



Electric Utility

U.S. ENERGY PRODUCTS FOR POWER GENERATION,
TRANSMISSION & DISTRIBUTION



General Guide

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3. Basic Concepts

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Electric Utility

This U.S. catalog contains in-depth information on the most comprehensive line of utility products available today for the electric utility marketplace.

The product and technical sections have been developed with an easy-to-use “spec-on-a-page” format. They feature the latest information on electric utility products, from applications and construction to detailed technical and specification data. There’s also a user-friendly index.

From low-, medium-, high- and extra-high-voltage wire and cable for power generation, distribution and transmission, both overhead and underground, General Cable offers a broad spectrum of cables for electric utilities, rural electric co-ops and independent power producers.



All information in this catalog is presented solely as a guide to product selection and is believed to be reliable. All printing errors are subject to correction in subsequent releases of this catalog. Although General Cable has taken precautions to ensure the accuracy of the product specifications at the time of publication, the specifications of all products contained herein are subject to change without notice.

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What’s New?

REDUCE YOUR COSTS AND INCREASE YOUR POWER WITH E3X® TECHNOLOGY



Groundbreaking E3X Technology allows utilities to optimize the power grid by adding more capacity and controlling losses with significant first-cost and long-term operational savings. TransPowr® with E3X Technology features a thin, durable coating that is applied to the surface of any TransPowr overhead conductor. This heat-dissipating coating increases emissivity and reduces absorptivity, improving energy effectiveness and efficiency by allowing for a higher ampacity rating, reduced operating temperature and lower losses for a given conductor size or reduced conductor size for a given ampacity rating—transforming power grid sustainability, reliability, resilience and cost of ownership.

SILEC® BRAND HIGH- & EXTRA-HIGH-VOLTAGE CABLE SYSTEMS



The Silec Brand name has been synonymous with solid-dielectric extruded cable solutions for over fifty years. General Cable offers a fully integrated approach to providing a comprehensive range of quality Silec high- and extra-high-voltage cable systems. They are designed, engineered, manufactured and installed to ensure maximum service life and best-in-class performance while maintaining cost effectiveness.

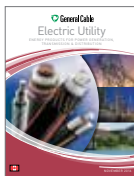
EMPOWER® LINK CL™ ADVANTAGE



Medium-Voltage Collection System Cable – Generating Results through Innovation

EmPowr® Link CL™ Advantage Cable is the next step in medium-voltage technology to deliver industry-leading reliability and performance for solar and wind energy collection systems. General Cable’s EmPowr Link CL Advantage Cable offers superior physical protection to endure the rigors of today’s collection system installation methods. This cost-effective cable solution is built upon widely accepted electrical advances in Cross-linked Polyethylene (XLPE) jacketing and optimized neutral designs to provide a compact, lightweight cable delivering more *Advantage* than ever before. For more information, ask your sales representative.

FULL LINE CATALOGS



Canadian Electric Utility

This catalog contains in-depth information on the most comprehensive line of utility products available today for the Canadian electric utility marketplace.



Building Wire

General Cable’s building copper and aluminum wire and cable products include XHHW-2 and THHN/THWN-2. Canadian constructions such as RW90, RWU90 and T90 are also readily available. Our THHN products come in a variety of colors and offer a low-friction jacket designed to improve installation even under the most difficult conditions. For today’s solar energy projects, General Cable offers a complete line of SunGen® solar photovoltaic wire in copper and aluminum constructions.



Industrial Cables

General Cable’s line of industrial cables serves industrial, specialty and commercial applications. When you specify General Cable, not only are you assured of product excellence from legacy cables such as Uniblend®, FREP® and VNVC®, but you also have access to the most extensive line of high-quality industrial cables available anywhere in the industry.

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Look for the General Cable “green” symbol and “Go Green” with our environmentally responsible products.

* ACCC is a registered trademark of CTC Global Corporation.

One Company Connecting The World™

POWERFUL PRESENCE · PRODUCTS PERFORMANCE · PEOPLE

General Cable has been a wire and cable innovator for over 170 years, always dedicated to connecting and powering people's lives. We are one of the largest wire and cable manufacturers in the world.

Our company serves customers through a network of manufacturing facilities in our core markets and has worldwide sales representation and distribution. We are dedicated to the production of high-quality aluminum, copper and fiber optic wire and cable and systems solutions for the energy, construction, industrial, specialty and communications sectors. With a vast portfolio of products to meet thousands of diverse application requirements, we continue to invest in research and development in order to maintain and extend our technology leadership by developing new materials, designing new products, and creating new solutions to meet tomorrow's market challenges.

In addition to our strong brand recognition and strengths in technology and manufacturing, General Cable is also competitive in such areas as distribution and logistics, marketing, sales and customer service. This combination enables us to better serve our customers globally and as they expand into new geographic markets.

General Cable offers our customers all the strengths and value of a large company, but our people give us the agility and responsiveness of a small one. We service you globally and locally.



Visit our Website at
www.generalcable.com



Corporate Social Responsibility

CREATING SHARED VALUE

General Cable believes corporate social responsibility (CSR) is about creating shared value. That means keeping a dual focus in our business decisions: what is good for us as a company and what contributes to the greater good of the communities in which we live and work.



SAFETY

Working safer by working together

General Cable has one worldwide safety vision and goal – **ZERO & BEYOND**. We measure safety performance globally, share best practices and implement sound health and safety management systems. Many of our facilities worldwide are OHSAS 18001 (safety management system) certified. All North American facilities have implemented an equivalent health and safety management system. General Cable was a pioneer in obtaining the OHSAS 18001 Certificate for Occupational Health and Safety Management Systems in Europe and North Africa.



SUSTAINABILITY

Responsible practices in daily operations

As a global leader in the wire and cable industry, General Cable recognizes its role and responsibility in promoting sustainability. Our strongest business value is continuous improvement in all areas of our company. Across our many businesses, the quest to introduce new and better products through continuous improvement in environmental designs reflects our commitment to achieving industry-leading standards and responding proactively to global environmental issues. General Cable was the first cable manufacturer to obtain certification for its environmental management system, in accordance with the ISO 14001 and EMAS Standards.



CITIZENSHIP

A commitment to being good citizens

Being responsible citizens in our communities is of the utmost importance to us. Unequivocal honesty, integrity, forthrightness and fair dealing have long been part of General Cable's core values and are expected globally in all of our business relationships with our customers, employees, suppliers, neighbors and competitors. Our company leaders and employees strive to make a difference throughout a host of volunteer activities and financial support, improving the communities in which we live and work.



INNOVATION

Technologies that power and connect the world

General Cable is delivering innovation that matters. We are focusing on R&D expertise and investing in developing wire and cable solutions that meet the challenges confronting our customers and the world. In working together and using all the ingenuity and creativity we have, we will reach the goal of being the preeminent supplier of wire and cabling solutions in the industry, with both green constructions and designs for the ever-growing renewable energy market.



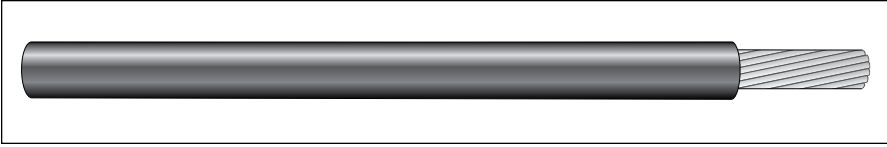
A commitment to achieving industry-leading standards and responding proactively to environmental global issues.

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Visit www.GeneralCableCSR.com
to learn more.



Low-Voltage Power Cable



PowrNet® Underground Network Cable

General Cable's PowrNet® cable was developed for use in congested urban networks (particularly in duct systems) where high-reliability, easy-to-install, low-smoke and -fume cables are needed. PowrNet cables are suitable for use in wet or dry locations and for direct burial or installations in ducts.

PowrNet's Low-Smoke, Zero-Halogen (LSZH) jacket system reduces the amount of gas and smoke emission in the event of a fire. Its track-resistant design reduces the combustible gases created when operating in harsh environments where salts, oils and chemicals promote electrical leakage along the jacket surface. In addition, the flame-resistant properties of the PowrNet cables minimize flame propagation.

General Cable's PowrNet 600 V network cables consist of a Class B compressed soft drawn copper conductor, covered with EAM insulation and a black Low-Smoke, Zero-Halogen (LSZH) flame-retardant, lead-free thermoset jacket. PowrNet is rated for 90°C maximum conductor temperature under normal conditions. All cables are manufactured and tested in accordance with ANSI/NEMA WC70/ICEA S-95-658.

PowrNet Cable Options:

- **Multiplexed Constructions of 2 to 6 Conductors** – Provide phase and neutral or bare ground conductors on one reel for easy installation.
- **Compact Copper Conductors** – Reduce overall diameter and use less insulation material.
- **Tinned Copper Conductors** – Provide additional protective coverage over the conductor.
- **Type RHH/RHW-2 Rating to UL 44** – Used in accordance with Article 310 and other applicable parts of the National Electrical Code (NEC).
- **Type USE-2 per UL 854** – Used in accordance with Article 338 and other applicable parts of the National Electrical Code (NEC).
- **UL OIL RES I (PR 1)** – Improves performance when exposed to oil.
- **UL ST-1 Limited Smoke Designation (Sizes 1/0 AWG and Larger)** – Presents limited smoke when burning.
- **UL "For CT Use" (Sizes 1/0 AWG and Larger)** – Used in cable trays. Passed UL vertical flame test.
- **EPR Insulation**
- **2000 V Rating**

PowrServ® Underground Secondary Distribution Cable

General Cable manufactures a complete line of insulated underground secondary cable. General Cable's PowrServ® underground service cables are intended to provide power from secondary power transformers that are pad-mounted.

General Cable's PowrServ XL cross-linked polyethylene underground secondary cables consist of a Class B or single input wire (SIW) compressed 1350-H19 aluminum conductor insulated with lead-free XLPE and manufactured in accordance with ANSI/ICEA S-105-692 and UL 854, listed as Type USE-2 cable. PowrServ AR is a lead-free abuse-resistant composite XLPE/HDXLPE insulated cable and is manufactured in accordance with ANSI/ICEA S-81-570 and UL 854. PowrServ AR provides protection against cuts and abrasions that may occur during installation. PowrServ XL and PowrServ AR are rated for 90°C maximum conductor temperature under normal conditions. PowrServ service cables are available with numerous conductor design and cable assembly options to meet a customer's particular requirements. The most common styles are generally available from stock.

PowrServ® Underground Cable Options:

- **Aluminum 1350** – H16 or H26 (¾ Hard) Conductor.
- **Copper Conductors** – Primarily used when more ampacity is needed and/or there are limitations to the overall cable diameter.
- **Series 8000 Aluminum Alloy Conductor** – Developed to overcome mechanical connection problems associated with circuit sizes 10 to 14 AWG.
- **Sizes 250 Through 500 kcmil Available with Thin Wall (0.080") Insulation**
- **High-Molecular-Weight Polyethylene (PE) Insulation** – Used for 75°C normal service operation.
- **Type RHH/RHW-2 Rating to UL 44** – Used in accordance with Article 310 and other applicable parts of the National Electrical Code (NEC).
- **Other Phase Identification Methods** – Identified by colored extruded stripes.
- **Combined Duct & Cable** – Designed for direct burial. The cable is factory-installed in duct, reducing the installation and repair cost. High-density polyethylene (HDPE) conduit designs available in multiple wall thicknesses.
- **MasterPak® Reel-less Packaging** – Supplied in coils without the wooden reel. Provides an environmentally friendly packaging option to avoid the disposal cost and save landfill space. See Section 6 to learn more about MasterPak reel-less packaging.

PowrServ Overhead Service Drop and RTS/PLAC Secondary Cable Neutral-Supported



















General Cable manufactures a complete line of insulated products for overhead secondary distribution.

General Cable's PowrServ OH overhead service cables are intended to provide power from secondary power transformers that are pole-mounted. The overhead service cables can also be used as pole line secondary with service splices at the pole or mid-span.

General Cable's PowrServ OH overhead products consist of a Class A, Class B or single input wire (SIW) compressed 1350-H19 aluminum conductor insulated with lead-free XLPE around an AAC, AAAC or ACSR neutral and are manufactured in accordance with ANSI/ICEA S-76-474. Solid conductors are H16 or H26 temper. PowrServ OH is rated for 90°C maximum conductor temperature under normal conditions. General Cable's PowrServ overhead service cables are available in numerous conductor design and cable assembly options to meet a customer's particular requirements. The most common styles are generally available from stock.

PowrServ Overhead Cable Options:

- **Aluminum 1350** – H16 or H26 (¾ Hard) Conductor.
- **Copper Conductors** – Primarily used when more ampacity is needed and/or there are environmental corrosion concerns.
- **High-Molecular-Weight Polyethylene (PE) Insulation** – Used for 75°C normal service operation.
- **High Density Polyethylene (HDPE) Insulation** – Used for 75°C normal service operation. Provides tough insulation.
- **Other Phase Identification Methods** – Printed numbers on black colored insulation or extruded colored stripes.
- **MasterPak Reel-less Packaging** – Supplied in coils without the wooden reel. Provides an environmentally friendly packaging option to avoid the disposal cost and save landfill space. See Section 6 to learn more about MasterPak reel-less packaging.

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Look for the General Cable "green" symbol and "Go Green" with our environmentally responsible products.



Powr[®]Net

600 Volt Secondary Network Cable

Installed Where Maximum Reliability
and Performance Are Critical

General Cable's PowrNet[®] cable was engineered for use in congested urban secondary network duct and buried systems in wet or dry locations where maximum reliability, ease of installation, and low-smoke cables are required.





This unique cable offers the advantages of a track-resistant, low-smoke and reduced gas evolution design. These inherent performance characteristics are complemented by excellent abrasion and tear-resistant properties coupled with a low coefficient of friction, which allows for ease of pulling into existing duct systems.

PowrNet® network cables are manufactured to meet ANSI/NEMA WC70 ICEA S-95-658, Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy.

PowrNet Performance Features

- > Installation Performance – Added Flexibility, Less Spring-Back, Low Coefficient of Friction, High Abuse- & Tear-Resistant
- > Environmental Performance – Fire- and Flame-Resistant, Oil- and Chemical-Resistant, and Low Generation of Combustible and Caustic Gases
- > Electrical & Physical Performance – High Dielectric Strength, High- and Low-Temperature Range, Superior Track Resistance

PowrNet, with its Low-Smoke, Zero-Halogen (LSZH) Jacket, is your Greener Choice for Modernizing the Secondary Network.

As energy consumption in densely populated urban areas continues to grow, existing power and secondary networks are required to operate under ever more severe conditions. General Cable has stayed ahead of this trend by offering its highly engineered PowrNet cable to meet the challenges of the most demanding urban environments. Designed to be installed either in ducts or directly buried, PowrNet gives system engineers a proven choice to specify a highly reliable cable that is easy to install, with excellent electrical performance and track resistance, and provides the assurance of low-smoke and reduced gas emission in the event of a fire.

Installation Performance

Because network cables may at times be installed in challenging conditions, General Cable has designed PowrNet to withstand the unique rigors of installation with a low coefficient of friction jacket, enhanced tear strength and exceptional cable flexibility.

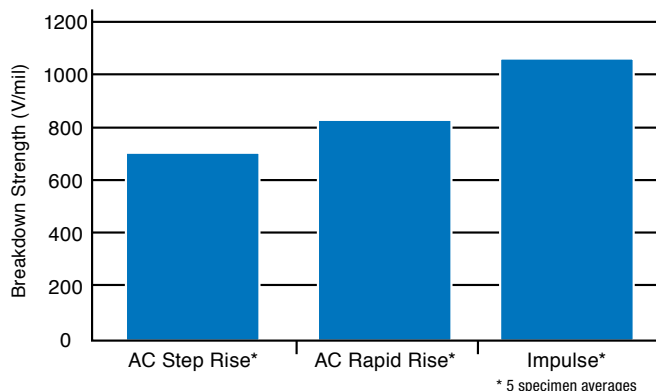
Environmental Performance

An aging urban network system required to meet modern needs with ever-increasing electrical loads challenges utility system engineers to find affordable, reliable and safe solutions. In response, PowrNet's low-smoke, zero-halogen jacket system reduces the amount of gas and smoke emission in the event of a fire. Its track-resistant design reduces the combustible gases created when operating in harsh environments where salts, oils and chemicals promote electrical leakage along the jacket surface. In addition, the flame-resistant properties of the PowrNet cables minimize flame propagation. General Cable has engineered PowrNet cables for extreme environments where unparalleled performance and safety are critical and cable failures are not an option.

Electrical & Physical Performance

Increasing demand for energy consumption puts added stress on secondary networks already at capacity that can degrade the networks at a much faster rate than normal loads. Continuous improvements made to PowrNet have extended the cable's maximum breakdown voltage, providing enhanced performance at maximum load.

Dielectric Breakdown Performance



PowrNet's proven performance as a superior secondary network cable is further demonstrated by the following qualification tests over and above the industry-standard requirements.

PowrNet - Additional Qualification Tests	
Installation Performance	Test Reference
Coefficient of Friction - Composite Cable	GCC In-house
Tear Resistance Test - Jacket	ANSI/ICEA T-37-581
Puncture Resistance - Composite Cable	ANSI/ICEA S-81-570
Abrasion Resistance - Composite Cable	ANSI/ICEA S-81-570
Electrical and Physical Performance	Test Reference
Rapid ac Voltage Rise - Insulation	EO-18
Step ac Voltage Withstand - Insulation	EO-18
Impulse Test - Composite Cable	EO-18
Roasting Test (260°C Limiter) - Composite Cable	EO-6068
Bond Fire Test - Composite Cable	EO-6068
Cold Bend Withstand Test - Composite Cable	EO-18
6 Month AWA Test - Composite Cable	EO-18
Surface Resistivity - Insulation and Jacket	ANSI/ICEA T-37-581
Arrhenius Elongation - Insulation and Jacket	GCC In-house
Environmental Performance	Test Reference
Flame Testing - Composite Cable	IEEE 1202
Smoke and Toxicity - Composite Cable	IEEE 1202
Tracking and Erosion Resistance - Jacket	ASTM D2132
10 Cycle Oil Resistance - Jacket	EO-18
Lead TCLP Test - Composite Cable	ICP SW846

PowrNet® 600 V Underground Network Cable

600 V Single Cu Conductor EAM Insulation LSZH Jacket



Product Construction:

Complete Cable:

General Cable's PowrNet® 600 V network cables consist of a Class B compressed copper conductor, covered with EAM insulation and a black Low-Smoke, Zero-Halogen (LSZH), flame-retardant, lead-free thermoset jacket. All cables are manufactured and tested in accordance with ANSI/NEMA WC70/ICEA S-95-658.

Conductors:

Class B compressed copper meeting the requirements of ASTM B8.

Insulation/Jacket:

The extruded thermoset, flame-retardant EAM insulation meets the requirements of an EPR Type II (Class E-2) insulation of ANSI/NEMA WC70/ICEA S-95-658. The extruded thermoset black jacket is a Type II Low-Smoke, Zero-Halogen (LSZH), flame-retardant, lead-free thermoset polyolefin and meets the requirements of ANSI/NEMA WC70/ICEA S-95-658.

Features and Benefits:

General Cable's PowrNet 600 V network cable was developed for use in congested urban networks (particularly in duct systems) where high-reliability, easy-to-install low-smoke and -fume cables are needed. This unique cable design provides advantages of a track-resistant, low-smoke and reduced-gas evolution in the event of a fire. These installed performance features are complemented by excellent abrasion and tear resistance properties coupled with a low coefficient of friction which allows easy pulling into existing duct systems. PowrNet is rated 600 V and has a wet and dry conductor operating temperature rating of 90°C.

Applications:

General Cable's PowrNet cable was engineered for use in congested urban secondary network duct and buried systems in wet or dry locations where maximum reliability, ease of installation, and low-smoke cables are required.

Options:

- Multiplexed constructions of 2 to 6 conductors
- Multiplexed with bare ground conductors
- Compact copper conductors
- Tinned copper conductors
- Reduced insulation/jacket thickness for 750 and 1000 kcmil sizes
- Type RHH/RHW-2 per UL 44
- Type USE-2 per UL 854
- UL OIL RES I (PR 1)
- UL ST-1 limited smoke designation (sizes 1/0 AWG and larger)
- UL "For CT Use" (sizes 1/0 AWG and larger)
- EPR insulation
- 2000 V rating

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



600 V SINGLE COPPER CONDUCTOR EAM INSULATION LSZH JACKET								
SIZE AWG OR kcmil	NO. AL WIRES	NOM. COND. O.D. IN.	INS./JACKET NOM. THKN. INCHES	NOM. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPACITY	
					COPPER	TOTAL	DIRECT BURIED	IN DUCT
6	7	0.178	0.045 / 0.030	0.328	81	120	120	90
4	7	0.225	0.045 / 0.030	0.375	129	176	160	115
2	7	0.283	0.045 / 0.030	0.433	205	262	205	145
1	19	0.313	0.055 / 0.045	0.513	258	342	230	170
1/0	19	0.352	0.055 / 0.045	0.552	326	417	260	195
2/0	19	0.395	0.055 / 0.045	0.595	411	512	295	220
3/0	19	0.443	0.055 / 0.045	0.643	518	629	335	250
4/0	19	0.498	0.055 / 0.045	0.698	653	777	380	285
250	37	0.558	0.065 / 0.045	0.778	772	920	420	320
350	37	0.661	0.065 / 0.065	0.921	1081	1290	500	390
500	37	0.789	0.065 / 0.065	1.049	1544	1790	600	470
750	61	0.968	0.080 / 0.065	1.258	2316	2643	735	590
1000	61	1.117	0.080 / 0.065	1.407	3088	3463	830	670



PowrServ®

Low-Voltage Cable Insulated Conductors for Overhead and Underground Distribution

General Cable offers a complete line of insulated cable designs and sizes to meet utility requirements for exceptional performance and reliability in a variety of underground and overhead low-voltage applications.

All PowrServ® cables are available on reels, coils or MasterPak® reel-less packaging.



PowrServ® OH

Multiplex Overhead Service Drop and
RTS/PLAC Secondary Cable
Neutral-Supported 600 Volt Aluminum
Conductor XLPE Insulation

PowrServ® XL

Single Conductor and Multiplex Underground
Distribution Cable Type USE-2 600 Volt Aluminum
Conductor XLPE Insulation UL Listed

PowrServ® AR

Abuse-Resistant Underground Distribution
Cable Type USE-2 600 Volt Aluminum
Conductor Composite XLPE/HDXLPE
Insulation UL Listed

PowrServ® XL

Single Conductor and Multiplex Underground
Distribution Cable Type USE-2 600 Volt Aluminum
Conductor XLPE Insulation UL Listed



PowrServ® XL 600 Volt rated lead-free XLPE insulated underground distribution cables in single, duplex, triplex and quadruplex configurations may be installed direct buried or in duct. They are rated for 90°C maximum conductor operating temperature in wet or dry locations, resistant to abrasion, impact and sunlight, and meet all applicable requirements of ANSI/ICEA Standard S-105-692 and UL Standard 854. PowrServ® XL is listed as a Type USE-2 cable.

PowrServ® XL underground distribution cables are available in Combined Duct & Cable construction where they are factory-installed in extruded high density polyethylene duct for ease of installation, greater protection and facility of replacement.

Product Construction:

Complete Cable:

Single conductor UL Type USE-2 cables consist of an aluminum conductor insulated with extruded lead-free Cross-linked Polyethylene (XLPE). Duplex, triplex and quadruplex Type USE-2 cables consist of one, two or three aluminum phase conductors and one neutral conductor that are insulated with extruded XLPE. The cables are twisted together to form a multiplex assembly. All cables are manufactured and tested in accordance with ANSI/ICEA Standard S-105-692 and UL Standard 854. PowrServ® XL is listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed aluminum 1350-H19.

Insulation:

The insulation is extruded black lead-free Cross-linked Polyethylene (XLPE). For multiplex cables, the phase conductors are black, and the neutral conductor is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings on the phase conductor.

Features and Benefits:

600 V PowrServ® XL cables are suitable for direct burial or installation in ducts and are resistant to abrasion, impact and sunlight. These cables are suitable for temperatures of 90°C in wet or dry locations.

Applications:

PowrServ® XL underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (3/4 Hard) stranded conductor
- Copper conductors
- Other phase identification methods
- Series 8000 aluminum alloy conductor
- Sizes 250 through 500 kcmil available with thin wall (0.080") insulation (primarily for installation in conduit)
- High-molecular-weight Polyethylene (PE) insulation 75°C rating
- Type RHH/RHW-2 per UL 44
- Combined Duct & Cable factory-installed in extruded high density polyethylene duct
- MasterPak® reel-less packaging

PowrServ® AR

Abuse-Resistant Underground Distribution Cable
Type USE-2 600 Volt Aluminum Conductor
Composite XLPE/HDXLPE Insulation UL Listed



PowrServ® AR 600 Volt rated abuse-resistant underground distribution cables are designed for direct buried installation where cable is especially susceptible to damage from unclean natural backfill material and other external forces which can occur during or after installation. They are highly abrasion- and impact-resistant, sunlight-resistant, rated for 90°C maximum conductor operating temperature in wet or dry locations and meet all applicable requirements of ANSI/ICEA Standard S-81-570 and UL Standard 854. PowrServ® AR is listed as a Type USE-2 cable.

PowrServ® AR abuse-resistant underground distribution cables are available in Combined Duct & Cable construction where they are factory-installed in extruded high density polyethylene duct for ease of installation, substantially greater protection and facility of replacement.

Product Construction:

Complete Cable:

PowrServ® AR abuse-resistant underground distribution duplex, triplex and quadruplex cables consist of one, two or three aluminum phase conductors and one neutral conductor, all of which are insulated with extruded composite lead-free Cross-linked Polyethylene (XLPE) and High Density Cross-linked Polyethylene (HDXLPE). The cables are twisted together to form a multiplex assembly. All cables are manufactured and tested in accordance with ANSI/ICEA Standard S-81-570 and UL Standard 854. PowrServ® AR is listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed aluminum 1350-H19.

Composite Insulation:

The extruded composite Cross-linked Polyethylene (XLPE) and High Density Cross-linked Polyethylene (HDXLPE) insulation meets the requirements of ANSI/ICEA S-81-570. For multiplex cables, the phase conductors are black, and the neutral is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings on the phase conductor.

Features and Benefits:

600 V PowrServ® AR dual extruded insulation system provides a very high degree of protection against insulation damage from unclean backfill material and from cuts and abrasions which can occur during installation. These cables are suitable for temperatures of 90°C in wet or dry locations.

Applications:

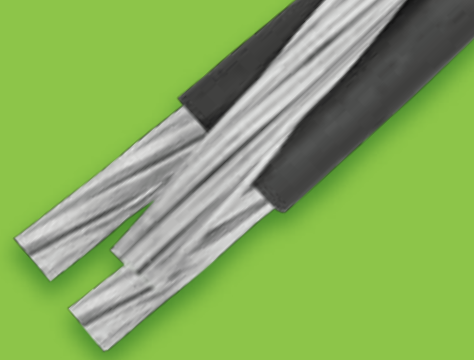
PowrServ® AR XLPE/HDXLPE underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (3/4 Hard) stranded conductor
- Copper conductors
- Sizes 250 - 500 kcmil available with thin wall (0.080") insulation (primarily for installation in conduit)
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded high density polyethylene duct
- MasterPak® reel-less packaging

PowrServ® OH

Multiplex Overhead Service Drop and RTS/PLAC
Secondary Cable Neutral-Supported 600 Volt
Aluminum Conductor XLPE Insulation



PowrServ® OH 600 Volt rated overhead service drop cables in duplex, triplex and quadruplex neutral-supported constructions may be used for overhead service entrance applications. They meet all applicable requirements of ANSI/ICEA Standard S-76-474.

PowrServ® OH 600 Volt rated overhead secondary cable is available in Reverse Twist Secondary (RTS) and in Parallel Lashed Aerial Cable (PLAC) designs, both facilitating easier phase conductor separation for mid-span taps.

Product Construction:

Complete Cable:

One, two or three aluminum conductors insulated with extruded lead-free Cross-linked Polyethylene (XLPE), cabled with a bare conductor which serves as a supporting neutral. Neutral-Supported cable meets the requirements of ANSI/ICEA Standard S-76-474.

Insulated Conductors:

The all-aluminum stranded conductors are Class A, Class B or SIW compressed 1350-H19 aluminum. Solid conductors are H16 temper.

Insulation:

The insulation is extruded black lead-free Cross-linked Polyethylene (XLPE).

Bare Neutral:

The all-aluminum stranded conductor is Class AA or Class A 1350-H19 (AAC) or 6201-T81 alloy (AAAC). The aluminum conductor steel reinforced (ACSR) is Class AA. The direction of lay of the outer layer is right-hand.

Phase Identification:

Phase identification is provided by means of white print legend markings or ribs on the phase conductor, depending on the cable construction.

Features and Benefits:

The insulated conductors of 600 V PowrServ® OH cables are resistant to weathering, abrasion, tearing, cutting and chemicals. These cables are rated at 600 volts with a maximum conductor-rated operating temperature of 90°C for Cross-linked Polyethylene insulation.

Applications:

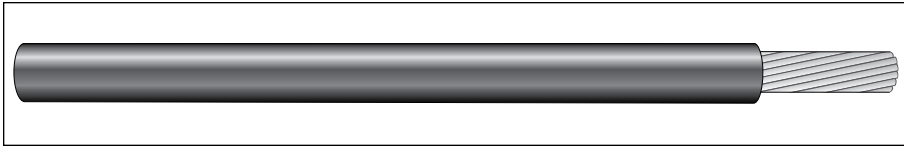
PowrServ® OH overhead service drop cable is intended to deliver power from the secondary power line or pole-mounted transformer to the service-entrance conductors at the user's building or other structure. Duplex is intended to deliver single-phase power. Triplex is intended to deliver 3-wire single-phase power. Quadruplex is intended to deliver 4-wire three-phase power. PowrServ® OH overhead secondary RTS and PLAC constructions are ideal for use as pole line secondary with service splices at the pole or in mid-span.

Options:

- Aluminum 1350-H16 or H26 (3/4 Hard) stranded conductor
- Copper conductors
- Other phase identification methods
- High-molecular-weight Polyethylene (PE) 75°C rating
- High Density Polyethylene (HDPE) insulation 75°C rating
- MasterPak® reel-less packaging

PowrServ® XL Underground Distribution Cable

600 V Single Al Conductor XLPE Insulation, UL Type USE-2



POWRSERV XL CABLE—XLPE INSULATION—600 VOLTS

CODE WORD	SIZE AWG OR kcmil	NO. OF WIRES (1)	INS. THKN. INCHES	NOM. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPACITY (2)		PACKAGING 1000 FT REEL (3)
					AL	TOTAL	DIRECT BURIED	IN DUCT	
Princeton/XP	6	7	0.060	0.30	25	44	95	60	NR 24.12
Mercer/XP	4	7	0.060	0.35	39	63	125	80	NR 24.12
Clemson/XP	2	7	0.060	0.40	62	92	160	105	NR 24.12
Kenyon/XP	1	19	0.080	0.47	78	120	180	125	NR 24.12
Harvard/XP	1/0	19	0.080	0.51	99	145	205	140	NR 24.18
Yale/XP	2/0	19	0.080	0.56	125	176	230	170	NR 24.18
Tufts/XP	3/0	19	0.080	0.60	157	214	265	195	NR 27.18
Beloit/XP	4/0	19	0.080	0.66	198	262	300	220	NR 27.18
Hofstra/XP	250 [†]	37	0.095	0.75	234	317	330	245	NR 30.18
Gonzaga/XP	300 [†]	37	0.095	0.78	281	369	360	275	NR 30.18
Rutgers/XP	350 [†]	37	0.095	0.85	328	426	395	300	NR 30.18
Dartmouth/XP	400 [†]	37	0.095	0.90	375	479	420	325	NR 32.24
Emory/XP	500 [†]	37	0.095	0.98	469	584	475	375	NR 32.24
Duke/XP	600	61	0.110	1.09	562	707	525	420	NR 36.24
Furman/XP	700	61	0.110	1.16	656	811	570	455	NR 40.24
Sewanee/XP	750	61	0.110	1.19	703	864	590	480	NR 40.24
Fordham/XP	1000	61	0.110	1.34	937	1122	680	560	NR 42.26

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are for non-code-complying installations. For installations covered by National Electrical Code (NEC), see the appropriate section of the NEC. Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 100% load factor and 36" depth of burial. Values based on one three-phase circuit buried together with no current in the neutral conductor. For specific ampacities, contact your General Cable sales representative.
 (3) Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.
[†] Available with thin wall (0.080") insulation.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Cable:

600 V PowrServ® XL cables consist of an aluminum conductor insulated with extruded lead-free Cross-linked Polyethylene (XLPE). These XLPE insulated cables are manufactured and tested in accordance with ANSI/ICEA S-105-692 and UL 854, listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed 1350-H19 aluminum

Insulation:

The insulation is black extruded lead-free Cross-linked Polyethylene (XLPE).

Phase Identification:

Phase identification is provided by means of white print legend markings and sequential footage markings on the phase conductor.

Features and Benefits:

600 V PowrServ XL underground distribution cables are suitable for direct burial or installations in ducts and are resistant to abrasion, impact and sunlight. For NEC complying applications, the maximum conductor operating temperature is 90°C in wet or dry locations. This cable is also suitable for noncode-complying temperature of 90°C in wet or dry locations.

Applications:

PowrServ XL underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- Series 8000 aluminum alloy conductor
- Sizes 250 through 500 kcmil available with thin wall (0.080") insulation
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- Type RHH/RHW-2 per UL 44
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded HDPE duct
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



PowrServ® XL Underground Distribution Cable

600 V Duplex Al Conductor XLPE Insulation, UL Type USE-2



Product Construction:

Complete Cable:

Duplex 600 V PowrServ® XL cables consist of one phase conductor and one neutral conductor that are insulated with extruded lead-free Cross-linked Polyethylene (XLPE). The cables are twisted together to form a duplex assembly. These XLPE insulated cables are manufactured and tested in accordance with ANSI/ICEA S-105-692 and UL 854, listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed 1350-H19 aluminum.

Insulation:

The insulation is extruded lead-free Cross-linked Polyethylene (XLPE). The phase conductor is black, and the neutral conductor is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings and sequential footage markings on the phase conductor and white print legend markings and three extruded yellow stripes on the neutral conductor.

Features and Benefits:

600 V PowrServ XL underground distribution cables are suitable for direct burial or installations in ducts and are resistant to abrasion, impact and sunlight. For NEC-complying applications, the maximum conductor operating temperature is 90°C in wet or dry locations. This cable is also suitable for non-code-complying installations with a maximum conductor temperature of 90°C in wet or dry locations.

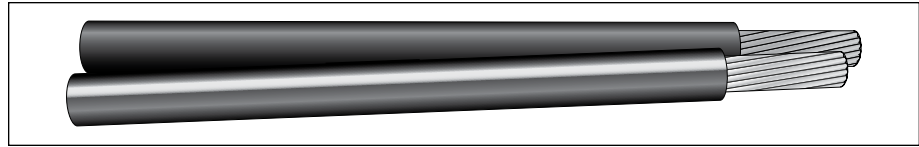
Applications:

PowrServ XL underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- Series 8000 aluminum alloy conductor
- Sizes 250 through 500 kcmil available with thin wall (0.080") insulation
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- Type RHH/RHW-2 per UL 44
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded HDPE duct
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



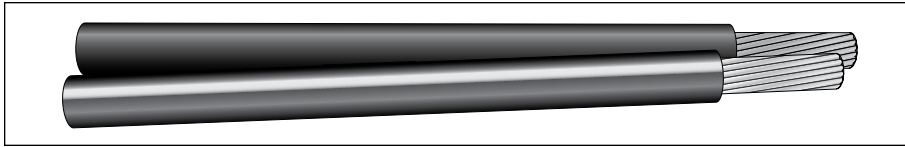
POWRSERV XL DUPLEX CABLE—XLPE INSULATION—600 VOLTS												
CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPACITY (2)		PACKAGING 1000 FT REEL (3)
	SIZE AWG OR kcmil	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG OR kcmil	NO. OF WIRES	INS. THKN. INCHES		AL	TOTAL	DIRECT BURIED	IN DUCT	
Clafin/XP/EYS	6	7	0.060	6	7	0.060	0.60	49	89	110	70	NR 24.18
Delgado/XP/EYS	4	7	0.060	4	7	0.060	0.69	78	127	145	90	NR 24.18
Everett/XP/EYS	2	7	0.060	2	7	0.060	0.81	125	185	185	120	NR 27.18
Findlay/XP/EYS	2/0	19	0.080	2/0	19	0.080	1.11	250	353	270	185	NR 32.24
Hanover/XP/EYS	4/0	19	0.080	4/0	19	0.080	1.32	398	526	350	245	NR 40.24

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are for non-code-complying installations. For installations covered by National Electrical Code (NEC), see the appropriate section of the NEC. Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 100% load factor and 36" depth of burial. Values based on current in both the phase and neutral conductors. For specific ampacities, contact your General Cable sales representative.
 (3) Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® AR Underground Distribution Cable

600 V Duplex Al Conductor Composite XLPE/HDXLPE Insulation, UL Type USE-2



POWRSERV AR DUPLEX CABLE—XLPE/HDXLPE—600 VOLTS

CODE WORD	PHASE CONDUCTOR				NEUTRAL CONDUCTOR				EFF. O.D. IN	APPROX. WEIGHT LB/1000 FT		AMPACITY (2)		PKG. 1000 FEET REEL (3)
	SIZE AWG OR kcmil	NO. OF WIRES (1)	XLPE THKN. IN	HDXLPE THKN. IN	SIZE AWG OR kcmil	NO. OF WIRES	XLPE THKN. IN	HDXLPE THKN. IN		AL	TOTAL	DIRECT BURIED	IN DUCT	
Clafin/AR/EYS	6	7	0.030	0.030	6	7	0.030	0.030	0.60	59	89	110	70	NR 24.18
Delgado/AR/EYS	4	7	0.030	0.030	4	7	0.030	0.030	0.69	78	127	145	90	NR 24.18
Everett/AR/EYS	2	7	0.030	0.030	2	7	0.030	0.030	0.81	125	185	185	120	NR 27.18
Findlay/AR/EYS	2/0	19	0.040	0.040	2/0	19	0.040	0.040	1.11	250	355	270	185	NR 32.24
Hanover/AR/EYS	4/0	19	0.040	0.040	4/0	19	0.040	0.040	1.32	398	528	350	245	NR 40.24

- (1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
- (2) Ampacities are for non-code-complying installations. For installations covered by National Electrical Code (NEC), see the appropriate section of the NEC. Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 100% load factor and 36" depth of burial. Values based on current in both the phase and neutral conductors. For specific ampacities, contact your General Cable sales representative.
- (3) Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Cable:

Duplex PowrServ® abuse-resistant (AR) underground distribution cables consist of one phase and one neutral conductor, both of which are insulated with extruded lead-free composite Cross-linked Polyethylene (XLPE) and High-Density Cross-linked Polyethylene (HDXLPE). The cables are twisted together to form a duplex assembly. These XLPE insulated cables are manufactured and tested in accordance with ANSI/ICEA S-81-570 and UL 854, listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed 1350-H19 aluminum.

Composite Insulation:

The extruded lead-free cross-linked polyethylene insulation meets the requirements of ANSI/ICEA S-81-570. The extruded lead-free high-density cross-linked polyethylene meets the requirements of ASTM D1248, Type III. The phase conductor is black, and the neutral conductor is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings and sequential footage markings on the phase conductor and white print legend markings and three extruded yellow stripes on the neutral conductor.

Features and Benefits:

The dual extruded composite insulation system provides a very high degree of protection against insulation damage from unclean backfill material and from cuts and abrasions that can occur during installation. For NEC-complying applications, the maximum conductor operating temperature is 90°C in wet or dry locations. This cable is also suitable for non-code-complying installations with a maximum conductor temperature of 90°C in wet or dry locations.

Applications:

PowrServ AR XLPE/HDXLPE underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- Sizes 250 through 500 kcmil available with thin wall (0.040"/0.040") insulation
- Composite PE/HDPE insulation, 75°C rating
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded HDPE duct
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



PowrServ® XL Underground Distribution Cable

600 V Triplex Al Conductor XLPE Insulation, UL Type USE-2



Product Construction:

Complete Cable:

Triplex 600 V PowrServ® XL cables consist of two phase conductors and one neutral conductor, all of which are insulated with extruded lead-free Cross-linked Polyethylene (XLPE). The cables are twisted together to form a triplex assembly. These XLPE insulated cables are manufactured and tested in accordance with ANSI/ICEA S-105-692 and UL 854, listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed 1350-H19 aluminum.

Insulation:

The insulation is extruded lead-free Cross-linked Polyethylene (XLPE). The two phase conductors are black, and the neutral conductor is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings and sequential footage markings on one phase conductor, white print legend markings on the other phase conductor, and white print legend markings and three extruded yellow stripes on the neutral conductor.

Features and Benefits:

600 V PowrServ XL underground distribution cables are suitable for direct burial or installations in ducts and are resistant to abrasion, impact and sunlight. For NEC-complying applications, the maximum conductor operating temperature is 90°C in wet or dry locations. This cable is also suitable for non-code-complying installations with a maximum conductor temperature of 90°C in wet or dry locations.

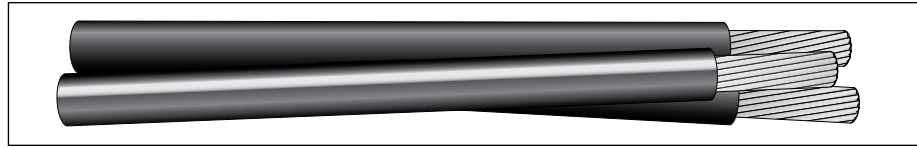
Applications:

PowrServ XL underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- Series 8000 aluminum alloy conductor
- Sizes 250 through 500 kcmil available with thin wall (0.080") insulation
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- Type RHH/RHW-2 per UL 44
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded HDPE duct
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



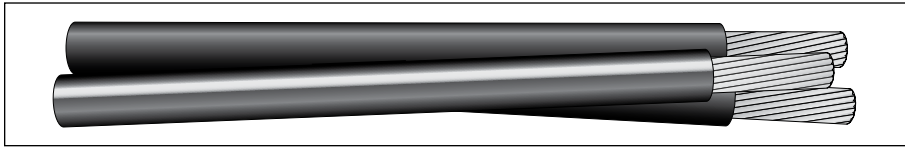
POWRSERV XL TRIPLEX CABLE—XLPE INSULATION—600 VOLTS												
CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPACITY (2)		PACKAGING 1000 FT REEL (3)
	SIZE AWG OR kcmil	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG OR kcmil	NO. OF WIRES	INS. THKN. INCHES		AL	TOTAL	DIRECT BURIED	IN DUCT	
Erskine/XP/EYS	6	7	0.060	6	7	0.060	0.64	74	133	110	70	NR 27.18
Vassar/XP/EYS	4	7	0.060	4	7	0.060	0.74	118	190	145	90	NR 30.18
Stephens/XP/EYS	2	7	0.060	4	7	0.060	0.84	164	248	185	120	NR 32.24
Ramapo/XP/EYS	2	7	0.060	2	7	0.060	0.87	187	277	185	120	NR 32.24
Brenau/XP/EYS	1/0	19	0.080	2	7	0.080	1.04	261	384	235	160	NR 36.24
Bergen/XP/EYS	1/0	19	0.080	1/0	19	0.080	1.10	298	437	235	160	NR 40.24
Converse/XP/EYS	2/0	19	0.080	1	19	0.080	1.15	329	474	270	185	NR 40.24
Hunter/XP/EYS	2/0	19	0.080	2/0	19	0.080	1.20	375	530	270	185	NR 40.24
Hollins/XP/EYS	3/0	19	0.080	1/0	19	0.080	1.25	415	576	305	210	NR 40.24
Rockland/XP/EYS	3/0	19	0.080	3/0	19	0.080	1.30	473	645	305	210	NR 42.26
Sweetbriar/XP/EYS	4/0	19	0.080	2/0	19	0.080	1.36	523	702	350	245	NR 42.26
Monmouth/XP/EYS	4/0	19	0.080	4/0	19	0.080	1.42	597	789	350	245	NR 45.28
Pratt/XP/EYS	250†	37	0.095	3/0	19	0.080	1.53	628	852	380	270	NR 45.28
Wesleyan/XP/EYS	350†	37	0.095	4/0	19	0.080	1.69	858	1111	455	325	NR 50.32
Newark/XP/EYS	350†	37	0.095	350	37	0.095	2.03	988	1277	455	325	NR 58.32
Rider/XP/EYS	500†	37	0.095	350	37	0.095	2.03	1269	1596	555	410	NR 58.32

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are for non-code-complying installations. For installations covered by National Electrical Code (NEC), see the appropriate section of the NEC. Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 100% load factor and 36" depth of burial. Values based on no current in the neutral conductor. For specific ampacities, contact your General Cable sales representative.
 (3) Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.
 † Available with thin wall (0.080") insulation.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® AR Underground Distribution Cable

600 V Triplex Al Conductor Composite XLPE/HDXLPE Insulation, UL Type USE-2



Product Construction:

Complete Cable:

Triplex PowrServ® abuse-resistant (AR) cables consist of two phase conductors and one neutral conductor, all of which are insulated with extruded lead-free composite Cross-linked Polyethylene (XLPE) and High-Density Cross-linked Polyethylene (HDXLPE). The cables are twisted together to form a triplex assembly. These XLPE insulated cables are manufactured and tested in accordance with ANSI/ICEA S-81-570 and UL 854, listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed 1350-H19 aluminum.

Composite Insulation:

The extruded lead-free cross-linked polyethylene insulation meets the requirements of ANSI/ICEA S-81-570. The extruded lead-free high-density cross-linked polyethylene meets the requirements of ASTM D1248, Type III. The two phase conductors are black, and the neutral conductor is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings and sequential footage markings on one phase conductor, white print legend markings on the other phase conductor, and white print legend markings and three extruded yellow stripes on the neutral conductor.

Features and Benefits:

The dual extruded composite insulation system provides a very high degree of protection against insulation damage from unclean backfill material and from cuts and abrasions that can occur during installation. For NEC-complying applications, the maximum conductor operating temperature is 90°C in wet or dry locations. This cable is also suitable for non-code-complying installations with a maximum conductor temperature of 90°C in wet or dry locations.

Applications:

PowrServ AR XLPE/HDXLPE underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- Sizes 250 through 500 kcmil available with thin wall (0.040"/0.040") insulation
- Composite PE/HDPE insulation, 75°C rating
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded HDPE duct
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.

POWRSERV AR TRIPLEX CABLE – XLPE/HDXLPE – 600 VOLTS														
CODE WORD	PHASE CONDUCTOR				NEUTRAL CONDUCTOR				EFF. O.D. IN	APPROX. WEIGHT LB/1000 FT		AMPACITY (2)		PKG. 1000 FEET REEL (3)
	SIZE AWG OR kcmil	NO. OF WIRES (1)	XLPE THKN. IN	HDXLPE THKN. IN	SIZE AWG OR kcmil	NO. OF WIRES	XLPE THKN. IN	HDXLPE THKN. IN		AL	TOTAL	DIRECT BURIED	IN DUCT	
	Erskine/AR/EYS	6	7	0.030	0.030	6	7	0.030		0.030	0.64	74	133	
Vassar/AR/EYS	4	7	0.030	0.030	4	7	0.030	0.030	0.74	118	191	145	90	NR 30.18
Stephens/AR/EYS	2	7	0.030	0.030	4	7	0.030	0.030	0.84	164	249	185	120	NR 32.24
Ramapo/AR/EYS	2	7	0.030	0.030	2	7	0.030	0.030	0.87	187	278	185	120	NR 32.24
Brenau/AR/EYS	1/0	19	0.040	0.040	2	7	0.030	0.030	1.04	261	386	235	160	NR 36.24
Bergen/AR/EYS	1/0	19	0.040	0.040	1/0	19	0.040	0.040	1.10	298	439	235	160	NR 40.24
Converse/AR/EYS	2/0	19	0.040	0.040	1	19	0.040	0.040	1.15	329	476	270	185	NR 40.24
Hunter/AR/EYS	2/0	19	0.040	0.040	2/0	19	0.040	0.040	1.20	375	532	270	185	NR 40.24
Hollins/AR/EYS	3/0	19	0.040	0.040	1/0	19	0.040	0.040	1.25	415	578	305	210	NR 40.24
Rockland/AR/EYS	3/0	19	0.040	0.040	3/0	19	0.040	0.040	1.30	473	648	305	210	NR 42.26
Sweetbriar/AR/EYS	4/0	19	0.040	0.040	2/0	19	0.040	0.040	1.36	523	705	350	245	NR 42.26
Monmouth/AR/EYS	4/0	19	0.040	0.040	4/0	19	0.040	0.040	1.42	597	792	350	245	NR 45.28
Pratt/AR/EYS	250†	37	0.045	0.050	3/0	19	0.040	0.040	1.53	628	855	380	270	NR 45.28
Wesleyan/AR/EYS	350†	37	0.045	0.050	4/0	19	0.040	0.040	1.69	858	1115	455	325	NR 50.32
Newark/AR/EYS	350†	37	0.045	0.050	350	37	0.045	0.050	1.79	988	1277	455	325	NR 58.32
Rider/AR/EYS	500†	37	0.045	0.050	350	37	0.045	0.050	2.03	1269	1601	555	410	NR 58.32

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are for non-code-complying installations. For installations covered by National Electrical Code (NEC), see the appropriate section of the NEC. Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 100% load factor and 36" depth of burial. Values based on no current in the neutral conductor. For specific ampacities, contact your General Cable sales representative.
 (3) Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.
 † Available with thin wall (0.040"/0.040") insulation

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.



PowrServ® XL Underground Distribution Cable

600 V Quadruplex Al Conductor XLPE Insulation, UL Type USE-2



Product Construction:

Complete Cable:

Quadruplex 600 V PowrServ® XL cables consist of three phase conductors and one neutral conductor, all of which are insulated with extruded lead-free Cross-linked Polyethylene (XLPE). The cables are twisted together to form a quadruplex assembly. These XLPE insulated cables are manufactured and tested in accordance with ANSI/ICEA S-105-692 and UL 854, listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed 1350-H19 aluminum.

Insulation:

The insulation is extruded lead-free Cross-linked Polyethylene (XLPE). The three phase conductors are black, and the neutral conductor is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings, "Phase A" marking, and sequential footage markings on one phase conductor, white print legend markings and "Phase B" marking on another phase conductor, white print legend markings and "Phase C" marking on another phase conductor, and white print legend markings and three extruded yellow stripes on the neutral conductor.

Features and Benefits:

600 V PowrServ XL underground distribution cables are suitable for direct burial or installations in ducts and are resistant to abrasion, impact and sunlight. For NEC-complying applications, the maximum conductor operating temperature is 90°C in wet or dry locations. This cable is also suitable for non-code-complying installations with a maximum conductor temperature of 90°C in wet or dry locations.

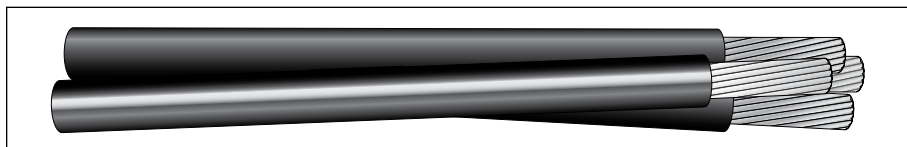
Applications:

PowrServ XL underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- Series 8000 aluminum alloy conductor
- Sizes 250 through 500 kcmil available with thin wall (0.080") insulation
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- Type RHH/RHW-2 per UL 44
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded HDPE duct
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



POWRSERV XL QUADRUPLEX CABLE—XLPE INSULATION—600 VOLTS

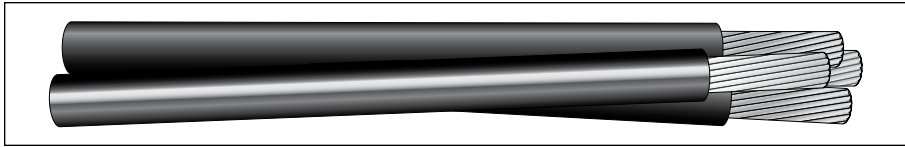
CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPACITY (2)		PACKAGING 1000 FT REEL (3)
	SIZE AWG OR kcmil	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG OR kcmil	NO. OF WIRES	INS. THKN. INCHES		AL	TOTAL	DIRECT BURIED	IN DUCT	
Tulsa/XP/EYS	4	7	0.060	4	7	0.060	0.83	157	253	125	80	NR 32.24
Dyke/XP/EYS	2	7	0.060	4	7	0.060	0.94	226	340	160	105	NR 32.24
Wittenberg/XP/EYS	2	7	0.060	2	7	0.060	0.97	250	369	160	105	NR 36.24
Notre Dame/XP/EYS	1/0	19	0.080	2	7	0.060	1.17	360	529	205	140	NR 42.26
Purdue/XP/EYS	1/0	19	0.080	1/0	19	0.080	1.24	397	583	205	140	NR 42.26
Syracuse/XP/EYS	2/0	19	0.080	1	19	0.080	1.29	454	651	230	170	NR 42.26
Lafayette/XP/EYS	2/0	19	0.080	2/0	19	0.080	1.34	501	707	230	170	NR 45.28
Swarthmore/XP/EYS	3/0	19	0.080	1/0	19	0.080	1.40	573	791	265	195	NR 45.28
Davidson/XP/EYS	3/0	19	0.080	3/0	19	0.080	1.46	631	860	265	195	NR 45.28
Wake Forest/XP/EYS	4/0	19	0.080	2/0	19	0.080	1.53	722	965	300	220	NR 50.32
Earlham/XP/EYS	4/0	19	0.080	4/0	19	0.080	1.59	796	1052	300	220	NR 50.32
Rust/XP/EYS	250†	37	0.095	3/0	19	0.080	1.72	863	1170	330	245	NR 50.32
Slippery Rock/XP/EYS	350†	37	0.095	4/0	19	0.080	1.91	1187	1535	395	300	NR 58.32
Niagara/XP/EYS	350†	37	0.095	350	37	0.095	2.01	1316	1716	395	300	NR 58.32
Wofford/XP/EYS	500†	37	0.095	350	37	0.095	2.28	1739	2182	475	375	NR 66.36

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are for non-code-complying installations. For installations covered by National Electrical Code (NEC), see the appropriate section of the NEC. Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 100% load factor and 36" depth of burial. Values based on no current in the neutral conductor. For specific ampacities, contact your General Cable sales representative.
 (3) Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.
 † Available with thin wall (0.080") insulation.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® AR Underground Distribution Cable

600 V Quadruplex Al Conductor Composite XLPE/HDXLPE Insulation, UL Type USE-2



POWRSERV AR QUADRUPLEX CABLE – XLPE/HDXLPE – 600 VOLTS

CODE WORD	PHASE CONDUCTOR				NEUTRAL CONDUCTOR				EFF. O.D. IN	APPROX. WEIGHT LB/1000 FT		AMPACITY (2)		PKG. 1000 FEET REEL (3)
	SIZE AWG OR kcmil	NO. OF WIRES (1)	XLPE THKN. IN	HDXLPE THKN. IN	SIZE AWG OR kcmil	NO. OF WIRES	XLPE THKN. IN	HDXLPE THKN. IN		AL	TOTAL	DIRECT BURIED	IN DUCT	
Tulsa/AR/EYS	4	7	0.030	0.030	4	7	0.030	0.030	0.83	157	255	125	80	NR 32.24
Dyke/AR/EYS	2	7	0.030	0.030	4	7	0.030	0.030	0.94	226	342	160	105	NR 32.24
Wittenberg/AR/EYS	2	7	0.030	0.030	2	7	0.030	0.030	0.97	250	371	160	105	NR 36.24
Notre Dame/AR/EYS	1/0	19	0.040	0.040	2	7	0.030	0.030	1.17	360	532	205	140	NR 42.26
Purdue/AR/EYS	1/0	19	0.040	0.040	1/0	19	0.040	0.040	1.24	397	586	205	140	NR 42.26
Syracuse/AR/EYS	2/0	19	0.040	0.040	1	19	0.040	0.040	1.29	454	654	230	170	NR 42.26
Lafayette/AR/EYS	2/0	19	0.040	0.040	2/0	19	0.040	0.040	1.34	501	710	230	170	NR 45.28
Swarthmore/AR/EYS	3/0	19	0.040	0.040	1/0	19	0.040	0.040	1.40	573	794	265	195	NR 45.28
Davidson/AR/EYS	3/0	19	0.040	0.040	3/0	19	0.040	0.040	1.46	631	864	265	195	NR 45.28
Wake Forest/AR/EYS	4/0	19	0.040	0.040	2/0	19	0.040	0.040	1.53	722	969	300	220	NR 50.32
Earlham/AR/EYS	4/0	19	0.040	0.040	4/0	19	0.040	0.040	1.59	796	1056	300	220	NR 50.32
Rust/AR/EYS	250 [†]	37	0.045	0.050	3/0	19	0.040	0.040	1.72	863	1175	330	245	NR 50.32
Slippery Rock/AR/EYS	350 [†]	37	0.045	0.050	4/0	19	0.040	0.040	1.91	1187	1541	395	300	NR 58.32
Niagara/AR/EYS	350 [†]	37	0.045	0.050	350	37	0.045	0.050	2.09	1320	1768	395	300	NR 58.32
Wofford/AR/EYS	500 [†]	37	0.045	0.050	350	37	0.045	0.050	2.28	1739	2189	475	375	NR 66.36

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are for non-code-complying installations. For installations covered by National Electrical Code (NEC), see the appropriate section of the NEC. Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 100% load factor and 36" depth of burial. Values based on no current in the neutral conductor. For specific ampacities, contact your General Cable sales representative.
 (3) Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.
[†] Available with thin wall (0.040"/0.040") insulation.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Cable:

Quadruplex PowrServ® abuse-resistant (AR) cables consist of three phase conductors and one neutral conductor, all of which are insulated with extruded lead-free composite Cross-linked Polyethylene (XLPE) and High-Density Cross-linked Polyethylene (HDXLPE). The cables are twisted together to form a quadruplex assembly. These XLPE insulated cables are manufactured and tested in accordance with ANSI/ICEA S-81-570 and UL 854, listed as a Type USE-2 cable.

Conductors:

Class B or SIW compressed 1350-H19 aluminum.

Composite Insulation:

The extruded lead-free cross-linked polyethylene insulation meets the requirements of ANSI/ICEA S-81-570. The extruded lead-free high-density cross-linked polyethylene meets the requirements of ASTM D1248, Type III. The three phase conductors are black, and the neutral conductor is black, identified by three extruded yellow stripes.

Phase Identification:

Phase identification is provided by means of white print legend markings, "Phase A" marking, and sequential footage markings on one phase conductor, white print legend markings and "Phase B" marking on another phase conductor, white print legend markings and "Phase C" marking on another phase conductor, and white print legend markings and three extruded yellow stripes on the neutral conductor.

Features and Benefits:

The dual extruded composite insulation system provides a very high degree of protection against insulation damage from unclean backfill material and from cuts and abrasions that can occur during installation. For NEC-complying applications, the maximum conductor operating temperature is 90°C in wet or dry locations. This cable is also suitable for non-code-complying installations with a maximum conductor temperature of 90°C in wet or dry locations.

Applications:

PowrServ AR XLPE/HDXLPE underground distribution cable is intended for use in underground systems operated at 600 volts or less.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- Sizes 250 through 500 kcmil available with thin wall (0.040"/0.040") insulation
- Composite PE/HDPE insulation, 75°C rating
- Other phase identification methods
- Combined Duct & Cable factory-installed in extruded HDPE duct
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.





PowrServ[®]

Tri-Rated Low-Voltage Cable
Multiplex Underground Distribution Cable
600 Volt Type USE-2/RHH/RHW-2
AA-8000 Series Aluminum Compact Conductor
XLPE Insulation UL Listed





Multiplex Underground Distribution Cable

600 Volt Type USE-2/RHH/RHW-2

AA-8000 Series Aluminum Compact Conductor

XLPE Insulation UL Listed



PowrServ® 600 Volt tri-rated lead-free XLPE insulated underground distribution cables in duplex, triplex and quadruplex configurations are designed for secondary power distribution circuits. They are rated for 90°C maximum conductor operating temperature in wet or dry locations, resistant to abrasion, impact and sunlight, and meet all applicable requirements of ANSI/ICEA Standard S-105-692 and UL Standard 854. PowrServ tri-rated is listed as a Type USE-2/RHH/RHW-2 cable and may be installed direct buried or in duct or conduit. The cables consist of two or three aluminum alloy phase conductors and one neutral conductor that are insulated with extruded black cross-linked polyethylene. The conductors are a compact stranded AA-8000 series aluminum alloy recognized by ASTM Standards B800, B801 and B836.

Application:

Primarily used as Type USE-2 direct-buried underground service entrance but also listed for RHH and RHW-2, making it suitable for applications in raceways for general purpose lighting and power circuits. This multiple listing offers a unique advantage to the installer to purchase one product that is suitable for installation on both sides of the service point and where the service point is located within the envelope of the building.

Options:

- AA-8000 series aluminum compressed conductor
- 3 extruded white stripes (EWS) on neutral
- Other constructions available upon request

Print Legend:

GENERAL CABLE POWRSERV® (PLANT ID) (CONDUCTOR SIZE) COMPACT AA-8000 FRXLPE 600 V TYPE USE-2/RHH/RHW-2 SUN RES (UL) (DATE)

CABLE DESCRIPTION	ALUMINUM ALLOY PHASE CONDUCTOR		ALUMINUM ALLOY NEUTRAL CONDUCTOR		NOM. WEIGHT LB/1000 FEET		PACKAGING	
	SIZE AWG/kcmil	INSULATION THICKNESS INCHES	SIZE AWG/kcmil	INSULATION THICKNESS INCHES	ALUMINUM	TOTAL	TYPE/SIZE	LENGTH FEET
PowrServ Triplex with 3 Extruded Yellow Stripes (EYS) on Neutral								
Erskine (6-6-6) USE-2/RHH/RHW-2 EYS	2 - #6	0.060	#6	0.060	74	139	NR 30.18	1,000
Vassar (4-4-4) USE-2/RHH/RHW-2 EYS	2 - #4	0.060	#4	0.060	116	194	NR 30.18	1,000
Stephens (2-2-4) USE-2/RHH/RHW-2 EYS	2 - #2	0.060	#4	0.060	162	252	NR 32.24	1,000
Ramapo (2-2-2) USE-2/RHH/RHW-2 EYS	2 - #2	0.060	#2	0.060	184	281	NR 32.24	1,000
Brenau (1/0-1/0-2) USE-2/RHH/RHW-2 EYS	2 - 1/0	0.080	#2	0.060	257	392	NR 34.26	1,000
Converse (2/0-2/0-1) USE-2/RHH/RHW-2 EYS	2 - 2/0	0.080	#1	0.080	323	484	NR 40.24	1,000
Sweetbriar (4/0-4/0-2/0) USE-2/RHH/RHW-2 EYS	2 - 4/0	0.080	2/0	0.080	524	713	NR 42.26	1,000
Monmouth (4/0-4/0-4/0) USE-2/RHH/RHW-2 EYS	2 - 4/0	0.080	4/0	0.080	587	799	NR 48.28	1,000
Pratt (250-250-3/0) USE-2/RHH/RHW-2 EYS	2 - 250	0.095	3/0	0.080	618	857	NR 48.32	1,000
Wesleyan (350-350-4/0) USE-2/RHH/RHW-2 EYS	2 - 350	0.095	4/0	0.080	843	1118	NR 50.32	1,000
PowrServ Quadruplex with 3 Extruded Yellow Stripes (EYS) on Neutral								
Dyke (2-2-2-4) USE-2/RHH/RHW-2 EYS	3 - #2	0.060	#4	0.060	228	349	NR 32.24	1,000
Wake Forest (4/0-4/0-4/0-2/0) USE-2/RHH/RHW-2 EYS	3 - 4/0	0.080	2/0	0.080	724	988	NR 50.32	1,000
Rust (250-250-250-3/0) USE-2/RHH/RHW-2 EYS	3 - 250	0.095	3/0	0.080	866	1190	NR 50.32	1,000
Slippery Rock (350-350-350-4/0) USE-2/RHH/RHW-2 EYS	3 - 350	0.095	4/0	0.080	1166	1544	NR 60.28	1,000

PowrServ® Underground Distribution—Secondary Combined Duct & Cable

Secondary Cable Installed in Extruded High-Density Polyethylene Duct



Product Construction:

Complete Assembly:

PowrServ® Combined Duct & Cable consists of insulated conductor(s) factory installed in a black High-Density Polyethylene (HDPE) conduit. The HDPE conduit is extruded directly over any prior-made single or plexed 600 volt cable assembly.

Complete Cable:

All underground distribution cables in PowrServ are manufactured and tested in accordance with applicable industry standards and/or individual customer specifications. See the appropriate catalog section for a complete cable description.

Conduit:

The high-density polyethylene EPEC-A conduit is manufactured and tested in accordance with NEMA Standard TC7, "Smooth-wall Coilable Electrical Polyethylene Conduit."

Applications:

PowrServ Combined Duct & Cable offers an economical alternative to pulling cable in previously installed short lengths of duct joined with sleeve couplings. The inherent construction advantages and versatility of the PowrServ design are ideally suited for underground secondary distribution systems.

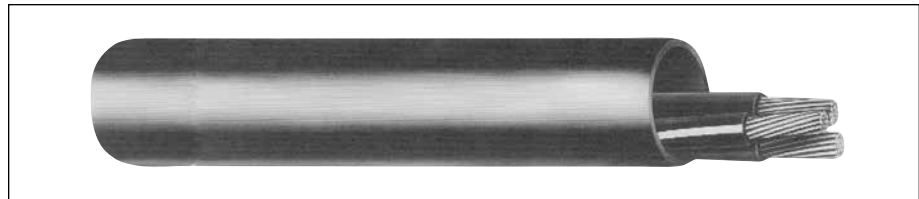
Features and Benefits:

In addition to the initial labor savings achieved from installation of cable and conduit in a single operation, cable replacement costs and ground disruption are significantly less for the PowrServ cable system. Tough, yet light and flexible, high-density polyethylene conduit provides ease of installation and high impact resistance for cable protection.

Options:

- EPEC-B, EPEC-40 or EPEC-80 Smooth-Wall Coilable Electrical Polyethylene Conduit to NEMA TC7
- Gray or red color
- Extruded red stripes

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



POWERSERV COMBINED DUCT & CABLE						
NOMINAL CONDUIT SIZE (INCHES)	MINIMUM I.D. (INCHES)	O.D. (± 0.012") (INCHES)	MINIMUM INSIDE AREA (SQ. INCHES)	APPROX. WEIGHT (LB/1000 FT)	MINIMUM* WALL THICKNESS (INCHES)	MINIMUM BEND RADIUS (INCHES)
1 1/4	1.408	1.660	1.557	240	0.100	18
1 1/2	1.618	1.900	2.056	310	0.115	21
2	2.033	2.375	3.246	475	0.145	26

*The maximum wall thickness is the minimum given above + 0.020 inches.

MAXIMUM CROSS-SECTIONAL AREA OF CONDUCTORS PER CONDUIT					
NOMINAL CONDUIT SIZE (INCHES)	MINIMUM INSIDE AREA (SQ. INCHES)	MAXIMUM TOTAL CROSS-SECTIONAL AREA OF CONDUCTORS (SQUARE INCHES)			
		53% FILL ONE CONDUCTOR	31% FILL TWO CONDUCTORS	40% FILL THREE CONDUCTORS	40% FILL FOUR CONDUCTORS
1 1/4	1.557	0.825	0.483	0.623	0.623
1 1/2	2.056	1.090	0.637	0.822	0.822
2	3.246	1.720	1.006	1.298	1.298

Note: The maximum percent fill used above is based on 1999 National Electrical Code recommendations. Larger fill areas can be furnished when required by the user.

MAXIMUM DIAMETER OF CONDUCTORS PER CONDUIT					
NOMINAL CONDUIT SIZE (INCHES)	MINIMUM I.D. (INCHES)	MAXIMUM DIAMETER OF EACH CONDUCTOR (INCHES)			
		ONE CONDUCTOR	TWO CONDUCTORS	THREE CONDUCTORS	FOUR CONDUCTORS
1 1/4	1.408	1.025	0.555	0.514	0.445
1 1/2	1.618	1.178	0.637	0.591	0.512
2	2.033	1.480	0.800	0.742	0.643

The maximum diameter of each conductor above is based on National Electrical Code recommendations. Larger conductor diameters can be furnished when required by the user. All conductors in the conduit are the same size.

Other conduit sizes may be furnished on request.

PowrServ® OH Service Drop Cable Neutral-Supported

600 V Duplex Al Conductor XLPE Insulation



POWRSERV OH DUPLEX SERVICE DROP—XLPE INSULATION—600 VOLTS

CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET

ALUMINUM 1350 FULL-SIZE NEUTRAL MESSENGER

Pekingese/XP	6	1	.045	6	7	563	0.44	49	61	110	COIL NR 27.18	1000 3600
Collie/XP	6	7	.045	6	7	563	0.45	49	64	110	COIL NR 27.18	1000 3300
Cocker/XP	6	7	0.060	6	7	563	0.48	49	69	110	COIL NR 30.18	1000 3600
Dachshund/XP	4	1	.045	4	7	881	0.53	78	92	145	COIL NR 30.18	1000 2600
Spaniel/XP	4	7	.045	4	7	881	0.55	78	96	145	COIL NR 27.18	1000 2200
Cairn/XP	4	7	0.060	4	7	881	0.58	78	103	145	COIL NR 30.18	1000 2200
Doberman/XP	2	7	.045	2	7	1350	0.67	125	147	195	COIL NR 32.24	500 2500
Airedale/XP	1	19	0.060	1	7	1640	0.76	157	188	225	COIL NR 36.24	500 2500
Basset/XP	1/0	7	0.060	1/0	7	1990	0.84	199	236	260	COIL NR 32.24	500 1500
Malemute/XP	1/0	19	0.060	1/0	7	1990	0.84	199	233	260	COIL NR 32.24	500 1500

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).

(2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.

(3) Normal length and shipping tolerances apply. Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Cable:

Overhead (OH) duplex service drop cable consists of one aluminum conductor insulated with extruded lead-free Cross-linked Polyethylene (XLPE), twisted around a bare conductor which serves as a supporting neutral. Service drop cable meets the requirements of ANSI/ICEA S-76-474.

Insulated Conductors:

The all-aluminum stranded conductors are Class A, Class B, or SIW compressed 1350-H19 aluminum. Solid conductors are H16 temper.

Insulation:

The insulation is black extruded lead-free Cross-linked Polyethylene (XLPE).

Bare Neutral:

The all-aluminum stranded conductors are Class AA or Class A 1350-H19 (AAC) or 6201-T81 alloy (AAAC). The aluminum conductor steel reinforced (ACSR) is Class AA. The direction of lay of the outer layer is right-hand.

Phase Identification:

Phase identification is provided by means of white print legend markings on the phase conductor.

Features and Benefits:

The insulated conductors of service drop cables are resistant to weathering, sunlight, abrasion, tearing, cutting and chemicals. This cable is rated at 600 volts with a maximum conductor operating temperature of 90°C for cross-linked polyethylene insulation.

Applications:

Duplex service drop cable is intended to deliver single phase power from the secondary power line or pole mounted transformer to the service-entrance conductors at the user's building or other structure. It may also be used as pole line secondary with service splices at the pole or in mid-span.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- High-Density Polyethylene (HDPE) insulation, 75°C rating
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.

PowrServ® OH Service Drop Cable Neutral-Supported

600 V Duplex Al Conductor XLPE Insulation



POWRSERV OH DUPLEX SERVICE DROP—XLPE INSULATION—600 VOLTS

CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET

ACSR FULL-SIZE NEUTRAL MESSENGER

Setter/XP	6	1	.045	6	6/1	1190	0.45	49	72	110	COIL NR 27.18	1000 3300
Shepherd/XP	6	7	.045	6	6/1	1190	0.47	49	75	110	COIL NR 30.18	1000 3300
Retriever/XP	6	7	0.060	6	6/1	1190	0.50	49	80	110	COIL NR 30.18	1000 3300
Eskimo/XP	4	1	.045	4	6/1	1860	0.54	78	110	145	COIL NR 27.18	1000 2400
Terrier/XP	4	7	.045	4	6/1	1860	0.57	78	115	145	COIL NR 30.18	1000 2400
Yorkshire/XP	4	7	0.060	4	6/1	1860	0.60	78	121	145	COIL NR 30.18	1000 2400
Chow/XP	2	7	.045	2	6/1	2850	0.69	125	177	195	COIL NR 32.24	500 2400
Labrador/XP	1	19	0.060	1	6/1	3550	0.79	157	225	225	COIL NR 36.24	500 2400
Bloodhound/XP	1/0	7	0.060	1/0	6/1	4380	0.87	198	283	260	COIL NR 32.24	500 1500
Bull/XP	1/0	19	0.060	1/0	6/1	4380	0.87	198	279	260	COIL NR 32.24	500 1500

ALUMINUM 6201-T81 FULL-SIZE NEUTRAL MESSENGER

Chihuahua/XP	6	1	.045	30.58	7	1110	0.45	53	65	110	COIL NR 27.18	1000 3600
Vizsla/XP	6	7	.045	30.58	7	1110	0.47	53	67	110	COIL NR 27.18	1000 3300
Harrier/XP	4	1	.045	48.69	7	1760	0.54	84	98	145	COIL NR 30.18	1000 2600
Whippet/XP	4	7	.045	48.69	7	1760	0.57	85	103	145	COIL NR 27.18	1000 2200
Schnauzer/XP	2	7	.045	77.47	7	2800	0.69	135	157	195	COIL NR 32.24	500 2500
Afghan/XP	1/0	7	0.060	123.3	7	4270	0.87	215	252	260	COIL NR 32.24	500 1500
Heeler/XP	1/0	19	0.060	123.3	7	4270	0.87	215	249	260	COIL NR 32.24	500 500

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).

(2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.

(3) Normal length and shipping tolerances apply. Reel sizes may vary. MasterPak® reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® OH Service Drop Cable Neutral-Supported

600 V Triplex Al Conductor XLPE Insulation



POWRSERV OH TRIPLEX SERVICE DROP - XLPE INSULATION - 600 VOLTS

CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET

ALUMINUM 1350 FULL-SIZE NEUTRAL MESSENGER

Haiotis/XP	6	1	0.045	6	7	563	0.50	73	97	110	COIL NR 30.18	1000 2500
Patella/XP	6	7	0.045	6	7	563	0.53	74	102	110	COIL NR 30.18	1000 2200
Oyster/XP	4	7	0.045	4	7	881	0.63	118	153	145	COIL NR 30.18	500 1500
Clam/XP	2	7	0.045	2	7	1350	0.76	187	232	195	COIL NR 32.24	500 1800
Pyrula/XP	1	7	0.060	1	7	1640	0.90	236	305	225	COIL NR 36.24	500 1500
Hyas/XP	1	19	0.060	1	7	1640	0.87	236	297	225	COIL NR 36.24	500 1500
Murex/XP	1/0	7	0.060	1/0	7	1990	0.97	298	373	260	COIL NR 36.24	500 1200
Purpura/XP	1/0	19	0.060	1/0	7	1990	0.96	298	366	260	COIL NR 36.24	500 1200
Nassa/XP	2/0	7	0.060	2/0	7	2510	1.06	375	461	300	NR 42.26	1500
Trophon/XP	2/0	19	0.060	2/0	7	2510	1.05	375	451	300	NR 42.26	1500
Melita/XP	3/0	19	0.060	3/0	19	3310	1.16	473	558	350	NR 42.26	1300
Coquina/XP	4/0	7	0.060	4/0	7	3830	1.29	597	708	405	NR 42.26	1000
Portunus/XP	4/0	19	0.060	4/0	19	4020	1.29	597	693	405	NR 42.26	1000

ALUMINUM 1350 REDUCED-SIZE NEUTRAL MESSENGER

Limpet/XP	4	7	0.045	6	7	563	0.60	102	137	145	COIL NR 30.18	500 1500
Mussel/XP	2	7	0.045	4	7	881	0.72	164	209	195	COIL NR 32.24	500 1800
Snail/XP	1/0	7	0.060	2	7	1350	0.92	261	337	260	COIL NR 32.24	500 1200

- (1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.
 (3) Normal length and shipping tolerances apply. Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Cable:

Overhead (OH) triplex service drop cable consists of two aluminum conductors insulated with extruded lead-free Cross-linked Polyethylene (XLPE), twisted around a bare conductor which serves as a supporting neutral. Service drop cable meets the requirements of ANSI/ICEA S-76-474.

Insulated Conductors:

The all-aluminum stranded conductors are Class A, Class B, or SIW compressed 1350-H19 aluminum. Solid conductors are H16 temper.

Insulation:

The insulation is black extruded lead-free Cross-linked Polyethylene (XLPE).

Bare Neutral:

The all-aluminum stranded conductors are Class AA or Class A 1350-H19 (AAC) or 6201-T81 alloy (AAAC). The aluminum conductor steel reinforced (ACSR) is Class AA. The direction of lay of the outer layer is right-hand.

Phase Identification:

Phase identification is provided by means of white print legend markings on one phase conductor.

Features and Benefits:

The insulated conductors of service drop cables are resistant to weathering, sunlight, abrasion, tearing, cutting and chemicals. This cable is rated at 600 volts with a maximum conductor operating temperature of 90°C for cross-linked polyethylene insulation.

Applications:

Triplex service drop cable is intended to deliver 3-wire single phase power from the secondary power line or pole mounted transformer to the service-entrance conductors at the user's building or other structure. It may also be used as pole line secondary with service splices at the pole or in mid-span.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- High-Density Polyethylene (HDPE) insulation, 75°C rating
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.

PowrServ® OH Service Drop Cable Neutral-Supported

600 V Triplex Al Conductor XLPE Insulation



POWRSERV OH TRIPLEX SERVICE DROP - XLPE INSULATION - 600 VOLTS

CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET

ACSR FULL-SIZE NEUTRAL MESSENGER

Paludina/XP	6	1	0.045	6	6/1	1190	0.51	73	108	110	COIL NR 30.18	1000 2500
Voluta/XP	6	7	0.045	6	6/1	1190	0.54	74	114	110	COIL NR 30.18	1000 2200
Whelk/XP	4	1	0.045	4	6/1	1860	0.61	116	163	145	COIL NR 30.18	500 1700
Weakfish/XP	4	1	0.045	4	7/1	2360	0.62	116	173	145	COIL NR 30.18	500 1500
Periwinkle/XP	4	7	0.045	4	6/1	1860	0.64	118	172	145	COIL NR 30.18	500 1500
Conch/XP	2	7	0.045	2	6/1	2850	0.77	187	262	195	COIL NR 36.24	500 1800
Vermeths/XP	1	7	0.060	1	6/1	3550	0.91	236	342	225	COIL NR 36.24	500 1500
Atya/XP	1	19	0.060	1	6/1	3550	0.89	236	334	225	COIL NR 36.24	500 1500
Neritina/XP	1/0	7	0.060	1/0	6/1	4380	0.99	297	420	260	COIL NR 36.24	500 1200
Cenia/XP	1/0	19	0.060	1/0	6/1	4380	0.98	297	413	260	COIL NR 36.24	500 1200
Runcina/XP	2/0	7	0.060	2/0	6/1	5300	1.09	375	520	300	NR 42.26	1500
Triton/XP	2/0	19	0.060	2/0	6/1	5300	1.08	375	510	300	NR 42.26	1500
Cherrystone/XP	3/0	7	0.060	3/0	6/1	6620	1.20	472	644	350	NR 42.26	1300
Mursia/XP	3/0	19	0.060	3/0	6/1	6620	1.19	472	632	350	NR 42.26	1300
Razor/XP	4/0	7	0.060	4/0	6/1	8350	1.32	596	801	405	NR 42.26	1000
Zuzara/XP	4/0	19	0.060	4/0	6/1	8350	1.31	596	786	405	NR 42.26	1000

ACSR REDUCED-SIZE NEUTRAL MESSENGER

Scallop/XP	4	1	0.045	6	6/1	1190	0.58	101	142	145	COIL NR 30.18	500 1700
Strombus/XP	4	7	0.045	6	6/1	1190	0.61	103	150	145	COIL NR 30.18	500 1500
Cockle/XP	2	7	0.045	4	6/1	1860	0.73	164	228	195	COIL NR 32.24	500 1800
Janthina/XP	1/0	7	0.060	2	6/1	2850	0.93	261	366	260	COIL NR 32.24	500 1200
Ranella/XP	1/0	19	0.060	2	6/1	2850	0.92	261	358	260	COIL NR 36.24	500 1200
Cavolina/XP	2/0	7	0.060	1	6/1	3550	1.02	329	452	300	NR 40.24	1500
Clio/XP	2/0	19	0.060	1	6/1	3550	1.01	329	442	300	NR 40.24	1500
Sanddollar/XP	3/0	7	0.060	1/0	6/1	4380	1.13	414	558	350	NR 40.24	1300
Aega/XP	3/0	19	0.060	1/0	6/1	4380	1.12	414	547	350	NR 40.24	1300
Cuttlefish/XP	4/0	7	0.060	2/0	6/1	5300	1.24	522	692	405	NR 40.24	1000
Cerapus/XP	4/0	19	0.060	2/0	6/1	5300	1.23	522	677	405	NR 40.24	1000

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).

(2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.

(3) Normal length and shipping tolerances apply. Reel sizes may vary. MasterPak® reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® OH Service Drop Cable Neutral-Supported

600 V Triplex Al Conductor XLPE Insulation



POWRSERV OH TRIPLEX SERVICE DROP - XLPE INSULATION - 600 VOLTS												
CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET
ALUMINUM 6201-T81 FULL-SIZE NEUTRAL MESSENGER												
Hippa/XP	6	7	0.045	30.58	7	1110	0.54	78	106	110	COIL NR 30.18	1000 2200
Barnacles/XP	4	7	0.045	48.69	7	1760	0.64	124	160	145	COIL NR 30.18	500 1500
Shrimp/XP	2	7	0.045	77.47	7	2800	0.77	197	242	195	COIL NR 32.24	500 1800
Gammarus/XP	1/0	7	0.060	123.3	7	4280	0.99	313	389	260	COIL NR 36.24	500 1200
Leda/XP	1/0	19	0.060	123.3	7	4280	0.98	313	382	260	COIL NR 36.24	500 1200
Dungeness/XP	2/0	7	0.060	155.4	7	5390	1.09	395	481	300	NR 42.26	1500
Cyclops/XP	2/0	19	0.060	155.4	7	5390	1.08	395	472	300	NR 42.26	1500
Flustra/XP	3/0	19	0.060	195.7	7	6790	1.19	497	584	350	NR 42.26	1300
Lepas/XP	4/0	19	0.060	246.9	7	8560	1.31	627	724	405	NR 42.26	1000
6201-T81 REDUCED-SIZE NEUTRAL MESSENGER												
Artemia/XP	4	1	0.045	30.58	7	1110	0.58	106	134	145	COIL NR 30.18	500 1700
Crab/XP	4	7	0.045	30.58	7	1110	0.61	107	143	145	COIL NR 30.18	500 1500
Solaster/XP	2	7	0.045	48.69	7	1760	0.73	170	215	195	COIL NR 32.24	500 1800
Sandcrab/XP	1/0	7	0.060	77.47	7	2800	0.93	271	347	260	COIL NR 36.24	500 1200
Fulgar/XP	3/0	19	0.060	123.3	7	4280	1.12	431	516	350	NR 40.24	1300
Squid/XP	4/0	7	0.060	155.4	7	5390	1.24	543	654	405	NR 40.24	1000
Arca/XP	4/0	19	0.060	155.4	7	5390	1.23	543	639	405	NR 40.24	1000

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire per ASTM B901.

(2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.

(3) Normal length and shipping tolerances apply. Reel sizes may vary. MasterPak® reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® OH Service Drop Cable Neutral-Supported

600 V Quadruplex Al Conductor XLPE Insulation



Product Construction:

Complete Cable:

Overhead (OH) quadruplex service drop cable consists of three aluminum conductors insulated with extruded lead-free Cross-linked Polyethylene (XLPE), twisted around a bare conductor which serves as a supporting neutral. Service drop cable meets the requirements of ANSI/ICEA S-76-474.

Insulated Conductors:

The all-aluminum stranded conductors are Class A, Class B, or SIW compressed 1350-H19 aluminum. Solid conductors are H16 temper.

Insulation:

The insulation is black extruded lead-free Cross-linked Polyethylene (XLPE).

Bare Neutral:

The all-aluminum stranded conductors are Class AA or Class A 1350-H19 (AAC) or 6201-T81 alloy (AAAC). The aluminum conductor steel reinforced (ACSR) is Class AA. The direction of lay of the outer layer is right-hand.

Phase Identification:

Phase identification is provided by means of white print legend markings on one phase conductor, one rib on another phase conductor, and two ribs on another phase conductor.

Features and Benefits:

The insulated conductors of service drop cables are resistant to weathering, sunlight, abrasion, tearing, cutting and chemicals. This cable is rated at 600 volts with a maximum conductor operation temperature of 90°C for cross-linked polyethylene insulation.

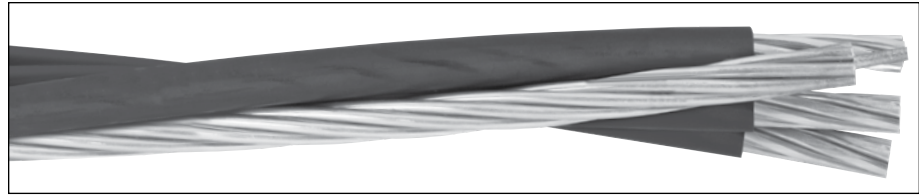
Applications:

Quadruplex service drop cable is intended to deliver 4-wire three phase power from the secondary power line or pole-mounted transformer to the service-entrance conductors at the user's building or other structure. It may also be used as pole line secondary with service splices at the pole or in mid-span.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- High-Density Polyethylene (HDPE) insulation, 75°C rating
- MasterPak® reel-less packaging

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



POWRSERV OH QUADRUPLEX SERVICE DROP - XLPE INSULATION - 600 VOLTS												
CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET

ALUMINUM 1350 FULL-SIZE NEUTRAL MESSENGER

Quarter/XP	6	1	0.045	6	7	563	0.57	97	133	105	COIL NR 32.24	500 2500
Clydesdale/XP	4	1	0.045	4	7	881	0.67	155	197	135	COIL NR 32.24	500 1700
Pinto/XP	4	7	0.045	4	7	881	0.71	157	210	135	COIL NR 32.24	500 1700
Mustang/XP	2	7	0.045	2	7	1350	0.85	250	317	175	NR 40.24	1800
Shire/XP	1	19	0.060	1	7	1640	1.00	315	408	205	NR 40.24	1500
Libyan/XP	1/0	7	0.060	1/0	7	1990	1.09	397	510	240	NR 40.24	1200
Criollo/XP	1/0	19	0.060	1/0	7	1990	1.08	397	499	240	NR 40.24	1200
Orloff/XP	2/0	7	0.060	2/0	7	2510	1.20	501	629	280	NR 45.28	1500
Percheron/XP	2/0	19	0.060	2/0	7	2510	1.19	501	614	280	NR 45.28	1500
Mongolian/XP	3/0	7	0.060	3/0	7	3040	1.32	631	776	325	NR 45.28	1300
Hanoverian/XP	3/0	19	0.060	3/0	19	3310	1.31	631	758	325	NR 45.28	1300
Singlefoot/XP	4/0	7	0.060	4/0	7	3830	1.45	796	962	375	NR 50.32	1100
Oldenberg/XP	4/0	19	0.060	4/0	19	4020	1.44	796	939	375	NR 50.32	1100

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.
 (3) Normal length and shipping tolerances apply. Reel sizes may vary. MasterPak reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® OH Service Drop Cable Neutral-Supported

600 V Quadruplex Al Conductor XLPE Insulation



POWRSERV OH QUADRUPLEX SERVICE DROP - XLPE INSULATION - 600 VOLTS												
CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET

ACSR FULL-SIZE NEUTRAL MESSENGER

Morchuca/XP	6	1	0.045	6	6/1	1190	0.58	97	144	105	COIL NR 32.24	500 2500
Chola/XP	6	7	0.045	6	6/1	1190	0.61	99	153	105	COIL NR 32.24	500 2500
Morgan/XP	4	1	0.045	4	6/1	1860	0.69	154	216	135	COIL NR 32.24	500 1700
Hackney/XP	4	7	0.045	4	6/1	1860	0.72	157	229	135	COIL NR 32.24	500 1700
Palomino/XP	2	7	0.045	2	6/1	2850	0.87	249	347	175	NR 40.24	1800
Albino/XP	1	19	0.060	1	6/1	3550	1.02	314	446	205	NR 40.24	1500
Standardbred/XP	1/0	7	0.060	1/0	6/1	4380	1.11	397	557	240	NR 42.26	1200
Costena/XP	1/0	19	0.060	1/0	6/1	4380	1.10	397	546	240	NR 42.26	1200
Chicoteagues/XP	2/0	7	0.060	2/0	6/1	5300	1.22	500	688	280	NR 45.28	1500
Grullo/XP	2/0	19	0.060	2/0	6/1	5300	1.20	500	673	280	NR 45.28	1500
Mare/XP	3/0	7	0.060	3/0	6/1	6620	1.34	630	850	325	NR 50.32	1300
Suffolk/XP	3/0	19	0.060	3/0	6/1	6620	1.32	630	833	325	NR 50.32	1300
Stallion/XP	4/0	7	0.060	4/0	6/1	8350	1.48	795	1055	375	NR 50.32	1100
Appaloosa/XP	4/0	19	0.060	4/0	6/1	8350	1.46	795	1033	375	NR 50.32	1100

ALUMINUM 6201-T81 FULL-SIZE NEUTRAL MESSENGER

Arabian/XP	4	7	0.045	48.69	7	1760	0.72	163	217	135	COIL NR 32.24	500 1700
Belgian/XP	2	7	0.045	77.47	7	2800	0.87	260	327	175	NR 40.24	1800
Shetland/XP	1/0	19	0.060	123.3	7	4270	1.10	413	515	240	NR 40.24	1200
Thoroughbred/XP	2/0	19	0.060	155.4	7	5390	1.20	521	635	280	NR 45.28	1500
Trotter/XP	3/0	19	0.060	195.7	7	6790	1.32	656	784	325	NR 50.32	1300
Walking/XP	4/0	19	0.060	246.9	7	8560	1.46	828	971	375	NR 50.32	1100

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).

(2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.

(3) Normal length and shipping tolerances apply. Reel sizes may vary. MasterPak® reel-less packaging is available - see Section 6 for description and typical dimensions for selected low-voltage products.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® OH Secondary Cable Neutral-Supported Type RTS

600 V Triplex Al Conductor XLPE Insulation Reverse Twist Secondary (RTS)



Product Construction:

Complete Cable:

Reverse Twist Secondary (RTS) cable consists of two aluminum conductors insulated with extruded lead-free Cross-linked Polyethylene (XLPE), reverse twisted around an aluminum alloy or ACSR conductor which serves as a supporting neutral. RTS cable meets the requirements of ANSI/ICEA S-76-474. Conductors meet ASTM B231, B232 and B399 as applicable.

Insulated Conductors:

The all-aluminum stranded conductors are Class A, Class B, or SIW compressed 1350-H19 aluminum.

Insulation:

The insulation is black extruded lead-free Cross-linked Polyethylene (XLPE).

Bare Neutral:

The all-aluminum alloy stranded conductors are Class AA or Class A 6201-T81 aluminum alloy (AAAC). The aluminum conductor steel reinforced (ACSR) is Class AA. The outer layer is right-hand.

Lashing Wire:

Aluminum 1350 wire, either flat wire approximately #10 AWG with beveled edges or #10 AWG wire covered with high-density polyethylene.

Features and Benefits:

The insulated conductors of RTS cables are resistant to weathering, sunlight, abrasion, tearing, cutting and chemicals. Conventional equipment can be used to string RTS. This cable is rated at 600 volts with a maximum conductor operations temperature of 90°C for extruded cross-linked polyethylene insulation.

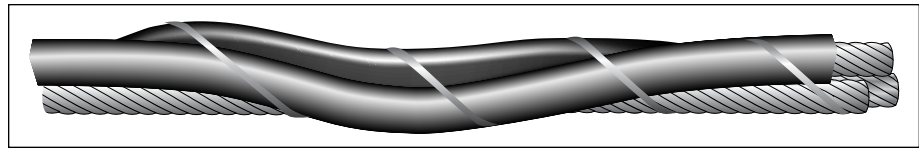
Applications:

Reverse twist secondary cable is used as a secondary overhead distribution cable for 3-wire single phase power. The alternating lay direction (left-right-left) provides additional cable length for mid-span taps.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- High-Density Polyethylene (HDPE) insulation, 75°C rating

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.



POWRSERV OH TRIPLEX REVERSE TWIST SECONDARY - XLPE INSULATION - 600 VOLTS

CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			EFF. O.D. INCHES	APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG	NO. OF WIRES	RATED STRG. POUNDS		AL	TOTAL		TYPE & SIZE	LENGTH FEET

ALUMINUM 6201-T81 FULL-SIZE NEUTRAL MESSENGER

Pope/XP	2	7	0.045	77.47	7	2800	0.77	197	242	195	NR 32.24 NR 42.26	1100 2100
Auburn/XP	1/0	7	0.060	123.3	7	4270	0.98	314	382	260	NR 40.24 NR 50.32	1100 2500
Rockne/XP	2/0	7	0.060	155.4	7	5390	1.08	396	472	300	NR 40.24 NR 50.32	1000 2000
Case/XP	3/0	7	0.060	195.7	7	6790	1.19	499	584	350	NR 42.26 NR 58.32	1000 2500
Durant/XP	4/0	7	0.060	246.9	7	8560	1.31	629	724	405	NR 50.32 NR 66.36 NR 66.36	1300 2700 3400
-none-	266.8	19	0.080	312.8	19	10500	1.54	794	941	470	NR 66.36 NR 66.36	1600 2400
-none-	336.4	19	0.080	394.5	19	13300	1.70	1002	1167	550	NR 66.36 NR 66.36	1500 2000
-none-	397.5	19	0.080	465.4	19	15600	1.83	1183	1363	610	NR 66.36 NR 66.36	1200 1600

ACSR FULL-SIZE NEUTRAL MESSENGER

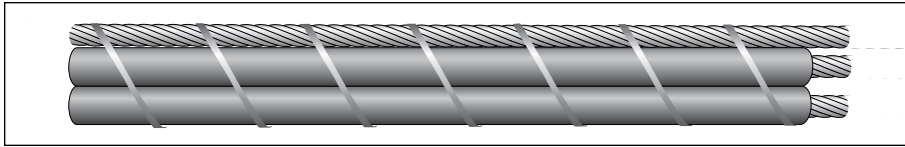
Edsel/XP	2	7	0.045	2	6/1	2850	0.77	187	262	195	NR 32.24 NR 42.26	1100 2100
Essex/XP	1/0	7	0.060	1/0	6/1	4380	0.98	297	413	260	NR 40.24 NR 50.32	1100 2500
Cord/XP	2/0	7	0.060	2/0	6/1	5300	1.08	375	510	300	NR 40.24 NR 50.32	1000 2000
Stutz/XP	3/0	7	0.060	3/0	6/1	6620	1.19	472	632	350	NR 42.26 NR 58.32	1000 2500
Reo/XP	4/0	7	0.060	4/0	6/1	8350	1.31	596	786	405	NR 50.32 NR 66.36 NR 66.36	1300 2700 3400
-none-	266.8	19	0.080	266.8	26/7	11300	1.54	754	1018	470	NR 66.36 NR 66.36	1600 2400
-none-	336.4	19	0.080	336.4	26/7	14100	1.70	950	1263	550	NR 66.36 NR 66.36	1500 2000
-none-	397.5	19	0.080	397.5	26/7	16300	1.83	1123	1477	610	NR 66.36 NR 66.36	1200 1600

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.
 (3) Normal length and shipping tolerances apply. Reel sizes may vary.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrServ® OH Secondary Cable Neutral-Supported Type PLAC

600 V Triplex Al Conductor XLPE Insulation Parallel Secondary (PLAC)



POWRSERV OH TRIPLEX PARALLEL SECONDARY - XLPE INSULATION - 600 VOLTS

CODE WORD	PHASE CONDUCTOR			NEUTRAL CONDUCTOR			O.D. INCHES		APPROX. WEIGHT LB/1000 FT		AMPS (2)	PACKAGING (3)	
	SIZE AWG OR kcmil	NO. OF WIRES (1)	INS. THKN. INCHES	SIZE AWG OR kcmil	NO. OF WIRES	RATED STRG. POUNDS	MINOR	MAJOR	AL	TOTAL		TYPE & SIZE	LENGTH FEET
ALUMINUM 6201-T81 FULL-SIZE NEUTRAL MESSENGER													
Fire Island/XP	2	7	0.045	77.47	7	2800	0.37	1.06	197	242	195	NR 40.26 NR 42.26	2100 3000
Hot Springs/XP	1/0	7	0.060	123.3	7	4270	0.47	1.34	314	382	260	NR 42.26 NR 50.32	2000 3500
Mesa Verde/XP	2/0	7	0.060	155.4	7	5390	0.52	1.48	396	472	300	NR 45.28 NR 50.32	1800 3010
Padre island/XP	3/0	7	0.060	195.7	7	6790	0.56	1.63	499	584	350	NR 42.26 NR 50.32	1560 2690
Tumacacori/XP	4/0	7	0.060	246.9	7	8560	0.62	1.80	629	724	405	NR 45.28 NR 50.32 NR 58.32	1290 2100 2960
-none-	266.8	19	0.080	312.8	19	10500	0.73	2.11	794	941	470	NR 42.26 NR 50.32 NR 66.36 NR 72.36	930 1585 2730 3700
-none-	336.4	19	0.080	394.5	19	13300	0.81	2.33	1002	1167	550	NR 50.32 NR 66.36 NR 66.36	1260 2390 3000
-none-	397.5	19	0.080	465.4	19	15600	0.86	2.51	1183	1363	610	NR 50.32 NR 66.36 NR 72.36	1050 2050 2600

ACSR FULL-SIZE NEUTRAL MESSENGER

Flathead/XP	2	7	0.045	2	6/1	2850	0.37	1.06	187	262	195	NR 40.26 NR 42.26	2100 3000
Homochitto/XP	1/0	7	0.060	1/0	6/1	4380	0.47	1.34	297	413	260	NR 42.26 NR 50.32	2000 3500
Malheur/XP	2/0	7	0.060	2/0	6/1	5300	0.52	1.48	375	510	300	NR 45.28 NR 50.32	1800 3010
Payette/XP	3/0	7	0.060	3/0	6/1	6620	0.56	1.63	472	632	350	NR 42.26 NR 50.32	1560 2690
Teton/XP	4/0	7	0.060	4/0	6/1	8350	0.62	1.80	596	786	405	NR 45.28 NR 50.32 NR 58.32	1290 2100 2960
-none-	266.8	19	0.060	266.8	26/7	11300	0.73	2.11	754	1018	470	NR 42.26 NR 50.32 NR 66.36 NR 72.36	930 1585 2730 3700
-none-	336.4	19	0.060	336.4	26/7	14100	0.81	2.33	950	1263	550	NR 50.32 NR 66.36 NR 66.36	1260 2390 3000
-none-	397.5	19	0.060	397.5	26/7	16300	0.86	2.51	1123	1477	610	NR 50.32 NR 66.36 NR 72.36	1050 2050 2600

(1) Actual number of wires may differ for compressed round stranded aluminum conductors using single input wire (SIW).
 (2) Ampacities are based on conductor temperature of 65°C over 25°C ambient, 2 ft/sec crosswind, .9 coefficient of emissivity, no sun. For specific ampacities, contact your General Cable sales representative.
 (3) Normal length and shipping tolerances apply. Reel sizes may vary.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Cable:

Triplex Parallel Lashed Aerial Cable (PLAC) consists of two aluminum conductors insulated with extruded lead-free Cross-linked Polyethylene, and one bare aluminum alloy or an ACSR conductor laid parallel to each other. The bare conductor, which serves as a supporting neutral, is in the outside position. The cable is bound together with lashing wire with a lay of from four to six inches.

Type PLAC cable meets the requirements of ANSI/ICEA S-76-474.

Insulated Conductors:

The all-aluminum stranded conductors are Class A, Class B, or SIW compressed 1350-H19 aluminum.

Insulation:

The insulation is black extruded lead-free Cross-linked Polyethylene (XLPE).

Bare Neutral:

The all-aluminum alloy stranded conductors are Class AA or Class A 6201-T81 aluminum alloy (AAAC). The aluminum conductor steel reinforced (ACSR) is Class AA. The outer layer is right-hand.

Lashing Wire:

Aluminum 1350 wire, either flat wire approximately #10 AWG with beveled edges or #10 AWG wire covered with high-density polyethylene.

Features and Benefits:

The insulated conductors are of Type PLAC cables and are resistant to weathering, sunlight, abrasion, tearing, cutting and chemicals. This cable is rated at 600 volts with a maximum conductor operations temperature of 90°C for cross-linked polyethylene insulation.

Applications:

Triplex parallel lashed aerial cable is used as a secondary overhead distribution cable for 3-wire single phase power.

Options:

- Aluminum 1350-H16 or H26 (¾ Hard) stranded conductor
- Copper conductors
- High-molecular-weight Polyethylene (PE) insulation, 75°C rating
- High-Density Polyethylene (HDPE) insulation, 75°C rating

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.

MasterPak[®]

Reel Sustainability, Real Savings

Reel-less Solution for PowrServ[®] Low-Voltage Service Drop and Secondary Distribution Cables

The MasterPak[®] reel-less packaging concept, originally developed through strategic alliances and partnerships with our utility customers, was introduced in the mid 90s as a means of helping utilities with the growing concern of disposal and landfill costs. Nearly two decades later, this innovative method continues to allow General Cable's PowrServ insulated aluminum low-voltage cable to be packaged and shipped without the weight of traditional wood reels.

Since 2003, MasterPak reel-less packaging has saved more than 12,183 trees and 37,647 cubic yards of unused landfill space while providing utilities with more than \$1,462,000 in savings!



SAVINGS • SUSTAINABILITY • SAFETY

Your Sustainability Partner

As a global leader in the wire and cable industry, General Cable recognizes its role and responsibility in promoting sustainability and creating shared value in our business decisions, focusing on what is good for us as a company, the environment and our valued customers.

We continually strive to reduce our environmental impact while supporting cost-effective sustainability and safety for our customers by incorporating responsible practices into our daily business and delivering innovative solutions.

Part of General Cable's comprehensive programs to reduce, reuse and recycle the materials required to manufacture and deliver our wire and cable products wherever possible, the MasterPak reel-less packaging solution for our PowrServ® service drop and secondary distribution cables is another example of our longstanding commitment.

This simple, innovative concept combats environmental degradation, conserves natural resources and maintains safe workplaces—all while extending real savings in material, transportation, storage and landfill costs to our longstanding utility customers.

The MasterPak® Concept

The MasterPak coil of PowrServ cable is supplied using exact dimensions, tightly secured by a corrugated protector, sturdy plastic banding and covered by stretch-wrap, providing utilities with 360° smooth payoff of the cable from reusable plastic breakdown reels or domes.* Both methods allow for simple and efficient dispensing of the cable for installation in the field. At approximately 150 pounds less than traditional product packaged on wood reels, MasterPak coils are also easy to handle.

** Plastic reels and domes are supplied by other manufacturers and are not products of General Cable. Please contact your local General Cable sales representatives for further details.*

MasterPak®—The Green Choice

FEATURES AND BENEFITS

Compared with the wood reel, MasterPak offers utilities several savings, sustainability and safety advantages:



Long-term cost savings by eliminating the cost associated with landfill disposal.



Environmental sustainability by saving thousands of trees and reducing landfill waste. Plastic reels can be reused up to 200 times and recycled at the end of their life.



Minimized cable waste and material scrap by eliminating collection, transportation and disposal costs of used wood reels. Cable remnants can be recovered for additional use or salvage.



Reduced handling and storage with durable MasterPak coils weighing approximately 150 pounds less than traditional product packaged on wood reels, maximizing freight capacity and offering the use of smaller vehicles for loading and unloading.

MasterPak® Material Handling & Storage

Each MasterPak reel-less coil of General Cable's PowrServ cable is tightly secured by a corrugated liner, sturdy plastic banding and covered by stretch-wrap for improved protection during storage. MasterPak coils may be shipped either unstacked by flatbed truck or in a 3-coil pyramid configuration by enclosed tractor-trailer. MasterPak coils in the pyramid configuration may be unloaded three at a time using a fork truck attachment or similar method.

Reusable Plastic Reel



Plastic Dome

The placement of a MasterPak coil on a plastic dome is accomplished in 4 easy steps:

1. Place the MasterPak coil in a rack.
2. Slide the dome through the MasterPak coil opening.
3. Using a lifting eye, place the dome in an upright position onto a turntable.
4. Remove the plastic wrap, straps and corrugated liner from the coil.

The **MasterPak®** coil of cable is now ready for installation.

Let's Do The Math! You can **SAVE** when using **MasterPak®** annually!

By replacing **350** wood reels annually with MasterPaks, a utility customer can save more than **117** trees and **361** cubic yards of unused landfill space, while providing crews with ease of handling and saving more than **\$14,000** in annual disposal fees.*

*Estimated landfill space and average \$40 disposal cost provided by Sonoco.



=



+

361 CUBIC YARDS
UNUSED LANDFILL SPACE

+

SAVE



**DISPOSAL
FEES**

Contact your General Cable sales representative **TODAY** to learn how **YOU** can meet your sustainability goals with the **MasterPak®** reel-less packaging solution.



MasterPak® Reel-less Packaging

MasterPak® Reel-less Package

Reel-less Solution for PowrServ® Low-Voltage Service Drop and Secondary Distribution Cables

The MasterPak reel-less packaging concept, originally developed through strategic alliances and partnerships with our utility customers, was introduced in the mid 90s as a means of helping utilities with the growing concern of disposal and landfill costs. Nearly two decades later, this innovative method continues to allow General Cable's PowrServ insulated aluminum low-voltage cable to be packaged and shipped without the weight of traditional wood reels.

The MasterPak coil of PowrServ cable is supplied using exact dimensions, tightly secured by a corrugated protector, sturdy plastic banding and covered by stretch-wrap, providing utilities with 360° smooth payoff of the cable from reusable plastic breakdown reels or domes.* Both methods allow for simple and efficient dispensing of the cable for installation in the field. At approximately 150 pounds less than traditional product packaged on wood reels, MasterPak coils are also easy to handle.

* Plastic reels and domes are supplied by other manufacturers and are not products of General Cable. Please contact your local General Cable sales representatives for further details.

Features & Benefits:

Compared with the wood reel, MasterPak offers utilities several savings, sustainability and safety advantages:

- Long-term cost savings by eliminating the cost associated with landfill disposal.
- Environmental sustainability by saving thousands of trees and reducing landfill waste. Plastic reels can be reused up to 200 times and recycled at the end of their life.
- Minimized cable waste and material scrap by eliminating collection, transportation and disposal costs of used wood reels. Cable remnants can be recovered for additional use or salvage.
- Reduced handling and storage with durable MasterPak coils weighing approximately 150 pounds less than traditional product packaged on wood reels, maximizing freight capacity and offering the use of smaller vehicles for loading and unloading.

For further information on General Cable MasterPak reel-less packaging, please consult your local representative.

CODE WORD	MAXIMUM PACKAGE SIZE 42" REUSABLE REEL OR DOME*			MAXIMUM PACKAGE SIZE 48" REUSABLE REEL**		
	LENGTH FEET	WEIGHT POUNDS	OUTER DIA. INCHES	LENGTH FEET	WEIGHT POUNDS	OUTER DIA. INCHES

PowerServ® OH Duplex Service Drop Cable Neutral-Supported 600 V AI Conductor XLPE Insulation – ACSR Full-Size Neutral Messenger

Shepherd/XLP	14000	1078	40.0	19000	1463	45.3
Terrier/XLP	10000	1170	39.8	14000	1638	46.0

PowerServ® OH Triplex Service Drop Cable Neutral-Supported 600 V AI Conductor XLPE Insulation – ACSR Full-Size Neutral Messenger

Periwinkle/XLP	5300	928	39.7	7550	1321	46.0
Conch/XLP	3300	878	39.9	4650	1237	46.0
Neritina/XLP	2000	850	40.0	2800	1190	46.0
Runcina/XLP	1700	898	40.0	2400	1267	46.0
Zuzara/XLP	1150	909	39.7	1650	1304	46.1

PowerServ® OH Triplex Service Drop Cable Neutral-Supported 600 V AI Conductor XLPE Insulation – ACSR Reduced-Size Messenger

Cockle/XLP	3800	882	39.9	5350	1241	45.9
Janthina/XLP	2300	853	40.0	3200	1187	45.8

PowerServ® OH Quadruplex Service Drop Cable Neutral-Supported 600 V AI Conductor XLPE Insulation – ACSR Full-Size Messenger

Palomino/XLP	2000	710	40.0	2750	976	45.7
Costena/XLP	1200	668	40.0	1650	919	45.7
Appaloosa/XLP	700	732	40.0	1000	1045	46.3

PowerServ® XL Underground Distribution Cable Type USE-2 600 V Triplex AI Conductor XLPE Insulation UL Listed

Stephens/XLP/EYS	2850	755	40.0	4000	1060	46.0
Brenau/XLP/EYS	2000	790	40.0	2750	1086	45.9
Converse/XLP/EYS	1500	731	40.0	2000	974	45.3
Sweetbriar/XLP/EYS	1000	718	39.4	1450	1041	45.9
Monmouth/XLP/EYS	1000	805	39.4	1450	1167	45.9
Wesleyan/XLP/EYS	750	852	40.0	1050	1193	46.0

PowerServ® XL Underground Distribution Cable Type USE-2 600 V Quadruplex AI Conductor XLPE Insulation UL Listed

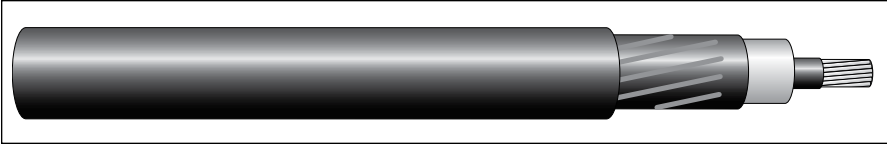
Notre Dame/XLP/EYS	1150	633	39.7	1650	908	46.0
Wake Forest/XLP/EYS	600	596	39.5	850	844	45.5

PowerServ® AR Underground Distribution Cable Type USE-2 600 V Triplex AI Conductor Composite XLPE/HDXLPE Insulation UL Listed

Brenau/AR/EYS	2000	812	40.3	2750	1117	45.9
Converse/AR/EYS	1500	749	40.3	2050	1023	45.8
Fisk/AR/EYS	1500	705	40.3	1900	890	46.0
Hollins/AR/EYS	1000	605	40.0	1500	910	45.0
Sweetbriar/AR/EYS	1000	732	39.4	1450	1061	45.9
Wesleyan/AR/EYS	750	866	40.1	1050	1213	46.0

* Based on reusable reel or dome having a 42" flange, 28" traverse, 17.5" drum diameter (18.5" coil diameter, 26" coil traverse).
 **Based on reusable reel having a 48" flange, 28" traverse, 17.5" drum diameter (18.5" coil diameter, 26" coil traverse).

Medium-Voltage Power Cable



EmPowr® Underground Distribution and Shielded Power Cables

General Cable's EmPowr® underground distribution and shielded power cables are manufactured and tested in accordance with ANSI/ICEA S-94-649 for copper concentric neutral and flat strap power cable designs or ANSI/ICEA S-97-682 for copper wire, copper tape and longitudinally applied corrugated copper tape (LACT) shielded power cable designs. Our cables also meet the latest requirements of AEIC CS8 and/or RUS U1 as applicable.

Stranded conductors are Class B compressed 1350-H19 aluminum. Solid conductors are H16 temper. Conductors are also available in solid, Class B compressed or compact concentric-lay-stranded aluminum or copper, meeting the appropriate requirements of ASTM. Stranded conductors can be blocked to prevent longitudinal movement of moisture along the cable. When applicable, STRANDFILL® conductors are tested in accordance with ICEA T-31-610.

Exceptional measures are taken during the materials handling and extrusion processes to ensure our cable delivers the reliability and longevity expected by our customers. All compounds are received and handled in an ultra-clean environment. Compounds are received in specially designed ultra-clean containers (protective outer box with a sealed removable inner lining) and handled within Class 10,000 conditions. In addition to the special materials handling, the conductor shield, insulation and insulation shield are applied using triple extrusion technology. These extra measures provide our customers with the highest-quality cable products available in the industry.

Designs are manufactured with either lead-free Tree-Retardant Cross-linked Polyethylene (TRXLPE), Ethylene Propylene Rubber (EPR) or lead-free EAM insulation. Our EmPowr® Link TRXLPE insulated cables offer high dielectric strength with extremely low dielectric loss characteristics. TRXLPE insulation is an economical option for the high-volume usage in underground residential systems. Our EmPowr® Fill EPR and lead-free EAM insulated cables are flexible for easy handling and exhibit excellent heat and moisture resistance. The physical and thermal characteristics of EPR and lead-free EAM insulation result in a high resistance to deformation. EPR and lead-free EAM insulation is typically specified for heavily loaded circuits such as feeders and network systems.

Cables are available with various metallic shields that include round wires (16 AWG and larger), helically applied copper tape, flat copper straps or longitudinally applied corrugated copper tape. Combinations of water-swellable tapes and powders applied between the insulation shield and jacket provide maximum moisture migration protection. When applicable, BIFILL® water-blocked cables are tested in accordance with ICEA T-34-664.

Standard designs are manufactured with black, non-conducting, sunlight-resistant Linear Low-Density Polyethylene (LLDPE). Jacketed cables are rated for 90°C maximum conductor temperature under normal conditions. General Cable's EmPowr Link CL™ TRXLPE insulated XLPE jacketed cables allow reduced-size copper concentric neutrals while still providing fault current of an LLDPE jacket, leading to cooler operation and lower line losses. EmPowr Link CL maintains the same physical properties of EmPowr Link LLDPE jacket constructions but with enhanced thermomechanical performance providing excellent resistance to deformation. EmPowr Link CL meets the latest requirements of ANSI/ICEA S-94-649 and AEIC CS8 as applicable for TRXLPE. EmPowr Link CL is rated UL MV-105 in accordance with UL 1072 for 105°C maximum conductor temperature under normal conditions. This design option has been particularly successful for renewable energy collection systems. General Cable has introduced the EmPowr Link CL *ADVANTAGE* product line, which takes the EmPowr Link CL product to a further enhanced level of refinement and cost saving. The combination of a compact phase conductor and flat strap neutrals provides a lighter weight cable with an overall smaller diameter for longer cable lengths and highly efficient fault current protection.

A growing alternative to direct buried cable or pulling cable in rigid conduit is purchasing cable pre-installed in flexible duct. Our Combined Duct & Cable offers mechanical protection comparable to rigid polyethylene duct and saves the labor of pulling cable into rigid duct. Combined Duct & Cable can also save considerable costs associated with cable replacement as compared to direct buried cable installations.







General Cable provides a number of underground cables designed to meet special applications. For example, our PowrPak® cables are intended for use in today's aging and expanding urban underground distribution systems of utilities where PILC has been used previously. Our unique PowrPak design and special manufacturing techniques allow a diameter reduction of more than 15 percent relative to standard AEIC solid dielectric cables. The smaller diameter permits PowrPak to be installed into existing ductwork, a feat not always possible with other types of PILC replacement cable.

While General Cable manufactures a complete range of primary concentric neutral power cables, only the most popular designs are described in the following section. Details of other constructions, voltages and sizes are available upon request.

General Cable provides technical assistance and advice on any challenges associated with cable design, installation or application. Engineering services are available for specification review, specification development and cable application inquiries. For more information, contact your General Cable sales representative or e-mail info@generalcable.com.

Medium-Voltage Options:

- **Copper Conductor** – Primarily used when more ampacity is needed and/or there are limitations to the overall cable diameter.
- **STRANDFILL®** – Limits the ingress of water into the conductor during cable manufacture, storage, installation and after service failure.
- **BIFILL®** – Limits the ingress of water into the conductor and underneath the outer cable jacket during cable manufacture, storage, installation and after service failure.
- **EPR Type III 105°C Rating** – Allows a slightly higher ampacity of the cable for a given installation condition.
- **TRXLPE Type III 105°C Rating** – Allows a slightly higher ampacity of the cable for a given installation condition.
- **Dry Cure for EPR Insulated Cables** – More of a preference.
- **True Triple Extrusion** – Conductor shield, insulation, and insulation shield are applied through one extrusion head.
- **TRXLPE 100% Pellet Inspection** – 100% new-generation optical pellet inspection of TRXLPE insulation. The optical pellet inspection systems are dual pass units. Insulation pellets are inspected twice, utilizing a dual array of high-resolution cameras for detection and a dual array of high-speed air ejectors for rejection of contaminants.
- **Flat Strap Neutrals** – Reduce the overall cable diameter and can provide more protective coverage over the extruded cable core.
- **Red Stripes** – Used for identifying medium-voltage power cables.
- **Semiconducting Jackets** – Provide an electrical connection with the earth in direct burial applications, which allows a reduction of ground rods per mile in accordance with the CEC.
- **PVC Jacket** – PVC can provide a flame-retardant cable design but is susceptible to degradation by some hydrocarbons, ketones, esters and chlorinated hydrocarbons. This option should not be applied where these materials can come in contact with the cable jacket. PVC cable jackets require a separator tape under the jacket to protect the extruded semiconducting insulation shield from plasticizers.
- **Deformation-Resistant Polypropylene (PP)** – Used in applications requiring an outer jacket that is more deformation-resistant at higher temperatures and/or provides better mechanical protection during installation.
- **CL™ Jacket** – Allows reduced-size copper concentric neutrals while still providing fault current of an LLDPE jacket, leading to cooler operation and lower line losses.
- **CL™ Advantage** – Further enhances the CL™ cable design by incorporating a flat strap neutral in place of traditional round neutral wires.
- **Combined Duct & Cable** – Used for applications where future cable replacement is anticipated and access to the cable is prohibited. Combined Duct and Cable can also help protect the cable during direct burial installation.
- **UL Type MV-90 or MV-105** – Used in applications where UL Listed cable is required for NEC installations.
- **Supersmooth and Extra-Clean Thermoset Conductor Shield** – Compound that provides a smoother interface with the insulation. This type of conductor shield is only used with TRXLPE and XLPE insulated cables.
- **Low Strip Insulation Shield (TRXLPE only)** – An easier-stripping insulation shield, with adhesion to the insulation in the 3-10 lb range at room temperature.
- **Triplexed or Paralleled** – Provides the user with all three phases on one reel for easier installation set-up.
- **Three Conductor Cable with an Overall Jacket** – More of a preference.
- **Class C Stranded Copper Conductor** – Provides a more flexible conductor than the standard Class B stranding.
- **Reduced Insulation Wall** – A reduced wall insulation thickness is only recommended when a compact conductor, reduced extruded shield thickness, flat strap neutral and reduced outer jacket thickness have not reduced the overall cable diameter enough for adequate duct clearance during installation. Mainly used for replacement of PILC cables.
- **Alternative Neutral Configurations** – Provides specific fault current handling or a preferred neutral configuration.

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Look for the General Cable “green” symbol and “Go Green” with our environmentally responsible products.

Medium-Voltage Power Cable

Insulation Level Definitions:

Several years ago, the terms used to identify the insulation thickness of medium-voltage cable for the various voltage ratings were “Grounded” and “Ungrounded”. These terms led the electrical industry to a common but erroneous belief that the type of system grounding determined the insulation level required. The terms were later replaced in the cable standards with “100% insulation level” and “133% insulation level” respectively, which are selected based on the “ground fault protection” of the system. The longer the fault remains on an electrical system, the longer the cable is electrically stressed. An effective way of minimizing the stress is increasing the insulation thickness to the next level (e.g., 100% to 133%). The relationship of “ground fault protection” to the “insulation level” is best remembered as follows:

- 100% insulation level for fault clearing within 1 minute
- 133% insulation level for fault clearing between 1 minute and one hour
- 173% insulation level for indefinite periods

Voltage Rating:

The designed, continuous operation, line to line (phase to phase) voltage rating for power cables is printed on the surface of the cable jacket. Rating examples are: 15 kV, 25 kV, 35 kV, etc. During conditions when the actual applied line voltage exceeds the cable rated voltage, General Cable power cable products, in accordance with industry standards, are designed to withstand a continuous overvoltage of up to 5% during normal operation and up to 10% during contingency conditions lasting no longer than 15 minutes.

Notes



EmPowr[®] Fill LF

Lead-Free EmPowr[®] Fill LF
Medium-Voltage EAM Cables
From The Industry Leader

An Environmental Breakthrough

Rethinking for Modernization

Utilities today are tasked with modernizing and decarbonizing the nation's electrical grid with underground cabling systems that avoid disrupting the surrounding landscape while continuing to provide affordable, reliable service.

Facing these challenges amidst regulations and a fast-shifting landscape requires fundamentally rethinking how energy is distributed and calls for new, cleaner approaches that use less energy.

Utilities simply cannot achieve these goals on their own—it requires a long-standing, innovative partner. As the premier leader for nearly 60 years in underground medium-voltage cabling solutions, General Cable is that partner.





Modernization meets environment

To meet increasing energy demands, utilities today face considerable pressure to modernize the nation's electrical power infrastructure. This includes upgrading aging underground cabling systems to reduce installation and maintenance costs using cables with proven performance that are also designed with ever-increasing environmental regulatory requirements in mind. In the most heavily loaded high-temperature circuits, some utilities have traditionally used medium-voltage cables with Ethylene Propylene Rubber (EPR) filled insulations stabilized with lead. These cables are favored by some utilities over cross-linked polyethylene (XLPE & TRXLPE) due to excellent heat aging, wet electrical stability and flexibility characteristics. However, efforts around the globe to reduce the use of lead in cables have prompted General Cable to re-engineer products to be "green" without compromising the necessary safety and performance required for these demanding applications.

Designing for the environment

As a global leader in the energy cable industry, General Cable recognizes our role and responsibility towards environmental protection and sustainability in the 21st century. Through more than a decade of extensive research and development, General Cable has applied emerging technologies that allow for the removal of lead from filled insulation medium-voltage energy cables, while maintaining or exceeding the aging performance, electrical stability and flexibility of our traditional EmPowr® Fill medium-voltage cable.

Today, General Cable introduces an environmentally sound, lead-free filled insulation medium-voltage energy cable — EmPowr® Fill LF.

The EmPowr Fill LF formulation is based upon advanced polymer catalyst technology and nearly a decade of comprehensive testing, which has proven that this new, lead-free technology will offer trouble-free service life, while providing complete compatibility with existing infrastructures. This formulation is referred to as ethylene alkene copolymer with the designation of EAM.

EmPowr Fill LF offers the same features and benefits you have come to know and trust from our EmPowr Fill formulation, such as:

- > Excellent ICEA Cable Core Qualification test performance
- > Excellent ac breakdown strength retention during ICEA AWTT
- > Cleaner base resins and compounds
- > Continuously mixed compounds
- > Class 10000 clean room packaging and compound transfer at cable plant
- > Meets ICEA Class III Insulation 105°C/140°C Conductor Temperature Rating
- > Low insulation shield adhesion and clean stripping
- > Low dissipation factor
- > Excellent flexibility characteristics

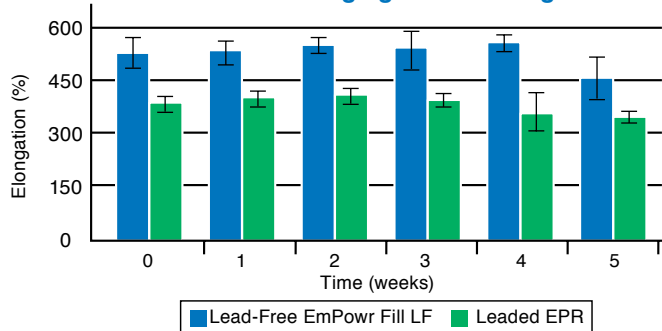
Attentive to the challenges and transformations taking place in the utility industry, General Cable anticipated the need for a new, sustainable approach more than a decade ago. Advances in technology have enabled General Cable to pioneer a medium-voltage cable that advances the way utilities distribute power for the 21st century.

The answer is **EmPowr Fill LF**.

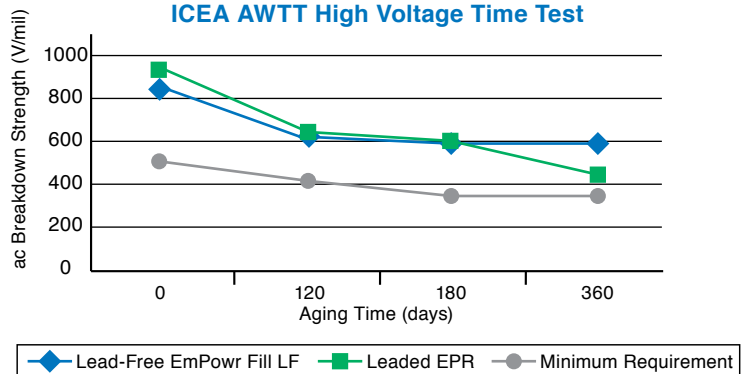
Long-term reliability and performance

Innovative EmPowr Fill LF cables ensure electrical performance over the life of the cable, even in extreme conditions. Under accelerated wet (AWTT) and dry electrical testing, EmPowr Fill LF exhibits excellent results—displaying high ac breakdown retention and thermal stability even under high voltage and temperature.

Insulation Heat Aging - 136°C Elongation



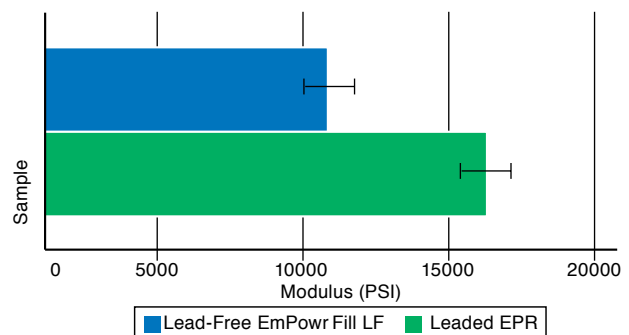
ICEA AWTT High Voltage Time Test



Demonstrated flexibility

In flexibility tests using the same insulation thickness, General Cable's EmPowr Fill LF compound demonstrated flexibility characteristics superior to traditional filled insulated cables for easier cable handling during installation that helps reduce cost.

Flexibility Testing





EmPowr[®] Fill

EmPowr[®] Fill
Medium-Voltage EPR Cables
From The Industry Leader

General Cable's EmPowr[®] Fill technology has one of the industry's most comprehensive warranties. One reason we have been servicing the utilities market for nearly 60 years.





The performance requirements

for medium- and high-voltage cables are becoming more demanding each year. Because of a growing population and increased individual energy consumption, existing power delivery systems are overburdened. In addition to the alarming increase in demand, energy suppliers are facing unparalleled pressure to reduce installation and maintenance costs. General Cable has invested heavily in formulation technologies to provide cable compound solutions to meet the rigorous underground cable installations of today and the future.

EmPowr® Fill is the trade name for our filled insulation. The **EmPowr® Fill** formulation is based upon historically proven resin technology with low catalyst residues. These innovations have expanded the number of polymer architectures available to General Cable, making it possible to economically optimize the formulation for the most demanding underground cable applications.

Our **EmPowr® Fill** cable features:

- > Excellent AC breakdown strength retention during ICEA AWTT
- > Cleaner base resins and compounds
- > Continuously mixed compounds
- > Class 10000 clean room packaging and compound transfer at the plant
- > Triple extrusion
- > Low dissipation factor
- > Low insulation shield adhesion and clean stripping
- > Meets ICEA Class III Insulation 105°C/140°C Conductor Temperature Rating
- > Over 4 years under ACLT testing at 4Vg without a failure

General Cable is committed to its R&D efforts and stands behind our **EmPowr® Fill** technology with one of the industry's most comprehensive warranties. This product offering is part of our near-60-year history of providing high performance medium-voltage cables with filled insulation to the utility industry.

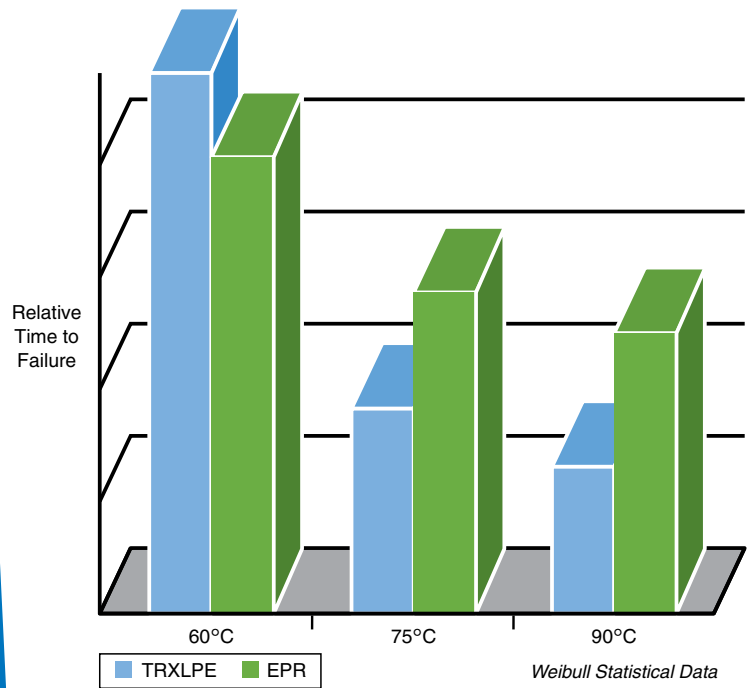
EmPowr® Fill is formulated for **High Operating Temperature** applications such as:

- > Urban underground network systems installed in conduit or duct banks (ask about our PowrPak® cable, specifically designed for PILC replacement)
- > Underground primary feeders and substation getaways
- > Larger conductor sizes where added flexibility may be desirable
- > Large commercial and industrial medium-voltage service feeders

...Anywhere cables are heavily loaded.

Research data has shown that cable life is directly related to operating temperature – *high operating temperatures shorten cable life*. The amount of cable life lost differs between unfilled and filled insulations. Shown to the right are compelling test results that support our position that filled insulations perform better in high-temperature applications.

Operating Temperature versus Cable Life



As demonstrated by the test data above, TRXLPE insulation performs as well as EPR insulation at lower operating temperatures. However, filled insulation outperforms unfilled insulation on cables tested at higher temperatures.

For Lead-Free cables operating at high temperatures and where superior flexibility is desired, General Cable recommends its **EmPowr® Fill LF** medium-voltage EAM cables. See our **EmPowr® Fill LF** brochure for details.

For cables operating at lower temperatures, General Cable recommends the **EmPowr® Link** medium-voltage TRXLPE insulated product line. See our **EmPowr® Link** brochure for details.

We “**EmPowr®**” you to work with our Engineering and Technology staff to provide a cable design for your specific need – be part of the “**EmPowr®**” generation.

EmPowr® Fill Underground Distribution Cable 15-35 kV

Al Conductor EPR Insulation Concentric Neutral LLDPE Jacket

Product Construction:

Complete Cable:

Cross-linked semi-conducting conductor shield, insulation and semi-conducting insulation shield are extruded over a solid or stranded aluminum conductor and cured in a single operation. Uncoated copper neutral wires (helicly applied) and extruded-to-fill black jacket are applied over the cable core. These products meet the latest requirements of ANSI/ICEA S-94-649, AEIC CS8 and RUS U1 as applicable for Ethylene Propylene Rubber (EPR) insulated concentric neutral cable.

Conductor:

Solid or Class B compressed concentric lay stranded 1350 aluminum.

Conductor Shield:

Extruded semi-conducting thermosetting polymeric stress control layer.

Insulation:

Extruded Ethylene Propylene Rubber (EPR) Class II and III.

Insulation Shield:

Extruded semi-conducting thermosetting layer, clean and free stripping from insulation.

Concentric Neutral:

Helicly applied, annealed, solid bare copper wires.

Jacket:

Black, non-conducting, sunlight-resistant, Linear Low-Density Polyethylene (LLDPE) extruded to fill spaces between neutral wires.

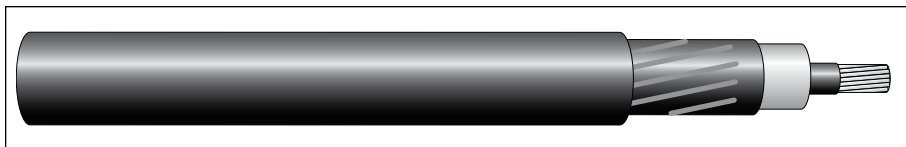
Features and Benefits:

- Triple extruded for clean interfaces
- Class 10,000 environment utilized for cable core material handling
- Flexibility for easy handling
- Excellent moisture resistance
- Deformation-resistant
- High dielectric strength
- Low dielectric loss
- Excellent resistance to water treeing
- Clean-stripping insulation shield without the use of a release agent
- Sunlight-resistant

Temperature Rating:

- Normal 105°C
- Emergency* 140°C
- Short Circuit 250°C

* Operation at the emergency overload temperature shall not exceed 1500 hours cumulative during the lifetime of the cable.



UNDERGROUND DISTRIBUTION CABLE – 15 kV – TYPE URD – FULL NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

175 mils NOMINAL EPR INSULATION – 100% INSULATION LEVEL (3)

2	1	16	16	0.610	0.695	0.914	0.055	61	134	461	190	130
2	7	16	16	0.635	0.720	0.939	0.055	62	134	479	190	130
1	1	20	16	0.645	0.725	0.945	0.055	77	168	522	215	150
1	19	20	16	0.675	0.760	0.978	0.055	78	168	543	215	150
1/0	1	16	14	0.680	0.760	1.007	0.055	97	213	617	240	170
1/0	19	16	14	0.715	0.800	1.044	0.055	99	213	641	240	170
2/0	19	20	14	0.760	0.845	1.088	0.055	125	266	738	275	195
3/0	19	16	12	0.810	0.895	1.172	0.055	157	338	886	315	220
4/0	19	20	12	0.865	0.950	1.228	0.055	198	423	1034	360	250

220 mils NOMINAL EPR INSULATION – 133% INSULATION LEVEL

2	1	16	16	0.700	0.790	1.004	0.055	61	134	527	190	130
2	7	16	16	0.725	0.815	1.029	0.055	62	134	547	190	130
1	1	20	16	0.735	0.820	1.035	0.055	77	168	590	215	150
1	19	20	16	0.765	0.855	1.068	0.055	78	168	613	215	150
1/0	1	16	14	0.770	0.855	1.097	0.055	97	213	689	240	170
1/0	19	16	14	0.805	0.895	1.134	0.055	99	213	716	240	170
2/0	19	20	14	0.850	0.935	1.178	0.055	125	267	816	275	195
3/0	19	16	12	0.900	0.985	1.262	0.055	158	338	970	315	220
4/0	19	20	12	0.955	1.045	1.318	0.055	199	423	1121	360	250

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Fill Underground Distribution Cable 15-35 kV

Al Conductor EPR Insulation Concentric Neutral LLDPE Jacket

UNDERGROUND DISTRIBUTION CABLE – 15 kV – TYPE UD – 1/3 NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

175 mils NOMINAL EPR INSULATION - 100% INSULATION LEVEL (3)

2	1	6	16	0.610	0.695	0.914	0.055	61	50	386	170	130
2	7	6	16	0.635	0.720	0.939	0.055	62	50	404	170	130
1	1	7	16	0.645	0.725	0.945	0.055	77	59	424	195	150
1	19	7	16	0.675	0.760	0.978	0.055	78	59	445	195	150
1/0	1	9	16	0.680	0.760	0.981	0.055	97	76	477	225	170
1/0	19	9	16	0.715	0.800	1.018	0.055	99	76	501	225	170
2/0	19	11	16	0.760	0.845	1.062	0.055	125	92	564	255	200
3/0	19	14	16	0.810	0.895	1.112	0.055	158	118	646	290	225
4/0	19	17	16	0.865	0.950	1.168	0.055	199	143	738	330	255
250	37	20	16	0.920	1.005	1.224	0.055	234	168	826	365	280
350	37	18	14	1.025	1.110	1.373	0.055	329	240	1082	440	340
500	37	25	14	1.150	1.235	1.501	0.055	468	334	1377	530	420
750	61	24	12	1.340	1.425	1.772	0.080	703	508	1966	640	510
1000	61	20	10	1.485	1.575	1.963	0.080	937	673	2491	730	595

220 mils NOMINAL EPR INSULATION – 133% INSULATION LEVEL (3)

2	1	6	16	0.700	0.790	1.004	0.055	61	51	452	170	130
2	7	6	16	0.725	0.815	1.029	0.055	62	51	472	170	130
1	1	7	16	0.735	0.820	1.035	0.055	77	59	493	195	150
1	19	7	16	0.765	0.855	1.068	0.055	78	59	515	195	150
1/0	1	9	16	0.770	0.855	1.071	0.055	97	76	548	225	170
1/0	19	9	16	0.805	0.895	1.108	0.055	99	76	574	225	170
2/0	19	11	16	0.850	0.935	1.152	0.055	125	92	641	255	200
3/0	19	14	16	0.900	0.985	1.202	0.055	158	118	726	290	225
4/0	19	17	16	0.955	1.045	1.258	0.055	199	143	822	330	255
250	37	20	16	1.010	1.100	1.334	0.055	234	168	935	365	280
350	37	18	14	1.115	1.200	1.463	0.055	329	240	1181	440	340
500	37	25	14	1.240	1.330	1.591	0.055	468	334	1484	530	420
750	61	24	12	1.430	1.520	1.862	0.080	703	508	2092	640	510
1000	61	20	10	1.575	1.670	2.083	0.080	937	673	2678	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.
 (2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration with neutral wires bonded at each end. For specific ampacities, contact your General Cable sales representative.
 (3) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Applications:

EmPowr® Fill cables are intended for use in dry or wet locations for distribution of single or three phase medium-voltage power. Cables with a full neutral are designed for use on single phase underground distribution (UD) applications. Cables with a 1/3 neutral are designed for use in three phase UD applications. The full neutral cable is sometimes referred to as an underground residential distribution (URD) cable. These cables may be installed in ducts or direct buried.

Options:

- Compact conductors
- Copper conductors
- EmPowr® Fill LF Lead-Free EAM
- STRANDFILL® blocked conductor. Tested in accordance with ICEA T-31-610
- BIFILL® blocked conductor and cable core/jacket. Tested in accordance with ICEA T-34-664
- Dry nitrogen cure
- True Triple Extrusion
- Flat strap concentric neutral
- Red stripes on jacket
- Semi-conducting thermoplastic jacket
- Overlaying PVC jacket with separator tape
- Deformation-resistant polypropylene jacket
- CL™ XLPE jacket
- Combined Duct & Cable
- 3 X 1/C triplex or parallel
- Type MV-90 UL 1072
- Type MV-105 UL 1072
- Alternative neutral configurations

For more information, or information on conductor sizes or voltage ratings not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

EmPowr® Fill Underground Distribution Cable 15-35 kV

Al Conductor EPR Insulation Concentric Neutral LLDPE Jacket

UNDERGROUND DISTRIBUTION CABLE – 25 kV – TYPE URD – FULL NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

260 mils NOMINAL EPR INSULATION – 100% INSULATION LEVEL (4)

1	1	20	16	0.805	0.895	1.115	0.055	77	168	656	215	150
1	19	20	16	0.835	0.925	1.148	0.055	78	168	681	215	150
1/0	1	16	14	0.840	0.930	1.177	0.055	97	213	759	240	170
1/0	19	16	14	0.875	0.965	1.214	0.055	99	214	788	240	170
2/0	19	20	14	0.920	1.010	1.258	0.055	125	267	891	275	195
3/0	19	16	12	0.970	1.060	1.342	0.055	158	339	1050	315	220
4/0	19	20	12	1.025	1.115	1.418	0.055	199	423	1227	360	250

UNDERGROUND DISTRIBUTION CABLE – 25 kV – TYPE UD – 1/3 NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (3)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

260 mils NOMINAL EPR INSULATION – 100% INSULATION LEVEL (4)

1	1	7	16	0.805	0.895	1.115	0.055	77	59	559	195	150
1	19	7	16	0.835	0.925	1.148	0.055	78	59	584	195	150
1/0	1	9	16	0.840	0.930	1.151	0.055	97	76	616	220	170
1/0	19	9	16	0.875	0.965	1.188	0.055	99	76	645	220	170
2/0	19	11	16	0.920	1.010	1.232	0.055	125	92	714	250	200
3/0	19	14	16	0.970	1.060	1.282	0.055	158	118	802	290	225
4/0	19	17	16	1.025	1.115	1.358	0.055	199	143	923	330	255
250	37	20	16	1.080	1.175	1.414	0.055	234	168	1020	360	280
350	37	18	14	1.185	1.275	1.543	0.055	329	240	1274	435	340
500	37	25	14	1.310	1.405	1.721	0.080	468	334	1639	525	420
750	61	24	12	1.500	1.595	1.942	0.080	703	508	2210	640	510
1000	61	20	10	1.645	1.740	2.163	0.080	937	673	2809	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on a three phase circuit, one conductor per phase, in flat adjacent configuration, with neutral wires bonded at each end. For specific ampacities, contact your General Cable sales representative.

(4) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Fill Underground Distribution Cable 15-35 kV

Al Conductor EPR Insulation Concentric Neutral LLDPE Jacket

UNDERGROUND DISTRIBUTION CABLE – 28 kV – TYPE URD – FULL NEUTRAL												
COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							
280 mils NOMINAL EPR INSULATION – 100% INSULATION LEVEL												
1	1	20	16	0.845	0.935	1.155	0.055	77	171	694	215	150
1	19	20	16	0.875	0.970	1.188	0.055	78	171	720	215	150
1/0	1	16	14	0.880	0.970	1.217	0.055	97	214	795	240	170
1/0	19	16	14	0.915	1.010	1.254	0.055	99	214	826	240	170
2/0	19	20	14	0.960	1.055	1.298	0.055	125	267	930	275	195
3/0	19	16	12	1.010	1.105	1.402	0.055	158	339	1113	315	220
4/0	19	20	12	1.065	1.160	1.458	0.055	199	423	1271	360	250

UNDERGROUND DISTRIBUTION CABLE – 28 kV – TYPE UD – 1/3 NEUTRAL												
COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (3)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							
280 mils NOMINAL EPR INSULATION – 100% INSULATION LEVEL												
1	1	7	16	0.845	0.935	1.155	0.055	77	60	595	195	150
1	19	7	16	0.875	0.970	1.188	0.055	78	60	621	195	150
1/0	1	9	16	0.880	0.970	1.191	0.055	97	77	654	220	170
1/0	19	9	16	0.915	1.010	1.228	0.055	99	77	684	220	170
2/0	19	11	16	0.960	1.055	1.272	0.055	125	94	755	250	200
3/0	19	14	16	1.010	1.105	1.342	0.055	158	120	865	290	225
4/0	19	17	16	1.065	1.160	1.398	0.055	199	146	968	330	255
250	37	20	16	1.120	1.215	1.454	0.055	234	172	1068	360	280
350	37	18	14	1.225	1.320	1.583	0.055	329	240	1322	435	340
500	37	25	14	1.350	1.445	1.761	0.080	468	341	1699	525	420
750	61	24	12	1.540	1.635	2.012	0.080	703	508	2317	640	510
1000	61	20	10	1.685	1.785	2.203	0.080	937	673	2877	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on a three phase circuit, one conductor per phase, in flat adjacent configuration, with neutral wires bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Fill Underground Distribution Cable 15-35 kV

Al Conductor EPR Insulation Concentric Neutral LLDPE Jacket

UNDERGROUND DISTRIBUTION CABLE – 35 kV – TYPE URD – FULL NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

345 mils NOMINAL EPR INSULATION – 100% INSULATION LEVEL (4)

1/0	1	16	14	1.010	1.105	1.367	0.055	97	214	944	240	170
1/0	19	16	14	1.045	1.145	1.404	0.055	99	214	979	240	170
2/0	19	20	14	1.090	1.190	1.448	0.055	125	267	1089	275	195
3/0	19	16	12	1.140	1.240	1.532	0.055	158	339	1259	315	220
4/0	19	20	12	1.195	1.295	1.588	0.055	199	423	1423	360	250

UNDERGROUND DISTRIBUTION CABLE – 35 kV – TYPE UD – 1/3 NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (3)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

345 mils NOMINAL EPR INSULATION – 100% INSULATION LEVEL (4)

1/0	1	9	16	1.010	1.105	1.341	0.055	97	77	800	220	170
1/0	19	9	16	1.045	1.145	1.378	0.055	99	77	835	220	170
2/0	19	11	16	1.090	1.190	1.422	0.055	125	95	911	250	200
3/0	19	14	16	1.140	1.240	1.472	0.055	158	120	1007	290	225
4/0	19	17	16	1.195	1.295	1.528	0.055	199	146	1116	330	255
250	37	20	16	1.250	1.350	1.584	0.055	234	172	1221	360	280
350	37	18	14	1.355	1.445	1.763	0.080	329	240	1543	435	340
500	37	25	14	1.480	1.580	1.891	0.080	468	341	1882	525	420
750	61	24	12	1.670	1.770	2.142	0.080	703	508	2526	640	510
1000	61	20	10	1.815	1.920	2.333	0.080	937	673	3104	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on a three phase circuit, one conductor per phase, in flat adjacent configuration, with neutral wires bonded at each end. For specific ampacities, contact your General Cable sales representative.

(4) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Notes

EmPow® Fill Shielded Power Cable 15-35 kV

Al Conductor EPR Insulation Longitudinally Applied Corrugated Tape LLDPE Jacket

Product Construction:

Complete Cable:

Cross-linked semi-conducting conductor shield, insulation and semi-conducting insulation shield are extruded over a solid or stranded aluminum conductor and cured in a single operation. Corrugated copper tape and an extruded black jacket are applied over the cable core. These products meet the latest requirements of ANSI/ICEA S-97-682 and AEIC CS8 as applicable for Ethylene Propylene Rubber (EPR) insulated shielded power cable.

Conductor:

Solid or Class B compressed concentric lay stranded 1350 aluminum.

Conductor Shield:

Extruded semi-conducting thermosetting polymeric stress control layer.

Insulation:

Extruded Ethylene Propylene Rubber (EPR) Class II and III.

Insulation Shield:

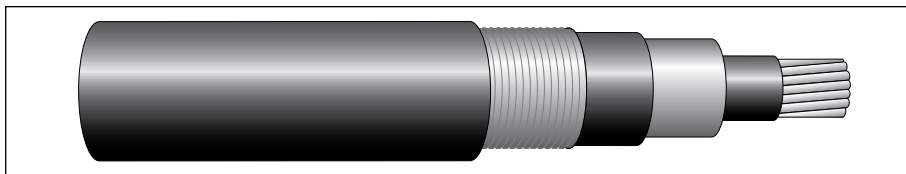
Extruded semi-conducting thermosetting layer, clean and free stripping from insulation.

Longitudinally Applied Corrugated Tape:

Copper, 8 or 10 mil thick Longitudinally Applied Corrugated Tape (LACT) with a minimum 375 mil overlap.

Jacket:

Black, non-conducting, sunlight-resistant, Linear Low-Density Polyethylene (LLDPE).



LONGITUDINALLY APPLIED CORRUGATED TAPE SHIELDED POWER CABLE

COMPRESSED CONDUCTOR		DIAMETER (1) INCHES				NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	INSULATION		LACT SHIELD			LLDPE JACKET	AL COND.	CU SHIELD	TOTAL	DIRECT BURIED
		MIN.	MAX.	THKN.	O.D.						

175 mils NOMINAL EPR INSULATION – 15 kV 100% INSULATION LEVEL

1/0	19	0.715	0.800	0.008	0.912	1.072	0.080	99	116	583	235	170
1/0	19	0.715	0.800	0.010	0.918	1.078	0.080	99	145	616	235	170
2/0	19	0.760	0.845	0.008	0.956	1.116	0.080	125	120	638	270	200
2/0	19	0.760	0.845	0.010	0.962	1.122	0.080	125	150	672	270	200
3/0	19	0.810	0.895	0.008	1.006	1.166	0.080	158	125	703	305	225
3/0	19	0.810	0.895	0.010	1.012	1.172	0.080	158	156	738	305	225
4/0	19	0.865	0.950	0.008	1.062	1.222	0.080	199	134	784	350	260
4/0	19	0.865	0.950	0.010	1.068	1.228	0.080	199	168	822	350	260
250	37	0.920	1.005	0.008	1.104	1.264	0.080	234	131	860	370	285
250	37	0.920	1.005	0.010	1.110	1.270	0.080	234	164	895	370	285
350	37	1.015	1.100	0.008	1.207	1.367	0.080	329	157	1037	445	345
350	37	1.015	1.100	0.010	1.213	1.373	0.080	329	191	1073	445	345
500	37	1.150	1.235	0.008	1.335	1.495	0.080	468	157	1250	545	425
500	37	1.150	1.235	0.010	1.355	1.515	0.080	468	220	1323	545	425
750	61	1.340	1.425	0.008	1.536	1.696	0.080	703	199	1645	665	530
750	61	1.340	1.425	0.010	1.542	1.702	0.080	703	243	1691	665	530
1000	61	1.485	1.575	0.008	1.685	1.905	0.110	937	208	2077	780	630
1000	61	1.485	1.575	0.010	1.691	1.911	0.110	937	260	2130	780	630

220 mils NOMINAL EPR INSULATION – 15 kV 133% INSULATION LEVEL

1/0	19	0.805	0.895	0.008	1.002	1.162	0.080	99	125	669	235	170
1/0	19	0.805	0.895	0.010	1.008	1.168	0.080	99	156	704	235	170
2/0	19	0.850	0.935	0.008	1.046	1.206	0.080	125	129	726	270	200
2/0	19	0.850	0.935	0.010	1.052	1.212	0.080	125	162	763	270	200
3/0	19	0.900	0.985	0.008	1.096	1.256	0.080	158	139	799	305	225
3/0	19	0.900	0.985	0.010	1.102	1.262	0.080	158	173	839	305	225
4/0	19	0.955	1.045	0.008	1.152	1.312	0.080	199	143	880	350	260
4/0	19	0.955	1.045	0.010	1.158	1.318	0.080	199	179	921	350	260
250	37	1.010	1.100	0.008	1.194	1.354	0.080	234	140	961	370	285
250	37	1.010	1.100	0.010	1.200	1.360	0.080	234	191	1012	370	285
350	37	1.105	1.190	0.008	1.297	1.457	0.080	329	157	1137	445	345
350	37	1.105	1.190	0.010	1.303	1.463	0.080	329	191	1173	445	345
500	37	1.240	1.330	0.008	1.439	1.599	0.080	468	185	1396	545	425
500	37	1.240	1.330	0.010	1.445	1.605	0.080	468	231	1444	545	425
750	61	1.430	1.520	0.008	1.626	1.846	0.110	703	203	1871	665	530
750	61	1.430	1.520	0.010	1.632	1.852	0.110	703	254	1923	665	530
1000	61	1.575	1.670	0.008	1.775	1.995	0.110	937	222	2228	780	630
1000	61	1.575	1.670	0.010	1.781	2.001	0.110	937	277	2285	780	630

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-97-682 for Utility Shielded Power Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration (direct buried) with metallic shield bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Fill Shielded Power Cable 15-35 kV

Al Conductor EPR Insulation Longitudinally Applied Corrugated Tape LLDPE Jacket

LONGITUDINALLY APPLIED CORRUGATED TAPE SHIELDED POWER CABLE

COMPRESSED CONDUCTOR		DIAMETER (1) INCHES					NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	INSULATION		LACT SHIELD		LLDPE JACKET		AL COND.	CU SHIELD	TOTAL	DIRECT BURIED	IN DUCT
		MIN.	MAX.	THKN.	O.D.							

260 mils NOMINAL EPR INSULATION – 25 kV 100% INSULATION LEVEL

1/0	19	0.875	0.965	0.008	1.082	1.242	0.080	99	134	751	235	170
1/0	19	0.875	0.965	0.010	1.088	1.248	0.080	99	168	789	235	170
2/0	19	0.920	1.010	0.008	1.125	1.286	0.080	125	139	812	270	200
2/0	19	0.920	1.010	0.010	1.132	1.292	0.080	125	173	851	270	200
3/0	19	0.970	1.060	0.008	1.176	1.336	0.080	158	143	883	305	225
3/0	19	0.970	1.060	0.010	1.182	1.342	0.080	158	179	924	305	225
4/0	19	1.025	1.115	0.008	1.232	1.392	0.080	199	153	972	350	260
4/0	19	1.025	1.115	0.010	1.238	1.398	0.080	199	191	1015	350	260
250	37	1.080	1.175	0.008	1.274	1.434	0.080	234	157	1064	370	285
250	37	1.080	1.175	0.010	1.280	1.440	0.080	234	191	1100	370	285
350	37	1.175	1.265	0.008	1.377	1.537	0.080	329	161	1235	445	345
350	37	1.175	1.265	0.010	1.397	1.557	0.080	329	220	1305	445	345
500	37	1.310	1.405	0.008	1.519	1.679	0.080	468	190	1503	545	425
500	37	1.310	1.405	0.010	1.525	1.685	0.080	468	237	1552	545	425
750	61	1.500	1.595	0.008	1.706	1.926	0.110	703	213	1998	665	530
750	61	1.500	1.595	0.010	1.712	1.932	0.110	703	266	2054	665	530
1000	61	1.645	1.740	0.008	1.855	2.075	0.110	937	227	2361	780	630
1000	61	1.645	1.740	0.010	1.861	2.081	0.110	937	289	2425	780	630

345 mils NOMINAL EPR INSULATION – 35 kV 100% INSULATION LEVEL

1/0	19	1.045	1.145	0.008	1.252	1.412	0.080	99	157	947	230	180
1/0	19	1.045	1.145	0.010	1.258	1.418	0.080	99	197	991	230	180
2/0	19	1.090	1.190	0.008	1.296	1.456	0.080	125	162	1013	260	205
2/0	19	1.090	1.190	0.010	1.302	1.462	0.080	125	202	1059	260	205
3/0	19	1.140	1.240	0.008	1.346	1.506	0.080	158	166	1092	295	235
3/0	19	1.140	1.240	0.010	1.352	1.512	0.080	158	208	1139	295	235
4/0	19	1.195	1.295	0.008	1.402	1.562	0.080	199	171	1183	340	265
4/0	19	1.195	1.295	0.010	1.408	1.568	0.080	199	214	1232	340	265
250	37	1.250	1.350	0.008	1.458	1.618	0.080	234	185	1305	360	295
250	37	1.250	1.350	0.010	1.464	1.624	0.080	234	231	1352	360	295
350	37	1.355	1.455	0.008	1.561	1.781	0.110	329	199	1594	430	355
350	37	1.355	1.455	0.010	1.567	1.787	0.110	329	243	1640	430	355
500	37	1.480	1.580	0.008	1.689	1.909	0.110	468	208	1858	530	430
500	37	1.480	1.580	0.010	1.695	1.915	0.110	468	260	1911	530	430
750	61	1.670	1.770	0.008	1.876	2.096	0.110	703	240	2294	650	550
750	61	1.670	1.770	0.010	1.882	2.102	0.110	703	289	2346	650	550
1000	61	1.815	1.920	0.008	2.025	2.245	0.110	937	245	2668	765	625
1000	61	1.815	1.920	0.010	2.031	2.251	0.110	937	306	2732	765	625

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-97-682 for Utility Shielded Power Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration (direct buried) with metallic shield bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Applications:

EmPowr® Fill cables are intended for use in dry or wet locations for distribution of three-phase medium-voltage power. These cables may be installed in ducts or direct buried.

Options:

- Compact conductors
- Copper conductors
- EmPowr® Fill LF Lead-Free EAM
- STRANDFILL® blocked conductor. Tested in accordance with ICEA T-31-610
- BIFILL® tested to ICEA T-34-664
 1. blocked conductor
 2. blocked cable core/LACT
- TRIFILL® tested to ICEA T-34-664
 1. blocked conductor
 2. blocked cable core/LACT
 3. sealed overlap and blocked LACT/jacket
- Sealed LACT overlap
- Dry nitrogen cure
- True Triple Extrusion
- Red stripes on jacket
- Semi-conducting thermoplastic jacket
- CL™ XLPE jacket
- 3 X 1/C triplex or parallel
- Type MV-90 UL 1072
- Type MV-105 UL 1072

For more information, or information on conductor sizes or voltage ratings not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



PowrPak[®]

The Next Generation of MV-UD Cable

From the early 1920s through the late 1990s, Paper Insulated Lead Covered (PILC) cable was the standard cable used for Primary Distribution Network cable. But as load demands increased, environmental concerns grew and urban distribution systems aged, it became necessary to develop a new cable design. PowrPak[®] is that cable.

- > **Increased Load Capacity**
- > **More Environmentally Friendly**
- > **Easier to Retrofit**
- > ***Now Available with Lead-Free Filled EAM Insulation***



Over 119 Million Feet Installed Since 1989

Easier Splicing, Terminating and Installation

Paper Insulated Lead Covered (PILC) cable with three conductors within a common lead sheath is stiff, heavy and difficult to handle. Plus, the special skills required for terminating and splicing are limited and labor-intensive. PowrPak® is easy to work with because it is three single conductors, more flexible and lighter than lead-encased oil-impregnated PILC, and uses commercially available splicing and terminating components. Retrofitting into existing duct work is easier and less labor-intensive, which results in reduced handling, installation and overall costs.

Pack More Power Into a Smaller Cable

PowrPak®'s unique design and special manufacturing techniques allow for a cable which has a diameter reduction of more than 15 percent relative to standard AEIC solid dielectric cable yet handles greater loads than the same size PILC. This is a major advantage for retrofitting into aging urban underground distribution systems. The smaller PowrPak® cable can be installed into existing ductwork...a feat not always possible with other types of PILC replacement cable.

Long-Term Reliability

PowrPak® is manufactured using state-of-the-art super-clean components, mixed with techniques that produce a homogeneous material that is the cleanest filled rubber insulation compound in the power cable industry. General Cable's manufacturing process technology allows for tight control of all dimensions. Our triple extrusion techniques control dimensional tolerances. Material handling systems for all PowrPak® material are second to none, including the use of Class 1000 and 10000 clean rooms at compounding and manufacturing plants. This assures a high degree of purity, consistency and long-term cable reliability.

PowrPak® Features

- > High ampacity
- > Reduced diameter
- > High dielectric strength
- > Low dielectric loss
- > Easy installation, splice and termination
- > Lower cost than PILC
- > More environmentally friendly than PILC
- > Available with TRXLPE insulation
- > **Now Available with Lead-Free Filled EAM Insulation**



Designed to Your Requirements

No two applications are identical, and neither are any two installations. General Cable engineers will provide a PowrPak® cable design to fit your conductor size, voltage, shield, duct size and duct clearance. Formula for calculating duct clearance:

$$\text{Clearance} = \frac{D}{2} - 1.366 (d) + \frac{D-d}{2} \sqrt{1 - \left(\frac{d}{D-d}\right)^2}$$

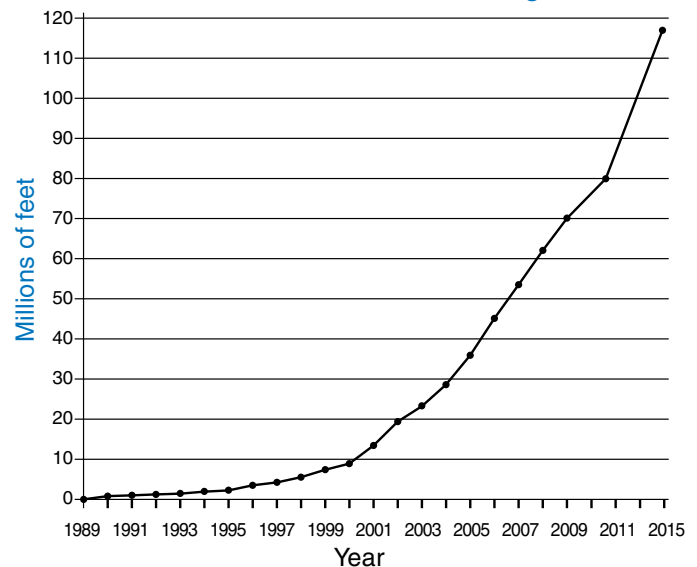
Where: D = Inside diameter of duct (inches)
d = Max. diameter of one conductor (inches)



It's Time for PowrPak®

General Cable has proven itself as a pioneer and innovator in the cable industry. PowrPak® is one example of how we think ahead and anticipate the changing needs of the electric utility industry. Since 1989, utility companies have installed millions of feet of PowrPak® cable provided by General Cable.

Cumulative PowrPak® Usage



PowrPak® Underground PILC Replacement Cable

Cu Conductor EPR Insulation Flat Strap Concentric Neutral LLDPE Jacket



Product Construction:

Complete Cable:

Cross-linked semi-conducting conductor shield, insulation and semi-conducting insulation shield are extruded over stranded copper conductor and cured in a single operation. Uncoated copper flat strap neutrals (helically applied) and extruded-to-fill black jacket are applied over the cable core. PowrPak® cables meet the latest ANSI/ICEA S-94-649 and AEIC CS8 specifications for Ethylene Propylene Rubber (EPR) insulated concentric neutral cable except for dimensional requirements.

Conductor:

STRANDFILL®, bare, compact, concentric lay stranded copper tested in accordance with ICEA T-31-610.

Conductor Shield:

Extruded semi-conducting thermosetting polymeric stress control layer.

Insulation:

Extruded Ethylene Propylene Rubber (EPR) Class II and III.

Insulation Shield:

Extruded semi-conducting thermosetting layer, clean and free stripping from insulation.

Copper Flat Straps:

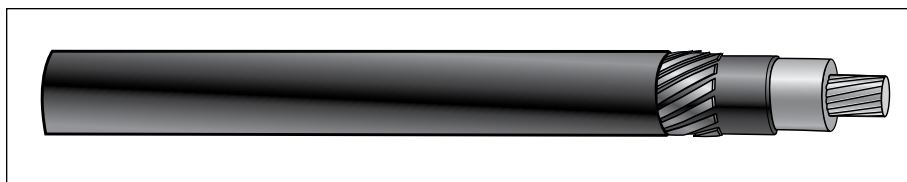
Bare annealed copper flat strap neutrals designed to meet customer fault current requirements.

Jacket:

Black, non-conducting Linear Low-Density Polyethylene (LLDPE) extruded to fill spaces between flat straps.

Features and Benefits:

- Reduced overall diameter for tight duct applications without reducing insulation wall
- No environmental concerns
- Higher emergency ampacity capabilities
- Less costly than PILC
- Millions of feet successfully installed and operated since its introduction in 1989
- Triple-extruded for clean interfaces
- Class 10,000 environment utilized for cable core material handling
- Flexibility for easy handling
- Excellent moisture resistance
- Improved temperature rating over PILC
- Low dielectric loss
- Deformation-resistant
- High dielectric strength
- Excellent resistance to water treeing
- Clean-stripping insulation shield without the use of a release agent



PILC REPLACEMENT CABLE - 15kV - PowrPak

COMPACT CONDUCTOR		FLAT STRAP SHIELD (1)			NOMINAL O.D. INCHES				NOM. JACKET THKN. INCHES	APPROX. WEIGHT LB/KFT			SHIELD FAULT CURRENT @ 8 CYCLES (2)	AMP. IN DUCT (3)	DUCT CLEARANCE (4)	
CU AWG OR kcmil	MIN. NO. OF WIRES	NO. OF STRAPS	THKN. MILS	WIDTH MILS	INS.	SHIELD	FLAT STRAP	ENCAP JACKET		CU COND.	CU SHIELD	TOTAL			DUCT I.D. INCHES	MIN. CLEAR INCHES

175 mils NOMINAL EPR INSULATION - 100% INSULATION LEVEL

4/0	18	12	20	165	0.865	0.925	0.965	1.065	0.050	653	160	1144	8700	315	3.0	0.72
350	35	14	20	165	1.006	1.066	1.106	1.206	0.050	1081	187	1658	10100	415	3.0	0.36
500	35	16	20	165	1.126	1.186	1.226	1.326	0.050	1542	214	2198	11600	505	3.5	0.63
750	58	18	20	165	1.298	1.358	1.398	1.498	0.050	2316	240	3074	13000	625	4.0	0.75
1000	58	20	20	165	1.450	1.510	1.550	1.650	0.050	3088	267	3940	14500	705	4.0	0.36

PILC REPLACEMENT CABLE - 25kV - PowrPak

COMPACT CONDUCTOR		FLAT STRAP SHIELD (1)			NOMINAL O.D. INCHES				NOM. JACKET THKN. INCHES	APPROX. WEIGHT LB/KFT			SHIELD FAULT CURRENT @ 8 CYCLES (2)	AMP. IN DUCT (3)	DUCT CLEARANCE (4)	
CU AWG OR kcmil	MIN. NO. OF WIRES	NO. OF STRAPS	THKN. MILS	WIDTH MILS	INS.	SHIELD	FLAT STRAP	ENCAP JACKET		CU COND.	CU SHIELD	TOTAL			DUCT I.D. INCHES	MIN. CLEAR INCHES

260 mils NOMINAL EPR INSULATION - 100% INSULATION LEVEL

4/0	18	12	20	165	1.035	1.095	1.135	1.235	0.050	653	161	1296	8700	320	3.5	0.86
350	35	14	20	165	1.176	1.236	1.276	1.376	0.050	1081	187	1829	10100	420	3.5	0.50
500	35	16	20	165	1.296	1.356	1.396	1.496	0.050	1542	214	2385	11600	515	4.0	0.76
750	58	18	20	165	1.468	1.528	1.568	1.668	0.050	2316	241	3285	13000	630	4.0	0.31
1000	58	20	20	165	1.620	1.680	1.720	1.820	0.050	3088	267	4172	14500	730	5.0	1.15

(1) Concentric neutral designs shown are for typical metallic shield requirements. The concentric neutral can be designed to fit the customer's fault current and time duration requirements. See fault current capability of typical designs on the following page.

(2) The value of the shield fault current is based on an 8 cycle duration (@ 60Hz) and calculated per ICEA P-45-482 using an "M factor" of 0.063, with a conductor temperature of 90°C and a metallic shield starting temperature of 85°C and a metallic shield ending temperature of 200°C.

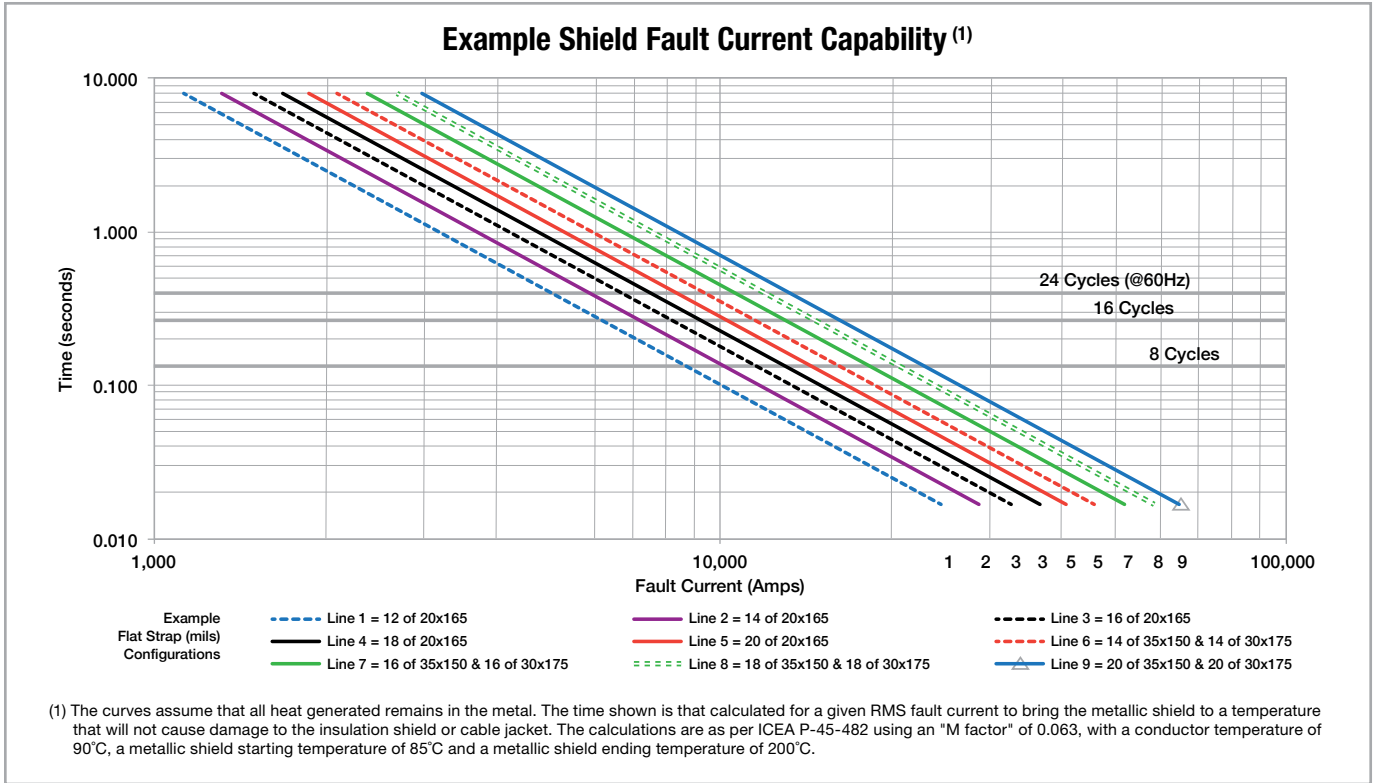
(3) Ampacity based on three phases in a duct and one duct load in a duct bank. Concrete thermal resistivity of 85°C-cm/watt, earth thermal resistivity of 90°C-cm/watt, burial depth to top of duct bank of 36", 90°C conductor temp., 20°C earth ambient temperature, and 75% load factor. For specific ampacities, contact your General Cable sales representative.

(4) Duct clearance based on maximum cable diameter and inside diameter of schedule 40 duct.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

PowrPak® Underground PILC Replacement Cable

Cu Conductor EPR Insulation Flat Strap Concentric Neutral LLDPE Jacket



Temperature Rating:

- Normal 105°C
- Emergency* 140°C
- Short Circuit 250°C

* Operation at the emergency overload temperature shall not exceed 1500 hours cumulative during the lifetime of the cable.

Applications:

PowrPak® cables are intended for use in dry or wet locations for today's aging and expanding urban underground distribution systems of utilities where PILC has been used previously. It is specifically designed to be used in urban underground network systems where existing duct space is limited.

Options:

- Class C copper conductors
- Reduced insulation wall thickness
- BIFILL® blocked conductor and cable core/ jacket. Tested in accordance with ICEA T-34-664
- Dry nitrogen cure
- True Triple Extrusion
- Red stripes on jacket
- Deformation-resistant polypropylene jacket
- CL™ XLPE jacket
- 3 X 1/C triplex or parallel
- Lead-free filled EAM insulation
- TRXLPE insulation

For more information, or information on conductor sizes or voltage ratings not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

EmPowr® Link Underground Distribution Cable 15-35 kV

Al Conductor TRXLPE Insulation Concentric Neutral LLDPE Jacket



Product Construction:

Complete Cable:

Lead-free cross-linked semi-conducting conductor shield, insulation and semi-conducting insulation shield are extruded over a solid or stranded aluminum conductor and cured in a single operation. Uncoated copper neutral wires (helically applied) and extruded-to-fill black jacket are applied over the cable core. These products meet the latest requirements of ANSI/ICEA S-94-649, AEIC CS8 and RUS U1 as applicable for Tree-Retardant Cross-linked Polyethylene (TRXLPE) insulated concentric neutral cable.

Conductor:

Solid or Class B compressed concentric lay stranded 1350 aluminum.

Conductor Shield:

Extruded lead-free semi-conducting thermosetting polymeric stress control layer.

Insulation:

Extruded, unfilled, lead-free Tree-Retardant Cross-linked Polyethylene (TRXLPE).

Insulation Shield:

Extruded lead-free semi-conducting thermosetting layer, clean and free stripping from insulation.

Concentric Neutral:

Helically applied, annealed, solid bare copper wires.

Jacket:

Black, non-conducting, sunlight-resistant, Linear Low-Density Polyethylene (LLDPE) extruded to fill spaces between neutral wires.

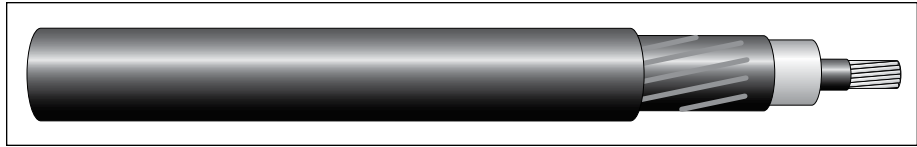
Features and Benefits:

- Lead-free environmentally friendly cable
- Triple-extruded for clean interfaces
- Dry nitrogen cure for enhanced performance
- Class 10,000 environment utilized for cable core material handling
- Excellent moisture resistance
- High dielectric strength
- Low dielectric loss
- Excellent resistance to water treeing
- Clean-stripping insulation shield
- Sunlight-resistant

Temperature Rating:

- Normal 90°C
- Emergency* 130°C
- Short Circuit 250°C

* Operation at the emergency overload temperature shall not exceed 1500 hours cumulative during the lifetime of the cable.



UNDERGROUND DISTRIBUTION CABLE – 15 kV – TYPE URD – FULL NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

175 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL (3)

2	1	16	16	0.610	0.695	0.914	0.055	61	134	433	190	130
2	7	16	16	0.635	0.720	0.939	0.055	62	134	450	190	130
1	1	20	16	0.645	0.725	0.945	0.055	77	168	492	215	150
1	19	20	16	0.675	0.760	0.978	0.055	78	168	510	215	150
1/0	1	16	14	0.680	0.760	1.007	0.055	97	213	584	240	170
1/0	19	16	14	0.715	0.800	1.044	0.055	99	213	606	240	170
2/0	19	20	14	0.760	0.845	1.088	0.055	125	266	701	275	195
3/0	19	16	12	0.810	0.895	1.172	0.055	158	338	846	315	220
4/0	19	20	12	0.865	0.950	1.228	0.055	199	423	990	360	250

220 mils NOMINAL TRXLPE INSULATION – 133% INSULATION LEVEL (3)

2	1	16	16	0.700	0.790	1.004	0.055	61	134	488	190	130
2	7	16	16	0.725	0.815	1.029	0.055	62	134	506	190	130
1	1	20	16	0.735	0.820	1.035	0.055	77	168	549	215	150
1	19	20	16	0.765	0.855	1.068	0.055	78	168	569	215	150
1/0	1	16	14	0.770	0.855	1.097	0.055	97	213	645	240	170
1/0	19	16	14	0.805	0.895	1.134	0.055	99	213	669	240	170
2/0	19	20	14	0.850	0.935	1.178	0.055	125	267	766	275	195
3/0	19	16	12	0.900	0.985	1.262	0.055	158	338	916	315	220
4/0	19	20	12	0.955	1.045	1.318	0.055	199	423	1064	360	250

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Link Underground Distribution Cable 15-35 kV

Al Conductor TRXLPE Insulation Concentric Neutral LLDPE Jacket



UNDERGROUND DISTRIBUTION CABLE – 15 kV – TYPE UD – 1/3 NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

175 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL (3)

2	1	6	16	0.610	0.695	0.914	0.055	61	51	358	170	130
2	7	6	16	0.635	0.720	0.939	0.055	62	51	375	170	130
1	1	7	16	0.645	0.725	0.945	0.055	77	59	395	195	150
1	19	7	16	0.675	0.760	0.978	0.055	78	59	413	195	150
1/0	1	9	16	0.680	0.760	0.981	0.055	97	76	445	225	170
1/0	19	9	16	0.715	0.800	1.018	0.055	99	76	467	225	170
2/0	19	11	16	0.760	0.845	1.062	0.055	125	93	528	255	200
3/0	19	14	16	0.810	0.895	1.112	0.055	158	118	606	290	225
4/0	19	17	16	0.865	0.950	1.168	0.055	199	143	695	330	255
250	37	20	16	0.920	1.005	1.224	0.055	234	168	780	365	280
350	37	18	14	1.025	1.110	1.373	0.055	329	240	1029	440	340
500	37	25	14	1.150	1.235	1.501	0.055	468	334	1316	530	420
750	61	24	12	1.340	1.425	1.772	0.080	703	508	1895	640	510
1000	61	20	10	1.485	1.575	1.963	0.080	937	673	2410	730	595

220 mils NOMINAL TRXLPE INSULATION – 133% INSULATION LEVEL (3)

2	1	6	16	0.700	0.790	1.004	0.055	61	51	413	170	130
2	7	6	16	0.725	0.815	1.029	0.055	62	51	431	170	130
1	1	7	16	0.735	0.820	1.035	0.055	77	59	452	195	150
1	19	7	16	0.765	0.855	1.068	0.055	78	59	472	195	150
1/0	1	9	16	0.770	0.855	1.071	0.055	97	76	504	225	170
1/0	19	9	16	0.805	0.895	1.108	0.055	99	76	528	225	170
2/0	19	11	16	0.850	0.935	1.152	0.055	125	93	591	255	200
3/0	19	14	16	0.900	0.985	1.202	0.055	158	118	672	290	225
4/0	19	17	16	0.955	1.045	1.258	0.055	199	143	764	330	255
250	37	20	16	1.010	1.100	1.334	0.055	234	168	873	365	280
350	37	18	14	1.115	1.200	1.463	0.055	329	240	1111	440	340
500	37	25	14	1.240	1.330	1.591	0.055	468	334	1405	530	420
750	61	24	12	1.430	1.520	1.862	0.080	703	508	1999	640	510
1000	61	20	10	1.575	1.670	2.083	0.080	937	673	2573	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for concentric neutral cables rated 5-46 kV and also meet the requirements of the latest revisions of AIEC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration with neutral wires bonded at each end.

(3) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Applications:

EmPowr® Link® cables are intended for use in dry or wet locations for distribution of single or three phase medium voltage power. Cables with a full neutral are designed for use on single phase underground distribution (UD) applications. Cables with a 1/3 neutral are designed for use in three phase UD applications. The full neutral cable is sometimes referred to as an underground residential distribution (URD) cable. These cables may be installed in ducts or direct buried.

Options:

- Compact conductors
- Copper conductors
- STRANDFILL® blocked conductor. Tested in accordance with ICEA T-31-610
- BIFILL® blocked conductor and cable core/jacket. Tested in accordance with ICEA T-34-664
- True Triple Extrusion
- Smoother and cleaner semi-conducting conductor shield
- Low-strip insulation shield
- Flat strap concentric neutral
- Red stripes on jacket
- Semi-conducting thermoplastic jacket
- Overlaying PVC jacket with separator tape
- Deformation-resistant polypropylene jacket
- CL™ XLPE jacket
- Combined Duct & Cable
- 3 X 1/C triplex or parallel
- TRXLPE Class III insulation for 105°/140°C temperature rating
- Type MV-90 UL 1072
- Type MV-105 UL 1072
- Alternative neutral configurations
- 100% pellet inspection

For more information, or information on conductor sizes or voltage ratings not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

EmPowr® Link Underground Distribution Cable 15-35 kV

Al Conductor TRXLPE Insulation Concentric Neutral LLDPE Jacket



UNDERGROUND DISTRIBUTION CABLE – 25 kV – TYPE URD – FULL NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

260 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL (4)

1	1	20	16	0.805	0.895	1.115	0.055	77	168	604	215	150
1	19	20	16	0.835	0.925	1.148	0.055	78	168	626	215	150
1/0	1	16	14	0.840	0.930	1.177	0.055	97	213	703	240	170
1/0	19	16	14	0.875	0.965	1.214	0.055	99	214	729	240	170
2/0	19	20	14	0.920	1.010	1.258	0.055	125	267	828	275	195
3/0	19	16	12	0.970	1.060	1.342	0.055	158	339	983	315	220
4/0	19	20	12	1.025	1.115	1.418	0.055	199	423	1155	360	250

UNDERGROUND DISTRIBUTION CABLE – 25 kV – TYPE UD – 1/3 NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (3)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

260 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL (4)

1	1	7	16	0.805	0.895	1.115	0.055	77	59	507	195	150
1	19	7	16	0.835	0.925	1.148	0.055	78	59	529	195	150
1/0	1	9	16	0.840	0.930	1.151	0.055	97	76	561	220	170
1/0	19	9	16	0.875	0.965	1.188	0.055	99	76	587	220	170
2/0	19	11	16	0.920	1.010	1.232	0.055	125	93	652	250	200
3/0	19	14	16	0.970	1.060	1.282	0.055	158	118	736	290	225
4/0	19	17	16	1.025	1.115	1.358	0.055	199	143	852	330	255
250	37	20	16	1.080	1.175	1.414	0.055	234	168	943	360	280
350	37	18	14	1.185	1.275	1.543	0.055	329	240	1188	435	340
500	37	25	14	1.310	1.405	1.721	0.080	468	334	1542	525	420
750	61	24	12	1.500	1.595	1.942	0.080	703	508	2096	640	510
1000	61	20	10	1.645	1.740	2.163	0.080	937	673	2682	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on a three phase circuit, one conductor per phase, in flat adjacent configuration, with neutral wires bonded at each end. For specific ampacities, contact your General Cable sales representative.

(4) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Link Underground Distribution Cable 15-35 kV

Al Conductor TRXLPE Insulation Concentric Neutral LLDPE Jacket



UNDERGROUND DISTRIBUTION CABLE – 28 kV – TYPE URD – FULL NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

280 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL

1	1	20	16	0.845	0.935	1.155	0.055	77	168	633	215	150
1	19	20	16	0.875	0.970	1.188	0.055	78	168	656	215	150
1/0	1	16	14	0.880	0.970	1.217	0.055	97	214	734	240	170
1/0	19	16	14	0.915	1.010	1.254	0.055	99	214	761	240	170
2/0	19	20	14	0.960	1.055	1.298	0.055	125	272	866	275	195
3/0	19	16	12	1.010	1.105	1.402	0.055	158	345	1045	315	220
4/0	19	20	12	1.065	1.160	1.458	0.055	199	432	1199	360	250

UNDERGROUND DISTRIBUTION CABLE – 28 kV – TYPE UD – 1/3 NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (3)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							

280 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL

1	1	7	16	0.845	0.935	1.155	0.055	77	59	536	195	150
1	19	7	16	0.875	0.970	1.188	0.055	78	59	559	195	150
1/0	1	9	16	0.880	0.970	1.191	0.055	97	76	591	220	170
1/0	19	9	16	0.915	1.010	1.228	0.055	99	76	617	220	170
2/0	19	11	16	0.960	1.055	1.272	0.055	125	93	684	250	200
3/0	19	14	16	1.010	1.105	1.342	0.055	157	118	789	290	225
4/0	19	17	16	1.065	1.160	1.398	0.055	198	143	887	330	255
250	37	20	16	1.120	1.215	1.454	0.055	234	168	980	360	280
350	37	18	14	1.225	1.320	1.583	0.055	329	240	1227	435	340
500	37	25	14	1.350	1.445	1.761	0.080	468	334	1586	525	420
750	61	24	12	1.540	1.635	2.012	0.080	703	508	2192	640	510
1000	61	20	10	1.685	1.785	2.203	0.080	937	673	2737	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on a three phase circuit, one conductor per phase, in flat adjacent configuration, with neutral wires bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Link Underground Distribution Cable 15-35 kV

Al Conductor TRXLPE Insulation Concentric Neutral LLDPE Jacket



UNDERGROUND DISTRIBUTION CABLE – 35 kV – TYPE URD – FULL NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							
345 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL (4)												
1/0	1	16	14	1.010	1.105	1.367	0.055	97	214	861	240	170
1/0	19	16	14	1.045	1.145	1.404	0.055	99	214	891	240	170
2/0	19	20	14	1.090	1.190	1.448	0.055	125	267	996	275	195
3/0	19	16	12	1.140	1.240	1.532	0.055	158	339	1161	315	220
4/0	19	20	12	1.195	1.295	1.588	0.055	199	423	1318	360	250

UNDERGROUND DISTRIBUTION CABLE – 35 kV – TYPE UD – 1/3 NEUTRAL

COMPRESSED CONDUCTOR		COPPER NEUTRAL		DIAMETER (1) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (3)	
AL AWG OR kcmil	NO. OF WIRES	NO. OF WIRES	WIRE SIZE AWG	INSULATION		ENCAP LLDPE JACKET		AL COND.	CU NEUT. WIRES	TOTAL	DIRECT BURIED	IN DUCT
				MIN.	MAX.							
345 mils NOMINAL TRXLPE INSULATION – 100% INSULATION LEVEL (4)												
1/0	1	9	16	1.010	1.105	1.341	0.055	97	76	716	220	170
1/0	19	9	16	1.045	1.145	1.378	0.055	99	76	746	220	170
2/0	19	11	16	1.090	1.190	1.422	0.055	125	93	816	250	200
3/0	19	14	16	1.140	1.240	1.472	0.055	158	118	908	290	225
4/0	19	17	16	1.195	1.295	1.528	0.055	199	143	1008	330	255
250	37	20	16	1.250	1.350	1.584	0.055	234	168	1106	360	280
350	37	18	14	1.355	1.455	1.763	0.080	329	240	1419	435	340
500	37	25	14	1.480	1.580	1.891	0.080	468	334	1737	525	420
750	61	24	12	1.670	1.770	2.142	0.080	703	508	2364	640	510
1000	61	20	10	1.815	1.920	2.333	0.080	937	673	2925	730	595

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on single phase operation, with full current return in the neutral wires. For specific ampacities, contact your General Cable sales representative.

(3) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values based on a three phase circuit, one conductor per phase, in flat adjacent configuration, with neutral wires bonded at each end. For specific ampacities, contact your General Cable sales representative.

(4) RUS Bulletin 1728F (U1) dated 4/2/12 requires, at minimum, 220 mil insulation thickness for 15 kV cable, 260 mil insulation thickness for 25 kV cable, and 345 mil insulation thickness for 35 kV cable.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Notes

EmPowr® Link Shielded Power Cable 15-35 kV

Al Conductor TRXLPE Insulation Longitudinally Applied Corrugated Tape LLDPE Jacket



Product Construction:

Complete Cable:

Lead-free cross-linked semi-conducting conductor shield, insulation and semi-conducting insulation shield are extruded over a solid or stranded aluminum conductor and cured in a single operation. Corrugated copper tape and an extruded black jacket are applied over the cable core. These products meet the latest requirements of ANSI/ICEA S-97-682 and AEIC CS8 as applicable for Tree-Retardant Cross-linked Polyethylene (TRXLPE) insulated shielded power cable.

Conductor:

Solid or Class B compressed concentric lay stranded 1350 aluminum.

Conductor Shield:

Extruded lead-free semi-conducting thermosetting polymeric stress control layer.

Insulation:

Extruded unfilled lead-free Tree-Retardant Cross-linked Polyethylene (TRXLPE).

Insulation Shield:

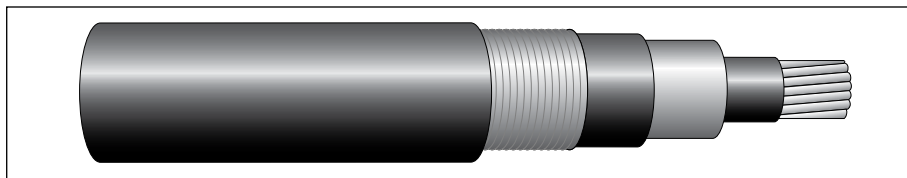
Extruded lead-free semi-conducting thermosetting layer, clean and free stripping from insulation.

Longitudinally Applied Corrugated Tape:

Copper, 8 or 10 mil thick Longitudinally Applied Corrugated Tape (LACT) with a minimum 375 mil overlap.

Jacket:

Black, non-conducting, sunlight-resistant Linear Low-Density Polyethylene (LLDPE).



LONGITUDINALLY APPLIED CORRUGATED TAPE SHIELDED POWER CABLE

COMPRESSED CONDUCTOR		DIAMETER (1) INCHES				NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	INSULATION		LACT SHIELD	LLDPE JACKET		AL COND.	CU SHIELD	TOTAL	DIRECT BURIED	IN DUCT
		MIN.	MAX.	THKN.		O.D.					

175 mils NOMINAL TRXLPE INSULATION – 15 kV 100% INSULATION LEVEL

1/0	19	0.715	0.800	0.008	0.912	1.072	0.080	99	116	549	235	170
1/0	19	0.715	0.800	0.010	0.918	1.078	0.080	99	145	582	235	170
2/0	19	0.760	0.845	0.008	0.956	1.116	0.080	125	120	601	270	200
2/0	19	0.760	0.845	0.010	0.962	1.122	0.080	125	150	635	270	200
3/0	19	0.810	0.895	0.008	1.006	1.166	0.080	158	125	663	305	225
3/0	19	0.810	0.895	0.010	1.012	1.172	0.080	158	156	698	305	225
4/0	19	0.865	0.950	0.008	1.062	1.222	0.080	199	134	740	350	260
4/0	19	0.865	0.950	0.010	1.068	1.228	0.080	199	168	778	350	260
250	37	0.920	1.005	0.008	1.104	1.264	0.080	234	131	814	370	285
250	37	0.920	1.005	0.010	1.110	1.270	0.080	234	164	848	370	285
350	37	1.015	1.100	0.008	1.207	1.367	0.080	329	157	984	445	345
350	37	1.015	1.100	0.010	1.213	1.373	0.080	329	191	1020	445	345
500	37	1.150	1.235	0.008	1.335	1.495	0.080	468	157	1190	545	425
500	37	1.150	1.235	0.010	1.355	1.515	0.080	468	220	1263	545	425
750	61	1.340	1.425	0.008	1.536	1.696	0.080	703	199	1574	665	530
750	61	1.340	1.425	0.010	1.542	1.702	0.080	703	243	1620	665	530
1000	61	1.485	1.575	0.008	1.685	1.905	0.110	937	208	1996	780	630
1000	61	1.485	1.575	0.010	1.691	1.911	0.110	937	260	2050	780	630

220 mils NOMINAL TRXLPE INSULATION – 15 kV 133% INSULATION LEVEL

1/0	19	0.805	0.895	0.008	1.002	1.162	0.080	99	125	622	235	170
1/0	19	0.805	0.895	0.010	1.008	1.168	0.080	99	156	658	235	170
2/0	19	0.850	0.935	0.008	1.046	1.206	0.080	125	129	677	270	200
2/0	19	0.850	0.935	0.010	1.052	1.212	0.080	125	162	713	270	200
3/0	19	0.900	0.985	0.008	1.096	1.256	0.080	158	139	746	305	225
3/0	19	0.900	0.985	0.010	1.102	1.262	0.080	158	173	785	305	225
4/0	19	0.955	1.045	0.008	1.152	1.312	0.080	199	143	822	350	260
4/0	19	0.955	1.045	0.010	1.158	1.318	0.080	199	179	863	350	260
250	37	1.010	1.100	0.008	1.194	1.354	0.080	234	140	899	370	285
250	37	1.010	1.100	0.010	1.200	1.360	0.080	234	191	950	370	285
350	37	1.105	1.190	0.008	1.297	1.457	0.080	329	157	1068	445	345
350	37	1.105	1.190	0.010	1.303	1.463	0.080	329	191	1103	445	345
500	37	1.240	1.330	0.008	1.439	1.599	0.080	468	185	1317	545	425
500	37	1.240	1.330	0.010	1.445	1.605	0.080	468	231	1365	545	425
750	61	1.430	1.520	0.008	1.626	1.846	0.110	703	203	1778	665	530
750	61	1.430	1.520	0.010	1.632	1.852	0.110	703	254	1830	665	530
1000	61	1.575	1.670	0.008	1.775	1.995	0.110	937	222	2124	780	630
1000	61	1.575	1.670	0.010	1.781	2.001	0.110	937	277	2181	780	630

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-97-682 for Utility Shielded Power Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration (direct buried) with metallic shield bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Link Shielded Power Cable 15-35 kV

Al Conductor TRXLPE Insulation Longitudinally Applied Corrugated Tape LLDPE Jacket



LONGITUDINALLY APPLIED CORRUGATED TAPE SHIELDED POWER CABLE

COMPRESSED CONDUCTOR		DIAMETER (1) INCHES				NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (1) LB/1000 FT			AMPACITY (2)	
AL AWG OR kcmil	NO. OF WIRES	INSULATION		LACT SHIELD			LLDPE JACKET	AL COND.	CU SHIELD	TOTAL	DIRECT BURIED
		MIN.	MAX.	THKN.	O.D.						

260 mils NOMINAL TRXLPE INSULATION – 25 kV 100% INSULATION LEVEL

1/0	19	0.875	0.965	0.008	1.082	1.242	0.080	99	134	693	235	170
1/0	19	0.875	0.965	0.010	1.088	1.248	0.080	99	168	731	235	170
2/0	19	0.920	1.010	0.008	1.126	1.286	0.080	125	139	749	270	200
2/0	19	0.920	1.010	0.010	1.132	1.292	0.080	125	173	789	270	200
3/0	19	0.970	1.060	0.008	1.176	1.336	0.080	158	143	816	305	225
3/0	19	0.970	1.060	0.010	1.182	1.342	0.080	158	179	857	305	225
4/0	19	1.025	1.115	0.008	1.232	1.392	0.080	199	153	900	350	260
4/0	19	1.025	1.115	0.010	1.238	1.398	0.080	199	191	943	350	260
250	37	1.080	1.175	0.008	1.274	1.434	0.080	234	161	923	370	285
250	37	1.080	1.175	0.010	1.294	1.454	0.080	234	220	988	370	285
350	37	1.185	1.275	0.008	1.391	1.551	0.080	329	185	1105	445	345
350	37	1.185	1.275	0.010	1.397	1.557	0.080	329	231	1152	445	345
500	37	1.310	1.405	0.008	1.519	1.679	0.080	468	199	1331	545	425
500	37	1.310	1.405	0.010	1.525	1.685	0.080	468	249	1382	545	425
750	61	1.500	1.595	0.008	1.706	1.926	0.110	703	222	1769	665	530
750	61	1.500	1.595	0.010	1.712	1.932	0.110	703	277	1826	665	530
1000	61	1.645	1.740	0.008	1.855	2.075	0.110	937	240	2113	780	630
1000	61	1.645	1.740	0.010	1.861	2.081	0.110	937	301	2174	780	630

345 mils NOMINAL TRXLPE INSULATION – 35 kV 100% INSULATION LEVEL

1/0	19	1.045	1.145	0.008	1.252	1.412	0.080	99	157	859	230	180
1/0	19	1.045	1.145	0.010	1.258	1.418	0.080	99	197	904	230	180
2/0	19	1.090	1.190	0.008	1.296	1.456	0.080	125	162	920	260	205
2/0	19	1.090	1.190	0.010	1.302	1.462	0.080	125	202	966	260	205
3/0	19	1.140	1.240	0.008	1.346	1.506	0.080	158	166	993	295	235
3/0	19	1.140	1.240	0.010	1.352	1.512	0.080	158	208	1040	295	235
4/0	19	1.195	1.295	0.008	1.402	1.562	0.080	199	171	1078	340	265
4/0	19	1.195	1.295	0.010	1.408	1.568	0.080	199	214	1127	340	265
250	37	1.250	1.350	0.008	1.458	1.618	0.080	234	199	1125	360	295
250	37	1.250	1.350	0.010	1.464	1.624	0.080	234	243	1170	360	295
350	37	1.355	1.455	0.008	1.561	1.781	0.110	329	208	1365	430	355
350	37	1.355	1.455	0.010	1.567	1.787	0.110	329	260	1418	430	355
500	37	1.480	1.580	0.008	1.689	1.909	0.110	468	222	1609	530	430
500	37	1.480	1.580	0.010	1.695	1.915	0.110	468	277	1665	530	430
750	61	1.670	1.770	0.008	1.876	2.096	0.110	703	245	2002	650	550
750	61	1.670	1.770	0.010	1.882	2.102	0.110	703	306	2064	650	550
1000	61	1.815	1.920	0.008	2.025	2.245	0.110	937	259	2357	765	625
1000	61	1.815	1.920	0.010	2.031	2.251	0.110	937	324	2423	765	625

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-97-682 for Utility Shielded Power Cables Rated 5 through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temp., 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, in flat adjacent configuration (direct buried) with metallic shield bonded at each end. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Applications:

EmPowr® Link* cables are intended for use in dry or wet locations for distribution of three-phase medium-voltage power. These cables may be installed in ducts or direct buried.

Options:

- Compact conductors
- Copper conductors
- STRANDFILL® blocked conductor. Tested in accordance with ICEA T-31-610
- BIFILL® tested to ICEA T-34-664
 1. blocked conductor
 2. blocked cable core/LACT
- TRIFILL® tested to ICEA T-34-664
 1. blocked conductor
 2. blocked cable core/LACT
 3. sealed overlap and blocked LACT/jacket
- Sealed LACT overlap
- True Triple Extrusion
- Low-strip insulation shield
- Red stripes on jacket
- Semi-conducting thermoplastic jacket
- CL™ XLPE jacket
- 3 X 1/C triplex or parallel
- TRXLPE Class III insulation for 105°/140°C temperature rating
- Type MV-90 UL 1072
- Type MV-105 UL 1072

For more information, or information on conductor sizes or voltage ratings not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

EmPowr® Link CL™ UL Type MV-105* Eco-nomical, Eco-efficient, Eco-friendly

EmPowr® Link CL™ — the next generation in renewable energy collection systems. It's the only medium-voltage cable that costs less now and pays more later.

- **Reduced upfront cost**
- **Environmentally friendly**
- **Better long-term efficiency**
- **Greater return on investment**

Our Non-stop Commitment

When specifying cables that effectively and efficiently operate under complex conditions, your options have changed. There's now something better. General Cable's team of experts has once again applied extensive R&D experience to re-engineer our medium-voltage cable, improving the performance of collection systems and making renewable energy more **eco-nomical, eco-efficient and eco-friendly** than ever before.

EmPowr Link CL — Eco-nomical

Through an innovative redesign of the cable's concentric neutrals, General Cable has succeeded in reducing the amount of high-cost copper to cut initial material costs.

EmPowr Link CL — Eco-efficient

This exciting breakthrough features the latest in Cross-linked Polyethylene (XLPE) cable jacketing coupled with reduced concentric neutrals, providing better efficiency over the life of the cable through cooler operation, lower line loss and greater resistance to deformation.

EmPowr Link CL — Eco-friendly

General Cable's EmPowr Link medium-voltage cables are already the greenest choice for wind farm construction. EmPowr Link offers high dielectric strength with the lowest dielectric loss characteristics of any medium-voltage cable type. With its built-in cost benefits and long-term efficiencies, CL is the total green solution — allowing you to go green and save green for an overall better return on investment.

- Reduced Copper in Concentric Neutrals
- Cooler Operation
- Enhanced Thermomechanical Properties
- Optimal Efficiency with Lower Line Loss
- Environmentally Friendly with Lead-Free Compounds
- Returnable Reels and Carbon Credit Value



Through extensive industry-recognized testing, this next-generation cable has proven its ability to meet the needs of today's wind farm collection systems while maintaining the reliability and performance of General Cable's existing EmPowr Link 35 kV TRXLPE insulated cable. Look at the test data on every purchase of medium-voltage cable to ensure that you're getting the performance you expect.

* See next page



 **General Cable**

Industry-Leading Reliability and Performance

EmPowr® Link CL™ UL Type MV-105*— Your Best Choice

Utilities have historically used Linear Low Density Polyethylene (LLDPE) thermoplastic jackets for the beneficial balance of cost and physical protection they provide. The future of utility power cable jacketing is thermoset XLPE jackets that provide a lower-total-cost solution.

Advantages of this new generation of cable construction include:

Approximately 25% reduction in copper in the concentric neutrals:

Using the ICEA P-45-482-2007 calculations to determine the shield cross-sectional area required for a given fault current, LLDPE jackets are limited to a maximum transient temperature of 200°C; XLPE jackets allow 350°C. The higher temperature allowance provides a greater amount of fault current capability for a given cross-sectional area, reducing the required copper in the neutrals. A smaller circulating current provides a reduced operating temperature, resulting in higher cable ampacities.

Further savings can be realized through the EPRI Short2 Program. General Cable's engineering team will gladly assist you in optimizing your cable design.

Reduced shield losses equate to lower line loss: With reduced copper concentric neutrals, the shield resistance will increase, with lower losses due to circulating currents. This effect is most easily seen in the larger kcmil sizes but is applicable to all conductor sizes.

Equivalent physical properties to existing LLDPE jacketed construction:

Test data has shown that EmPowr® Link CL™ maintains the physical properties, jacket stripping, coefficient of friction and installation characteristics of traditional EmPowr Link LLDPE jacket constructions.

Enhanced thermomechanical performance provides excellent resistance to deformation:

To simulate three-conductor installed performance, General Cable conducted AEIC/ICEA thermomechanical testing on traditional EmPowr Link LLDPE jacketed cables and EmPowr Link CL XLPE jacketed cables.

Photos and results of the testing are shown below:

EmPowr® Link LLDPE jacketed cables:

The results of the testing showed that the LLDPE failed 3 x 1/C Cable/Conduit 140°C testing. It clearly melted and fused together, causing exposed concentric neutrals at some locations.



EmPowr Link CL XLPE jacketed cables:

These cables passed 3 x 1/C Cable/Conduit 140°C testing with no problem areas.



Comparative Study: EmPowr Link Versus EmPowr Link CL

PRODUCT DESIGN	DESCRIPTION - 1000 kcmil Aluminum, TRXLPE, 1/3 CN, 35 kV			
	EMPOWR LINK LLDPE JACKET		EMPOWR LINK CL XLPE JACKET	
Concentric Neutrals	No. of Wires: 20	10 AWG	No. of Wires: 23	12 AWG
Concentric Neutrals - CU WT.	673 lbs/kft (1002 kg/km)		487 lbs/kft (725 kg/km)	
Shield Fault Capacity – Currents @ 6 Cycles (AMPS)	42645 A		42695 A	
Ampacity ⁽¹⁾ Direct Buried @ 90°C – Flat	645 A		660 A	
Cost of Shield Losses ⁽²⁾	\$82,700		\$75,300	
Calculated Savings ⁽³⁾			\$976,800	

(1) Based on cables with 90°C normal operation.

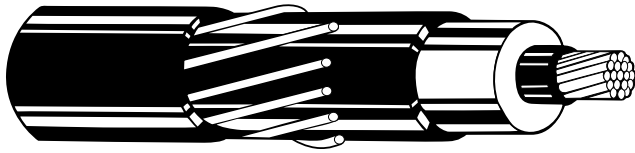
(2) Based on 3 conductor, flat, 7.5" spacing, 36" burial depth, 20°C ambient, 75% load factor, soil Rho 0.9°C-m/W.

(3) Based on 3 conductor, flat, 7.5" spacing, 645 A, avg. energy cost \$0.06/kWh, 1 circuit mile, 1-year time frame.

(4) Based on 3 conductor, flat, 7.5" spacing, 645 A, avg. energy cost \$0.06/kWh, 20 circuit miles, 20-year life of a wind farm, 1/3 production time.

*UL Type MV-105 EmPowr Link CL is rated MV-105 in accordance with the UL 1072 standard. It should be noted that utilizing a 105°C normal operating conductor temperature will increase cable ampacity rating but will reduce the shield fault capability slightly. If the user plans on operating these cables at 105°C conductor temperature for normal operation and 140°C for emergency overload, please contact General Cable for the applicable cable ampacity and shield fault capability ratings. Another important consideration is that the migration of soil moisture away from the cable is more likely at the higher operating conductor temperature and can result in an increase in soil thermal resistivity, resulting in an increase in conductor and soil temperature.

U.S. Specification for TRXLPE Medium-Voltage Underground Distribution Cable with XLPE Jacket



1.0 SCOPE

This specification covers single conductor tree-retardant cross-linked polyethylene insulated, concentric neutral cables rated from 5 kV to 46 kV. The cable shall be suitable for both single- and three-phase primary underground distribution (UD) for installation in underground ducts, conduit and direct burial in wet or dry locations. It shall also be suitable for on-grade and aerial installations. The cable shall be rated 90°C for normal operation, 130°C for emergency overload, and 250°C for short-circuit conditions in accordance with the latest revision of ANSI/ICEA S-94-649, AEIC CS8 and UL 1072 as applicable.

2.0 GENERAL

Cable shall meet or exceed the latest requirements of the following industry specifications and standards. The order of precedent is as follows: 1) Customer Specification, 2) AEIC CS8, 3) ANSI/ICEA S-94-649, 4) UL 1072. Where a particular product requirement or characteristic is specified in more than one document, the most stringent requirement will apply. Wherever reference is made to an industry specification or standard, it shall be understood to be the latest edition of that document.

3.0 QUALITY ASSURANCE

The cable shall be produced with the conductor shield, insulation and insulation shield applied in the same extrusion operation. All three extruded layers shall be applied in a common extruder head. A dry-cure process shall be used. Compound pellets used for strand shield, insulation and insulation shield shall be received and unloaded using an ultra-clean bulk handling system and/or an ultra-clean box handling system. The bulk handling system shall be a closed system. The material transfer/storage system shall use filtered air. The box handling system shall incorporate a dedicated material transfer system with filtered air involving at least the following: a Class 10,000 clean room per FED-STD-209E to hold the bag of compound as it is unloaded into the transfer system or a Class 10,000 clean compartment per FED-STD-209E surrounding the transfer point.

4.0 CONDUCTORS

The central conductor shall be either solid or stranded. If stranded, it shall be filled with a material compatible with the conductor and the conductor shield to prevent the longitudinal penetration of water into the conductor. Solid aluminum shall meet the requirements of ANSI/ICEA S-94-649 Part 2. Stranded aluminum conductor shall be Class B, compressed per ANSI/ICEA S-94-649 Part 2. Conductor temper shall be H-16 to H-19 (3/4 to hard drawn) for stranded conductors and H-14 to H-16 (1/2 to 3/4 hard) for solid conductors.

5.0 CONDUCTOR SHIELD

The conductor shield shall be an extruded thermosetting semi-conductive material complying with the applicable requirements of AEIC CS8 and ANSI/ICEA S-94-649 Part 3. The extruded shield shall be easily removable from the conductor and shall be firmly bonded to the overlying insulation.

6.0 INSULATION

The insulation shall be a tree-retardant cross-linked polyethylene and shall comply with AEIC CS8 and ANSI/ICEA S-94-649 Part 4. The thickness shall be as required by ANSI/ICEA S-94-649 Table 4-4. An insulation pellet inspection system capable of examining 100% of the insulation pellets and rejecting contaminants shall be used. The manufacturer shall state the method used to examine and reject contaminated pellets.

7.0 INSULATION SHIELDING

The insulation shield shall be a thermosetting semi-conductive material complying with the applicable requirements of ANSI/ICEA S-94-649 Part 5.

8.0 CONCENTRIC NEUTRAL

The concentric neutral conductor shall consist of bare annealed copper wires per ANSI/ICEA S-94-649 Part 6, applied helically and essentially equally spaced over the outer semi-conducting shield, with a lay length of not less than six nor more than ten times the diameter over the concentric neutral conductor. The neutral indents in the insulation shield shall be within the requirements of ANSI/ICEA S-94-649 Part 5.2. The cable shall contain water-blocking components for the concentric neutral, and the completed cable longitudinal water penetration resistance shall comply with the requirements of ANSI/ICEA S-94-649 Part 6 and ANSI/ICEA T-34-664.

9.0 OVERALL OUTER JACKET

The outer jacket is an extruded-to-fill black non-conducting cross-linked polyethylene jacket, meeting the physical requirements of Table 1 when tested by the methods specified in ANSI/ICEA S-94-649. The jacket shall be free stripping and not interfere with an intimate contact between the neutral wires and the underlying extruded insulation shield. The jacket shall contain a print legend marking, sequential length marking and three longitudinal extruded red stripes.

Table 1: Physical Properties of Extruded-to-Fill XLPE Jacket

PHYSICAL REQUIREMENTS	VALUES
Unaged Tensile Strength, Min. (psi)	1500
Aged* Tensile Strength, Min. Ret. (%)	70
Unaged Elongated, Min. (%)	150
Aged* Elongated, Min. Ret. (%)	70
Heat Distortion 1 hr at 131°C, Max. (%)	30

*Aged for 168 hrs at 121°C.

10.0 TESTS

All tests required by the referenced specifications shall be performed and passed prior to shipment, and a certified copy of the results of the tests shall be sent to the customer, if so requested. The manufacturer shall either submit with the quotation, or have on file with the customer, certified support data for the qualification tests required by ANSI/ICEA S-94-649 Part 10 as applicable.

11.0 EXCEPTIONS

All exceptions to these specifications are to be clearly stated in the bid proposal and will require the review and approval of the customer.

EmPowr® Link CL™ Underground Distribution Cable 15-35 kV

Al Conductor TRXLPE Insulation Concentric Neutral XLPE Jacket, UL Type MV-105



COMPRESSED CONDUCTOR CLASS B STRAND			INS. DIAMETER (1) IN (mm)			NOM. JACKET THKN. (1) IN (mm)	LLDPE JACKET						APPROX. SHIELD FAULT CAPACITY (4)	EMPOWR® LINK CL™						TYPICAL LENGTH (5) FT (m)	COND. SIZE AL (AWG or kcmil)	
							NEUTRAL CONFIGURATION			NOM. JACKET O.D. INCHES (mm)	AMPACITY (2)			NEUTRAL CONFIGURATION			NOM. JACKET O.D. INCHES (mm)	AMPACITY (2)				APPROX. TOTAL WT. LBS/KFT (kg/km)
AL (AWG or kcmil)	NOM. COND. DIA. IN (mm)	APPROX. AL WT. LBS/KFT (kg/km)	MIN. INS. O.D. IN (mm)	MAX. INS. O.D. IN (mm)	LLDPE JACKET	NEUT. SIZE	NO. OF WIRES	WIRE SIZE (AWG)	APPROX. CU WT. (1) LBS/KFT (kg/km)		DIRECT BURIED FLAT (3) TREFOIL	CURRENT @ 6 CYCLES (AMPS)	NO. OF WIRES	WIRE SIZE (AWG)	APPROX. CU WT. (1) LBS/KFT (kg/km)	DIRECT BURIED FLAT (3) TREFOIL		LBS/KFT (kg/km)	FT (m)			
										1/0							0.362 (9.19)			99 (147)	1.045 (26.54)	1.145 (29.08)
2/3	17	16	143 (213)	1.378 (35.00)	245	230	9000	13	16		109 (162)	1.377 (34.99)	245	230	786 (1169)							
1/2	13	16	109 (162)	1.378 (35.00)	250	230	6900	10	16		84 (125)	1.377 (34.99)	250	230	778 (1158)							
1/3	9	16	76 (113)	1.378 (35.00)	250	230	4800	7	16		59 (88)	1.377 (34.99)	250	230	778 (1158)							
3/0	0.456 (11.58)	158 (235)	1.140 (28.96)	1.240 (31.50)	0.055 (1.40)	Full	16	12	339 (504)	1.532 (38.91)	310	300	21400	18	14	240 (357)	1.498 (38.05)	315	300	1053 (1567)	7000 (2150)	3/0
						2/3	17	14	227 (338)	1.498 (38.05)	315	300	14300	20	16	168 (250)	1.471 (37.37)	315	300	964 (1434)		
						1/2	20	16	168 (250)	1.472 (37.39)	315	300	10600	15	16	126 (187)	1.471 (37.37)	320	300	927 (1379)		
						1/3	14	16	118 (176)	1.472 (37.39)	320	300	7400	10	16	84 (125)	1.471 (37.37)	320	300	912 (1357)		
4/0	0.512 (13.00)	199 (296)	1.195 (30.35)	1.295 (32.89)	0.055 (1.40)	Full	20	12	423 (630)	1.588 (40.34)	350	340	26800	23	14	307 (457)	1.554 (39.47)	350	340	1196 (1780)	7000 (2150)	4/0
						2/3	21	14	280 (417)	1.554 (39.47)	355	340	17700	16	14	214 (318)	1.554 (39.47)	355	340	1112 (1655)		
						1/2	16	14	214 (318)	1.554 (39.47)	355	340	13500	19	16	159 (237)	1.528 (38.81)	360	340	1038 (1544)		
						1/3	17	16	143 (213)	1.528 (38.81)	360	340	9000	13	16	109 (162)	1.528 (38.81)	365	340	993 (1477)		
350	0.661 (16.79)	329 (490)	1.355 (34.42)	1.455 (36.96)	0.080 (2.03)	2/3	22	12	466 (693)	1.797 (45.64)	440	445	29500	26	14	347 (516)	1.763 (44.78)	445	445	1542 (2294)	5000 (1500)	350
						1/2	26	14	347 (516)	1.763 (44.78)	445	445	21900	30	16	252 (375)	1.737 (44.12)	455	445	1428 (2125)		
						1/3	28	16	235 (350)	1.737 (44.12)	455	450	14800	20	16	168 (250)	1.737 (44.12)	465	450	1353 (2013)		
						1/6	14	16	118 (176)	1.737 (44.12)	475	450	7400	10	16	84 (125)	1.737 (44.12)	475	450	1278 (1902)		
500	0.789 (20.04)	468 (697)	1.480 (37.59)	1.580 (40.13)	0.080 (2.03)	2/3	20	10	673 (1002)	1.967 (49.96)	505	535	42600	23	12	487 (725)	1.925 (48.90)	510	540	1952 (2904)	5000 (1500)	500
						1/2	24	12	508 (757)	1.925 (48.90)	510	540	32200	27	14	361 (537)	1.891 (48.03)	520	540	1798 (2675)		
						1/3	25	14	334 (497)	1.891 (48.03)	525	545	21100	29	16	243 (362)	1.865 (47.37)	540	545	1662 (2473)		
						1/6	20	16	168 (250)	1.865 (47.37)	555	545	10600	15	16	126 (188)	1.865 (47.37)	570	550	1565 (2328)		
750	0.968 (24.59)	703 (1047)	1.670 (42.42)	1.770 (44.96)	0.080 (2.03)	1/2	22	10	741 (1102)	2.184 (55.47)	585	655	49600	26	12	551 (820)	2.142 (54.41)	590	660	2461 (3662)	5000 (1500)	750
						1/3	24	12	508 (757)	2.142 (54.41)	595	665	32200	27	14	361 (537)	2.108 (53.54)	615	670	2245 (3340)		
						1/6	30	16	252 (375)	2.082 (52.88)	645	675	15900	22	16	185 (275)	2.082 (52.88)	670	680	2053 (3055)		
1000	1.117 (28.37)	937 (1394)	1.815 (46.10)	1.920 (48.77)	0.080 (2.03)	1/2	30	10	1010 (1503)	2.333 (59.26)	650	740	64000	22	10	741 (1102)	2.333 (59.26)	650	760	3690 (5490)	4000 (1200)	1000
						1/3	20	10	673 (1002)	2.333 (59.26)	645	755	42600	23	12	487 (725)	2.291 (58.19)	660	765	2774 (4127)		
						1/6	25	14	334 (497)	2.257 (57.32)	695	775	21100	29	16	243 (362)	2.231 (56.67)	725	785	2470 (3676)		
1250	1.251 (31.78)	1172 (1744)	1.960 (49.78)	2.065 (52.45)	0.080 (2.03)	1/3	25	10	842 (1253)	2.481 (63.02)	690	825	53300	29	12	615 (915)	2.439 (61.95)	700	845	3271 (4867)	3500 (1050)	1250
						1/6	20	12	424 (631)	2.439 (61.95)	730	855	26800	23	14	307 (457)	2.405 (61.09)	765	870	2943 (4379)		
						1/12	25	16	210 (313)	2.405 (61.09)	815	880	13200	18	16	151 (225)	2.379 (60.43)	850	885	2779 (4136)		

(1) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with CSA C68.5. Dimensions and weights not designated as minimum or maximum are nominal values and are subject to manufacturing tolerances.
 (2) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temperature, 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, with neutral wires bonded at each end.
 (3) Cables buried in flat configuration with 7.5" spacing between conductors.
 (4) EmPowr® Link CL™ neutral configurations are designed to provide equivalent shield fault capacity of the corresponding neutrals, based on LLDPE jackets with 90°C normal operation.
 (5) Based on capacity of 96" non-returnable wood reels.



EmPowr[®] Link CL[™] ADVANTAGE

Built for Endurance, Economics, Efficiency, Environment

EmPowr[®] Link CL[™] Advantage—the next evolutionary step in medium-voltage technology for renewable energy collection systems.

- **Enhanced Ruggedized Installation Protection**
- **Reduced Weight and Diameter**
- **Superior XLPE Jacket Technology**
- **Highly Efficient Fault Current Protection**

An Even Greater CL Advantage

General Cable has once again taken the next step in improving medium-voltage cable with superior physical characteristics for cost-effective renewable wind and solar energy collection systems. Building upon the widely accepted and innovative electrical advancements of Cross-linked Polyethylene (XLPE) jacketing coupled with reduced neutral redesigns, **EmPowr Link CL Advantage** provides superior protection in a compact, lightweight cable that delivers more **Advantage** than ever before.

The Endurance CL Advantage

EmPowr Link CL Advantage's XLPE jacketing outperforms typical LLDPE jackets in impact and scoring resistance, providing a cable that physically endures the rigors of today's direct buried installation techniques, subsoil conditions and the frequent handling of reels found in renewable collection system installations.

The Economics CL Advantage

Rather than typical round concentric neutral wires, industry-proven flat strap neutrals under the CL jacket provide better mechanical protection for the insulated core to withstand the pressures of automated cable handling equipment and an armor-like force to resist potential underground damages, minimizing risk of expensive repairs while optimizing profitability.

The Efficiency CL Advantage

The combination of a compact phase conductor and flat strap neutrals provides a lighter weight cable with an overall smaller diameter for longer cable lengths and highly efficient fault current protection. Together with the CL XLPE jacket's proven thermomechanical properties, EmPowr Link CL Advantage offers long-term efficiencies over the life of the cable.

The Environment CL Advantage

EmPowr Link CL Advantage's superior physical characteristics, smaller diameter and long-term performance make it the most environmentally friendly medium-voltage cable for today's solar and wind construction market. With built-in benefits, lead-free compounds and General Cable's recyclable reels and carbon credit value, CL Advantage is the total green solution.



Industry-Leading Reliability, Performance and Installation

EmPowr® Link CL™ Advantage is more durable and easier to install, making it the new standard for today's solar and wind farm collection systems while providing industry-leading reliability and performance. The test data on every purchase of EmPowr Link CL Advantage medium-voltage cable lets you know you're getting the performance you expect.

EmPowr Link CL Advantage The Better Choice*

Utilities have historically used Linear Low Density Polyethylene (LLDPE) thermoplastic jackets and round concentric neutrals. The future of renewable medium-voltage cable is thermoset XLPE jackets with flat strap neutrals that provide a lower-total-cost solution.

Approximately 25% reduction in copper

LLDPE jackets are limited to a maximum transient temperature of 200°C versus XLPE's 350°C (per ICEA P-45-482 calculations). The higher temperature limit provides greater fault current capability for a given cross-sectional area, reducing required copper in the neutrals. It also reduces operating temperature, providing higher cable ampacities.

Reduced shield losses equate to lower line losses

Reduced copper flat strap neutrals also increase shield resistance for lower losses due to circulating currents—especially apparent in larger kcmil sizes.

Enhanced installation and reliability

EmPowr Link CL Advantage is proven to maintain the same jacket stripping and coefficient of friction of a traditional EmPowr Link LLDPE jacket construction. Compact phase conductor and flat strap neutrals further reduce overall diameter and significantly improve durability for even easier installation and long-term reliability.



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Photograph courtesy of PLC Trenching Co., LLC.

Superior thermomechanical performance resists deformation

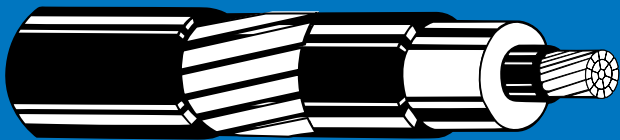
Through CSA C68.5 thermomechanical testing simulating three-conductor installed performance, EmPowr Link CL Advantage XLPE-jacketed cables passed 3 x 1/C Cable/Conduit 140°C testing with no problem areas, while traditional LLDPE jacketed cables melted and fused together, causing exposed neutrals at some locations.



EmPowr® Link CL™ Advantage jacketed cables: These cables passed 3 x 1/C Cable/Conduit 140°C testing with no problem areas.

* EmPowr Link CL Advantage is rated 105°C in accordance with the CSA C68.5 standard. It should be noted that utilizing a 105°C normal operating conductor temperature will increase cable ampacity rating but will reduce the shield fault capability slightly. If the user plans on operating these cables at 105°C conductor temperature for normal operation and 140°C for emergency overload, please contact General Cable for the applicable cable ampacity and shield fault capability ratings. Another important consideration is that the migration of soil moisture away from the cable is more likely at the higher operating conductor temperature and can result in an increase in soil thermal resistivity, resulting in an increase in conductor and soil temperature.

U.S. Specification for TRXLPE Medium-Voltage Underground Distribution Cable with Flat Strap Neutrals and XLPE Jacket



1.0 SCOPE

This specification covers single conductor tree-retardant cross-linked polyethylene insulated, flat strap neutral cables rated from 5 kV to 46 kV. The cable shall be suitable for both single- and three-phase primary underground distribution (UD) for installation in underground ducts, conduit and direct burial in wet or dry locations. It shall also be suitable for on-grade and aerial installations. The cable shall be rated 105°C for normal operation, 140°C for emergency overload, and 250°C for short-circuit conditions in accordance with the latest revision of ANSI/ICEA S-94-649, AEIC CS8 and UL 1072 as applicable.

2.0 GENERAL

Cable shall meet or exceed the latest requirements of the following industry specifications and standards. The order of precedent is as follows: 1) Customer Specification, 2) AEIC CS8, 3) ANSI/ICEA S-94-649, 4) UL 1072. Where a particular product requirement or characteristic is specified in more than one document, the most stringent requirement will apply. Wherever reference is made to an industry specification or standard, it shall be understood to be the latest edition of that document.

3.0 QUALITY ASSURANCE

The cable shall be produced with the conductor shield, insulation and insulation shield applied in the same extrusion operation. All three extruded layers shall be applied in a common extruder head. A dry-cure process shall be used. Compound pellets used for strand shield, insulation and insulation shield shall be received and unloaded using an ultra-clean bulk handling system and/or an ultra-clean box handling system. The bulk handling system shall be a closed system. The material transfer/ storage system shall use filtered air. The box handling system shall incorporate a dedicated material transfer system with filtered air involving at least the following: a Class 10,000 clean room per FED-STD-209E to hold the bag of compound as it is unloaded into the transfer system or a Class 10,000 clean compartment per FED-STD-209E surrounding the transfer point.

4.0 CONDUCTOR

The central conductor shall be either solid or stranded. If stranded, it shall be filled with a material compatible with the conductor and the conductor shield to prevent the longitudinal penetration of water into the conductor. Solid aluminum shall meet the requirements of ANSI/ICEA S-94-649 Part 2. Stranded aluminum conductor shall be compact per ANSI/ICEA S-94-649 Part 2. Conductor temper shall be H-16 to H-19 (3/4 to hard drawn) for stranded conductors and H-14 to H-16 (1/2 to 3/4 hard) for solid conductors.

5.0 CONDUCTOR SHIELD

The conductor shield shall be an extruded thermosetting semi-conductive material complying with the applicable requirements of AEIC CS8 and ANSI/ICEA S-94-649 Part 3. The extruded shield shall be easily removable from the conductor and shall be firmly bonded to the overlying insulation.

6.0 INSULATION

The insulation shall be a tree-retardant cross-linked polyethylene and shall comply with AEIC CS8 and ANSI/ICEA S-94-649 Part 4. The thickness shall be as required by ANSI/ICEA S-94-649 Table 4-4. An insulation pellet inspection system capable of examining 100% of the insulation pellets and rejecting contaminants shall be used. The manufacturer shall state the method used to examine and reject contaminated pellets.

7.0 INSULATION SHIELDING

The insulation shield shall be a thermosetting semi-conductive material complying with the applicable requirements of ANSI/ICEA S-94-649 Part 5.

8.0 FLAT STRAP NEUTRAL

The flat strap neutral conductor shall consist of bare annealed copper wires per ANSI/ICEA S-94-649 Part 6, applied helically and essentially equally spaced over the outer semi-conducting shield, with a lay length of not less than six nor more than ten times the diameter over the flat strap neutral conductor. The neutral indents in the insulation shield shall be within the requirements of ANSI/ICEA S-94-649 Part 5.2. The cable shall contain water-blocking components for the flat strap neutral, and the completed cable longitudinal water penetration resistance shall comply with the requirements of ANSI/ICEA S-94-649 Part 6 and ANSI/ICEA T-34-664.

9.0 OVERALL OUTER JACKET

The outer jacket is an extruded-to-fill black non-conducting cross-linked polyethylene jacket, meeting the physical requirements of Table 1 when tested by the methods specified in ANSI/ICEA S-94-649. The jacket shall be free-stripping and not interfere with an intimate contact between the neutral wires and the underlying extruded insulation shield. The jacket shall contain a print legend marking, sequential length marking and three longitudinal extruded red stripes.

Table 1: Physical Properties of Extruded-to-Fill XLPE Jacket

PHYSICAL REQUIREMENTS	VALUES
Unaged Tensile Strength, Min. (psi)	1500
Aged* Tensile Strength, Min. Ret. (%)	70
Unaged Elongated, Min. (%)	150
Aged* Elongated, Min. Ret. (%)	70
Heat Distortion 1 hr at 131°C, Max. (%)	30

*Aged for 168 hrs at 121°C.

10.0 TESTS

All production tests required by the referenced specifications shall be performed and passed prior to shipment, and a certified copy of the results of the tests shall be sent to the customer, if so requested. The manufacturer shall either submit with the quotation, or have on file with the customer, certified support data for the qualification tests required by ANSI/ICEA S-94-649 Part 10 as applicable.

11.0 EXCEPTIONS

All exceptions to these specifications are to be clearly stated in the bid proposal and will require the review and approval of the customer.

EmPowr® Link CL™ Advantage Underground Distribution Cable 15-35 kV

Al Conductor TRXLPE Insulation Flat Strap Neutral XLPE Jacket, UL Type MV-105



UNDERGROUND DISTRIBUTION CABLE - 35kV - TYPE UD - FLAT STRAP NEUTRAL

COMPACT CONDUCTOR		FLAT STRAP NEUTRAL CONFIGURATION			DIAMETER (2) INCHES			NOMINAL JACKET THKN. INCHES (1)	APPROX. WEIGHT (2) LB/KFT			AMPACITY (3)	
AL AWG OR kcmil	NOM. COND. DIA. INCHES	NO. OF STRAPS	FLAT STRAP DIMENSIONS (THKN. mils x WIDTH mils)	FAULT CURRENT EQUIV. LLDPE CN. DESIG. (1)	INSULATION		ENCAP XLPE JACKET		AL COND.	FLAT STRAP NEUTRAL	TOTAL	DIRECT BURIED	
					MIN.	MAX.						FLAT	TREFOIL

345 mils NOMINAL TRXLPE INSULATION - 100% INSULATION LEVEL

1/0	0.336	9	25 X 163	Full	1.020	1.120	1.282	0.055	99	148	737	245	230
	0.336	6	25 X 163	2/3	1.020	1.120	1.282	0.055	99	99	691	245	230
3/0	0.423	15	25 X 163	Full	1.105	1.205	1.369	0.055	158	247	944	315	300
	0.423	10	25 X 163	2/3	1.105	1.205	1.369	0.055	158	165	868	315	300
	0.423	8	25 X 163	1/2	1.105	1.205	1.369	0.055	158	132	838	320	300
4/0	0.475	18	25 X 163	Full	1.160	1.260	1.421	0.055	199	297	1065	350	340
	0.475	12	25 X 163	2/3	1.160	1.260	1.421	0.055	199	198	974	355	340
	0.475	9	25 X 163	1/2	1.160	1.260	1.421	0.055	199	148	929	360	340
	0.475	6	25 X 163	1/3	1.160	1.260	1.421	0.055	199	99	883	365	340
350	0.616	20	25 X 163	2/3	1.310	1.410	1.570	0.055	329	330	1330	445	445
	0.616	15	25 X 163	1/2	1.310	1.410	1.570	0.055	329	247	1254	455	445
	0.616	10	25 X 163	1/3	1.310	1.410	1.570	0.055	329	165	1179	465	450
500	0.736	18	25 X 193	1/2	1.430	1.530	1.740	0.080	468	351	1628	520	540
	0.736	12	25 X 193	1/3	1.430	1.530	1.740	0.080	468	234	1521	540	545
	0.736	6	25 X 193	1/6	1.430	1.530	1.740	0.080	468	117	1413	570	550
750	0.908	18	25 X 193	1/3	1.610	1.710	1.920	0.080	703	351	2008	615	670
	0.908	9	25 X 193	1/6	1.610	1.710	1.920	0.080	703	176	1847	670	680
1000	1.060	24	25 X 193	1/3	1.760	1.865	2.072	0.080	937	468	2468	660	765
	1.060	12	25 X 193	1/6	1.760	1.865	2.072	0.080	937	234	2254	725	785
1250	1.173	15	25 X 193	1/6	1.890	1.995	2.204	0.080	1172	293	2616	765	870
	1.173	9	25 X 163	1/12	1.890	1.995	2.204	0.080	1172	148	2483	850	885

(1) The flat strap neutral (FS) cable designs for the XLPE jacket, when operated at 90°C, are equivalent in fault current carrying capacity (but with reduced cross-sectional area) to concentric neutral cable designs with LLDPE jackets and the indicated concentric neutral designation. For single phase, full neutral applications, a neutral equivalent in cross-sectional area to the LLDPE jacket designs must be used. Three phase designs may use the configurations with reduced cross-sectional area (but equivalent fault current capability) as shown in the table.

(2) Extruded layer thicknesses and insulation and insulation shield diameters are in accordance with ANSI/ICEA S-94-649 for Concentric Neutral Cables Rated 5 Through 46 kV and also meet the requirements of the latest revisions of AEIC CS8.

(3) Ampacity based on earth thermal resistivity of 90°C-cm/watt, 90°C conductor temperature, 20°C earth ambient temperature, 75% load factor and 36" depth of burial. Values are based on one three-phase circuit, one conductor per phase, with neutral wires bonded at each end. Flat configuration based on 7.5" on center spacing between cables. For specific ampacities, contact your General Cable sales representative.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

EmPowr® Underground Distribution—Primary Combined Duct & Cable

Primary Cable Installed in Extruded High-Density Polyethylene Duct

Product Construction:

Complete Assembly:

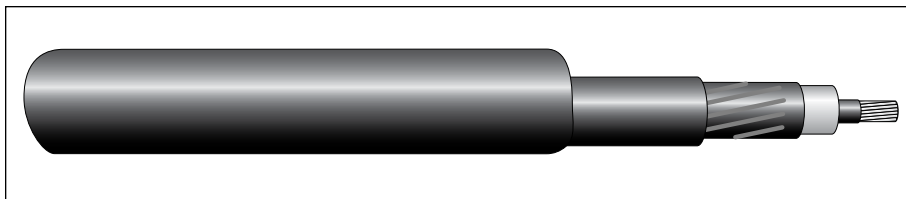
EmPowr® Combined Duct & Cable consists of insulated conductor factory installed in a black high-density polyethylene conduit. The polyethylene conduit is extruded directly over any prior-made single medium-voltage cable.

Complete Cable:

All underground distribution cables in EmPowr are manufactured and tested in accordance with applicable industry standards and/or individual customer specifications. See the appropriate catalog section for a complete cable description.

Conduit:

The high-density polyethylene EPEC-A Conduit is manufactured and tested in accordance with NEMA Standard TC7, "Smooth-wall Coilable Electrical Polyethylene Conduit."



EMPOWR COMBINED DUCT & CABLE

NOMINAL CONDUIT SIZE (INCHES)	MINIMUM I.D. (INCHES)	O.D. (± 0.012") (INCHES)	MINIMUM INSIDE AREA (SQ. INCHES)	APPROX. WEIGHT (LB/1000 FT)	MINIMUM* WALL THICKNESS (INCHES)	MINIMUM BEND RADIUS (INCHES)
1 1/4	1.408	1.660	1.557	240	0.100	18
1 1/2	1.618	1.900	2.056	310	0.115	21
2	2.033	2.375	3.246	475	0.145	26

*The maximum wall thickness is the minimum plus 0.020 inches.

Applications:

EmPowr Combined Duct & Cable offers an economical alternative to pulling cable in previously installed short lengths of duct joined with sleeve couplings. The inherent construction advantages and versatility of the EmPowr design are ideally suited for underground primary distribution systems up to 46 kV.

Features and Benefits:

In addition to the initial labor savings achieved from installation of cable and conduit in a single operation, cable replacement costs and ground disruption are significantly less for the EmPowr cable system. Tough, yet light and flexible, high-density polyethylene conduit provides ease of installation and high impact resistance for cable protection.

Options:

- EPEC-B, EPEC-40 or EPEC-80 smooth-wall coilable electrical polyethylene conduit TC7
- Gray or red color
- Extruded red stripes

For more information, contact your General Cable sales representative or e-mail info@generalcable.com.

MAXIMUM CROSS-SECTIONAL AREA OF CONDUCTORS PER CONDUIT

NOMINAL CONDUIT SIZE (INCHES)	MINIMUM INSIDE AREA (SQ. INCHES)	MAXIMUM TOTAL CROSS-SECTIONAL AREA OF CONDUCTORS (SQ. INCHES)
		53% FILL ONE CONDUCTOR (SQ. INCHES)
1 1/4	1.557	0.825
1 1/2	2.056	1.090
2	3.246	1.720

The maximum percent fill used above is based on National Electrical Code recommendations. Larger fill areas can be furnished when required by the user.

MAXIMUM DIAMETER OF CONDUCTORS PER CONDUIT

NOMINAL CONDUIT SIZE (INCHES)	MINIMUM INSIDE AREA (SQ. INCHES)	MAXIMUM CONDUCTOR DIAMETER
		ONE (1) CONDUCTOR (INCHES)
1 1/4	1.408	1.025
1 1/2	1.618	1.178
2	2.033	1.480

The maximum diameter of each conductor above is based on National Electrical Code recommendations. Larger conductor diameters can be furnished when required by the use. All conductors in the conduit are the same size. Other conduit sizes may be furnished on request.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Notes

High- and Extra-High-Voltage Transmission Cable

RELY ON OUR EXPERIENCE...
EXPERIENCE OUR CAPABILITIES



For over half a century, the Silec brand name has been a recognized leader in the global electric utility market. With unrivaled capabilities, expertise and turnkey project management, General Cable provides the innovation, quality and service to reliably and cost-effectively bring power from the grid into major urban areas. **Having pioneered the development of solid-dielectric extruded High- and Extra-High-Voltage (HV/EHV) cable systems over fifty years ago**, General Cable provides its global customers with superior cable system solutions that offer maximum flexibility and service life.

When it comes to upgrading North America's aging utility grid with underground solid-dielectric cable systems, General Cable understands the challenges that these significant and complex projects present, from system planning, engineering and project management to final testing and post-project maintenance. Underground transmission systems represent a considerable investment, requiring a long-term partner that has in-depth knowledge of the cables, accessories and installation methods — General Cable is that partner.

- **Decades of experience in underground solid-dielectric cable systems**
- **Comprehensive line of high- and extra-high-voltage cable and accessories**
- **Total turnkey project management, from planning through installation, testing and commissioning**
- **Optimized economics to keep projects on time and on budget**
- **Extremely reliable, low-maintenance and long-term performance**
- **Complete post-project maintenance services and responsive ongoing support**

With the best experience, the best product and the best service, General Cable is the best partner to meet your expectations.

THE WORLD LEADER FOR HV/EHV UNDERGROUND TRANSMISSION CABLE SYSTEMS UP TO 500 kV

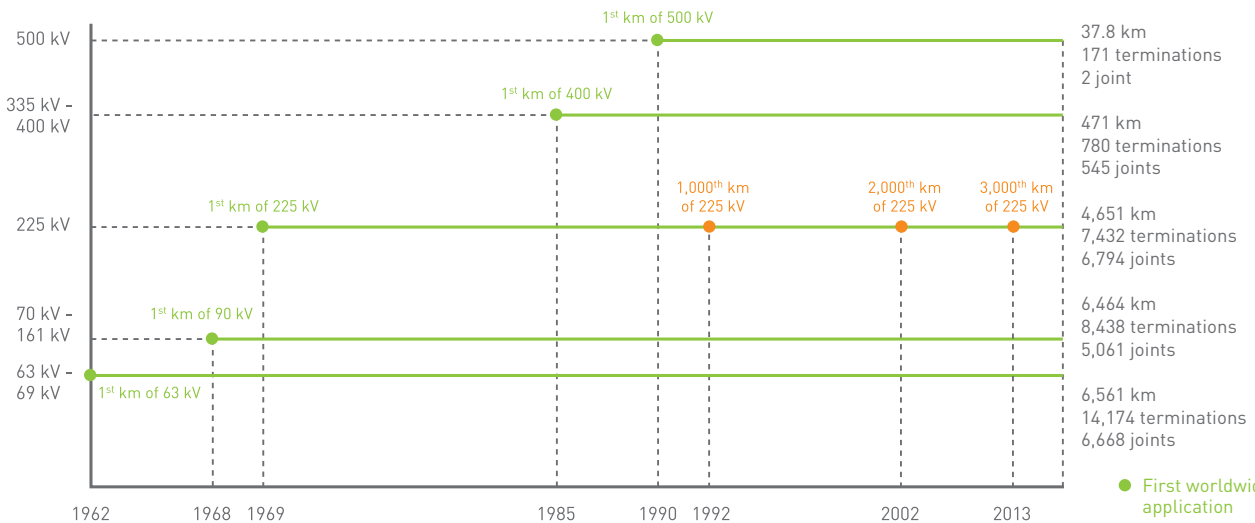


- 63-110 kV
- 132-160 kV
- 230 kV
- 345-500 kV

Voltage level (kV)	63-161	220-230	330-500
Cable (km)	9,947	6,561	508.8
Terminations	22,612	7,432	951
Joints	11,729	6,794	547

50 Years of Worldwide High- & Extra-High-Voltage Firsts

VOLTAGE RANGE



HIGH- & EXTRA-HIGH-VOLTAGE GLOBAL CABLE SOLUTIONS

The Silec brand name has been synonymous with solid-dielectric extruded cable solutions for over fifty years. General Cable offers a fully integrated approach to providing a comprehensive range of quality Silec High- and Extra-High-Voltage cable systems. They are designed, engineered and manufactured to ensure maximum reliability and best-in-class performance.

General Cable's Silec HV/EHV underground transmission cables are manufactured to meet the needs of current and future utility transmission systems. They exceed the requirements of our customers' technical specifications while meeting international standards like IEC 60840, IEC 60287, IEC 62067, ICEA S-108-720 and AEIC CS9.



The Most Comprehensive HV/EHV Solid-Dielectric Underground Transmission Cable Options in the Industry — Voltage Ratings up to 500 kV

1 Conductor

Manufacturing up to 5,000 kcmil (2,500 mm²) conductor.

- Copper, enamelled copper or aluminum stranded wires, watertight or non-watertight
- Compact round
- Segmental for Milliken conductor (recommended at 2,500 kcmil [1,200 mm²] and above) to achieve high ampacities

2 Insulation

Triple-head extrusion process using super-clean Cross-linked Polyethylene (XLPE) provides high dielectric performance.

2.1 Inner semi-conductive layer

2.2 Insulation

2.3 Outer semi-conductive layer

3 Longitudinal Water Barrier

Swelling semi-conductive tape (under and over wirescreen or optional optical fiber tubes).

4 Metal Screen/ Radial Moisture Barrier

Sheathing options for short circuit requirements and radial moisture barrier.

- Concentric wires: copper or aluminum
- Foil laminated: copper or aluminum
- Welded or butt-to-butt welded
- Lead sheath

5 Jacket

Jacketing options for mechanical and chemical protection.

- High-Density Polyethylene (HDPE)
- Low-Density Polyethylene (LDPE) or Linear Low-Density Polyethylene (LLDPE)
- Halogen-free fire-retardant sheathing complex
- Fire-retardant low-smoke sheathing complex
- Polyvinyl Chloride (PVC)
- Conductive coating

6 Additional Components

- Proprietary μ Cable[®] fibers (single- or multimode) within a Polyethylene (PE) tube for flexibility and improved stripability are integrated into the high- or extra-high-voltage cable for temperature monitoring via DTS system
- General Cable can also provide standard stainless steel tube with single- or multimode optical fibers
- PD detection and other diagnostic capabilities

HIGH- & EXTRA-HIGH-VOLTAGE CABLE ACCESSORIES



As part of a fully integrated approach and commitment to providing complete system performance, General Cable offers a wide range of Silec HV/EHV cable accessories. Vital components of an overall cable system, these accessories are designed, manufactured and precision-controlled to ensure best-in-class performance and long-term service reliability.

Thousands of accessories in service

Voltage level (kV)	63-161	220-230	330-500
Terminations	22,612	7,432	951
Joints	11,729	6,794	547



A Complete Range Of High- and Extra-High-Voltage Cable Accessories

From 72.5 kV to 550 kV

General Cable’s advanced technology in compounding and molding of silicone, EPDM and resins translates into a complete range of high-performance accessories from 72.5 kV to 550 kV to connect the whole range of Silec cables up to 5,000 kcmil (2,500 mm²) per IEC 60840, IEC 62067, IEEE 48, IEEE 404, ICEA S-108-720 and AEIC CS9.



Engineering and Testing

Silec HV/EHV cable accessories are designed and tested through a range of calculation, modeling and testing techniques that enable General Cable to continuously adapt and optimize performance to meet the demands of our customers. Silec accessories have a history of extreme reliability.

High- and Extra-High-Voltage Cable Accessories	Maximum Voltage			
	72.5 kV	123 kV to 170 kV	245 kV	>362 kV
Joints: with or without grounding system with shield interruption with solutions for water tightness (Cu casing, etc.)	Wrapped or EPDM Pre-Molded	EPDM Pre-Molded	Short Joint	Pre-Molded EPDM
Outdoor Composite or Porcelain Terminations	Pre-Molded Stress Cone	Ester Oil Termination	Pre-Molded Stress Cone	Pre-Molded EPDM
Synthetic Terminations	Pre-Molded Shed Pre-Molded Stress Cone		–	–
GIS and Transformer (SF6 and/or Oil)	Silicon Pre-Molded – Epoxy Insulator			Pre-Molded EPDM – Epoxy Insulator
Transition Joints	Back-to-Back Joint with 2 GIS Terminations Back-to-Back Joint with One Insulator			Back-to-Back Joint with 2 GIS Terminations Side-by-Side Joint with 2 GIS Terminations
Link Boxes	Available according to the designed grounding system			
Additional Installation Materials	Designed, recommended and supplied by Silec Engineering Department Clamps, Support for Joints, Racking System, etc.			

HIGH- & EXTRA-HIGH-VOLTAGE TURNKEY SERVICES



With more than 17,000 km of cables, 30,000 terminations and 19,000 joints installed and commissioned since 1962, General Cable's Silec underground cabling solutions are your best partner for the life of the entire cable system. From system engineering and installation to final testing and post-project services, General Cable specializes in providing turnkey service management for new cable projects or the upgrading of existing cable circuits.

With decades of experience, General Cable's HV/EHV specialists design, install and manage cable systems according to customer specifications, budgets and timelines. We then provide the comprehensive assessment, monitoring, training and service programs needed to **maximize the lifetime of the system** while **reducing maintenance** and **optimizing operating costs**.

Silec North American Turnkey Services

Engineering: System and Installation Engineering

- Cable system design
- Civil design
- Complete construction specification

Management: Project Management Safety Management Environmental Management

Installation: Cable Pulling Accessory Installation and Termination Services

- Experienced and skilled technicians based in North America
- On-site coordination

Testing: On-Site Testing and Commissioning

- Visual inspection of cable system
- Testing of sheath bonding system
- High-voltage resonant tests and partial discharge (PD) measurement
- Assessment of in-service systems
- Investigation of cable system faults and failures

Emergency: After-Sales Service

- Experienced and skilled technicians
- Expedited maintenance and replacement of any circuit part up to 500 kV
- Emergency failure repair

Technical Assessments

- Comprehensive site investigations and technical assessments
- Advanced North American laboratories for testing materials and components

Stand-By Links

- For voltages up to 275 kV
- Used in substations to bypass OHL
- Maintain power transmission in the case of unusual failures
- Substation repairs and spare product support

Other: Training

- Customized training programs for maintenance crews



ONE COMPANY – YOUR SOURCE FOR GLOBAL HIGH-PERFORMANCE QUALITY CABLE, ACCESSORIES AND SERVICES



A Worldwide Partnership

As a 100% subsidiary of General Cable, Silec Cable's experience and innovation are backed by one of the most geographically diversified wire and cable companies in the world. General Cable's legacy of leadership, innovation and service spans more than 100 years, and the company is solely dedicated to the development and manufacturing of the most reliable and technologically advanced cable solutions, as well as first-rate distribution and customer service. General Cable serves customers through a global network of 47 manufacturing facilities in 25 countries and sales representatives and distribution centers worldwide.

Safety — Our First Priority

General Cable has one worldwide safety vision and goal – **ZERO AND BEYOND**. We measure safety performance globally, share best practices and implement sound health and safety management systems. Many of our facilities worldwide are OHSAS 18001 (safety management system) certified. All North American facilities have implemented an equivalent health and safety management system.

General Cable was a pioneer in obtaining the OHSAS 18001 Certificate for Occupational Health and Safety Management Systems in Europe and North Africa.



INTERNATIONAL
ISO 9001:2008
 CERTIFICATION

Environmental — Foundation of Our Actions

As a global leader in the wire and cable industry, General Cable recognizes our role and responsibility in promoting sustainability. Our strongest business value is continuous improvement in all areas of our company. Across our many businesses, the quest to introduce new and better products through continuous improvement in environmental designs reflects our commitment to achieving industry-leading standards and responding proactively to global environmental issues.

General Cable was the first cable manufacturer to obtain certification for its environmental management system, in accordance with the ISO 14001 and EMAS Standards.

Research and Development — Our Competitive Advantage

General Cable uses the latest technology and systems to ensure superior engineering and manufacturing, as well as industry-leading logistics. Our global resources deliver maximum value to customers through a powerful combination of product and service innovations. General Cable backs all operations with an unwavering dedication to responsive customer service and knowledgeable technical support.

Quality Assurance Guaranteed — Our Path to Excellence

Through ongoing quality assurance initiatives, General Cable ensures the quality of product design, manufacture, installation and expected service life, as well as respect for the environment through sustainable products, processes and policies. Continuous research and development, combined with process control, quality audits and stringent testing, provide an ever-growing range of materials and designs that meet the global approvals and standards of the electric utility industry.

Overhead Conductors

TransPowr® Bare Overhead Conductors for Transmission and Distribution

General Cable manufactures an extensive line of bare overhead products for both transmission and distribution applications. General Cable's TransPowr® bare overhead products are manufactured and tested in accordance with the latest applicable ASTM specifications.

General Cable's bare overhead conductors are available as all-aluminum conductors (AAC), all-aluminum alloy conductors (AAAC), aluminum conductor steel-reinforced (ACSR), aluminum conductor steel-supported (ACSS), and T-2® twisted pair AAC and ACSR. AAC consists of 1350-H19 aluminum, is lightweight and corrosion-resistant and is commonly used in overhead line installations where higher strength or temperature ratings are not required. AAAC consists of high-strength 6201 T81 aluminum alloy and is commonly used for overhead line installations adjacent to ocean coastlines where there can be a problem of corrosion in the steel of an ACSR construction. ACSR combines the light weight and good conductivity of 1350-H19 aluminum with the high tensile strength and ruggedness of steel. ACSR provides higher tension, less sag and longer span lengths than AAC and AAAC overhead conductors. Standard ACSR designs are manufactured with regular-strength Class A galvanized steel (GA2).

To meet the changing needs and expectations of our customers, our highly qualified team of engineers and scientists used their conductor and material know-how to develop E3X®. E3X is an innovative coating material that provides high emissivity and low solar absorptivity characteristics, thereby allowing conductors to operate at lower temperatures, maximizing available line thermal capacity (normal & emergency) while minimizing capital investment and electrical losses. By simply applying the coating to the surface of any overhead conductor design, E3X Technology offers engineered "fixed" *emissivity* and *absorptivity* values in place of what had been previously a significant "variable" in line rating, thus reducing a source of risk when calculating the optimal thermal capacity of a transmission line. Groundbreaking E3X Technology allows utilities to optimize the power grid by adding more power and controlling losses with significant first-cost and long-term operational savings. For more details about this technology, see page 81.

With over 40 years of experience, General Cable is able to offer the option of utilizing TransPowr® ACSS conductors as an alternative for new line ACSR construction projects or for reconducting opportunities. With its unique ability to operate at higher temperatures and withstand harsh environmental factors, TransPowr® ACSS allows utilities to modernize and optimize the nation's electrical grid with minimal capital investment. TransPowr® ACSS offers better performance over ACSR when it operates at high temperatures without detriment to its mechanical properties and with significantly less sag, allowing for much higher ampacity ratings. Standard ACSS designs are manufactured with 1350-O aluminum and regular-strength Class A zinc-5% aluminum mischmetal alloy coated steel (MA2). With several steel core options such as mischmetal, aluminum-clad steel and galvanized steel, TransPowr® ACSS is easily customized to meet specific applications and performance levels. TransPowr® ACSS is an affordable, long-lasting conductor with improved performance and reliability, made from aluminum and steel components that have been used in transmission lines for more than a hundred years. With thousands of miles installed throughout North America, ACSS is a proven, trustworthy overhead conductor technology and remains the most accepted solution for high-temperature performance.

General Cable has partnered with CTC Global to manufacture, promote and sell the high performance ACCC® conductor for applications in the U.S., Canada and Puerto Rico. This high-capacity and low-loss conductor is built with a composite carbon fiber core in lieu of the steel core used in conventional overhead conductor. ACCC/TW can provide unique solutions for the design of transmission and distribution lines by providing an additional conductor option to evaluate.

General Cable's TransPowr T-2 conductors offer remarkable performance and long life in their unique, intelligent design. TransPowr T-2 conductors are actually two standard round conductors twisted around each other at 9-foot intervals. This design effectively resists wind-induced motion in two ways. First, the constantly varying diameter drastically inhibits resonant vibration frequencies in the line. Second, the low torsional stiffness of the twist absorbs and dissipates motion-causing wind forces to ineffective energy levels. TransPowr T-2 conductors can be installed with many of the same methods and equipment used for stranded round conductors.







See the following page for a complete list and description of the numerous options that are available for TransPowr overhead products. For ACSR and ACSS concentric round or trapezoidal conductors, a myriad of aluminum and steel stranding combinations are available. In addition, a variety of steel strengths and types of coatings or claddings are available. Trapezoidal AAC, ACSR and ACSS conductor designs are listed in separate catalog sections. Compact aluminum and compact ACSR stranded conductor information may be found in the Canadian Electric Utility catalog.

While General Cable manufactures a complete range of bare overhead products, only the most popular designs are described in the following section. Details of other conductor sizes and designs are available upon request.

General Cable provides technical assistance and advice on any challenges associated with conductor design, installation or application. Engineering services are available for specification review, specification development and conductor application inquiries. For more information, contact your General Cables sales representative or e-mail info@generalcable.com.

TransPowr® Bare Overhead Options:

- E3X® Technology** – This heat-dissipating coating, when factory-applied post-stranding to the surface of any General Cable overhead conductor, increases the conductor’s emissivity (improving heat dissipation) and reduces absorptivity (minimizing heat absorption) to provide an increased ampacity rating and a reduced operating temperature for a given conductor size, or a reduced conductor size for a given ampacity rating. Contact your General Cable sales representative to learn how E3X Technology can optimize the power grid by adding more power and controlling losses with significant first-cost and long-term operational savings.
- Non-Specular (NS)** – Overhead aluminum electrical conductors, when installed, typically have a shiny surface appearance. This “reflective” or “specular” surface can make a transmission line more noticeable in appearance against the background landscape. A factory treatment process of the outer surface of the aluminum wires can render the surface finish into a dull, non-specular matte gray finish. This non-reflective or “de-glared” surface finish allows the conductor to become less visible when observed from a distance and enables the transmission line to blend in with the skyline or landscape background. The “NS” surface finish option is available for all types of bare overhead conductors that have aluminum outer strand wires.
- High-Conductivity Aluminum (HC)** – The normal 1350 hard-drawn aluminum material used for an ACSR-type conductor has a minimum average conductivity value of 61.2% IACS (International Association Copper Standard). By carefully selecting the feed stock of the raw materials and manufacturing process used to refine the aluminum and convert it into rolled rod, a purer grade of 1350 aluminum can be manufactured. When this is done, the aluminum conductivity value is increased to 62.2%. The use of the higher conductivity metal means the overall electrical resistance of the conductor is lowered. Lowering the electrical resistance means there are lower line losses incurred in the transmission line.
- “Mischmetal” Alloy-Coated Steel** – Inside an ACSR and ACSS conductor, there is the stranded steel core. To provide corrosion protection for the steel, traditionally zinc has been used to coat (galvanize) the steel. In recent years, a zinc alloy material has also been used. This material, a 95% zinc/5% aluminum alloy, is available as an optional steel wire coating material. The alloy, known as zinc-5% aluminum “mischmetal”, demonstrates improved corrosion resistance and high temperature exposure as compared to regular zinc. For ACSS conductors, “mischmetal” alloy-coated steel is recommended for applications where the conductor will see exposure to temperatures in excess of 200°C.
- Ultra-High-Strength Steel** – In response to industry needs, there are new high strength carbon steel materials now available for ACSR and ACSS conductors. The higher strength steel overcomes some of the previous transmission line design limitations encountered with available conductor selection options. The availability of these new steel materials boosts the conductor rated strength and can enable enhanced sag and tension calculation results. General Cable identifies the new ultra-high-strength steel as GA5 (for zinc coated steel) and MA5 (for the zinc-5% aluminum “mischmetal” alloy coated steel) strength grade designations. General Cable participated in the creation of two new ASTM Standards to introduce these new steel types (ASTM B957 for GA5 steel and ASTM B958 for MA5 steel).
- Aluminum-Clad Steel (AW)** – In the USA, the “AW” identifier is used for aluminum-clad steel. Elsewhere in the world, other designations are used. Aluminum-clad steel is chosen for coastal locations or applications where there are severe corrosion concerns for the steel core and a zinc or “mischmetal” coated steel will not last. Aluminum-clad steel also offers the advantage of having a higher conductivity than conventional galvanized steel wires. The higher conductivity will reduce the line loss parameters of the transmission line, saving energy and reducing the day-to-day operating cost. In an ACSS conductor, aluminum-clad steel can allow the conductor to be operated up to 250°C.

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Look for the General Cable “green” symbol and “Go Green” with our environmentally responsible products.

Overhead Conductors

- **Compact (Smooth Body) Conductors** – While not popular in the USA, compact AAC and ACSR type conductors for distribution conductor sizes are used in Canada and elsewhere in the world. General Cable can supply compact AAC (to ASTM B400) and compact ACSR (to ASTM B401) “smooth body” type conductor products. Compact conductors reduce the overall diameter of the conductor, thus lowering the resultant wind and ice loads on the conductor. In heavy ice load locations, the compact conductor option may be an interesting design option to explore. Contact your General Cable sales representative for additional information.
- **Trapezoidal-Wire (TW) Conductors** – For overhead transmission conductor applications, General Cable supplies TW compact-style conductors. The aluminum wires in a “round wire” stranded conductor leave approximately 25% of an air gap between the aluminum strands. Compacting the aluminum strands into the trapezoidal (TW) shape allows you to significantly reduce this empty air space and fill it with aluminum. By “compacting” the metal space, it allows you to build a conductor that either a) has the same cross-sectional area of aluminum and a reduced overall conductor diameter or b) has the same overall conductor diameter as before, but now squeezes in more aluminum cross-sectional area. Reducing the overall diameter of the conductor provides the advantage of lowering the resultant ice and wind loading on the conductor. Maintaining the same diameter by increasing the aluminum metal content means you lower the power loss in the conductor for day-to-day operations, as well as having a higher overall conductor ampacity rating. With TW conductors, the growing trend is to utilize the same diameter/increased aluminum cross-sectional area option.
- **Aluminum Alloy Steel Supported Reinforced Conductors (AACSR)** – General Cable is capable of building ACSR conductors where the 1350 H19 aluminum wires are replaced with the high strength 6201 aluminum alloy material. These super high strength conductors are used in river crossings or for long span applications where the traditional ACSR conductor will not work. Contact General Cable to find out more details about these customized conductor constructions and see how they might be of benefit to you and your line design application.
- **Aluminum Conductor Steel Reinforced - Self-Damping Conductors (ACSR/SD)** – General Cable is capable of building concentric-lay-stranded self-damping aluminum conductors, steel reinforced (ACSR/SD) based on the ASTM B701 standard. Contact General Cable to find out more details about these special conductor constructions and see how they might be of benefit to you and your line design application.
- **ULS** – Extra High Strength composite carbon fiber core, enabling greater strength and lower sag due to ice for use in locations where heavy or extreme ice loading conditions exist (ULS ACCC).

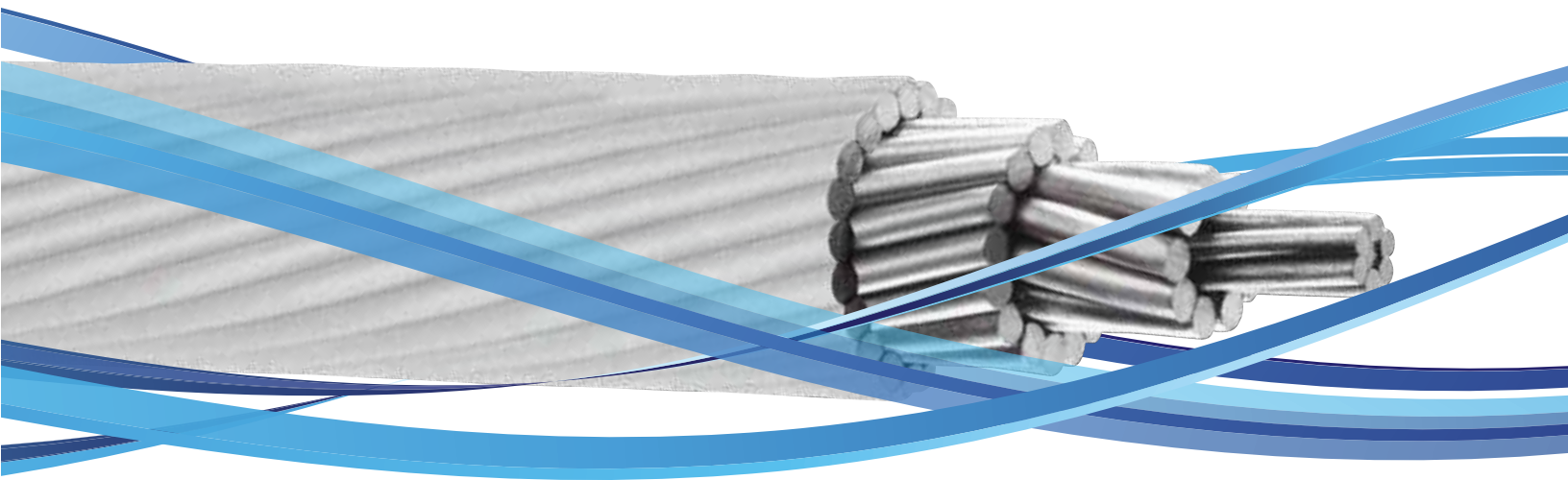
TransPowr® bare overhead conductors can be designed to meet special applications and requirements. For designs not found in these catalog pages, contact your General Cable sales representative.

THE UTILITY INDUSTRY'S FIRST HEAT-DISSIPATING OVERHEAD CONDUCTOR



TransPower[®]
with **E3X** TECHNOLOGY

More Power.
Less Cost.



Reduce Your Costs and Increase Your Power

Groundbreaking E3X® Technology allows utilities to optimize the power grid by adding more capacity and controlling losses with significant first-cost and long-term operational savings.

TransPowr® with E3X Technology features a thin, durable coating that is applied to the surface of any TransPowr overhead conductor. This heat-dissipating coating increases *emissivity* and reduces absorptivity, improving *energy effectiveness and efficiency* by allowing for a higher ampacity rating, reduced operating temperature and lower losses for a given conductor size, or reduced conductor size for a given ampacity rating—transforming power grid sustainability, reliability, resilience and cost of ownership.



Less than 2 Years on Average Payback Period*

Savings from lower first project cost or line loss will result in an accelerated return on conductor investment.



Up to 20% Reduced Project Costs*

A reduced conductor sag or size enables optimized structures, hardware and labor for new lines.



Up to 25% Increased Ampacity*

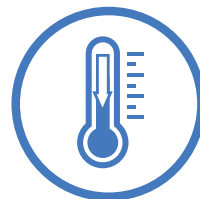
Lowers reconductoring cost by increasing conductor ampacity without upgrading existing infrastructure.



Up to 25% Lower Line Loss*

Reduces conductor line losses via lower operating temperature, resulting in significant lifetime savings.

AND



Up to 30% Reduced Operating Temperature*

Lower operating temperature reduces power losses and increases power-carrying capacity, for efficiency and lower total system costs.

CASE STUDY

Cross Texas Transmission CREZ Project

BACKGROUND

Cross Texas Transmission (CTT), an affiliate of LS Power, was designated by the Public Utility Commission of Texas (PUCT) to construct, operate and maintain 238 miles of transmission lines as part of PUCT’s commitment to deliver renewable energy from Competitive Renewable-Energy Zones (CREZ). These zones, located in West Texas and the Texas Panhandle, are resource-rich, high-wind areas. The CREZ projects were ultimately constructed by 8 different utilities to transmit 18,456 MW of wind power over more than 2,300 miles of transmission lines from the zones to approximately five million homes and businesses. The CTT portion of the CREZ initiative consisted of approximately 1,300 structures that included lattice and monopole steel towers ranging from 80 to 200 feet tall. The 238 miles of Falcon/ACSS/MA2 transmission lines consisted of double-circuit, double-bundle 345 kV AC lines running in three segments, totaling 2,820 conductor miles.

FIRST-COST SAVINGS WITH E3X

\$11MM to \$13MM Savings¹

PRIMARY OBJECTIVE

With assistance from Burns & McDonnell and LS Power, estimate the potential first-cost savings for the CTT CREZ project if an equivalent ampacity Pheasant/ACSS/MA2 with E3X[®] Technology had been implemented. First project cost savings are calculated based on reduced mechanical loading due to the change in conductor size in both round wire and trapezoidal constructions.



Original Conductor Design & E3X Technology Options	Ampacity @ 200°C ²	Conductor Weight (lb/kft)	Material Cost Savings (\$/mile)
1590 kcmil 54/19 Falcon/ACSS/MA2	2372	2039	Original Base Design
1272 kcmil 54/19 Pheasant/ACSS/MA2/E3X	2360	1631	\$45,743/mile
1272 kcmil 59/19 Pheasant/ACSS/TW/MA2/E3X	2357	1636	\$55,382/mile

¹ Neglected potential cost savings associated with smaller conductor diameter hardware, structure erection costs, foundation rock excavation and casings.

² Ampacities calculated per IEEE 738 and the following conditions: 40°C ambient temperature, 2 ft/s wind velocity (90° to conductor), 35° northern latitude, 3500 ft elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of 12:00 PM on June 21 (resulting in 106.3 W/ft² of solar and sky radiated heat). Standard conductor calculated with an emissivity of 0.5 and an absorptivity of 0.5; E3X conductor calculated with values of 0.9 and 0.2 respectively.

ENERGY SAVINGS WITH E3X

Net Present Value of Savings — \$150MM¹

SECONDARY OBJECTIVE

Estimate the potential energy savings associated with conductor losses for the CTT CREZ project if a Falcon/ACSS/MA2 with E3X Technology had been implemented. Energy savings are based on a conservative 20% reduction in operating temperature due to application of the high emissivity, low absorptivity E3X Technology.



Parameter	1590 kcmil Falcon/ACSS/MA2 100°C - 1452 Amps ²	1590 kcmil Falcon/ACSS/MA2/E3X 80°C - 1452 Amps ²	NPV of Savings Per Conductor	NPV of Savings for Transmission Line
Power Losses (kW/mile)	165	157	8	98
Annual Energy Losses (kWh/mile)	470,982	447,620	23,362	280,344
Annual Energy Cost (\$/mile)	\$36,307	\$34,506	\$1,801	\$21,612
Annual Demand Cost (\$/mile)	\$33,748	\$32,074	\$1,674	\$20,088
NPV of Energy Savings (\$/mile)	-	-	\$53,419	\$641,027

¹ Economic Analysis calculated per Aluminum Association Publication No. 54 with the following parameters: transmission application, 1452 ampacity, \$1000/kW cost of installed generating capacity, 17% fixed charge rate on generating capacity, 50% load factor, \$0.060/kWh present cost of energy, 30-year service life of conductor, and 5% interest rate. Additional significant savings potentially available from carbon credits.

² Ampacities calculated per IEEE 738 and the following conditions: 40°C ambient temperature, 2 ft/s wind velocity (90° to conductor), 35° northern latitude, 3500 ft elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of 12:00 PM on June 21 (resulting in 106.3 W/ft² of solar and sky radiated heat). Standard conductor calculated with an emissivity of 0.5 and an absorptivity of 0.5. E3X conductor calculated with values of 0.9 and 0.2 respectively.

INDEPENDENT VERIFICATION AND VALIDATION OF E3X[®] TECHNOLOGY

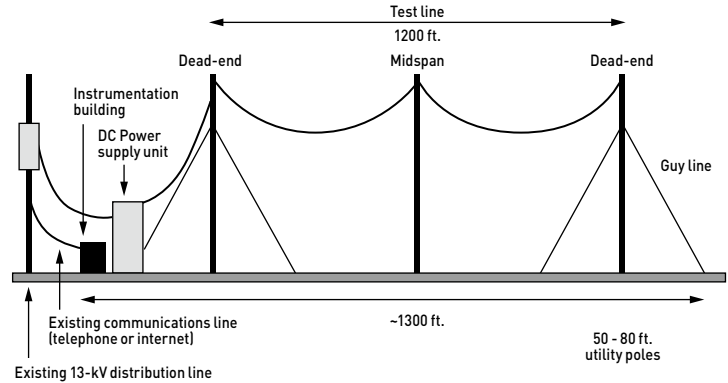
Oak Ridge National Laboratory (ORNL) Powerline Conductor Accelerated Testing (PCAT)

ORNL PCAT FACILITY

PCAT in Oak Ridge, Tennessee was developed by ORNL and the U.S. Department of Energy in 2003 as a test facility to evaluate the performance and reliability of overhead conductor designs in a real-world environment either before or in conjunction with field trials. PCAT accommodates 2,400 ft of overhead test conductor in a loop arrangement across five 161 kV-rated steel transmission poles, with two poles at each of the two dead-ends and one in the center with a cross-arm. The facility uniquely provides a high-power, heavily instrumented and controlled platform for conducting accelerated performance testing and collecting all the necessary information for overhead conductor characterization.

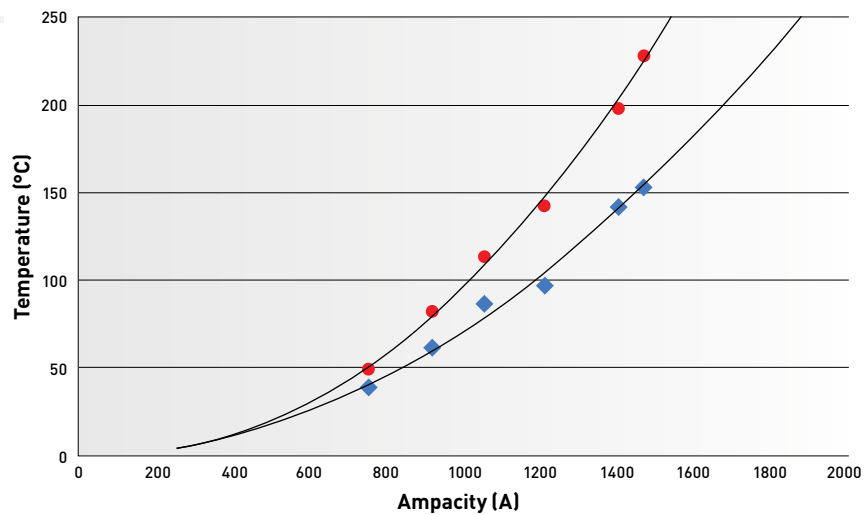
ORNL PCAT OBJECTIVE

A test plan was designed to evaluate the sag/tension, current-carrying and temperature characteristics of Drake/ACSS/MA2 with E3X Technology against standard Drake/ACSS/MA2 utilizing constant current tests and current thermal/mechanical cycling tests. The charts on Temperature and Sag versus Ampacity are based on test data generated at the ORNL PCAT facility.



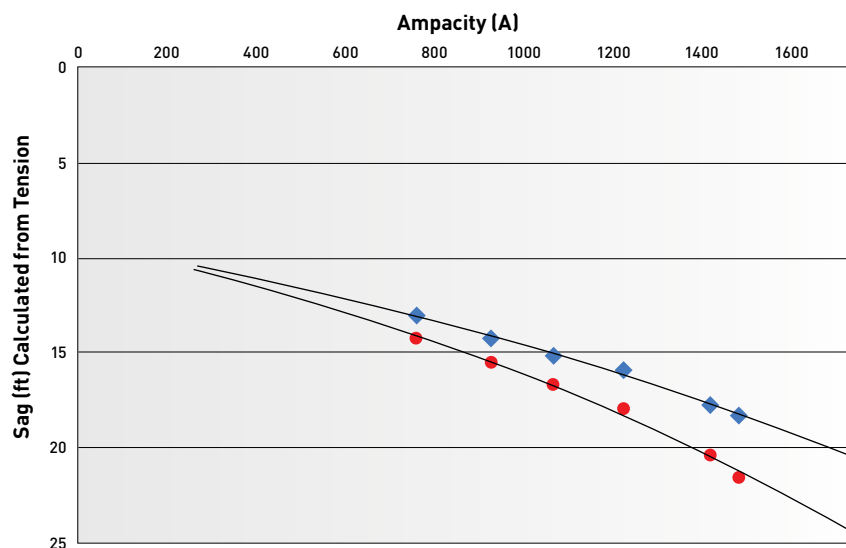
OAK RIDGE NATIONAL LABORATORY: Temperature vs. Ampacity

- Drake/ACSS/MA2
- ◆ Drake/ACSS/MA2/E3X



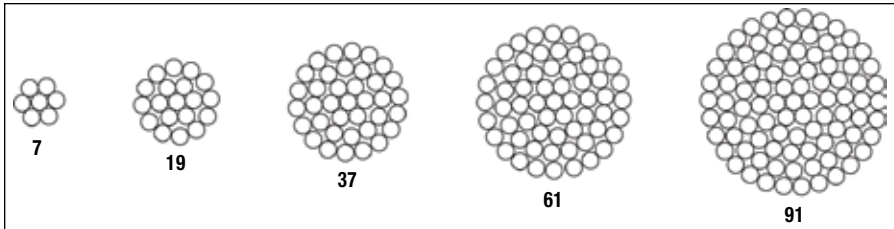
OAK RIDGE NATIONAL LABORATORY: Sag vs. Ampacity

- Drake/ACSS/MA2
- ◆ Drake/ACSS/MA2/E3X



TransPowr® AAC Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

Bare all-aluminum 1350 conductors (AAC) are concentric-lay-stranded conductors, consisting of one or more layers of wire wrapped helically around a straight round central wire. Each successive layer has six wires more than the layer immediately beneath. Greater flexibility is provided by increasing the number of strands for a specific cross-sectional area. AAC conductors are manufactured in accordance with the requirements of the latest issue of ASTM B231. The more commonly used strandings are 7, 19, 37, 61 and 91. The sizes and strandings listed on the following pages are common examples in overhead lines. Other sizes are also available.

Complete Conductor (cont'd.):

Class AA strandings are used for bare overhead

lines. The direction of lay for the outer layer is right-hand and is normally reversed in successive layers. The temper is full hard drawn (H19).

Class A strandings are used primarily for overhead conductors which are to be covered with weather-resistant materials. Greater flexibility than Class AA is provided. The outer layer is right-hand, and the temper generally H19. Successive layers are normally reverse lay.

Features and Benefits:

Optimum economy is provided since the lighter weight means lower unit length costs, easier handling in installation and less-complex fittings.

All-aluminum conductors have an inherent high corrosion resistance due to their homogeneous construction.

Applications:

Stranded bare all-aluminum 1350 conductors

(AAC) are used in overhead line installations where design parameters do not require the higher strength or temperature ratings provided by ACSR, ACSS or other type conductors.

Options:

- E3X® surface coating (/E3X)
- Compact aluminum strands (ASTM B400)
- Trapezoidal-shaped aluminum strands (/TW)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® AAC Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded

AAC, ALUMINUM 1350 CONDUCTORS - CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES	CLASS	CROSS-SECTION SQ. INCHES	O.D. IN	APPROX. WEIGHT LB/KFT	RATED STRENGTH LBS
Peachbell	#6	7x0.0612	A	0.0206	0.184	24.4	560
Rose	#4	7x0.0772	A	0.0328	0.232	38.8	880
Iris	#2	7x0.0974	A, AA	0.0522	0.292	61.8	1350
Pansy	#1	7x0.1093	A, AA	0.0657	0.328	77.8	1640
Poppy	1/0	7x0.1228	A, AA	0.0829	0.368	98.3	1990
Aster	2/0	7x0.1379	A, AA	0.1045	0.414	123.9	2510
Phlox	3/0	7x0.1548	A, AA	0.1317	0.464	156.1	3040
Oxlip	4/0	7x0.1739	A, AA	0.1663	0.522	197.0	3830
Daisy	266.8	7x0.1952	AA	0.2095	0.586	248.3	4830
Laurel	266.8	19x0.1185	A	0.2095	0.592	249.4	4970
Tulip	336.4	19x0.1331	A	0.2644	0.666	314.6	6150
Daffodil	350.0	19x0.1357	A	0.2748	0.678	327.1	6390
Canna	397.5	19x0.1446	A, AA	0.3120	0.723	371.4	7110
Cosmos	477.0	19x0.1584	AA	0.3744	0.792	445.6	8360
Syringa	477.0	37x0.1135	A	0.3744	0.794	447.0	8690
Zinnia	500.0	19x0.1622	AA	0.3926	0.811	467.3	8760
Hyacinth	500.0	37x0.1162	A	0.3924	0.813	468.6	9110
Dahlia	556.5	19x0.1711	AA	0.4369	0.856	520.0	9750
Mistletoe	556.5	37x0.1226	A	0.4368	0.858	521.6	9940
Meadowsweet	600.0	37x0.1273	A, AA	0.4709	0.891	562.4	10700
Orchid	636.0	37x0.1311	A, AA	0.4995	0.918	596.4	11400
Violet	715.5	37x0.1391	AA	0.5623	0.974	671.4	12800
Nasturtium	715.5	61x0.1083	A	0.5619	0.975	673.9	13100
Petunia	750.0	37x0.1424	AA	0.5893	0.997	703.7	13100
Arbutus	795.0	37x0.1466	AA	0.6245	1.026	745.8	13900
Lilac	795.0	61x0.1142	A	0.6248	1.028	749.3	14300
Fuchsia	799.5	37x0.1470	AA	0.6280	1.029	749.9	14000
Heliotrope	800.0	61x0.1145	A	0.6281	1.031	753.3	14400
Anemone	874.5	37x0.1537	AA	0.6865	1.076	819.8	15000
Crocus	874.5	61x0.1197	A	0.6864	1.077	823.2	15800
Magnolia	954.0	37x0.1606	AA	0.7495	1.124	895.0	16400
Goldenrod	954.0	61x0.1251	A	0.7498	1.126	899.2	16900
Camellia	1000.0	61x0.1280	A	0.7849	1.152	941.3	17700
Bluebell	1033.5	37x0.1671	AA	0.8114	1.170	969.0	17700
Larkspur	1033.5	61x0.1302	A	0.8122	1.172	974.0	18300
Marigold	1113.0	61x0.1351	A, AA	0.8744	1.216	1049	19700
Hawthorn	1192.5	61x0.1398	A, AA	0.9363	1.258	1123	21100
Narcissus	1272.0	61x0.1444	A, AA	0.9990	1.300	1198	22000
Columbine	1351.5	61x0.1488	A, AA	1.061	1.339	1272	23400
Carnation	1431.0	61x0.1532	A, AA	1.124	1.379	1348	24300
Gladiolus	1510.5	61x0.1574	A, AA	1.187	1.417	1423	25600
Coreopsis	1590.0	61x0.1614	AA	1.248	1.453	1497	27000
Jessamine	1750.0	61x0.1694	AA	1.375	1.525	1649	29700
Cowslip	2000.0	91x0.1482	A	1.570	1.630	1883	34200
Sagebrush	2250.0	91x0.1572	A	1.766	1.729	2126	37700
Pigweed	2300.0	61x0.1942	A	1.807	1.748	2167	39000
Lupine	2500.0	91x0.1657	A	1.962	1.823	2362	41900
Bitterroot	2750.0	91x0.1738	A	2.159	1.912	2598	46100
Trillium	3000.0	127x0.1537	A	2.356	1.998	2843	50300
Bluebonnet	3500.0	127x0.1660	A	2.749	2.158	3316	58700

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr[®] AAC Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded

AAC, ALUMINUM 1350 CONDUCTORS - CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

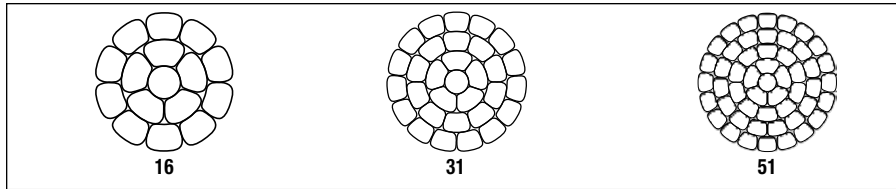
CODE WORD	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES	CLASS	CROSS-SECTION SQ. INCHES	O.D. IN	RESISTANCE (1) OHMS/KFT			AMPACITY @75°C (2)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (3)	CAPACITIVE REACTANCE MEGAOHM/KFT (3)
						DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X [®]			
Peachbell	#6	7x0.0612	A	0.0206	0.184	0.654	0.667	0.800	105	110	0.0056	0.119	0.7633
Rose	#4	7x0.0772	A	0.0328	0.232	0.411	0.420	0.503	140	150	0.0070	0.114	0.7269
Iris	#2	7x0.0974	A, AA	0.0522	0.292	0.259	0.264	0.316	185	200	0.0088	0.109	0.6905
Pansy	#1	7x0.1093	A, AA	0.0657	0.328	0.205	0.209	0.251	215	230	0.0099	0.106	0.6725
Poppy	1/0	7x0.1228	A, AA	0.0829	0.368	0.163	0.166	0.199	250	270	0.0111	0.103	0.6542
Aster	2/0	7x0.1379	A, AA	0.1045	0.414	0.129	0.132	0.158	285	315	0.0125	0.101	0.6361
Phlox	3/0	7x0.1548	A, AA	0.1317	0.464	0.102	0.104	0.125	330	365	0.0140	0.0981	0.6180
Oxlip	4/0	7x0.1739	A, AA	0.1663	0.522	0.0811	0.0828	0.0992	385	425	0.0158	0.0953	0.5997
Daisy	266.8	7x0.1952	AA	0.2095	0.586	0.0643	0.0657	0.0787	445	495	0.0177	0.0927	0.5816
Laurel	266.8	19x0.1185	A	0.2095	0.592	0.0646	0.0661	0.0791	445	495	0.0187	0.0914	0.5798
Tulip	336.4	19x0.1331	A	0.2644	0.666	0.0512	0.0525	0.0628	515	575	0.0210	0.0888	0.5616
Daffodil	350.0	19x0.1357	A	0.2748	0.678	0.0493	0.0504	0.0603	525	590	0.0214	0.0883	0.5586
Canna	397.5	19x0.1446	A, AA	0.3120	0.723	0.0434	0.0444	0.0532	570	640	0.0228	0.0869	0.5486
Cosmos	477.0	19x0.1584	AA	0.3744	0.792	0.0361	0.0371	0.0444	640	720	0.0250	0.0848	0.5343
Syringa	477.0	37x0.1135	A	0.3744	0.794	0.0363	0.0373	0.0445	640	720	0.0254	0.0844	0.5338
Zinnia	500.0	19x0.1622	AA	0.3926	0.811	0.0345	0.0354	0.0423	660	745	0.0256	0.0842	0.5306
Hyacinth	500.0	37x0.1162	A	0.3924	0.813	0.0346	0.0356	0.0425	660	740	0.0260	0.0839	0.5302
Dahlia	556.5	19x0.1711	AA	0.4369	0.856	0.0310	0.0319	0.0381	705	795	0.0270	0.0830	0.5223
Mistletoe	556.5	37x0.1226	A	0.4368	0.858	0.0311	0.0320	0.0382	705	795	0.0275	0.0826	0.5218
Meadowsweet	600.0	37x0.1273	A, AA	0.4709	0.891	0.0288	0.0297	0.0355	735	835	0.0285	0.0818	0.5159
Orchid	636.0	37x0.1311	A, AA	0.4995	0.918	0.0272	0.0281	0.0335	765	865	0.0294	0.0810	0.5113
Violet	715.5	37x0.1391	AA	0.5623	0.974	0.0242	0.0251	0.0299	825	935	0.0311	0.0798	0.5020
Nasturtium	715.5	61x0.1083	A	0.5619	0.975	0.0243	0.0252	0.0300	820	935	0.0314	0.0795	0.5018
Petunia	750.0	37x0.1424	AA	0.5893	0.997	0.0231	0.0239	0.0285	845	965	0.0319	0.0792	0.4983
Arbutus	795.0	37x0.1466	AA	0.6245	1.026	0.0218	0.0226	0.0270	880	1000	0.0328	0.0785	0.4938
Lilac	795.0	61x0.1142	A	0.6248	1.028	0.0218	0.0227	0.0271	875	1000	0.0331	0.0783	0.4935
Fuchsia	799.5	37x0.1470	AA	0.6280	1.029	0.0216	0.0225	0.0268	880	1005	0.0329	0.0785	0.4933
Heliotrope	800.0	61x0.1145	A	0.6281	1.031	0.0217	0.0226	0.0269	880	1005	0.0332	0.0783	0.4931
Anemone	874.5	37x0.1537	AA	0.6865	1.076	0.0198	0.0207	0.0246	930	1065	0.0344	0.0774	0.4864
Crocus	874.5	61x0.1197	A	0.6864	1.077	0.0199	0.0208	0.0247	930	1065	0.0347	0.0772	0.4861
Magnolia	954.0	37x0.1606	AA	0.7495	1.124	0.0181	0.0190	0.0226	980	1125	0.0360	0.0764	0.4795
Goldenrod	954.0	61x0.1251	A	0.7498	1.126	0.0182	0.0191	0.0227	980	1125	0.0362	0.0763	0.4792
Camellia	1000.0	61x0.1280	A	0.7849	1.152	0.0174	0.0183	0.0217	1010	1160	0.0371	0.0757	0.4756
Bluebell	1033.5	37x0.1671	AA	0.8114	1.170	0.0167	0.0176	0.0209	1030	1185	0.0374	0.0755	0.4733
Larkspur	1033.5	61x0.1302	A	0.8122	1.172	0.0168	0.0177	0.0210	1030	1185	0.0377	0.0753	0.4730
Marigold	1113.0	61x0.1351	A, AA	0.8744	1.216	0.0156	0.0165	0.0196	1075	1240	0.0391	0.0745	0.4672
Hawthorn	1192.5	61x0.1398	A, AA	0.9363	1.258	0.0146	0.0155	0.0184	1120	1295	0.0405	0.0737	0.4618
Narcissus	1272.0	61x0.1444	A, AA	0.9990	1.300	0.0137	0.0146	0.0173	1165	1350	0.0418	0.0730	0.4568
Columbine	1351.5	61x0.1488	A, AA	1.061	1.339	0.0129	0.0139	0.0163	1210	1400	0.0431	0.0723	0.4521
Carnation	1431.0	61x0.1532	A, AA	1.124	1.379	0.0121	0.0132	0.0155	1250	1455	0.0444	0.0716	0.4475
Gladiolus	1510.5	61x0.1574	A, AA	1.187	1.417	0.0115	0.0126	0.0148	1290	1505	0.0456	0.0710	0.4433
Coreopsis	1590.0	61x0.1614	AA	1.248	1.453	0.0109	0.0120	0.0141	1330	1550	0.0467	0.0704	0.4393
Jessamine	1750.0	61x0.1694	AA	1.375	1.525	0.00993	0.0111	0.0129	1405	1645	0.0490	0.0693	0.4318
Cowslip	2000.0	91x0.1482	A	1.570	1.630	0.00869	0.00994	0.0115	1515	1780	0.0526	0.0677	0.4213
Sagebrush	2250.0	91x0.1572	A	1.766	1.729	0.00775	0.00908	0.0105	1615	1905	0.0558	0.0663	0.4120
Pigweed	2300.0	61x0.1942	A	1.807	1.748	0.00755	0.00888	0.0102	1640	1930	0.0562	0.0662	0.4103
Lupine	2500.0	91x0.1657	A	1.962	1.823	0.00697	0.00839	0.00963	1710	2020	0.0588	0.0651	0.4038
Bitterroot	2750.0	91x0.1738	A	2.159	1.912	0.00634	0.00783	0.00894	1795	2130	0.0617	0.0640	0.3963
Trillium	3000.0	127x0.1537	A	2.356	1.998	0.00582	0.00740	0.00841	1875	2230	0.0646	0.0630	0.3894
Bluebonnet	3500.0	127x0.1660	A	2.749	2.158	0.00499	0.00669	0.00753	2025	2420	0.0697	0.0612	0.3773

(1) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
 (2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.

Notes

TransPowr® AAC/TW Bare Overhead Conductor

Trapezoidal All-Aluminum 1350 Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

TransPowr® AAC/TW is a trapezoidal 1350 H19 aluminum (AAC) concentric-lay-stranded conductor. The aluminum strands are trapezoidal in shape. The wedge-shaped aluminum strands enable a more compact alignment of the aluminum wires.

Conductor designs that maintain the same circular mil cross-sectional area of aluminum as a conventional round conductor result in a TW conductor that is 10 to 15 percent smaller in overall diameter.

Conductor designs that maintain the same overall diameter as a conventional round conductor result in a TW conductor that has 20 to 25 percent more aluminum cross-sectional area packed in.

The AAC/TW conductors are manufactured in accordance with the requirements of the latest issue of ASTM B778.

The conductor consists of two, three, four or five layers of aluminum 1350-H19 wires. The sizes and constructions listed on this and the following pages are examples used in overhead lines.

Features and Benefits:

TransPowr AAC/TW has a continuous operating temperature rating of 75°C. Operation of the conductor at elevated temperatures may increase the conductor sag properties and lower the rated tensile strength of the conductor.

AAC/TW conductors constructed of equivalent aluminum circular mil cross-sectional area provide a conductor that is smaller in overall diameter than the equivalent conventional round wire AAC conductor. The reduced conductor diameter is advantageous in reducing the effects of ice and wind loading on the conductor.

AAC/TW conductors constructed to be equivalent overall diameter enable a greater circular mil cross-sectional area of aluminum within the conductor, reducing power loss in the conductor for day-to-day operations as well as allowing a significant increase in conductor current-carrying capacity.

Applications:

Trapezoidal 1350 H19 aluminum conductors (AAC/TW) are used for overhead transmission lines where design parameters do not require the higher strength or temperature ratings provided by ACSR, ACSS or other type conductors.

Electrical Parameters:

The electrical parameters for the trapezoidal AAC equivalent circular mil area and equivalent overall diameter conductors may be found in the last table of this section.

Options:

- E3X® surface coating (/E3X)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

TransPowr® AAC/TW Bare Overhead Conductor

Trapezoidal All-Aluminum 1350 Concentric-Lay-Stranded



AAC/TW CONDUCTORS (MECHANICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR AAC

CODE WORD	SIZE AWG OR kcmil	NO. OF AL WIRES	EQUIVALENT STRAND WIRE DIA. INCHES	FILL FACTOR	CROSS-SECTION SQ. INCHES	O.D. IN	APPROX. WEIGHT LB/KFT	RATED STRENGTH LBS
Tulip/AAC/TW	336.4	15	0.1498	90.3	0.2644	0.609	313.9	6020
Canna/AAC/TW	397.5	15	0.1628	91.5	0.3122	0.657	370.8	6970
Cosmos/AAC/TW	477.0	15	0.1783	92.5	0.3745	0.716	444.8	8360
Zinnia/AAC/TW	500.0	15	0.1826	92.7	0.3928	0.733	466.5	8770
Mistletoe/AAC/TW	556.5	15	0.1926	93.2	0.4370	0.771	519.0	9750
Meadowsweet/AAC/TW	600.0	15	0.2000	93.5	0.4712	0.799	559.6	10500
Orchid/AAC/TW	636.0	15	0.2059	93.8	0.4995	0.821	593.1	11100
Verbena/AAC/TW	700.0	15	0.2160	94.1	0.5497	0.86	652.7	12000
Nasturtium/AAC/TW	750.0	15	0.2236	94.4	0.5890	0.889	699.5	12900
Arbutus/AAC/TW	795.0	17	0.2163	93.1	0.6243	0.922	743.7	13600
Cockscomb/AAC/TW	900.0	28	0.1793	91.8	0.7070	0.987	844.4	15400
Magnolia/AAC/TW	954.0	28	0.1846	92.1	0.7494	1.014	895.0	16400
Hawkweed/AAC/TW	1000.0	28	0.1890	92.3	0.7855	1.037	938.2	17200
Bluebell/AAC/TW	1033.5	28	0.1921	92.4	0.8115	1.054	969.2	17700
Marigold/AAC/TW	1113.1	28	0.1994	92.7	0.8744	1.092	1044	19100
Hawthorn/AAC/TW	1192.5	28	0.2064	93.0	0.9368	1.128	1119	20500
Narcissus/AAC/TW	1272.0	28	0.2131	93.2	0.9987	1.164	1193	21400
Columbine/AAC/TW	1351.5	28	0.2197	93.4	1.0610	1.198	1268	22700
Carnation/AAC/TW	1431.0	28	0.2261	93.7	1.1240	1.232	1343	24000
Coreopsis/AAC/TW	1590.0	28	0.2383	94.0	1.2490	1.296	1492	26700
Jessamine/AAC/TW	1750.0	45	0.1972	92.2	1.3740	1.372	1648	29700
Cowslip/AAC/TW	2000.0	45	0.2108	92.8	1.5710	1.463	1884	33200

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

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AAC/TW CONDUCTORS (ELECTRICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR AAC

CODE WORD	SIZE AWG OR kcmil	NO. OF AL WIRES	EQUIVALENT STRAND WIRE DIA. INCHES	FILL FACTOR	CROSS-SECTION SQ. INCHES	O.D. IN	RESISTANCE (1) OHMS/KFT			AMPACITY @75°C (2)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (3)	CAPACITIVE REACTANCE MEGAOHM/KFT (3)
							DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X®			
Tulip/AAC/TW	336.4	15	0.1498	90.3	0.2644	0.609	0.0511	0.0523	0.0626	505	560	0.0195	0.0905	0.5756
Canna/AAC/TW	397.5	15	0.1628	91.5	0.3122	0.657	0.0433	0.0443	0.0530	555	620	0.0211	0.0887	0.5635
Cosmos/AAC/TW	477.0	15	0.1783	92.5	0.3745	0.716	0.0361	0.0370	0.0443	625	700	0.0230	0.0867	0.5501
Zinnia/AAC/TW	500.0	15	0.1826	92.7	0.3928	0.733	0.0344	0.0353	0.0422	640	720	0.0236	0.0861	0.5465
Mistletoe/AAC/TW	556.5	15	0.1926	93.2	0.4370	0.771	0.0309	0.0318	0.0380	685	770	0.0248	0.0850	0.5386
Meadowsweet/AAC/TW	600.0	15	0.2000	93.5	0.4712	0.799	0.0287	0.0295	0.0353	720	810	0.0257	0.0841	0.5330
Orchid/AAC/TW	636.0	15	0.2059	93.8	0.4995	0.821	0.0270	0.0279	0.0333	745	840	0.0264	0.0835	0.5286
Verbena/AAC/TW	700.0	15	0.2160	94.1	0.5497	0.860	0.0246	0.0254	0.0303	790	895	0.0277	0.0824	0.5214
Nasturtium/AAC/TW	750.0	15	0.2236	94.4	0.5890	0.889	0.0229	0.0237	0.0283	825	935	0.0286	0.0817	0.5162
Arbutus/AAC/TW	795.0	17	0.2163	93.1	0.6243	0.922	0.0217	0.0225	0.0268	855	970	0.0296	0.0809	0.5106
Cockscomb/AAC/TW	900.0	28	0.1793	91.8	0.7070	0.987	0.0192	0.0201	0.0239	925	1050	0.0318	0.0792	0.4999
Magnolia/AAC/TW	954.0	28	0.1846	92.1	0.7494	1.014	0.0181	0.0190	0.0226	955	1090	0.0327	0.0786	0.4956
Hawkweed/AAC/TW	1000.0	28	0.1890	92.3	0.7855	1.037	0.0173	0.0182	0.0216	985	1125	0.0335	0.0780	0.4921
Bluebell/AAC/TW	1033.5	28	0.1921	92.4	0.8115	1.054	0.0167	0.0176	0.0209	1005	1150	0.0340	0.0777	0.4896
Marigold/AAC/TW	1113.1	28	0.1994	92.7	0.8744	1.092	0.0155	0.0164	0.0195	1050	1205	0.0352	0.0769	0.4841
Hawthorn/AAC/TW	1192.5	28	0.2064	93.0	0.9368	1.128	0.0145	0.0154	0.0182	1095	1255	0.0364	0.0761	0.4789
Narcissus/AAC/TW	1272.0	28	0.2131	93.2	0.9987	1.164	0.0136	0.0145	0.0172	1135	1310	0.0376	0.0754	0.4741
Columbine/AAC/TW	1351.5	28	0.2197	93.4	1.0610	1.198	0.0128	0.0137	0.0162	1180	1360	0.0387	0.0747	0.4695
Carnation/AAC/TW	1431.0	28	0.2261	93.7	1.1240	1.232	0.0121	0.0130	0.0154	1220	1405	0.0398	0.0741	0.4651
Coreopsis/AAC/TW	1590.0	28	0.2383	94.0	1.2490	1.296	0.0109	0.0119	0.0140	1295	1500	0.0418	0.0730	0.4572
Jessamine/AAC/TW	1750.0	45	0.1972	92.2	1.3740	1.372	0.00993	0.0110	0.0129	1370	1590	0.0443	0.0716	0.4482
Cowslip/AAC/TW	2000.0	45	0.2108	92.8	1.5710	1.463	0.00869	0.00987	0.0115	1475	1720	0.0473	0.0701	0.4382

(1) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.

(2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.

(3) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



TransPowr® AAC/TW Bare Overhead Conductor

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AAC/TW CONDUCTORS (MECHANICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR AAC

CODE WORD	SIZE AWG OR kcmil	NO. OF AL WIRES	EQUIVALENT STRAND WIRE DIA. INCHES	FILL FACTOR	CROSS-SECTION SQ. INCHES	O.D. IN	APPROX. WEIGHT LB/KFT	RATED STRENGTH LBS
Logan/AAC/TW	322.5	15	0.1466	90.0	0.2532	0.60	300.7	5770
- none -	384.5	15	0.1601	91.3	0.3020	0.65	358.6	6740
Wheeler/AAC/TW	449.4	15	0.1731	92.1	0.3530	0.70	419.2	7880
- none -	521.7	15	0.1865	92.9	0.4098	0.75	486.6	9150
Robson/AAC/TW	595.8	15	0.1993	93.5	0.4679	0.80	555.7	10400
- none -	678.2	15	0.2126	94.0	0.5325	0.85	632.3	11600
McKinley/AAC/TW	761.5	15	0.2253	94.5	0.5980	0.90	710.2	13100
- none -	854.2	15	0.2386	94.8	0.6707	0.95	796.5	14700
Rainier/AAC/TW	918.8	28	0.1811	91.9	0.7212	1.00	861.4	15800
- none -	1020.0	28	0.1909	92.4	0.8014	1.05	957.2	17500
Helens/AAC/TW	1123.1	28	0.2003	92.8	0.8823	1.10	1054	19300
- none -	1234.2	28	0.2099	93.2	0.9689	1.15	1157	21200
Mazama/AAC/TW	1346.8	28	0.2193	93.4	1.0580	1.20	1263	22600
- none -	1467.9	28	0.2290	93.7	1.1530	1.25	1377	24700
Hood/AAC/TW	1583.2	34	0.2158	92.6	1.2440	1.30	1488	26600
- none -	1682.7	45	0.1934	92.1	1.3220	1.35	1585	28600
Whitney/AAC/TW	1812.7	45	0.2007	92.4	1.4240	1.40	1707	30800
- none -	1954.3	45	0.2084	92.7	1.5350	1.45	1841	33200
Powell/AAC/TW	2093.6	45	0.2157	92.9	1.6440	1.50	1972	34800
- none -	2245.4	45	0.2234	93.2	1.7640	1.55	2115	37300
Jefferson/AAC/TW	2388.1	46	0.2278	93.2	1.8770	1.60	2252	39700

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr[®] AAC/TW Bare Overhead Conductor

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AAC/TW CONDUCTORS (ELECTRICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR AAC

CODE WORD	SIZE AWG OR kcmil	NO. OF AL WIRES	EQUIVALENT STRAND WIRE DIA. INCHES	FILL FACTOR	CROSS-SECTION SQ. INCHES	O.D. IN	RESISTANCE (1) OHMS/KFT			AMPACITY @75°C (2)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (3)	CAPACITIVE REACTANCE MEGAOHM/KFT (3)
							DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X [®]			
Logan/AAC/TW	322.5	15	0.1466	90.0	0.2532	0.597	0.0533	0.0546	0.0653	490	545	0.0192	0.0908	0.5787
- none -	384.5	15	0.1601	91.3	0.3020	0.647	0.0447	0.0458	0.0548	545	610	0.0208	0.0890	0.5660
Wheeler/AAC/TW	449.4	15	0.1731	92.1	0.3530	0.696	0.0383	0.0393	0.0469	600	675	0.0224	0.0873	0.5545
- none -	521.7	15	0.1865	92.9	0.4098	0.747	0.0330	0.0339	0.0405	660	740	0.0240	0.0857	0.5434
Robson/AAC/TW	595.8	15	0.1993	93.5	0.4679	0.796	0.0289	0.0297	0.0355	715	805	0.0256	0.0842	0.5335
- none -	678.2	15	0.2126	94.0	0.5325	0.847	0.0254	0.0262	0.0313	775	875	0.0273	0.0828	0.5238
McKinley/AAC/TW	761.5	15	0.2253	94.5	0.5980	0.896	0.0226	0.0234	0.0279	835	945	0.0288	0.0815	0.5151
- none -	854.2	15	0.2386	94.8	0.6707	0.947	0.0201	0.0209	0.0249	895	1015	0.0305	0.0802	0.5063
Rainier/AAC/TW	918.8	28	0.1811	91.9	0.7212	0.996	0.0188	0.0197	0.0234	935	1065	0.0321	0.0790	0.4984
- none -	1020.0	28	0.1909	92.4	0.8014	1.047	0.0170	0.0178	0.0212	995	1140	0.0338	0.0778	0.4906
Helens/AAC/TW	1123.1	28	0.2003	92.8	0.8823	1.097	0.0154	0.0163	0.0193	1055	1210	0.0354	0.0768	0.4834
- none -	1234.2	28	0.2099	93.2	0.9689	1.147	0.0140	0.0149	0.0177	1115	1285	0.0370	0.0758	0.4764
Mazama/AAC/TW	1346.8	28	0.2193	93.4	1.0580	1.196	0.0128	0.0138	0.0163	1175	1355	0.0386	0.0748	0.4698
- none -	1467.9	28	0.2290	93.7	1.1530	1.247	0.0118	0.0128	0.0150	1240	1430	0.0403	0.0738	0.4632
Hood/AAC/TW	1583.2	34	0.2158	92.6	1.2440	1.304	0.0109	0.0120	0.0140	1295	1500	0.0420	0.0729	0.4563
- none -	1682.7	45	0.1934	92.1	1.3220	1.347	0.0103	0.0114	0.0134	1340	1555	0.0435	0.0720	0.4512
Whitney/AAC/TW	1812.7	45	0.2007	92.4	1.4240	1.396	0.00958	0.0107	0.0125	1400	1625	0.0451	0.0712	0.4456
- none -	1954.3	45	0.2084	92.7	1.5350	1.447	0.00889	0.0101	0.0117	1460	1700	0.0468	0.0704	0.4399
Powell/AAC/TW	2093.6	45	0.2157	92.9	1.6440	1.496	0.00830	0.00952	0.0110	1515	1770	0.0483	0.0696	0.4347
- none -	2245.4	45	0.2234	93.2	1.7640	1.547	0.00774	0.00901	0.0104	1575	1840	0.0500	0.0688	0.4294
Jefferson/AAC/TW	2388.1	46	0.2278	93.2	1.8770	1.597	0.00727	0.00859	0.00990	1630	1910	0.0517	0.0681	0.4244

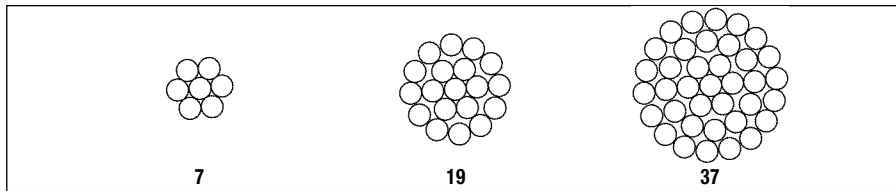
(1) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (3) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

TransPowr® AAAC Bare Overhead Conductor

Aluminum Alloy Conductor Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

AAAC is a high-strength aluminum alloy, concentric-lay-stranded conductor. It is similar in construction and appearance to the AAC all-aluminum conductor.

The AAAC conductor is manufactured in accordance with the requirements of the latest issue of ASTM B399. The AAAC conductor is manufactured from a heat-treated, magnesium-silicide high-strength 6201 T81 aluminum alloy.

The aluminum strands consist of a concentric-stranded cable of 7, 19, 37 or more wires. The sizes and strandings listed are common examples used in overhead lines. Metric (mm) sizes are also available.

Features and Benefits:

Aluminum alloy conductors have a number of advantages over the use of the ACSR or all-aluminum conductors.

- Lower power losses than for equivalent single- aluminum-layer ACSR conductors. (The inductive effect of the steel core in the ACSR is eliminated).
- Simpler fittings than those required for ACSR.
- Excellent corrosion resistance in environments conducive to galvanic corrosion in ACSR.
- Strength and sag approximately the same as for equivalent 6/1 and 26/7 ACSR conductors.
- Outside diameters are the same as for standard ACSR conductors, permitting interchangeability of fittings.
- Greater resistance to abrasion than that for 1350 wires in all-aluminum or ACSR conductors.

Applications:

AAAC aluminum alloy conductors are extensively used for overhead distribution and transmission

lines adjacent to ocean coastlines where there can be a problem of corrosion in the steel of an ACSR construction.

The aluminum alloy conductors are used in place of single-layer ACSR conductors (i.e., #6 to #4/0 AWG) to reduce power losses in overhead distribution and transmission lines. The inductive effect of the ACSR's steel core is eliminated, hence increasing the operating efficiency of the line.

Options:

- E3X® surface coating (/E3X)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® AAAC Bare Overhead Conductor

Aluminum Alloy Conductor Concentric-Lay-Stranded

AAAC (MECHANICAL PROPERTIES) - CONDUCTORS SIZED TO HAVE DIAMETER EQUAL TO ACSR (1)

CODE WORD	SIZE AWG OR kcmil	EQUIVALENT ACSR SIZE (2)	EQUIVALENT AAC SIZE (3)	STRANDING NO. X DIA. INCHES	CLASS	CROSS-SECTION SQ. INCHES	O.D. IN	APPROX. WEIGHT LB/KFT	RATED STRENGTH LBS
Akron	30.6	#6 (Turkey)	#6	7x0.0661	A	0.0240	0.198	28.3	1110
Alton	48.7	#4 (Swan)	#4	7x0.0834	A	0.0382	0.250	45.1	1760
Ames	77.5	#2 (Sparrow)	#2	7x0.1052	A, AA	0.0608	0.316	71.7	2800
Azusa	123.3	1/0 (Raven)	1/0	7x0.1327	A, AA	0.0968	0.398	114.1	4280
Anaheim	155.4	2/0 (Quail)	2/0	7x0.1490	A, AA	0.1221	0.447	143.9	5390
Amherst	195.7	3/0 (Pigeon)	3/0	7x0.1672	A, AA	0.1537	0.502	181.2	6790
Alliance	246.9	4/0 (Penguin)	4/0	7x0.1878	AA	0.1939	0.563	228.6	8560
Butte	312.8	266.8 (Partridge)	266.8	19x0.1283	A	0.2456	0.642	290.9	10500
Canton	394.5	336.4 (Linnet)	336.4	19x0.1441	A, AA	0.3099	0.720	366.9	13300
Cairo	465.4	397.5 (Ibis)	397.5	19x0.1565	AA	0.3655	0.782	432.8	15600
Darien	559.5	477.0 (Hawk)	477.0	19x0.1716	AA	0.4394	0.858	520.3	18800
Elgin	652.4	556.5 (Dove)	556.5	19x0.1853	AA	0.5124	0.926	606.7	21900
Flint	740.8	636.0 (Grosbeak)	636.0	37x0.1415	AA	0.5818	0.990	691.2	24400
Greeley	927.2	795.0 (Drake)	795.0	37x0.1583	AA	0.7282	1.108	865.1	30500

(1) General Cable utilizes an aluminum alloy that meets both the requirements of 6101 T81 and 6201 T81 designation.

(2) Equivalent ACSR Size refers to an ACSR conductor size of equal diameter.

(3) Equivalent AAC Size refers to an ASTM AAC 1350 conductor of approximate equivalent electrical resistance.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® AAAC Bare Overhead Conductor

Aluminum Alloy Conductor Concentric-Lay-Stranded

AAAC (ELECTRICAL PROPERTIES) - CONDUCTORS SIZED TO HAVE DIAMETER EQUAL TO ACSR (1)

CODE WORD	SIZE AWG OR kcmil	EQUIVALENT ACSR SIZE (2)	EQUIVALENT AAC SIZE (3)	STRANDING NO. X DIA. INCHES	CLASS	O.D. IN	RESISTANCE (4) OHMS/KFT			AMPACITY @75°C (5)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (6)	CAPACITIVE REACTANCE MEGAOHM/KFT (6)
							DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X®			
Akron	30.6	#6 (Turkey)	#6	7x0.0661	A	0.198	0.654	0.666	0.779	105	115	0.0060	0.118	0.7512
Alton	48.7	#4 (Swan)	#4	7x0.0834	A	0.250	0.411	0.418	0.489	145	155	0.0076	0.112	0.7148
Ames	77.5	#2 (Sparrow)	#2	7x0.1052	A, AA	0.316	0.258	0.263	0.308	190	205	0.0095	0.107	0.6785
Azusa	123.3	1/0 (Raven)	1/0	7x0.1327	A, AA	0.398	0.162	0.165	0.193	255	280	0.0120	0.102	0.6421
Anaheim	155.4	2/0 (Quail)	2/0	7x0.1490	A, AA	0.447	0.129	0.131	0.153	295	325	0.0135	0.0989	0.6239
Amherst	195.7	3/0 (Pigeon)	3/0	7x0.1672	A, AA	0.502	0.102	0.104	0.122	345	380	0.0152	0.0962	0.6059
Alliance	246.9	4/0 (Penguin)	4/0	7x0.1878	AA	0.563	0.0810	0.0825	0.0966	395	440	0.0170	0.0936	0.5877
Butte	312.8	266.8 (Partridge)	266.8	19x0.1283	A	0.642	0.0642	0.0655	0.0766	460	515	0.0203	0.0896	0.5673
Canton	394.5	336.4 (Linnet)	336.4	19x0.1441	A, AA	0.720	0.0509	0.0520	0.0608	535	595	0.0227	0.0870	0.5492
Cairo	465.4	397.5 (Ibis)	397.5	19x0.1565	AA	0.782	0.0432	0.0441	0.0516	590	665	0.0247	0.0851	0.5362
Darien	559.5	477.0 (Hawk)	477.0	19x0.1716	AA	0.858	0.0359	0.0368	0.0430	665	750	0.0271	0.0829	0.5218
Elgin	652.4	556.5 (Dove)	556.5	19x0.1853	AA	0.926	0.0308	0.0316	0.0369	730	830	0.0292	0.0812	0.5098
Flint	740.8	636.0 (Grosbeak)	636.0	37x0.1415	AA	0.990	0.0272	0.0280	0.0327	790	900	0.0317	0.0793	0.4993
Greeley	927.2	795.0 (Drake)	795.0	37x0.1583	AA	1.108	0.0217	0.0226	0.0263	905	1040	0.0354	0.0768	0.4817

(1) General Cable utilizes an aluminum alloy that meets both the requirements of 6101 T81 and 6201 T81 designation.

(2) Equivalent ACSR Size refers to an ACSR conductor size of equal diameter.

(3) Equivalent AAC Size refers to an ASTM AAC 1350 conductor of approximate equivalent electrical resistance.

(4) Based on a conductivity of 52.5% (minimum lot average) IACS at 20°C. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.

(5) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.

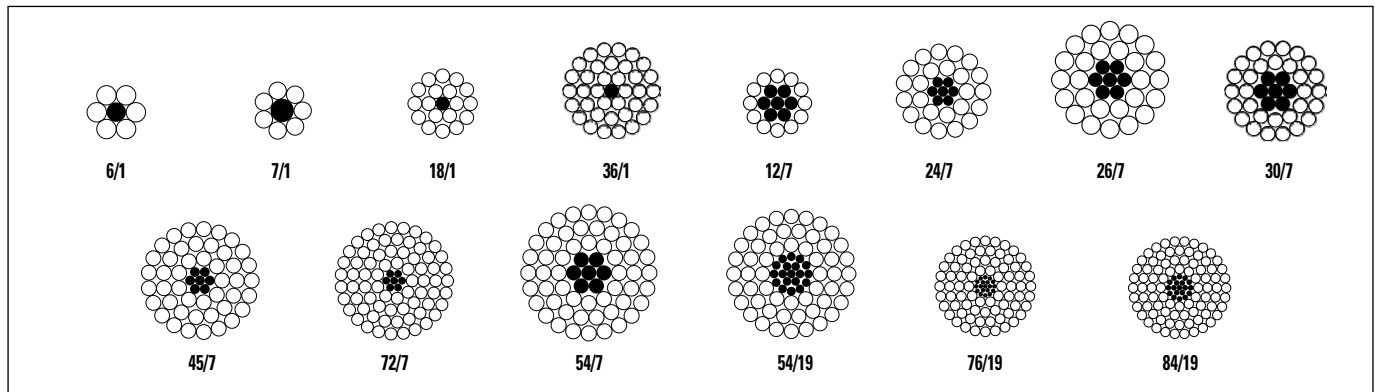
(6) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

TransPowr® ACSR Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

ACSR is a composite concentric-lay-stranded conductor. ACSR conductors are manufactured in accordance with the requirements of the latest issue of ASTM B232.

The steel strand or strands form the central core of the conductor, around which is stranded one or more layers of aluminum 1350-H19 wires. The steel core may consist of a single strand or a concentric-stranded cable of 7, 19, 37 or more wires. Numerous combinations of aluminum and steel strands and layers are possible. The sizes and strandings listed on the following pages are those most frequently used for overhead lines.

Features and Benefits:

ACSR conductors are recognized for their record of economy, dependability and favorable strength/weight ratio. ACSR conductors combine the light weight and good conductivity of aluminum with the high tensile strength and ruggedness of steel. In line design, this can provide higher tensions, less sag and longer span lengths than obtainable with most other types of overhead conductors. The steel strands are added as mechanical reinforcement. The cross-sections above illustrate some common strandings.

Features and Benefits (cont'd.):

The steel core wires are protected from corrosion

by galvanizing. The standard Class A zinc coating is usually adequate for ordinary environments. For greater protection, Class C galvanized coatings may be specified. High-Strength (/GA3), Extra-High-Strength (/GA4) and Ultra-High-Strength (/GA5) steel core with Class A galvanizing and High-Strength (/MA3), Extra-High-Strength (/MA4) and Ultra-High-Strength (/MA5) steel core with Class A zinc-5% aluminum mischmetal coating are also available.

The product is also available with corrosion inhibitor treatment applied to the central steel component.

Applications:

Aluminum Conductors, Steel-Reinforced (ACSR) are extensively used for overhead distribution and transmission lines.

Options:

- E3X® surface coating (/E3X)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Regular-strength Class C galvanized steel core (/GC2)
- High-strength Class A galvanized steel core (/GA3 to ASTM B606)

Options (cont'd.):

- Extra-high-strength Class A galvanized steel core (/GA4 to ASTM B957)
- Ultra-high-strength Class A galvanized steel core (/GA5 to ASTM B957)
- Regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2 to ASTM B802)
- High-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA3 to ASTM B803)
- Extra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA4 to ASTM B958)
- Ultra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA5 to ASTM B958)
- Aluminum-clad steel core (/AW)—see ACSR/AW catalog section
- Non-specular surface finish (/NS)
- Compact ACSR (ASTM B401) designs are available
- Trapezoidal-shaped aluminum strands (/TW)—see ACSR/TW catalog section
- Aluminum Alloy Steel Reinforced Conductors AACSR (ASTM B711) designs are available

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® ACSR Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR, ALUMINUM CONDUCTOR, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	GA2	GA3 (HS)	GA5 (UHS)
Turkey	#6	6x0.0661	1x0.0661	0.0240	0.0206	0.198	36.0	24.4	11.6	67.86%	32.11%	1190	1260	1320
Swan	#4	6x0.0834	1x0.0834	0.0382	0.0328	0.250	57.4	38.9	18.4	67.88%	32.12%	1860	1970	2070
Swanate	#4	7x0.0772	1x0.1029	0.0411	0.0328	0.257	66.9	38.8	28.0	58.08%	41.92%	2360	2520	2680
Sparrow	#2	6x0.1052	1x0.1052	0.0608	0.0522	0.316	91.2	61.9	29.3	67.88%	32.12%	2850	3010	3180
Sparate	#2	7x0.0974	1x0.1299	0.0654	0.0522	0.325	106.5	61.8	44.7	58.07%	41.96%	3640	3900	4150
Robin	#1	6x0.1181	1x0.1181	0.0767	0.0657	0.354	115.0	78.1	36.9	67.88%	32.12%	3550	3760	3980
Raven	1/0	6x0.1327	1x0.1327	0.0968	0.0830	0.398	145.2	98.6	46.6	67.88%	32.12%	4380	4650	4910
Quail	2/0	6x0.1489	1x0.1489	0.1219	0.1045	0.447	182.8	124.1	58.7	67.89%	32.12%	5300	5720	6050
Pigeon	3/0	6x0.1672	1x0.1672	0.1537	0.1317	0.502	230.5	156.5	74.0	67.90%	32.12%	6620	7150	7570
Penguin	4/0	6x0.1878	1x0.1878	0.1939	0.1662	0.563	290.8	197.4	93.4	67.88%	32.12%	8350	9010	9550
Waxwing	266.8	18x0.1217	1x0.1217	0.2210	0.2094	0.608	288.7	249.4	39.2	86.39%	13.59%	6880	7100	7320
Spoonbill	266.8	22x0.1101	7x0.0612	0.2300	0.2095	0.624	319.8	250.0	69.8	78.17%	21.81%	8720	9120	9510
Scaup	266.8	24x0.1054	7x0.0703	0.2366	0.2094	0.632	342.2	250.1	92.0	73.09%	26.90%	10000	10500	11100
Partridge	266.8	26x0.1013	7x0.0788	0.2437	0.2095	0.642	366.1	250.5	115.6	68.42%	31.58%	11300	11900	12600
Junco	266.8	30x0.0943	7x0.0943	0.2584	0.2095	0.660	416.4	250.8	165.6	60.23%	39.77%	13900	14900	15800
Ostrich	300.0	26x0.1074	7x0.0835	0.2739	0.2355	0.680	411.4	281.6	129.8	68.45%	31.55%	12700	13400	14200
Merlin	336.4	18x0.1367	1x0.1367	0.2789	0.2642	0.684	364.2	314.7	49.5	86.41%	13.59%	8680	8960	9240
Trogon	336.4	20x0.1297	7x0.0576	0.2825	0.2642	0.692	377.3	315.5	61.8	83.62%	16.38%	9470	9820	10200
Woodcock	336.4	22x0.1237	7x0.0687	0.2903	0.2644	0.701	403.5	315.6	87.9	78.22%	21.78%	10900	11400	11900
Widgeon	336.4	24x0.1184	7x0.0789	0.2985	0.2642	0.710	431.6	315.7	115.9	73.15%	26.85%	12500	13200	13800
Linnet	336.4	26x0.1137	7x0.0884	0.3070	0.2640	0.720	461.1	315.6	145.5	68.45%	31.55%	14100	14900	15700
Oriole	336.4	30x0.1059	7x0.1059	0.3259	0.2642	0.741	525.2	316.3	208.9	60.22%	39.78%	17300	18500	19700
Chickadee	397.5	18x0.1486	1x0.1486	0.3295	0.3122	0.743	430.4	371.9	58.5	86.41%	13.59%	9940	10400	10700
Ptarmigan	397.5	20x0.1410	7x0.0627	0.3339	0.3123	0.752	446.1	372.9	73.2	83.59%	16.41%	11100	11500	11900
Stork	397.5	22x0.1344	7x0.0747	0.3428	0.3121	0.762	476.5	372.6	103.9	78.20%	21.80%	12900	13400	14000
Brant	397.5	24x0.1287	7x0.0858	0.3527	0.3122	0.772	510.1	373.0	137.1	73.12%	26.88%	14600	15400	16200
Ibis	397.5	26x0.1236	7x0.0961	0.3627	0.3120	0.783	544.9	372.9	172.0	68.43%	31.57%	16300	17200	18200
Lark	397.5	30x0.1151	7x0.1151	0.3850	0.3121	0.806	620.4	373.7	246.7	60.24%	39.76%	20300	21700	23100
Pelican	477.0	18x0.1628	1x0.1628	0.3955	0.3747	0.814	516.6	446.4	70.2	86.41%	13.59%	11800	12300	12700
Tailorbird	477.0	20x0.1544	7x0.0866	0.4003	0.3745	0.823	534.7	447.1	87.6	83.62%	16.39%	13100	13600	14100
Toucan	477.0	22x0.1472	7x0.0818	0.4112	0.3744	0.834	571.5	446.9	124.6	78.20%	21.80%	15200	15900	16700
Flicker	477.0	24x0.1410	7x0.0940	0.4233	0.3747	0.846	612.2	447.7	164.6	73.13%	26.89%	17200	18100	19000
Hawk	477.0	26x0.1354	7x0.1053	0.4353	0.3744	0.858	654.0	447.5	206.5	68.43%	31.57%	19500	20700	21900
Hen	477.0	30x0.1261	7x0.1261	0.4621	0.3747	0.883	744.7	448.5	296.1	60.23%	39.76%	23800	25500	27200
Heron	500.0	30x0.1291	7x0.1291	0.4843	0.3927	0.904	780.5	470.1	310.4	60.23%	39.77%	25000	26700	28500
Osprey	556.5	18x0.1758	1x0.1758	0.4612	0.4369	0.879	602.4	520.5	81.8	86.40%	13.59%	13700	14300	14800
Tody	556.5	20x0.1668	7x0.0741	0.4672	0.4370	0.890	624.1	521.8	102.3	83.61%	16.39%	15300	15800	16400
Sapsucker	556.5	22x0.1590	7x0.0883	0.4797	0.4368	0.901	666.6	521.4	145.2	78.22%	21.78%	17600	18400	19200
Parakeet	556.5	24x0.1523	7x0.1015	0.4939	0.4372	0.914	714.1	522.3	191.9	73.14%	26.87%	19800	20900	22000
Dove	556.5	26x0.1463	7x0.1138	0.5083	0.4371	0.927	763.7	522.5	241.2	68.42%	31.58%	22600	24000	25300
Eagle	556.5	30x0.1362	7x0.1362	0.5391	0.4371	0.953	868.7	523.3	345.5	60.24%	39.77%	27800	29700	31700
Peacock	605.0	24x0.1588	7x0.1059	0.5370	0.4753	0.953	776.7	567.8	208.9	73.10%	26.90%	21600	22700	23900
Squab	605.0	26x0.1525	7x0.1186	0.5522	0.4749	0.966	829.7	567.7	261.9	68.42%	31.57%	24300	25800	27300
Wood Duck	605.0	30x0.1420	7x0.1420	0.5860	0.4751	0.994	944.3	568.8	375.5	60.24%	39.76%	28900	31600	33700
Teal	605.0	30x0.1420	19x0.0852	0.5834	0.4751	0.994	937.2	568.8	368.4	60.69%	39.31%	30000	32000	34000
Swift	636.0	36x0.1329	1x0.1329	0.5133	0.4994	0.930	643.5	596.7	46.8	92.73%	7.27%	13800	14000	14300
Kingbird	636.0	18x0.1880	1x0.1880	0.5274	0.4997	0.940	688.9	595.3	93.6	86.41%	13.59%	15700	16300	16900
Turacos	636.0	20x0.1783	7x0.0792	0.5339	0.4994	0.951	713.1	596.2	116.8	83.61%	16.38%	17400	18100	18800
Goldfinch	636.0	22x0.1700	7x0.0944	0.5483	0.4994	0.963	762.0	596.1	166.0	78.23%	21.78%	19800	20800	21700
Rook	636.0	24x0.1628	7x0.1085	0.5643	0.4996	0.977	816.0	596.8	219.2	73.14%	26.86%	22600	23900	25100
Grosbeak	636.0	26x0.1564	7x0.1216	0.5808	0.4995	0.990	872.5	597.1	275.4	68.44%	31.56%	25200	26800	28300
Scoter	636.0	30x0.1456	7x0.1456	0.6160	0.4995	1.019	992.8	598.0	394.8	60.23%	39.77%	30400	33200	35400
Egret	636.0	30x0.1456	19x0.0874	0.6135	0.4995	1.019	985.6	598.0	387.7	60.67%	39.34%	31500	33600	35800
Flamingo	666.6	24x0.1667	7x0.1111	0.5917	0.5238	1.000	855.6	625.7	229.9	73.13%	26.87%	23700	25000	26300
Gannet	666.6	26x0.1601	7x0.1245	0.6086	0.5234	1.014	914.4	625.7	288.7	68.43%	31.57%	26400	28000	29700
Stilt	715.5	24x0.1727	7x0.1151	0.6350	0.5622	1.036	918.3	671.6	246.7	73.14%	26.86%	25500	26900	28300
Starling	715.5	26x0.1659	7x0.1290	0.6535	0.5620	1.051	981.8	671.9	309.9	68.44%	31.56%	28400	30100	31900
Redwing	715.5	30x0.1544	19x0.0926	0.6897	0.5617	1.081	1108	672.4	435.2	60.69%	39.28%	34600	36900	39300
Coot	795.0	36x0.1486	1x0.1486	0.6417	0.6244	1.040	804.5	746.0	58.5	92.73%	7.27%	16800	17200	17500
Macaw	795.0	42x0.1376	7x0.0764	0.6567	0.6246	1.055	857.7	749.0	108.7	87.33%	12.67%	20100	20700	21300
Turbit	795.0	20x0.1994	7x0.0886	0.6677	0.6246	1.063	891.9	745.7	146.2	83.61%	16.39%	21800	22600	23500
Tern	795.0	45x0.1329	7x0.0886	0.6674	0.6242	1.063	895.2	749.0	146.2	83.67%	16.33%	22100	22900	23700
Puffin	795.0	22x0.1901	7x0.1056	0.6857	0.6244	1.077	953.0	745.3	207.7	78.21%	21.79%	24800	26000	27200
Cuckoo	795.0	24x0.1820	7x0.1213	0.7053	0.6244	1.092	1020	745.8	274.0	73.12%	26.86%	27900	29500	31000
Condor	795.0	54x0.1213	7x0.1213	0.7049	0.6240	1.092	1024	749.8	274.0	73.22%	26.76%	28200	29700	31300
Drake	795.0	26x0.1749	7x0.1360	0.7263	0.6247	1.108	1091	746.8	344.4	68.45%	31.57%	31500	33500	35400
Mallard	795.0	30x0.1628	19x0.0977	0.7669	0.6245	1.140	1232	747.6	484.4	60.68%	39.32%	38400	41100	43700

(1) Code words shown denote ACSR with regular-strength Class A Galvanized steel core ((GA2)). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSR Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR, ALUMINUM CONDUCTOR, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT			AMPACITY @75°C (4)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
		AL	STEEL	TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X®			
Turkey	#6	6x0.0661	1x0.0661	0.0240	0.0206	0.198	0.640	0.655	0.819	105	110	0.0017	0.1465	0.7512
Swan	#4	6x0.0834	1x0.0834	0.0382	0.0328	0.250	0.402	0.411	0.524	140	150	0.0026	0.1372	0.7148
Swanate	#4	7x0.0772	1x0.1029	0.0411	0.0328	0.257	0.397	0.407	0.529	140	150	0.0022	0.1410	0.7105
Sparrow	#2	6x0.1052	1x0.1052	0.0608	0.0522	0.316	0.253	0.259	0.337	185	200	0.0039	0.1273	0.6785
Sparate	#2	7x0.0974	1x0.1299	0.0654	0.0522	0.325	0.249	0.256	0.341	170	185	0.0037	0.1289	0.6740
Robin	#1	6x0.1181	1x0.1181	0.0767	0.0657	0.354	0.201	0.205	0.271	210	230	0.0048	0.1226	0.6603
Raven	1/0	6x0.1327	1x0.1327	0.0968	0.0830	0.398	0.159	0.163	0.218	240	265	0.0059	0.1178	0.6421
Quail	2/0	6x0.1489	1x0.1489	0.1219	0.1045	0.447	0.126	0.129	0.177	275	305	0.0072	0.1133	0.6240
Pigeon	3/0	6x0.1672	1x0.1672	0.1537	0.1317	0.502	0.100	0.102	0.143	315	350	0.0086	0.1093	0.6059
Penguin	4/0	6x0.1878	1x0.1878	0.1939	0.1662	0.563	0.0793	0.0812	0.116	365	400	0.0101	0.1055	0.5877
Waxwing	266.8	18x0.1217	1x0.1217	0.2210	0.2094	0.608	0.0642	0.0656	0.0785	450	500	0.0196	0.0904	0.5756
Spoonbill	266.8	22x0.1101	7x0.0612	0.2300	0.2095	0.624	0.0639	0.0653	0.0781	455	505	0.0206	0.0892	0.5717
Scaup	266.8	24x0.1054	7x0.0703	0.2366	0.2094	0.632	0.0637	0.0650	0.0778	455	505	0.0210	0.0888	0.5696
Partridge	266.8	26x0.1013	7x0.0788	0.2437	0.2095	0.642	0.0634	0.0647	0.0774	460	510	0.0215	0.0882	0.5673
Junco	266.8	30x0.0943	7x0.0943	0.2584	0.2095	0.660	0.0628	0.0641	0.0767	465	520	0.0225	0.0872	0.5629
Ostrich	300.0	26x0.1074	7x0.0835	0.2739	0.2355	0.680	0.0564	0.0576	0.0689	495	550	0.0228	0.0869	0.5582
Merlin	336.4	18x0.1367	1x0.1367	0.2789	0.2642	0.684	0.0509	0.0521	0.0623	520	580	0.0220	0.0877	0.5574
Trogon	336.4	20x0.1297	7x0.0576	0.2825	0.2642	0.692	0.0509	0.0521	0.0623	520	585	0.0226	0.0871	0.5556
Woodcock	336.4	22x0.1237	7x0.0687	0.2903	0.2644	0.701	0.0506	0.0518	0.0619	525	585	0.0231	0.0866	0.5535
Widgeon	336.4	24x0.1184	7x0.0789	0.2985	0.2642	0.710	0.0504	0.0516	0.0617	525	590	0.0236	0.0861	0.5514
Linnet	336.4	26x0.1137	7x0.0884	0.3070	0.2640	0.720	0.0503	0.0514	0.0615	530	595	0.0242	0.0855	0.5493
Oriole	336.4	30x0.1059	7x0.1059	0.3259	0.2642	0.741	0.0498	0.0509	0.0609	535	600	0.0253	0.0845	0.5447
Chickadee	397.5	18x0.1486	1x0.1486	0.3295	0.3122	0.743	0.0431	0.0441	0.0528	575	645	0.0240	0.0857	0.5443
Ptarmigan	397.5	20x0.1410	7x0.0627	0.3339	0.3123	0.752	0.0430	0.0441	0.0527	580	650	0.0245	0.0852	0.5424
Stork	397.5	22x0.1344	7x0.0747	0.3428	0.3121	0.762	0.0429	0.0439	0.0525	580	655	0.0251	0.0847	0.5404
Brant	397.5	24x0.1287	7x0.0858	0.3527	0.3122	0.772	0.0427	0.0437	0.0523	585	660	0.0257	0.0841	0.5383
Ibis	397.5	26x0.1236	7x0.0961	0.3627	0.3120	0.783	0.0426	0.0435	0.0521	590	660	0.0263	0.0836	0.5362
Lark	397.5	30x0.1151	7x0.1151	0.3850	0.3121	0.806	0.0422	0.0431	0.0515	595	670	0.0275	0.0826	0.5317
Pelican	477.0	18x0.1628	1x0.1628	0.3955	0.3747	0.814	0.0359	0.0368	0.0440	645	730	0.0262	0.0837	0.5300
Tailorbird	477.0	20x0.1544	7x0.0686	0.4003	0.3745	0.823	0.0359	0.0368	0.0440	650	730	0.0269	0.0831	0.5282
Toucan	477.0	22x0.1472	7x0.0818	0.4112	0.3744	0.834	0.0357	0.0367	0.0438	650	735	0.0275	0.0826	0.5262
Flicker	477.0	24x0.1410	7x0.0940	0.4233	0.3747	0.846	0.0356	0.0365	0.0436	655	740	0.0281	0.0821	0.5240
Hawk	477.0	26x0.1354	7x0.1053	0.4353	0.3744	0.858	0.0355	0.0363	0.0434	660	745	0.0288	0.0815	0.5219
Hen	477.0	30x0.1261	7x0.1261	0.4621	0.3747	0.883	0.0351	0.0360	0.0430	670	755	0.0301	0.0805	0.5174
Heron	500.0	30x0.1291	7x0.1291	0.4843	0.3927	0.904	0.0335	0.0343	0.0410	690	780	0.0308	0.0800	0.5137
Osprey	556.5	18x0.1758	1x0.1758	0.4612	0.4369	0.879	0.0308	0.0317	0.0378	710	805	0.0283	0.0819	0.5180
Tody	556.5	20x0.1668	7x0.0741	0.4672	0.4370	0.890	0.0308	0.0316	0.0378	715	810	0.0290	0.0814	0.5162
Sapsucker	556.5	22x0.1590	7x0.0883	0.4797	0.4368	0.901	0.0306	0.0315	0.0376	720	815	0.0297	0.0808	0.5142
Parakeet	556.5	24x0.1523	7x0.1015	0.4939	0.4372	0.914	0.0305	0.0313	0.0374	725	820	0.0304	0.0803	0.5119
Dove	556.5	26x0.1463	7x0.1138	0.5083	0.4371	0.927	0.0304	0.0312	0.0372	725	825	0.0311	0.0798	0.5098
Eagle	556.5	30x0.1362	7x0.1362	0.5391	0.4371	0.953	0.0301	0.0309	0.0369	735	835	0.0325	0.0787	0.5053
Peacock	605.0	24x0.1588	7x0.1059	0.5370	0.4753	0.953	0.0280	0.0288	0.0344	760	865	0.0317	0.0793	0.5054
Squab	605.0	26x0.1525	7x0.1186	0.5522	0.4749	0.966	0.0280	0.0287	0.0343	765	870	0.0324	0.0788	0.5033
Wood Duck	605.0	30x0.1420	7x0.1420	0.5860	0.4751	0.994	0.0277	0.0284	0.0339	775	885	0.0339	0.0778	0.4988
Teal	605.0	30x0.1420	19x0.0852	0.5834	0.4751	0.994	0.0277	0.0284	0.0340	775	885	0.0339	0.0778	0.4988
Swift	636.0	36x0.1329	1x0.1329	0.5133	0.4994	0.930	0.0271	0.0282	0.0349	750	850	0.0301	0.0805	0.5091
Kingbird	636.0	18x0.1880	1x0.1880	0.5274	0.4997	0.940	0.0269	0.0278	0.0331	775	880	0.0303	0.0804	0.5075
Turacos	636.0	20x0.1783	7x0.0792	0.5339	0.4994	0.951	0.0269	0.0278	0.0331	775	880	0.0310	0.0798	0.5057
Goldfinch	636.0	22x0.1700	7x0.0944	0.5483	0.4994	0.963	0.0268	0.0276	0.0330	780	890	0.0317	0.0793	0.5037
Rook	636.0	24x0.1628	7x0.1085	0.5643	0.4996	0.977	0.0267	0.0275	0.0328	785	895	0.0325	0.0787	0.5015
Grosbeak	636.0	26x0.1564	7x0.1216	0.5808	0.4995	0.990	0.0266	0.0273	0.0326	790	900	0.0333	0.0782	0.4993
Scoter	636.0	30x0.1456	7x0.1456	0.6160	0.4995	1.019	0.0263	0.0270	0.0323	800	915	0.0348	0.0772	0.4948
Egret	636.0	30x0.1456	19x0.0874	0.6135	0.4995	1.019	0.0264	0.0271	0.0323	800	915	0.0348	0.0772	0.4948
Flamingo	666.6	24x0.1667	7x0.1111	0.5917	0.5238	1.000	0.0254	0.0262	0.0313	810	925	0.0333	0.0782	0.4978
Gannet	666.6	26x0.1601	7x0.1245	0.6086	0.5234	1.014	0.0254	0.0261	0.0312	815	930	0.0340	0.0777	0.4956
Stilt	715.5	24x0.1727	7x0.1151	0.6350	0.5622	1.036	0.0237	0.0245	0.0292	845	965	0.0345	0.0774	0.4923
Starling	715.5	26x0.1659	7x0.1290	0.6535	0.5620	1.051	0.0236	0.0243	0.0290	850	975	0.0353	0.0768	0.4901
Redwing	715.5	30x0.1544	19x0.0926	0.6897	0.5617	1.081	0.0234	0.0241	0.0288	860	985	0.0369	0.0758	0.4857
Coot	795.0	36x0.1486	1x0.1486	0.6417	0.6244	1.040	0.0217	0.0227	0.0280	865	985	0.0337	0.0779	0.4916
Macaw	795.0	42x0.1376	7x0.0764	0.6567	0.6246	1.055	0.0217	0.0226	0.0279	870	990	0.0345	0.0774	0.4895
Turbit	795.0	20x0.1994	7x0.0886	0.6677	0.6246	1.063	0.0215	0.0223	0.0266	890	1020	0.0347	0.0772	0.4882
Tern	795.0	45x0.1329	7x0.0886	0.6674	0.6242	1.063	0.0216	0.0226	0.0278	870	995	0.0350	0.0770	0.4882
Puffin	795.0	22x0.1901	7x0.1056	0.6857	0.6244	1.077	0.0214	0.0222	0.0265	900	1030	0.0355	0.0767	0.4862
Cuckoo	795.0	24x0.1820	7x0.1213	0.7053	0.6244	1.092	0.0214	0.0221	0.0263	905	1035	0.0363	0.0762	0.4840
Drake	795.0	54x0.1213	7x0.1213	0.7049	0.6240	1.092	0.0215	0.0224	0.0276	880	1010	0.0366	0.0760	0.4841
Drake	795.0	26x0.1749	7x0.1360	0.7263	0.6247	1.108	0.0213	0.0221	0.0262	910	1040	0.0372	0.0756	0.4818
Mallard	795.0	30x0.1628	19x0.0977	0.7669	0.6245	1.140	0.0211	0.0217	0.0259	920	1055	0.0389	0.0746	0.4773

(1) Code words shown denote ACSR with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
 (3) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (4) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



TransPow[®] ACSR Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR, ALUMINUM CONDUCTOR, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	GA2	GA3 (HS)	GA5 (UHS)
Ruddy	900.0	45x0.1414	7x0.0943	0.7555	0.7066	1.131	1013	847.9	165.6	83.70%	16.35%	24400	25400	26300
Canary	900.0	54x0.1291	7x0.1291	0.7985	0.7069	1.162	1160	849.4	310.4	73.22%	26.76%	31900	33700	35400
Catbird	954.0	36x0.1628	1x0.1628	0.7702	0.7494	1.140	966	895.4	70.2	92.73%	7.27%	19800	20300	20700
Phoenix	954.0	42x0.1507	7x0.0837	0.7877	0.7491	1.155	1029	898.5	130.5	87.32%	12.68%	23400	24100	24900
Corncrake	954.0	20x0.2184	7x0.0971	0.8011	0.7492	1.165	1070	894.6	175.6	83.61%	16.41%	25600	26600	27600
Rail	954.0	45x0.1456	7x0.0971	0.8011	0.7492	1.165	1075	899.0	175.6	83.63%	16.33%	25900	26900	27900
Towhee	954.0	48x0.1410	7x0.1097	0.8157	0.7495	1.175	1124	899.7	224.1	80.04%	19.94%	28500	29700	31000
Redbird	954.0	24x0.1994	7x0.1329	0.8466	0.7495	1.196	1224	895.3	328.9	73.15%	26.87%	33500	35400	37200
Cardinal	954.0	54x0.1329	7x0.1329	0.8462	0.7491	1.196	1229	900.1	328.9	73.24%	26.76%	33800	35700	37600
Canvasback	954.0	30x0.1783	19x0.1070	0.9199	0.7491	1.248	1478	896.7	581.0	60.67%	39.31%	46100	49300	52500
Snowbird	1033.5	42x0.1569	7x0.0872	0.8539	0.8121	1.203	1116	973.9	141.6	87.27%	12.69%	25400	26200	27000
Ortolan	1033.5	45x0.1515	7x0.1010	0.8673	0.8112	1.212	1163	973.3	190.0	83.69%	16.34%	27700	28800	29800
Whooper	1033.5	48x0.1467	7x0.1141	0.8829	0.8113	1.223	1216	974.0	242.4	80.10%	19.93%	30800	32200	33500
Curlew	1033.5	54x0.1383	7x0.1383	0.9164	0.8112	1.245	1331	974.7	356.2	73.23%	26.76%	36600	38600	40700
Avocet	1113.0	42x0.1628	7x0.0904	0.9192	0.8743	1.248	1201	1049	152.2	87.34%	12.67%	27100	27900	28800
Bluejay	1113.0	45x0.1573	7x0.1049	0.9350	0.8745	1.259	1254	1049	204.9	83.65%	16.34%	29800	31000	32200
Bullfinch	1113.0	48x0.1523	7x0.1185	0.9516	0.8744	1.269	1311	1050	261.5	80.09%	19.95%	32800	34300	35800
Finch	1113.0	54x0.1436	19x0.0862	0.9854	0.8746	1.293	1428	1051	377.1	73.60%	26.41%	39100	41200	43200
Oxbird	1192.5	42x0.1685	7x0.0936	0.9847	0.9366	1.292	1286	1123	163.2	87.33%	12.69%	29000	29900	30900
Bunting	1192.5	45x0.1628	7x0.1085	1.0010	0.9367	1.302	1343	1124	219.2	83.69%	16.32%	32000	33200	34400
Cormorant	1192.5	48x0.1576	7x0.1226	1.0190	0.9364	1.313	1404	1124	279.9	80.06%	19.94%	34700	36300	37900
Grackle	1192.5	54x0.1486	19x0.0892	1.0550	0.9365	1.338	1529	1125	403.8	73.58%	26.41%	41900	44100	46300
Skylark	1272.0	36x0.1880	1x0.1880	1.0270	0.9993	1.316	1288	1194	93.6	92.70%	7.27%	26400	27000	27600
Scissorail	1272.0	42x0.1740	7x0.0967	1.0500	0.9987	1.334	1372	1198	174.1	87.32%	12.69%	30900	31900	32900
Bittern	1272.0	45x0.1681	7x0.1121	1.0680	0.9987	1.345	1432	1198	234.0	83.66%	16.34%	34100	35400	36700
Diver	1272.0	48x0.1628	7x0.1266	1.0870	0.9992	1.357	1498	1199	298.5	80.04%	19.93%	37000	38700	40400
Pheasant	1272.0	54x0.1535	19x0.0921	1.1260	0.9993	1.382	1631	1201	430.5	73.64%	26.39%	43600	46000	48300
Ringdove	1351.5	42x0.1794	7x0.0997	1.1160	1.0620	1.376	1458	1273	185.1	87.31%	12.70%	32900	33900	35000
Dipper	1351.5	45x0.1733	7x0.1155	1.1350	1.0610	1.386	1522	1274	248.4	83.71%	16.32%	36200	37600	39000
-None-	1351.5	48x0.1678	7x0.1305	1.1550	1.0610	1.398	1591	1274	317.2	80.08%	19.94%	39400	41200	43000
Martin	1351.5	54x0.1582	19x0.0949	1.1960	1.0610	1.424	1732	1275	457.0	73.61%	26.39%	46300	48800	51300
Poplinjay	1431.0	42x0.1846	7x0.1026	1.1820	1.1240	1.415	1544	1348	196.0	87.31%	12.69%	34800	35900	37100
Bobolink	1431.0	45x0.1783	7x0.1189	1.2010	1.1240	1.427	1611	1348	263.3	83.67%	16.34%	38300	39800	41300
Wagtail	1431.0	48x0.1727	7x0.1343	1.2240	1.1240	1.439	1686	1350	335.9	80.07%	19.92%	41700	43600	45500
Plover	1431.0	54x0.1628	19x0.0977	1.2670	1.1240	1.465	1835	1351	484.4	73.62%	26.40%	49100	51700	54400
Nuthatch	1510.5	45x0.1832	7x0.1221	1.2680	1.1860	1.466	1701	1423	277.6	83.66%	16.32%	40100	41600	43200
Parrot	1510.5	54x0.1672	19x0.1003	1.3360	1.1860	1.505	1935	1425	510.5	73.64%	26.38%	51700	54500	57300
Ratite	1590.0	42x0.1946	7x0.1081	1.3130	1.2490	1.492	1716	1498	217.6	87.30%	12.68%	38700	39900	41200
Lapwing	1590.0	45x0.1880	7x0.1253	1.3350	1.2490	1.504	1791	1499	292.4	83.70%	16.33%	42200	43900	45500
Hornbill	1590.0	48x0.1820	7x0.1416	1.3590	1.2490	1.517	1872	1499	373.4	80.07%	19.95%	45300	47900	50000
Falcon	1590.0	54x0.1716	19x0.1030	1.4070	1.2490	1.545	2039	1501	538.4	73.61%	26.41%	54500	57500	60400
Chukar	1780.0	84x0.1456	19x0.0874	1.5130	1.3990	1.602	2074	1686	387.7	81.29%	18.69%	51000	53100	55200
Seahawk	1869.0	68x0.1658	7x0.0921	1.5150	1.4680	1.603	1925	1728	158.0	91.84%	8.21%	40000	40900	41800
Mockingbird	2034.5	72x0.1681	7x0.1121	1.6670	1.5980	1.681	2158	1964	234.0	89.16%	10.84%	46800	48100	49400
Roadrunner	2057.5	76x0.1645	19x0.0768	1.7030	1.6150	1.700	2245	1946	299.3	86.68%	13.33%	50400	52100	53700
Bluebird	2156.0	84x0.1602	19x0.0961	1.8310	1.6930	1.762	2510	2041	468.7	81.31%	18.67%	60300	62800	65400
Kiwi	2167.0	72x0.1735	7x0.1157	1.7760	1.7020	1.735	2299	2050	249.3	89.17%	10.84%	49800	51300	52700
Thrasher	2312.0	76x0.1744	19x0.0814	1.9140	1.8160	1.802	2523	2187	336.3	86.68%	13.33%	56700	58500	60400
Joree	2515.0	76x0.1819	19x0.0849	2.0830	1.9750	1.880	2745	2379	365.8	86.67%	13.33%	61700	63700	65700

ACSR, ALUMINUM CONDUCTOR, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED, HIGH-STRENGTH-STRANDING (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	GA2	GA3 (HS)	GA5 (UHS)
Grouse	80.0	8x0.1000	1x0.1670	0.0847	0.0628	0.367	148.7	74.8	73.9	50.32%	49.67%	5200	5730	6150
Petrel	101.8	12x0.0921	7x0.0921	0.1266	0.0799	0.460	253.5	95.6	158.0	37.70%	62.33%	10400	11200	12100
Minorca	110.8	12x0.0961	7x0.0961	0.1378	0.0870	0.480	276.0	104.0	172.0	37.68%	62.32%	11300	12200	13200
Leghorn	134.6	12x0.1059	7x0.1059	0.1674	0.1057	0.530	335.2	126.3	208.9	37.68%	62.32%	13600	14800	16000
Guinea	159.0	12x0.1151	7x0.1151	0.1977	0.1249	0.576	396.0	149.3	246.7	37.70%	62.30%	16000	17400	18800
Dotterel	176.9	12x0.1214	7x0.1214	0.2199	0.1389	0.607	440.5	166.0	274.5	37.68%	62.32%	17300	18900	20400
Dorking	190.8	12x0.1261	7x0.1261	0.2373	0.1499	0.630	475.3	179.1	296.1	37.68%	62.30%	18700	20400	22100
Brahma	203.2	16x0.1127	19x0.0977	0.3020	0.1596	0.714	676.0	191.6	484.4	28.34%	71.66%	28400	31100	33700
Cochin	211.3	12x0.1327	7x0.1327	0.2628	0.1660	0.664	526.3	198.4	327.9	37.70%	62.30%	20700	22600	24400

(1) Code words shown denote ACSR with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.
 Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSR Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR, ALUMINUM CONDUCTOR, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR Kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT			AMPACITY @75°C (4)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
		AL	STEEL	TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	STD.	E3X®			
Ruddy	900.0	45x0.1414	7x0.0943	0.7555	0.7066	1.131	0.0191	0.0200	0.0246	940	1080	0.0373	0.0756	0.4785
Canary	900.0	54x0.1291	7x0.1291	0.7985	0.7069	1.162	0.0190	0.0198	0.0244	955	1095	0.0390	0.0746	0.4743
Catbird	954.0	36x0.1628	1x0.1628	0.7702	0.7494	1.140	0.0181	0.0191	0.0234	970	1110	0.0369	0.0758	0.4773
Phoenix	954.0	42x0.1507	7x0.0837	0.7877	0.7491	1.155	0.0181	0.0190	0.0233	975	1115	0.0378	0.0753	0.4752
Corncrake	954.0	20x0.2184	7x0.0971	0.8011	0.7492	1.165	0.0179	0.0187	0.0223	1000	1150	0.0380	0.0752	0.4739
Rail	954.0	45x0.1456	7x0.0971	0.8011	0.7492	1.165	0.0180	0.0189	0.0233	975	1120	0.0384	0.0749	0.4739
Towhee	954.0	48x0.1410	7x0.1097	0.8157	0.7495	1.175	0.0180	0.0189	0.0232	980	1125	0.0390	0.0746	0.4725
Redbird	954.0	24x0.1994	7x0.1329	0.8466	0.7495	1.196	0.0178	0.0185	0.0220	1010	1165	0.0398	0.0741	0.4697
Cardinal	954.0	54x0.1329	7x0.1329	0.8462	0.7491	1.196	0.0179	0.0187	0.0230	990	1135	0.0401	0.0739	0.4698
Canvasback	954.0	30x0.1783	19x0.1070	0.9199	0.7491	1.248	0.0176	0.0182	0.0217	1030	1190	0.0426	0.0725	0.4631
Snowbird	1033.5	42x0.1569	7x0.0872	0.8539	0.8121	1.203	0.0167	0.0176	0.0216	1025	1175	0.0394	0.0743	0.4689
Ortolan	1033.5	45x0.1515	7x0.1010	0.8673	0.8112	1.212	0.0167	0.0176	0.0215	1025	1180	0.0399	0.0740	0.4677
Whooper	1033.5	48x0.1467	7x0.1141	0.8829	0.8113	1.223	0.0166	0.0175	0.0214	1030	1185	0.0405	0.0737	0.4663
Curlew	1033.5	54x0.1383	7x0.1383	0.9164	0.8112	1.245	0.0165	0.0173	0.0213	1040	1195	0.0417	0.0730	0.4635
Avocet	1113.0	42x0.1628	7x0.0904	0.9192	0.8743	1.248	0.0155	0.0164	0.0201	1070	1235	0.0409	0.0735	0.4631
Bluejay	1113.0	45x0.1573	7x0.1049	0.9350	0.8745	1.259	0.0154	0.0164	0.0200	1075	1240	0.0415	0.0731	0.4618
Bullfinch	1113.0	48x0.1523	7x0.1185	0.9516	0.8744	1.269	0.0154	0.0163	0.0199	1080	1245	0.0421	0.0728	0.4605
Finch	1113.0	54x0.1436	19x0.0862	0.9854	0.8746	1.293	0.0153	0.0162	0.0198	1090	1255	0.0434	0.0721	0.4576
Oxbird	1192.5	42x0.1685	7x0.0936	0.9847	0.9366	1.292	0.0145	0.0154	0.0188	1115	1290	0.0423	0.0727	0.4577
Bunting	1192.5	45x0.1628	7x0.1085	1.0010	0.9367	1.302	0.0144	0.0153	0.0187	1120	1295	0.0429	0.0724	0.4564
Cormorant	1192.5	48x0.1576	7x0.1226	1.0190	0.9364	1.313	0.0144	0.0153	0.0187	1125	1300	0.0435	0.0720	0.4551
Grackle	1192.5	54x0.1486	19x0.0892	1.0550	0.9365	1.338	0.0143	0.0151	0.0185	1135	1315	0.0449	0.0713	0.4522
Skylark	1272.0	36x0.1880	1x0.1880	1.0270	0.9993	1.316	0.0135	0.0146	0.0177	1155	1335	0.0426	0.0725	0.4548
Scissortail	1272.0	42x0.1740	7x0.0967	1.0500	0.9987	1.334	0.0136	0.0145	0.0177	1160	1345	0.0437	0.0719	0.4527
Bittern	1272.0	45x0.1681	7x0.1121	1.0680	0.9987	1.345	0.0135	0.0145	0.0176	1165	1350	0.0443	0.0716	0.4514
Diver	1272.0	48x0.1628	7x0.1266	1.0870	0.9992	1.357	0.0135	0.0144	0.0175	1170	1355	0.0450	0.0713	0.4500
Pheasant	1272.0	54x0.1535	19x0.0921	1.1260	0.9993	1.382	0.0134	0.0142	0.0174	1180	1370	0.0463	0.0706	0.4472
Ringdove	1351.5	42x0.1794	7x0.0997	1.1160	1.0620	1.376	0.0128	0.0137	0.0167	1205	1395	0.0451	0.0712	0.4479
Dipper	1351.5	45x0.1733	7x0.1155	1.1350	1.0610	1.386	0.0127	0.0137	0.0166	1210	1405	0.0457	0.0709	0.4466
-None-	1351.5	48x0.1678	7x0.1305	1.1550	1.0610	1.398	0.0127	0.0136	0.0165	1215	1410	0.0462	0.0706	0.4453
Martin	1351.5	54x0.1582	19x0.0949	1.1960	1.0610	1.424	0.0126	0.0135	0.0164	1225	1425	0.0478	0.0699	0.4425
Popinjay	1431.0	42x0.1846	7x0.1026	1.1820	1.1240	1.415	0.0120	0.0130	0.0158	1250	1450	0.0464	0.0706	0.4434
Bobolink	1431.0	45x0.1783	7x0.1189	1.2010	1.1240	1.427	0.0120	0.0130	0.0157	1255	1455	0.0470	0.0703	0.4422
Wagtail	1431.0	48x0.1727	7x0.1343	1.2240	1.1240	1.439	0.0120	0.0129	0.0157	1260	1465	0.0477	0.0699	0.4408
Plover	1431.0	54x0.1628	19x0.0977	1.2670	1.1240	1.465	0.0119	0.0128	0.0155	1270	1480	0.0491	0.0693	0.4380
Nuthatch	1510.5	45x0.1832	7x0.1221	1.2680	1.1860	1.466	0.0114	0.0124	0.0150	1295	1505	0.0483	0.0696	0.4379
Parrot	1510.5	54x0.1672	19x0.1003	1.3360	1.1860	1.505	0.0113	0.0122	0.0148	1315	1530	0.0505	0.0686	0.4338
Ratite	1590.0	42x0.1946	7x0.1081	1.3130	1.2490	1.492	0.0108	0.0119	0.0143	1330	1550	0.0489	0.0694	0.4351
Lapwing	1590.0	45x0.1880	7x0.1253	1.3350	1.2490	1.504	0.0108	0.0118	0.0143	1335	1555	0.0496	0.0690	0.4339
Hornbill	1590.0	48x0.1820	7x0.1416	1.3590	1.2490	1.517	0.0108	0.0117	0.0142	1340	1565	0.0503	0.0687	0.4326
Falcon	1590.0	54x0.1716	19x0.1030	1.4070	1.2490	1.545	0.0107	0.0116	0.0141	1355	1580	0.0518	0.0680	0.4297
Chukar	1780.0	84x0.1456	19x0.0874	1.5130	1.3990	1.602	0.00969	0.0106	0.0125	1455	1705	0.0532	0.0674	0.4240
Seahawk	1869.0	68x0.1658	7x0.0921	1.5150	1.4680	1.603	0.00928	0.0104	0.0121	1470	1725	0.0523	0.0678	0.4239
Mockingbird	2034.5	72x0.1681	7x0.1121	1.6670	1.5980	1.681	0.00852	0.00964	0.0112	1550	1825	0.0551	0.0666	0.4164
Roadrunner	2057.5	76x0.1645	19x0.0768	1.7030	1.6150	1.700	0.00842	0.00950	0.0111	1565	1845	0.0560	0.0662	0.4147
Bluebird	2156.0	84x0.1602	19x0.0961	1.8310	1.6930	1.722	0.00800	0.00903	0.0105	1620	1915	0.0582	0.0652	0.4091
Kiwi	2167.0	72x0.1735	7x0.1157	1.7760	1.7020	1.735	0.00800	0.00915	0.0106	1605	1895	0.0569	0.0659	0.4115
Thrasher	2312.0	76x0.1744	19x0.0814	1.9140	1.8160	1.802	0.00749	0.00864	0.0100	1670	1975	0.0593	0.0649	0.4055
Joree	2515.0	76x0.1819	19x0.0849	2.0830	1.9750	1.880	0.00688	0.00810	0.00934	1750	2075	0.0619	0.0639	0.3990

ACSR, ALUMINUM CONDUCTOR, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED, HIGH-STRENGTH-STRANDING (ELECTRICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR Kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT			AMPACITY @75°C (4)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
		AL	STEEL	TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	STANDARD	E3X®			
Grouse	80.0	8x0.1000	1x0.1670	0.0847	0.0628	0.367	0.205	0.211	0.291	205	225	0.0037	0.1284	0.6548
Petrel	101.8	12x0.0921	7x0.0921	0.1266	0.0799	0.460	0.156	0.162	0.240	240	265	0.0039	0.1275	0.6193
Minorca	110.8	12x0.0961	7x0.0961	0.1378	0.0870	0.480	0.144	0.149	0.224	250	275	0.0042	0.1256	0.6126
Leghorn	134.6	12x0.1059	7x0.1059	0.1674	0.1057	0.530	0.118	0.122	0.190	280	310	0.0051	0.1213	0.5974
Guinea	159.0	12x0.1151	7x0.1151	0.1977	0.1249	0.576	0.100	0.104	0.165	305	340	0.0059	0.1179	0.5844
Dotterel	176.9	12x0.1214	7x0.1214	0.2199	0.1389	0.607	0.0900	0.0931	0.151	325	360	0.0065	0.1158	0.5760
Dorking	190.8	12x0.1261	7x0.1261	0.2373	0.1499	0.630	0.0835	0.0863	0.143	335	375	0.0067	0.1149	0.5701
Brahma	203.2	16x0.1127	19x0.0977	0.3020	0.1596	0.714	0.0755	0.0781	0.132	360	400	0.0080	0.1110	0.5506
Cochin	211.3	12x0.1327	7x0.1327	0.2628	0.1660	0.664	0.0754	0.0779	0.130	360	400	0.0076	0.1121	0.5621

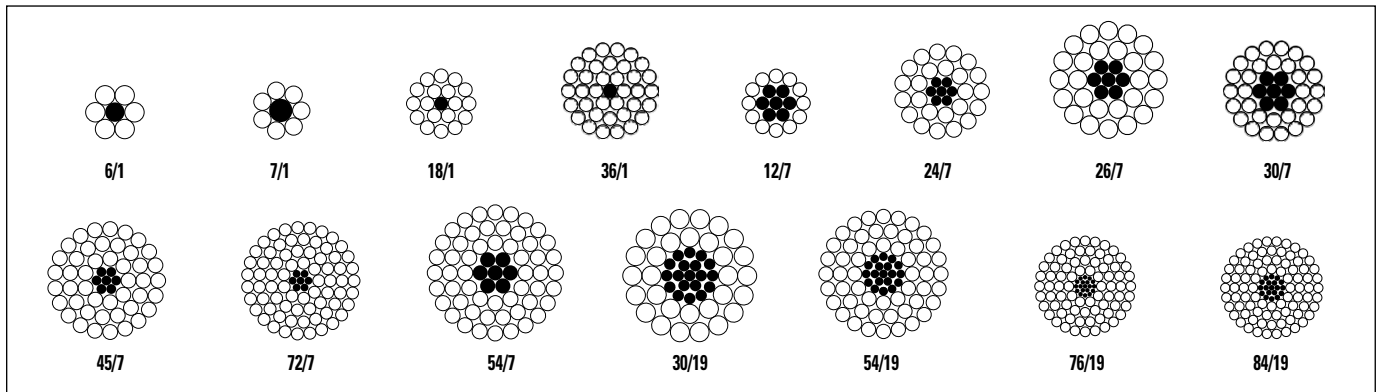
(1) Code words shown denote ACSR with regular-strength Class A Galvanized steel core (GA). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization.
 To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (4) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.



Notes

TransPowr® ACSR/AW Bare Overhead Conductor

Aluminum Conductor Aluminum-Clad Steel-Reinforced Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

ACSR/AW is a composite concentric-lay-stranded conductor. ACSR/AW conductors are manufactured in accordance with the requirements of the latest issue of ASTM B549. Aluminum-clad steel strands form the central core of the conductor, around which is stranded one or more layers of aluminum 1350-H19 wires. The aluminum-clad steel core may consist of a single strand or a concentric stranded conductor of 7, 19, 37 or more wires. Numerous combinations of aluminum and steel strands and layers are possible. The sizes and strandings listed on the following pages are those most frequently used for overhead lines.

Features and Benefits:

The AW core, which consists of a thick layer of aluminum (approx. 10 percent of the nominal wire radius) over steel, gives ACSR/AW conductors the advantage of the light weight and good conductivity of aluminum with the high tensile strength and ruggedness of steel. The cross-sections above illustrate some common strandings.

Applications:

Aluminum conductors reinforced with aluminum-clad steel wire (ACSR/AW) are used for overhead distribution and transmission lines where a high degree of corrosion resistance is needed. It should also be considered for use in locations where air pollution exists, such as along the coast or in highly industrialized areas.

Options:

- E3X® surface coating (/E3X)

- Compact aluminum strands (ASTM B401)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Trapezoidal-shaped aluminum strands (/TW)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® ACSR/AW Bare Overhead Conductor

Aluminum Conductor Aluminum-Clad Steel-Reinforced Concentric-Lay-Stranded

ACSR/AW, ALUMINUM CONDUCTOR, ALUMINUM-CLAD, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	
Swan/AW	#4	6x0.0834	1x0.0834	0.0382	0.0328	0.250	54.5	38.9	15.6	71.38%	28.62%	1780
Swanate/AW	#4	7x0.0772	1x0.1029	0.0411	0.0328	0.257	62.6	38.8	23.8	62.05%	37.95%	2280
Sparrow/AW	#2	6x0.1052	1x0.1052	0.0608	0.0522	0.316	86.8	61.9	24.8	71.38%	28.61%	2760
Sparate/AW	#2	7x0.0974	1x0.1299	0.0654	0.0522	0.325	99.7	61.8	37.9	62.02%	37.98%	3510
Robin/AW	#1	6x0.1181	1x0.1181	0.0767	0.0657	0.354	109.4	78.1	31.3	71.35%	28.61%	3450
Raven/AW	1/0	6x0.1327	1x0.1327	0.0968	0.0830	0.398	138.1	98.6	39.5	71.37%	28.62%	4250
Quail/AW	2/0	6x0.1489	1x0.1489	0.1219	0.1045	0.447	173.8	124.1	49.8	71.40%	28.62%	5130
Pigeon/AW	3/0	6x0.1672	1x0.1672	0.1537	0.1317	0.502	219.2	156.5	62.7	71.40%	28.62%	6300
Penguin/AW	4/0	6x0.1878	1x0.1878	0.1939	0.1662	0.563	276.5	197.4	79.1	71.39%	28.62%	7690
Waxwing/AW	266.8	18x0.1217	1x0.1217	0.2210	0.2094	0.608	282.7	249.4	33.2	88.22%	11.76%	6820
Spoonbill/AW	266.8	22x0.1101	7x0.0612	0.2300	0.2095	0.624	309.1	250.0	59.1	80.88%	19.12%	4970
Scaup/AW	266.8	24x0.1054	7x0.0703	0.2366	0.2094	0.632	328.1	250.1	78.0	76.23%	23.77%	5060
Partridge/AW	266.8	26x0.1013	7x0.0788	0.2437	0.2095	0.642	348.5	250.5	98.0	71.88%	28.11%	10800
Junco/AW	266.8	30x0.0943	7x0.0943	0.2584	0.2095	0.660	391.2	250.8	140.3	64.11%	35.86%	13500
Ostrich/AW	300.0	26x0.1074	7x0.0835	0.2739	0.2355	0.680	391.6	281.6	110.0	71.91%	28.09%	12100
Merlin/AW	336.4	18x0.1367	1x0.1367	0.2789	0.2642	0.684	356.7	314.7	41.9	88.23%	11.75%	8540
Trogon/AW	336.4	20x0.1297	7x0.0576	0.2825	0.2642	0.692	367.9	315.5	52.4	85.76%	14.23%	6140
Woodcock/AW	336.4	22x0.1237	7x0.0687	0.2903	0.2644	0.701	390.1	315.6	74.5	80.90%	19.09%	6150
Widgeon/AW	336.4	24x0.1184	7x0.0789	0.2985	0.2642	0.710	413.9	315.7	98.2	76.27%	23.73%	12000
Linnet/AW	336.4	26x0.1137	7x0.0884	0.3070	0.2640	0.720	438.9	315.6	123.3	71.91%	28.09%	13500
Oriole/AW	336.4	30x0.1059	7x0.1059	0.3259	0.2642	0.741	493.3	316.3	177.0	64.12%	35.88%	16700
Chickadee/AW	397.5	18x0.1486	1x0.1486	0.3295	0.3122	0.743	421.5	371.9	49.6	88.23%	11.76%	9780
Ptarmigan/AW	397.5	20x0.1410	7x0.0627	0.3339	0.3123	0.752	434.9	372.9	62.0	85.74%	14.26%	7120
Stork/AW	397.5	22x0.1344	7x0.0747	0.3428	0.3121	0.762	460.6	372.6	88.0	80.89%	19.12%	7260
Brant/AW	397.5	24x0.1287	7x0.0858	0.3527	0.3122	0.772	489.1	373.0	116.2	76.26%	23.76%	14100
Ibis/AW	397.5	26x0.1236	7x0.0961	0.3627	0.3120	0.783	518.7	372.9	145.7	71.89%	28.09%	15800
Lark/AW	397.5	30x0.1151	7x0.1151	0.3850	0.3121	0.806	582.7	373.7	209.1	64.13%	35.88%	19600
Pelican/AW	477.0	18x0.1628	1x0.1628	0.3955	0.3747	0.814	505.9	446.4	59.5	88.24%	11.76%	11500
Tailorbird/AW	477.0	20x0.1544	7x0.0686	0.4003	0.3745	0.823	521.4	447.1	74.3	85.75%	14.24%	8360
Toucan/AW	477.0	22x0.1472	7x0.0818	0.4112	0.3744	0.834	552.5	446.9	105.6	80.89%	19.11%	14700
Flicker/AW	477.0	24x0.1410	7x0.0940	0.4233	0.3747	0.846	587.1	447.7	139.4	76.26%	23.74%	16700
Hawk/AW	477.0	26x0.1354	7x0.1053	0.4353	0.3744	0.858	622.5	447.5	175.0	71.89%	28.11%	18900
Hen/AW	477.0	30x0.1261	7x0.1261	0.4621	0.3747	0.883	699.4	448.5	250.9	64.13%	35.87%	23400
Heron/AW	500.0	30x0.1291	7x0.1291	0.4843	0.3927	0.904	733.1	470.1	263.0	64.12%	35.88%	24100
Osprey/AW	556.5	18x0.1758	1x0.1758	0.4612	0.4369	0.879	589.9	520.5	69.4	88.24%	11.76%	13200
Tody/AW	556.5	20x0.1668	7x0.0741	0.4672	0.4370	0.890	608.5	521.8	86.6	85.75%	14.24%	9750
Sapsucker/AW	556.5	22x0.159	7x0.0883	0.4797	0.4368	0.901	644.4	521.4	123.0	80.91%	19.09%	17000
Parakeet/AW	556.5	24x0.1523	7x0.1015	0.4939	0.4372	0.914	684.8	522.3	162.6	76.27%	23.74%	19300
Dove/AW	556.5	26x0.1463	7x0.1138	0.5083	0.4371	0.927	728.9	522.5	204.4	71.88%	28.12%	21900
Eagle/AW	556.5	30x0.1362	7x0.1362	0.5391	0.4371	0.953	816.0	523.3	292.7	64.13%	35.87%	26800
Peacock/AW	605.0	24x0.1588	7x0.1059	0.5370	0.4753	0.953	744.8	567.8	177.0	76.24%	23.76%	21000
Squab/AW	605.0	26x0.1525	7x0.1186	0.5522	0.4749	0.966	789.7	567.7	222.0	71.89%	28.11%	23600
Wood Duck/AW	605.0	30x0.1420	7x0.1420	0.5860	0.4751	0.994	887.0	568.8	318.2	64.13%	35.87%	28400
Teal/AW	605.0	30x0.1420	19x0.0852	0.5834	0.4751	0.994	880.9	568.8	312.1	64.57%	35.43%	28500
Swift/AW	636.0	36x0.1329	1x0.1329	0.5133	0.4994	0.930	636.3	596.7	39.6	93.78%	6.23%	13600
Kingbird/AW	636.0	18x0.1880	1x0.1880	0.5274	0.4997	0.940	674.6	595.3	79.3	88.24%	11.76%	15000
Turacos/AW	636.0	20x0.1783	7x0.0792	0.5339	0.4994	0.951	695.2	596.2	99.0	85.76%	14.24%	16900
Goldfinch/AW	636.0	22x0.1700	7x0.0944	0.5483	0.4994	0.963	736.7	596.1	140.6	80.91%	19.09%	19400
Rook/AW	636.0	24x0.1628	7x0.1085	0.5643	0.4996	0.977	782.5	596.8	185.8	76.27%	23.74%	22000
Grosbeak/AW	636.0	26x0.1564	7x0.1216	0.5808	0.4995	0.990	830.5	597.1	233.3	71.90%	28.09%	24800
Scoter/AW	636.0	30x0.1456	7x0.1456	0.6160	0.4995	1.019	932.5	598.0	334.5	64.13%	35.87%	29300
Egret/AW	636.0	30x0.1456	19x0.0874	0.6135	0.4995	1.019	926.4	598.0	328.5	64.55%	35.46%	29900
Flamingo/AW	666.6	24x0.1667	7x0.1111	0.5917	0.5238	1.000	820.5	625.7	194.8	76.26%	23.74%	23100
Gannet/AW	666.6	26x0.1601	7x0.1245	0.6086	0.5234	1.014	870.3	625.7	244.6	71.89%	28.11%	26000
Stilt/AW	715.5	24x0.1727	7x0.1151	0.6350	0.5622	1.036	880.6	671.6	209.1	76.27%	23.75%	24800
Starling/AW	715.5	26x0.1659	7x0.1290	0.6535	0.5620	1.051	934.5	671.9	262.6	71.90%	28.10%	27500
Redwing/AW	715.5	30x0.1544	19x0.0926	0.6897	0.5617	1.081	1041.0	672.4	368.7	64.59%	35.42%	33400
Coot/AW	795.0	36x0.1486	1x0.1486	0.6417	0.6244	1.040	795.5	746.0	49.6	93.78%	6.23%	16600
Macaw/AW	795.0	42x0.1376	7x0.0764	0.6567	0.6246	1.055	841.2	749.0	92.1	89.04%	10.95%	14200
Turbit/AW	795.0	20x0.1994	7x0.0886	0.6677	0.6246	1.063	869.6	745.7	123.9	85.75%	14.25%	21200
Turn/AW	795.0	45x0.1329	7x0.0886	0.6674	0.6242	1.063	872.9	749.0	123.9	85.81%	14.19%	21500
Puffin/AW	795.0	22x0.1901	7x0.1056	0.6857	0.6244	1.077	921.3	745.3	176.0	80.90%	19.10%	24200
Cuckoo/AW	795.0	24x0.1820	7x0.1213	0.7053	0.6244	1.092	978.0	745.8	232.2	76.26%	23.74%	27500
Condor/AW	795.0	54x0.1213	7x0.1213	0.7049	0.6240	1.092	982.0	749.8	232.2	76.35%	23.65%	27800
Drake/AW	795.0	26x0.1749	7x0.1360	0.7263	0.6247	1.108	1039	746.8	291.9	71.88%	28.09%	30500
Mallard/AW	795.0	30x0.1628	19x0.0977	0.7669	0.6245	1.140	1158	747.6	410.5	64.56%	35.45%	37100

(1) Code words shown, including suffix /AW, denote ACSR with aluminum-clad steel core. See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPow[®] ACSR/AW Bare Overhead Conductor

Aluminum Conductor Aluminum-Clad Steel-Reinforced Concentric-Lay-Stranded

ACSR/AW, ALUMINUM CONDUCTOR, ALUMINUM-CLAD, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	
Ruddy/AW	900.0	45x0.1414	7x0.0943	0.7555	0.7066	1.131	988.2	847.9	140.3	85.80%	14.20%	24000
Canary/AW	900.0	54x0.1291	7x0.1291	0.7985	0.7069	1.162	1112	849.4	263.0	76.38%	23.65%	31000
Catbird/AW	954.0	36x0.1628	1x0.1628	0.7702	0.7494	1.140	954.9	895.4	59.5	93.77%	6.23%	19500
Phoenix/AW	954.0	42x0.1507	7x0.0837	0.7877	0.7491	1.155	1009	898.5	110.5	89.05%	10.95%	22800
Corncrake/AW	954.0	20x0.2184	7x0.0971	0.8011	0.7492	1.165	1043	894.6	148.8	85.77%	14.27%	25100
Rail/AW	954.0	45x0.1456	7x0.0971	0.8011	0.7492	1.165	1048	899.0	148.8	85.78%	14.20%	25400
Towhee/AW	954.0	48x0.1410	7x0.1097	0.8157	0.7495	1.175	1090	899.7	189.9	82.54%	17.42%	27800
Redbird/AW	954.0	24x0.1994	7x0.1329	0.8466	0.7495	1.196	1174	895.3	278.7	76.26%	23.74%	32600
Cardinal/AW	954.0	54x0.1329	7x0.1329	0.8462	0.7491	1.196	1179	900.1	278.7	76.34%	23.64%	32900
Canvasback/AW	954.0	30x0.1783	19x0.107	0.9199	0.7491	1.248	1389	896.7	492.3	64.56%	35.44%	44500
Snowbird/AW	1033.5	42x0.1569	7x0.0872	0.8539	0.8121	1.203	1059	973.9	120.0	89.02%	10.97%	24800
Ortolan/AW	1033.5	45x0.1515	7x0.1010	0.8673	0.8112	1.212	1134	973.3	161.0	85.83%	14.20%	27100
Whooper/AW	1033.5	48x0.1467	7x0.1141	0.8829	0.8113	1.223	1179	974.0	205.4	82.61%	17.42%	30100
Curlew/AW	1033.5	54x0.1383	7x0.1383	0.9164	0.8112	1.245	1277	974.7	301.8	76.33%	23.63%	35100
Avocet/AW	1113.0	42x0.1628	7x0.0904	0.9192	0.8743	1.248	1177	1049	129.0	89.12%	10.96%	26600
Bluejay/AW	1113.0	45x0.1573	7x0.1049	0.9350	0.8745	1.259	1223	1049	173.6	85.77%	14.19%	29300
Bullfinch/AW	1113.0	48x0.1523	7x0.1185	0.9516	0.8744	1.269	1271	1050	221.6	82.61%	17.44%	32100
Finch/AW	1113.0	54x0.1436	19x0.0862	0.9854	0.8746	1.293	1370	1051	319.5	76.72%	23.32%	37500
Oxbird/AW	1192.5	42x0.1685	7x0.0936	0.9847	0.9366	1.292	1261	1132	138.2	89.06%	10.96%	28500
Bunting/AW	1192.5	45x0.1628	7x0.1085	1.0010	0.9367	1.302	1310	1124	185.8	85.80%	14.18%	31300
Cormorant/AW	1192.5	48x0.1576	7x0.1226	1.0190	0.9364	1.313	1361	1124	237.2	82.59%	17.43%	34300
Grackle/AW	1192.5	54x0.1486	19x0.0892	1.0550	0.9365	1.338	1467	1125	342.1	76.69%	23.32%	40200
Skylark/AW	1272.0	36x0.1880	1x0.1880	1.0270	0.9993	1.316	1273	1194	79.3	93.79%	6.23%	25700
Scissortail/AW	1272.0	42x0.1740	7x0.0967	1.0500	0.9987	1.334	1345	1198	147.6	89.07%	10.97%	30400
Bittern/AW	1272.0	45x0.1681	7x0.1121	1.0680	0.9987	1.345	1397	1198	198.3	85.76%	14.19%	33400
Diver/AW	1272.0	48x0.1628	7x0.1266	1.0870	0.9992	1.357	1452	1199	252.9	82.58%	17.42%	36600
Pheasant/AW	1272.0	54x0.1535	19x0.0921	1.1260	0.9993	1.382	1566	1201	364.8	76.69%	23.30%	42400
Ringdove/AW	1351.5	42x0.1794	7x0.0997	1.1160	1.0620	1.376	1430	1273	156.9	89.02%	10.97%	32400
Dipper/AW	1351.5	45x0.1733	7x0.1155	1.1350	1.0610	1.386	1484	1274	210.5	85.85%	14.18%	35500
1351.5/AW	1351.5	48x0.1678	7x0.1305	1.1550	1.0610	1.398	1543	1274	268.7	82.57%	17.41%	38500
Martin/AW	1351.5	54x0.1582	19x0.0949	1.1960	1.0610	1.424	1663	1275	387.3	76.67%	23.29%	45100
Popinjay/AW	1431.0	42x0.1846	7x0.1026	1.1820	1.1240	1.415	1514	1348	166.1	89.04%	10.97%	34300
Bobolink/AW	1431.0	45x0.1783	7x0.1189	1.2010	1.1240	1.427	1571	1348	223.1	85.81%	14.20%	37600
Wagtail/AW	1431.0	48x0.1727	7x0.1343	1.2240	1.1240	1.439	1634	1350	284.6	82.62%	17.42%	40700
Plover/AW	1431.0	54x0.1628	19x0.0977	1.2670	1.1240	1.465	1761	1351	410.5	76.72%	23.31%	47700
Nuthatch/AW	1510.5	45x0.1832	7x0.1221	1.2880	1.1860	1.466	1659	1423	235.3	85.77%	14.18%	39700
Parrot/AW	1510.5	54x0.1672	19x0.1003	1.3360	1.1860	1.505	1857	1425	432.6	76.74%	23.30%	50300
Ratite/AW	1590.0	42x0.1946	7x0.1081	1.3130	1.2490	1.492	1683	1498	184.4	89.01%	10.96%	38100
Lapwing/AW	1590.0	45x0.1880	7x0.1253	1.3350	1.2490	1.504	1747	1499	247.7	85.80%	14.18%	41800
Hornbill/AW	1590.0	48x0.1820	7x0.1416	1.3590	1.2490	1.517	1815	1499	316.4	82.59%	17.43%	44700
Falcon/AW	1590.0	54x0.1716	19x0.1030	1.4070	1.2490	1.545	1957	1501	456.2	76.70%	23.31%	53000
Chukar/AW	1780.0	84x0.1456	19x0.0874	1.5130	1.3990	1.602	2014	1686	328.5	83.71%	16.31%	49400
Seahawk/AW	1869.0	68x0.1658	7x0.0921	1.5150	1.4680	1.603	1901	1768	133.9	93.00%	7.04%	39500
Mockingbird/AW	2034.5	72x0.1681	7x0.1121	1.6670	1.5980	1.681	2123	1924	198.3	90.63%	9.34%	46100
Roadrunner/AW	2057.5	76x0.1645	19x0.0768	1.7030	1.6150	1.700	2200	1946	253.6	88.45%	11.53%	34900
Bluebird/AW	2156.0	84x0.1602	19x0.0961	1.8310	1.6930	1.762	2438	2041	397.1	83.72%	16.29%	59000
Kiwi/AW	2167.0	72x0.1735	7x0.1157	1.7760	1.7020	1.735	2261	2050	211.2	90.67%	9.34%	49100
Thrasher/AW	2312.0	76x0.1744	19x0.0814	1.9140	1.8160	1.802	2472	2187	284.9	88.47%	11.53%	55300
Joree/AW	2515.0	76x0.1819	19x0.0849	2.0830	1.9750	1.880	2689	2379	310.0	88.47%	11.53%	60200

ACSR/AW, ALUMINUM CONDUCTOR, ALUMINUM-CLAD, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED, HIGH-STRENGTH-STRANDING (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	
Grouse/AW	80.0	8x0.1000	1x0.1670	0.0847	0.0628	0.367	137.4	74.8	62.6	54.46%	45.55%	4890
Petrel/AW	101.8	12x0.0921	7x0.0921	0.1266	0.0799	0.460	229.4	95.6	133.9	41.66%	58.37%	9910
Minorca/AW	110.8	12x0.0961	7x0.0961	0.1378	0.0870	0.480	249.8	104.0	145.7	41.63%	58.33%	10800
Leghorn/AW	134.6	12x0.1059	7x0.1059	0.1674	0.1057	0.530	303.3	126.3	177.0	41.64%	58.36%	13000
Guinea/AW	159.0	12x0.1151	7x0.1151	0.1977	0.1249	0.576	358.3	149.3	209.1	41.67%	58.36%	15300
Dotterel/AW	176.9	12x0.1214	7x0.1214	0.2199	0.1389	0.607	398.6	166.0	232.6	41.65%	58.35%	16900
Dorking/AW	190.8	12x0.1261	7x0.1261	0.2373	0.1499	0.630	430.1	179.1	250.9	41.64%	58.34%	18300
Brahma/AW	203.2	16x0.1127	19x0.0977	0.3020	0.1596	0.714	602.1	191.6	410.5	31.82%	68.18%	27100
Cochin/AW	211.3	12x0.1327	7x0.1327	0.2628	0.1660	0.664	476.3	198.4	277.9	41.65%	58.35%	19800

(1) Code words shown, including suffix /AW, denote ACSR with aluminum-clad steel core. See the Options section to find the appropriate code word modifier designation for alternative design options.

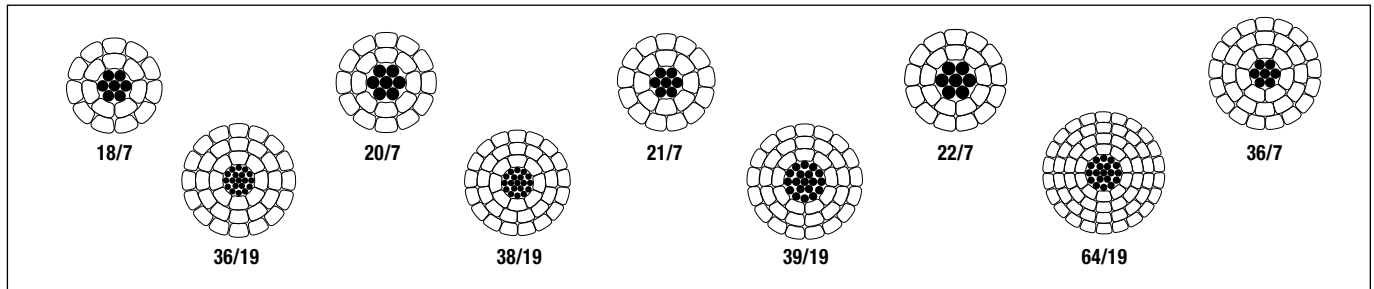
(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Notes

TransPowr® ACSR/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

TransPowr® ACSR/TW is a trapezoidal aluminum conductor steel-reinforced concentric-lay-stranded conductor. The aluminum strands are trapezoidal in shape.

The wedge-shaped aluminum strands enable a more compact alignment of the aluminum wires. Conductor designs that maintain the same circular mil cross-sectional area of aluminum as a conventional round conductor result in a TW conductor that is 10 to 15 percent smaller in overall diameter. Conductor designs that maintain the same overall diameter as a conventional round conductor result in a TW conductor that has 20 to 25 percent more aluminum cross-sectional area packed in.

The ACSR/TW conductors are manufactured in accordance with the requirements of the latest issue of ASTM B779.

The steel strands form the central core of the conductor, around which is stranded two, three or four layers of aluminum 1350-H19 wires. The steel core may consist of a concentric stranded cable of 7, 19 or more wires. Numerous combinations of aluminum and steel strands and layers are possible. The sizes and constructions listed on the following pages are common examples used in overhead lines.

For ACSR/TW conductors, the standard Class A galvanized coating is usually adequate for ordinary environments.

Features and Benefits:

TransPowr ACSR/TW has a continuous operating

temperature rating of 75°C. ACSR and ACSR/TW conductors have an “industry-accepted” short-duration maximum operating temperature rating of 100°C. Operation of the conductor at elevated temperatures may increase the conductor sag properties and lower the rated tensile strength of the conductor.

TransPowr ACSR/TW conductors are recognized for their record of economy, dependability and favorable strength-to-weight ratio. ACSR/TW conductors constructed of equivalent aluminum circular mil cross-sectional area provide a conductor that is smaller in overall diameter than the equivalent conventional round wire ACSR conductor. The reduced conductor diameter is advantageous in reducing the effects of ice and wind loading on the conductor.

ACSR/TW conductors constructed to be equivalent overall diameter enable a greater circular mil cross-sectional area of aluminum within the conductor, reducing power loss in the conductor for day-to-day operations as well as allowing a significant increase in conductor current-carrying capacity.

Applications:

Trapezoidal aluminum conductors steel-reinforced (ACSR/TW) are used for overhead transmission lines.

Options:

- E3X® surface coating (/E3X)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Regular-strength Class C galvanized steel core (/GC2)
- High-strength Class A galvanized steel core (/GA3 to ASTM B606)
- Extra-high-strength Class A galvanized steel core (/GA4 to ASTM B957)
- Ultra-high-strength Class A galvanized steel core (/GA5 to ASTM B957)
- Regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2 to ASTM B802)
- High-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA3 to ASTM B803)
- Extra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA4 to ASTM B958)
- Ultra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA5 to ASTM B958)
- Aluminum-clad steel core (/AW)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

TransPowr® ACSR/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded



ACSR/TW (MECHANICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
								TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	GA2	GA3 (HS)	GA5 (UHS)
Oriole/ACSR/TW	336.4	23	18	88.7	0.1367	7x0.1059	0.318	0.3258	0.2642	0.692	524.7	315.9	208.9	60.21%	39.81%	17200	18400	19600
Flicker/ACSR/TW	477.0	13	18	90.8	0.1628	7x0.0940	0.282	0.4233	0.3747	0.777	612.6	448.1	164.6	73.15%	26.87%	17200	18100	19000
Hawk/ACSR/TW	477.0	16	18	90.8	0.1628	7x0.1053	0.316	0.4356	0.3747	0.790	654.8	448.3	206.5	68.46%	31.54%	19400	20500	21700
Hen/ACSR/TW	477.0	23	22	89.5	0.1472	7x0.1261	0.378	0.4618	0.3744	0.821	744.5	448.4	296.1	60.23%	39.77%	23800	25500	27200
Parakeet/ACSR/TW	556.5	13	18	91.7	0.1758	7x0.1015	0.304	0.4939	0.4372	0.835	714.5	522.7	191.9	73.16%	26.86%	20000	21100	22200
Dove/ACSR/TW	556.5	16	20	91.1	0.1668	7x0.1138	0.341	0.5082	0.4370	0.852	764.1	522.9	241.2	68.43%	31.57%	22600	24000	25300
Rook/ACSR/TW	636.0	13	18	92.4	0.1880	7x0.1085	0.326	0.5644	0.4997	0.890	816.8	597.5	219.2	73.15%	26.84%	22900	24100	25400
Grosbeak/ACSR/TW	636.0	16	20	91.8	0.1783	7x0.1216	0.365	0.5807	0.4994	0.908	872.9	597.5	275.4	68.45%	31.55%	25400	27000	28600
Tern/ACSR/TW	795.0	7	17	93.5	0.2163	7x0.0888	0.266	0.6678	0.6244	0.958	892.2	745.3	146.8	83.54%	16.45%	21800	22700	23500
Puffin/ACSR/TW	795.0	11	18	93.3	0.2102	7x0.1108	0.332	0.6921	0.6246	0.980	975.3	746.7	228.6	76.56%	23.44%	25900	27200	28500
Condor/ACSR/TW	795.0	13	18	93.3	0.2102	7x0.1213	0.364	0.7055	0.6246	0.991	1021	747.0	274.0	73.16%	26.84%	27900	29500	31000
Drake/ACSR/TW	795.0	16	20	92.8	0.1994	7x0.1360	0.408	0.7262	0.6246	1.010	1092	747.3	344.4	68.43%	31.54%	31800	33800	35700
Mallard/ACSR/TW	795.0	23	22	92.4	0.1901	19x0.0977	0.488	0.7669	0.6244	1.047	1232	747.9	484.4	60.71%	39.32%	38700	41400	44000
Phoenix/ACSR/TW	954.0	5	30	91.4	0.1783	7x0.0837	0.251	0.7876	0.7491	1.050	1029	899.0	130.5	87.37%	12.68%	23700	24500	25200
Rail/ACSR/TW	954.0	7	33	90.9	0.1700	7x0.0971	0.291	0.8009	0.7490	1.063	1075	899.3	175.6	83.66%	16.33%	25900	26900	27900
Cardinal/ACSR/TW	954.0	13	20	94.1	0.2184	7x0.1329	0.399	0.8464	0.7493	1.081	1224	895.2	328.9	73.14%	26.87%	33500	35400	37200
Snowbird/ACSR/TW	1033.5	5	30	91.8	0.1856	7x0.0871	0.261	0.8534	0.8116	1.091	1115	974.1	141.3	87.36%	12.67%	25700	26500	27300
Ortolan/ACSR/TW	1033.5	7	33	91.4	0.1770	7x0.1010	0.303	0.8681	0.8120	1.104	1165	974.9	190.0	83.68%	16.31%	28100	29200	30200
Curlew/ACSR/TW	1033.5	13	20	93.8	0.2273	7x0.1383	0.415	0.9167	0.8116	1.127	1327	970.5	356.2	73.13%	26.84%	36300	38300	40300
Avocet/ACSR/TW	1113.0	5	30	92.2	0.1926	7x0.0904	0.271	0.9190	0.8740	1.130	1201	1049	152.2	87.34%	12.67%	27500	28400	29200
Bluejay/ACSR/TW	1113.0	7	33	91.7	0.1836	7x0.1049	0.315	0.9342	0.8737	1.144	1254	1049	204.9	83.65%	16.34%	30200	31400	32600
Finch/ACSR/TW	1113.0	13	20	94.0	0.2359	19x0.0862	0.431	0.9850	0.8741	1.169	1422	1045	377.1	73.49%	26.52%	39100	41200	43200
Oxbird/ACSR/TW	1192.5	5	30	92.5	0.1994	7x0.0936	0.281	0.9850	0.9368	1.168	1287	1124	163.2	87.33%	12.68%	29500	30400	31300
Bunting/ACSR/TW	1192.5	7	33	92.0	0.1901	7x0.1086	0.326	1.0010	0.9366	1.182	1344	1125	219.6	83.71%	16.34%	32400	33700	34900
Grackle/ACSR/TW	1192.5	13	38	91.3	0.1771	19x0.0892	0.446	1.0550	0.9358	1.224	1529	1125	403.8	73.58%	26.41%	41900	44100	46300
Scissortail/ACSR/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	1373	1199	174.1	87.33%	12.68%	31400	32400	33400
Bittern/ACSR/TW	1272.0	7	33	92.2	0.1963	7x0.1121	0.336	1.0680	0.9987	1.219	1433	1199	234.0	83.67%	16.33%	34600	35900	37200
Pheasant/ACSR/TW	1272.0	13	39	91.5	0.1806	19x0.0921	0.460	1.1260	0.9989	1.264	1631	1201	430.5	73.64%	26.39%	44100	46400	48800
Dipper/ACSR/TW	1351.5	7	33	92.5	0.2024	7x0.1155	0.346	1.1350	1.0620	1.255	1523	1275	248.4	83.72%	16.31%	36700	38100	39500
Martin/ACSR/TW	1351.5	13	39	91.8	0.1862	19x0.0949	0.474	1.1960	1.0620	1.301	1733	1276	457.0	73.63%	26.37%	46800	49300	51800
Bobolink/ACSR/TW	1431.0	7	33	92.7	0.2082	7x0.1189	0.357	1.2010	1.1230	1.290	1612	1349	263.3	83.68%	16.33%	38900	40400	41900
Plover/ACSR/TW	1431.0	13	39	92.1	0.1916	19x0.0977	0.488	1.2670	1.1240	1.337	1836	1352	484.4	73.64%	26.38%	49600	52300	54900
Lapwing/ACSR/TW	1590.0	7	33	93.2	0.2195	7x0.1253	0.376	1.3350	1.2490	1.357	1792	1499	292.4	83.65%	16.32%	42200	43900	45500
Falcon/ACSR/TW	1590.0	13	42	92.1	0.1946	19x0.1030	0.515	1.4060	1.2480	1.408	2038	1500	538.4	73.60%	26.42%	55100	58000	61000
Chukar/ACSR/TW	1780.0	8	36	93.2	0.2224	19x0.0874	0.437	1.5120	1.3980	1.447	2067	1680	387.7	81.28%	18.76%	50700	52800	54900
Bluebird/ACSR/TW	2156.0	8	60	91.6	0.1896	19x0.0961	0.480	1.8320	1.6940	1.604	2511	2043	468.7	81.36%	18.67%	61100	63700	66200

(1) Code words shown denote ACSR/TW with regular-strength Class A Galvanized steel core ((GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr® ACSR/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded



ACSR/TW (ELECTRICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT			AMPACITY @75°C (4)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
								TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	STD.	E3X®			
Oriole/ACSR/TW	336.4	23	18	88.7	0.1367	7x0.1059	0.318	0.3258	0.2642	0.692	0.0497	0.0508	0.0608	525	590	0.0240	0.0857	0.5554
Flicker/ACSR/TW	477.0	13	18	90.8	0.1628	7x0.0940	0.282	0.4233	0.3747	0.777	0.0356	0.0365	0.0436	640	720	0.0263	0.0836	0.5374
Hawk/ACSR/TW	477.0	16	18	90.8	0.1628	7x0.1053	0.316	0.4356	0.3747	0.790	0.0355	0.0363	0.0434	645	725	0.0270	0.0830	0.5348
Hen/ACSR/TW	477.0	23	22	89.5	0.1472	7x0.1261	0.378	0.4618	0.3744	0.821	0.0352	0.0360	0.0430	655	740	0.0285	0.0818	0.5286
Parakeet/ACSR/TW	556.5	13	18	91.7	0.1758	7x0.1015	0.304	0.4939	0.4372	0.835	0.0305	0.0313	0.0374	705	795	0.0283	0.0819	0.5260
Dove/ACSR/TW	556.5	16	20	91.1	0.1668	7x0.1138	0.341	0.5082	0.4370	0.852	0.0304	0.0312	0.0373	710	805	0.0291	0.0813	0.5229
Rook/ACSR/TW	636.0	13	18	92.4	0.1880	7x0.1085	0.326	0.5644	0.4997	0.890	0.0267	0.0275	0.0328	765	870	0.0302	0.0804	0.5160
Grosbeak/ACSR/TW	636.0	16	20	91.8	0.1783	7x0.1216	0.365	0.5807	0.4994	0.908	0.0266	0.0273	0.0326	770	875	0.0310	0.0798	0.5130
Tern/ACSR/TW	795.0	7	17	93.5	0.2163	7x0.0888	0.266	0.6678	0.6244	0.958	0.0215	0.0223	0.0266	870	990	0.0318	0.0792	0.5045
Puffin/ACSR/TW	795.0	11	18	93.3	0.2102	7x0.1108	0.332	0.6921	0.6246	0.980	0.0214	0.0221	0.0264	875	1000	0.0330	0.0784	0.5010
Condor/ACSR/TW	795.0	13	18	93.3	0.2102	7x0.1213	0.364	0.7055	0.6246	0.991	0.0214	0.0221	0.0263	880	1005	0.0336	0.0780	0.4992
Drake/ACSR/TW	795.0	16	20	92.8	0.1994	7x0.1360	0.408	0.7262	0.6246	1.010	0.0213	0.0219	0.0262	885	1010	0.0346	0.0773	0.4962
Mallard/ACSR/TW	795.0	23	22	92.4	0.1901	19x0.0977	0.488	0.7669	0.6244	1.047	0.0211	0.0217	0.0259	900	1030	0.0364	0.0761	0.4906
Phoenix/ACSR/TW	954.0	5	30	91.4	0.1783	7x0.0837	0.251	0.7876	0.7491	1.050	0.0181	0.0190	0.0233	950	1085	0.0347	0.0772	0.4902
Rail/ACSR/TW	954.0	7	33	90.9	0.1700	7x0.0971	0.291	0.8009	0.7490	1.063	0.0180	0.0189	0.0232	955	1090	0.0354	0.0768	0.4883
Cardinal/ACSR/TW	954.0	13	20	94.1	0.2184	7x0.1329	0.399	0.8464	0.7493	1.081	0.0178	0.0185	0.0220	985	1130	0.0367	0.0760	0.4856
Snowbird/ACSR/TW	1033.5	5	30	91.8	0.1856	7x0.0871	0.261	0.8534	0.8116	1.091	0.0167	0.0176	0.0216	995	1140	0.0361	0.0763	0.4842
Ortolan/ACSR/TW	1033.5	7	33	91.4	0.1770	7x0.1010	0.303	0.8681	0.8120	1.104	0.0166	0.0175	0.0215	1005	1145	0.0367	0.0760	0.4823
Curlew/ACSR/TW	1033.5	13	20	93.8	0.2273	7x0.1383	0.415	0.9167	0.8116	1.127	0.0164	0.0171	0.0204	1035	1190	0.0382	0.0750	0.4790
Avocet/ACSR/TW	1113.0	5	30	92.2	0.1926	7x0.0904	0.271	0.9190	0.8740	1.130	0.0155	0.0164	0.0201	1045	1195	0.0374	0.0755	0.4787
Bluejay/ACSR/TW	1113.0	7	33	91.7	0.1836	7x0.1049	0.315	0.9342	0.8737	1.144	0.0155	0.0164	0.0200	1050	1200	0.0381	0.0751	0.4768
Finch/ACSR/TW	1113.0	13	20	94.0	0.2359	19x0.0862	0.431	0.9850	0.8741	1.169	0.0153	0.0159	0.0190	1085	1245	0.0396	0.0742	0.4734
Oxbird/ACSR/TW	1192.5	5	30	92.5	0.1994	7x0.0936	0.281	0.9850	0.9368	1.168	0.0145	0.0154	0.0188	1090	1250	0.0386	0.0748	0.4735
Bunting/ACSR/TW	1192.5	7	33	92.0	0.1901	7x0.1086	0.326	1.0010	0.9366	1.182	0.0144	0.0153	0.0187	1095	1255	0.0394	0.0743	0.4716
Grackle/ACSR/TW	1192.5	13	38	91.3	0.1771	19x0.0892	0.446	1.0550	0.9358	1.224	0.0143	0.0151	0.0185	1110	1280	0.0416	0.0731	0.4661
Scissortail/ACSR/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	0.0136	0.0145	0.0176	1130	1300	0.0398	0.0741	0.4687
Bittern/ACSR/TW	1272.0	7	33	92.2	0.1963	7x0.1121	0.336	1.0680	0.9987	1.219	0.0135	0.0144	0.0176	1140	1310	0.0406	0.0736	0.4668
Pheasant/ACSR/TW	1272.0	13	39	91.5	0.1806	19x0.0921	0.460	1.1260	0.9989	1.264	0.0134	0.0142	0.0173	1155	1335	0.0429	0.0724	0.4612
Dipper/ACSR/TW	1351.5	7	33	92.5	0.2024	7x0.1155	0.346	1.1350	1.0620	1.255	0.0127	0.0136	0.0166	1180	1360	0.0418	0.0730	0.4623
Martin/ACSR/TW	1351.5	13	39	91.8	0.1862	19x0.0949	0.474	1.1960	1.0620	1.301	0.0126	0.0134	0.0164	1200	1385	0.0442	0.0717	0.4567
Bobolink/ACSR/TW	1431.0	7	33	92.7	0.2082	7x0.1189	0.357	1.2010	1.1230	1.290	0.0120	0.0129	0.0157	1220	1410	0.0430	0.0723	0.4580
Plover/ACSR/TW	1431.0	13	39	92.1	0.1916	19x0.0977	0.488	1.2670	1.1240	1.337	0.0119	0.0127	0.0155	1240	1435	0.0454	0.0711	0.4523
Lapwing/ACSR/TW	1590.0	7	33	93.2	0.2195	7x0.1253	0.376	1.3350	1.2490	1.357	0.0108	0.0118	0.0142	1300	1505	0.0452	0.0712	0.4500
Falcon/ACSR/TW	1590.0	13	42	92.1	0.1946	19x0.1030	0.515	1.4060	1.2480	1.408	0.0108	0.0116	0.0140	1325	1535	0.0478	0.0699	0.4442
Chukar/ACSR/TW	1780.0	8	36	93.2	0.2224	19x0.0874	0.437	1.5120	1.3980	1.447	0.00965	0.0106	0.0128	1395	1625	0.0484	0.0696	0.4399
Bluebird/ACSR/TW	2156.0	8	60	91.6	0.1896	19x0.0961	0.480	1.8320	1.6940	1.604	0.00800	0.00897	0.0105	1585	1860	0.0537	0.0672	0.4238

(1) Code words shown denote ACSR/TW with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (3) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/R² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (4) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



TransPowr® ACSR/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded



ACSR/TW (MECHANICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
								TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	GA2	GA3 (HS)	GA5 (UHS)
Calumet/ACSR/TW	565.3	16	20	91.1	0.1681	7x0.1146	0.344	0.5161	0.4439	0.858	775.7	531.1	244.6	68.47%	31.53%	22900	24300	25700
Mohawk/ACSR/TW	571.7	13	18	91.8	0.1782	7x0.1030	0.309	0.5073	0.4489	0.846	734.4	536.9	197.6	73.11%	26.91%	20600	21700	22800
Oswego/ACSR/TW	664.8	16	20	92.0	0.1823	7x0.1244	0.373	0.6071	0.5220	0.927	912.8	624.6	288.2	68.43%	31.57%	26600	28200	29900
Mystic/ACSR/TW	666.6	13	18	92.5	0.1924	7x0.1111	0.333	0.5912	0.5233	0.911	855.7	625.8	229.9	73.13%	26.87%	24000	25300	26600
Wabash/ACSR/TW	762.8	16	20	92.6	0.1953	7x0.1331	0.399	0.6965	0.5991	0.990	1047	716.9	329.9	68.47%	31.51%	30500	32400	34200
Maumee/ACSR/TW	768.2	13	20	92.7	0.1960	7x0.1195	0.358	0.6819	0.6034	0.977	986.8	720.9	265.9	73.05%	26.95%	27700	29200	30700
Kettle/ACSR/TW	957.2	7	33	91.0	0.1703	7x0.0973	0.292	0.8037	0.7517	1.065	1079	902.5	176.3	83.64%	16.34%	26000	27000	28000
Suwannee/ACSR/TW	959.6	16	22	93.2	0.2088	7x0.1493	0.448	0.8763	0.7538	1.108	1317	902.0	415.1	68.49%	31.52%	37200	40100	42500
Columbia/ACSR/TW	966.2	13	18	93.9w	0.2317	7x0.1338	0.401	0.8574	0.7590	1.089	1241	907.7	333.4	73.14%	26.87%	34000	35800	37700
Genesee/ACSR/TW	1158.0	7	33	91.9	0.1873	7x0.1078	0.323	0.9731	0.9092	1.166	1308	1092	216.4	83.49%	16.54%	31600	32900	34300
Hudson/ACSR/TW	1158.4	13	39	91.0	0.1723	7x0.1467	0.440	1.0280	0.9093	1.209	1494	1093	400.8	73.16%	26.83%	39600	42400	44700
Cheyenne/ACSR/TW	1168.1	5	30	92.4	0.1973	7x0.0926	0.278	0.9643	0.9172	1.156	1260	1101	159.7	87.38%	12.67%	28800	29700	30700
Yukon/ACSR/TW	1233.6	13	38	91.5	0.1802	19x0.0910	0.455	1.0920	0.9689	1.245	1585	1165	420.2	73.50%	26.51%	42900	45200	47500
Nelson/ACSR/TW	1257.1	7	33	92.3	0.1952	7x0.1115	0.334	1.0560	0.9876	1.212	1417	1186	231.5	83.70%	16.34%	34200	35500	36800
Catawba/ACSR/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	1373	1199	174.1	87.33%	12.68%	31400	32400	33400
Thames/ACSR/TW	1334.6	13	39	91.7	0.1850	19x0.0944	0.472	1.1810	1.0480	1.293	1712	1260	452.2	73.60%	26.41%	46300	48800	51200
Mackenzie/ACSR/TW	1359.7	7	33	92.6	0.2030	7x0.1159	0.348	1.1420	1.0680	1.258	1533	1282	250.2	83.63%	16.32%	37000	38400	39800
Truckee/ACSR/TW	1372.5	5	30	93.0	0.2139	7x0.1004	0.301	1.1330	1.0780	1.249	1482	1294	187.7	87.31%	12.67%	33400	34500	35500
Merrimack/ACSR/TW	1433.6	13	39	92.0	0.1917	19x0.0978	0.489	1.2680	1.1260	1.338	1838	1353	485.4	73.61%	26.41%	49700	52300	55000
Miramichi/ACSR/TW	1455.3	7	33	92.9	0.2100	7x0.1200	0.360	1.2220	1.1430	1.300	1640	1372	268.2	83.66%	16.35%	39200	40700	42200
St. Croix/ACSR/TW	1467.8	5	30	93.2	0.2212	7x0.1041	0.312	1.2120	1.1530	1.291	1585	1384	201.8	87.32%	12.73%	35800	36900	38100
Rio Grande/ACSR/TW	1533.3	13	39	92.3	0.1983	19x0.1012	0.506	1.3570	1.2040	1.382	1967	1448	519.7	73.61%	26.42%	53200	56000	58900
Potomac/ACSR/TW	1557.4	7	36	92.7	0.2080	7x0.1241	0.372	1.3080	1.2230	1.345	1754	1467	286.8	83.64%	16.35%	41900	43600	45200
Platte/ACSR/TW	1569.0	5	30	93.4	0.2287	7x0.1074	0.322	1.2960	1.2320	1.333	1694	1479	214.8	87.31%	12.68%	38200	39400	40600
Pecos/ACSR/TW	1622.0	13	39	92.5	0.2039	19x0.1064	0.532	1.4420	1.2730	1.424	2105	1531	574.5	72.73%	27.29%	57500	60600	63800
Schuykill/ACSR/TW	1657.4	7	33	93.3	0.2241	7x0.1280	0.384	1.3920	1.3020	1.384	1868	1563	305.1	83.67%	16.33%	44000	45700	47500
James/ACSR/TW	1730.6	13	39	92.8	0.2107	19x0.1075	0.538	1.5320	1.3600	1.465	2221	1634	586.5	73.57%	26.41%	59400	62600	65800
Pee Dee/ACSR/TW	1758.6	7	33	93.4	0.2308	7x0.1319	0.396	1.4760	1.3810	1.425	1982	1658	324.0	83.65%	16.35%	46700	48500	50400
Cumberland/ACSR/TW	1926.9	13	42	92.9	0.2142	19x0.1133	0.566	1.7050	1.5130	1.545	2470	1819	651.5	73.64%	26.38%	66000	69600	73200
Athabaska/ACSR/TW	1949.6	7	36	93.5	0.2327	7x0.1392	0.418	1.6380	1.5310	1.500	2199	1838	360.8	83.58%	16.41%	51900	53900	56000
Powder/ACSR/TW	2153.8	8	60	91.6	0.1895	19x0.0961	0.480	1.8300	1.6920	1.604	2509	2040	468.7	81.31%	18.68%	61100	63600	66200
Santee/ACSR/TW	2627.3	8	60	92.4	0.2093	19x0.1062	0.531	2.2330	2.0640	1.764	3061	2489	572.4	81.31%	18.70%	74500	77700	80800

(1) Code words shown denote ACSR/TW with regular-strength Class A Galvanized steel core ((GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.
 Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr® ACSR/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded



ACSR/TW (ELECTRICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT			AMPACITY @75°C (4)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
								TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	STD.	E3X®			
Calumet/ACSR/TW	565.3	16	20	91.1	0.1681	7x0.1146	0.344	0.5161	0.4439	0.858	0.0299	0.0307	0.0367	720	810	0.0293	0.0811	0.5218
Mohawk/ACSR/TW	571.7	13	18	91.8	0.1782	7x0.1030	0.309	0.5073	0.4489	0.846	0.0297	0.0305	0.0365	720	810	0.0287	0.0816	0.5240
Oswego/ACSR/TW	664.8	16	20	92.0	0.1823	7x0.1244	0.373	0.6071	0.5220	0.927	0.0255	0.0262	0.0312	795	900	0.0317	0.0793	0.5096
Mystic/ACSR/TW	666.6	13	18	92.5	0.1924	7x0.1111	0.333	0.5912	0.5233	0.911	0.0255	0.0262	0.0313	790	895	0.0309	0.0799	0.5125
Wabash/ACSR/TW	762.8	16	20	92.6	0.1953	7x0.1331	0.399	0.6965	0.5991	0.990	0.0222	0.0229	0.0273	865	985	0.0339	0.0778	0.4994
Maumee/ACSR/TW	768.2	13	20	92.7	0.1960	7x0.1195	0.358	0.6819	0.6034	0.977	0.0221	0.0228	0.0272	865	980	0.0331	0.0783	0.5014
Kettle/ACSR/TW	957.2	7	33	91.0	0.1703	7x0.0973	0.292	0.8037	0.7517	1.065	0.0180	0.0189	0.0232	955	1090	0.0354	0.0768	0.4880
Suwannee/ACSR/TW	959.6	16	22	93.2	0.2088	7x0.1493	0.448	0.8763	0.7538	1.108	0.0176	0.0183	0.0218	995	1145	0.0379	0.0752	0.4817
Columbia/ACSR/TW	966.2	13	18	93.9	0.2317	7x0.1338	0.401	0.8574	0.7590	1.089	0.0176	0.0183	0.0217	995	1135	0.0370	0.0758	0.4844
Genesee/ACSR/TW	1158.0	7	33	91.9	0.1873	7x0.1078	0.323	0.9731	0.9092	1.166	0.0149	0.0157	0.0192	1075	1235	0.0388	0.0747	0.4737
Hudson/ACSR/TW	1158.4	13	39	91.0	0.1723	7x0.1467	0.440	1.0280	0.9093	1.209	0.0147	0.0155	0.0190	1090	1255	0.0410	0.0734	0.4681
Cheyenne/ACSR/TW	1168.1	5	30	92.4	0.1973	7x0.0926	0.278	0.9643	0.9172	1.156	0.0148	0.0157	0.0192	1075	1235	0.0382	0.0750	0.4751
Yukon/ACSR/TW	1233.6	13	38	91.5	0.1802	19x0.0910	0.455	1.0920	0.9689	1.245	0.0139	0.0146	0.0179	1135	1310	0.0423	0.0727	0.4635
Nelson/ACSR/TW	1257.1	7	33	92.3	0.1952	7x0.1115	0.334	1.0560	0.9876	1.212	0.0137	0.0146	0.0178	1130	1300	0.0404	0.0737	0.4677
Catawba/ACSR/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	0.0136	0.0145	0.0176	1130	1300	0.0398	0.0741	0.4687
Thames/ACSR/TW	1334.6	13	39	91.7	0.1850	19x0.0944	0.472	1.1810	1.0480	1.293	0.0128	0.0136	0.0166	1190	1375	0.0439	0.0718	0.4576
Mackenzie/ACSR/TW	1359.7	7	33	92.6	0.2030	7x0.1159	0.348	1.1420	1.0680	1.258	0.0127	0.0136	0.0165	1185	1365	0.0419	0.0729	0.4618
Truckee/ACSR/TW	1372.5	5	30	93.0	0.2139	7x0.1004	0.301	1.1330	1.0780	1.249	0.0126	0.0135	0.0164	1185	1365	0.0413	0.0732	0.4630
Merrimack/ACSR/TW	1433.6	13	39	92.0	0.1917	19x0.0978	0.489	1.2680	1.1260	1.338	0.0119	0.0127	0.0155	1245	1440	0.0454	0.0711	0.4522
Miramichi/ACSR/TW	1455.3	7	33	92.9	0.2100	7x0.1200	0.360	1.2220	1.1430	1.300	0.0118	0.0127	0.0155	1235	1425	0.0433	0.0722	0.4567
St. Croix/ACSR/TW	1467.8	5	30	93.2	0.2212	7x0.1041	0.312	1.2120	1.1530	1.291	0.0118	0.0127	0.0154	1235	1425	0.0427	0.0725	0.4579
Rio Grande/ACSR/TW	1533.3	13	39	92.3	0.1983	19x0.1012	0.506	1.3570	1.2040	1.382	0.0111	0.0119	0.0145	1295	1500	0.0469	0.0703	0.4471
Potomac/ACSR/TW	1557.4	7	36	92.7	0.2080	7x0.1241	0.372	1.3080	1.2230	1.345	0.0110	0.0120	0.0145	1285	1490	0.0448	0.0714	0.4513
Platte/ACSR/TW	1569.0	5	30	93.4	0.2287	7x0.1074	0.322	1.2960	1.2320	1.333	0.0110	0.0120	0.0145	1285	1485	0.0441	0.0717	0.4528
Pecos/ACSR/TW	1622.0	13	39	92.5	0.2039	19x0.1064	0.532	1.4420	1.2730	1.424	0.0105	0.0113	0.0137	1340	1560	0.0485	0.0695	0.4424
Schuylkill/ACSR/TW	1657.4	7	33	93.3	0.2241	7x0.1280	0.384	1.3920	1.3020	1.384	0.0104	0.0113	0.0137	1335	1545	0.0461	0.0707	0.4469
James/ACSR/TW	1730.6	13	39	92.8	0.2107	19x0.1075	0.538	1.5320	1.3600	1.465	0.00987	0.0107	0.0129	1395	1620	0.0498	0.0689	0.4380
Pee Dee/ACSR/TW	1758.6	7	33	93.4	0.2308	7x0.1319	0.396	1.4760	1.3810	1.425	0.00979	0.0108	0.0130	1380	1605	0.0475	0.0700	0.4423
Cumberland/ACSR/TW	1926.9	13	42	92.9	0.2142	19x0.1133	0.566	1.7050	1.5130	1.545	0.00887	0.00972	0.0117	1485	1735	0.0525	0.0677	0.4297
Athabaska/ACSR/TW	1949.6	7	36	93.5	0.2327	7x0.1392	0.418	1.6380	1.5310	1.500	0.00883	0.00985	0.0118	1465	1710	0.0500	0.0688	0.4343
Powder/ACSR/TW	2153.8	8	60	91.6	0.1895	19x0.0961	0.480	1.8300	1.6920	1.604	0.00801	0.00898	0.0105	1585	1860	0.0537	0.0672	0.4238
Santee/ACSR/TW	2627.3	8	60	92.4	0.2093	19x0.1062	0.531	2.2330	2.0640	1.764	0.00656	0.00765	0.00884	1770	2085	0.0591	0.0650	0.4089

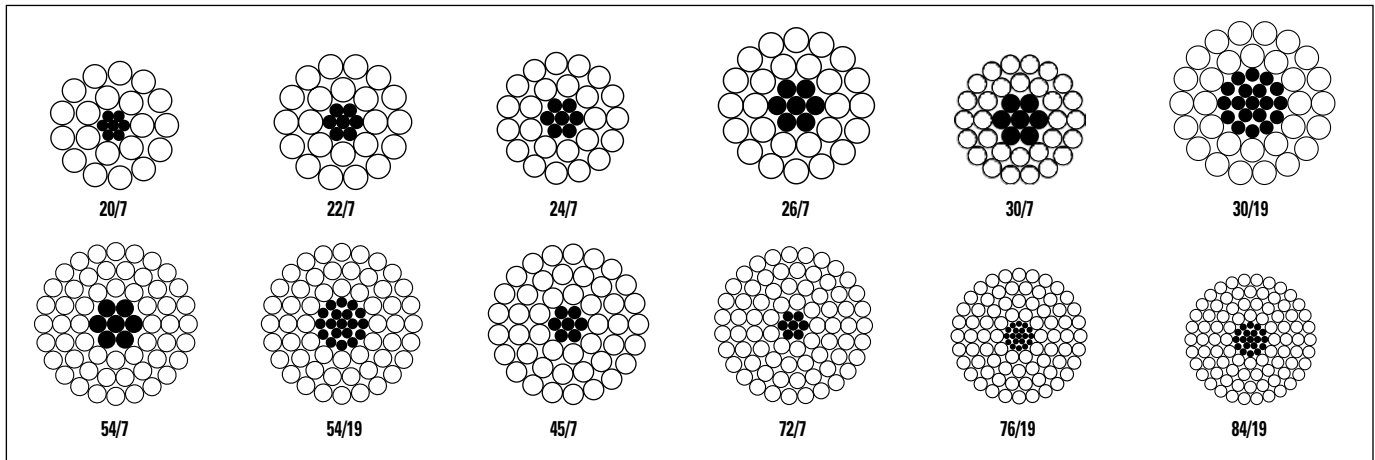
(1) Code words shown denote ACSR/TW with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (3) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
 (4) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for an E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for an E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/R² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

TransPowr® ACSS Bare Overhead Conductor

Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

ACSS is a composite concentric-lay-stranded cable. ACSS conductors are manufactured in accordance with the latest issue of ASTM B856. The steel strands form the central core of the cable, around which is stranded one or more layers of aluminum 1350-O wires. The "O" temper of the aluminum, a fully annealed or soft temper, causes most or all of the mechanical load on ACSS to be carried by the steel. Standard ACSS designs are manufactured with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). The steel core may consist of 7, 19, 37 or more wires.

Features and Benefits:

ACSS conductors are similar to conventional ACSR with some very important additional advantages. ACSS can operate continuously at high temperatures up to 250°C without damage, allowing for a significant increase in conductor current-carrying capacity. ACSS sags less under emergency electrical loadings than ACSR, it is self-damping, and its final sags are not affected by long-term creep of the aluminum.

Applications:

Aluminum conductor steel-supported (ACSS) is used for overhead transmission lines. It is especially useful in reconductoring applications requiring increased current with existing tensions and clearances; new line applications where structures can be economized due to reduced sag; new line applications requiring high emergency loadings; and lines where aeolian vibration is a problem.

Options:

- E3X® surface coating (/E3X)
- High-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA3 to ASTM B803)
- Extra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA4 to ASTM B958)
- Ultra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA5 to ASTM B958)
- Aluminum-clad steel core (/AW)—see ACSS/AW catalog section

Options (cont'd):

- 250°C operating temperature rating utilizing either the zinc-5% aluminum mischmetal alloy-coated steel core wires or the aluminum-clad steel core wires
- Trapezoidal-shaped aluminum strands (/TW)—see ACSS/TW catalog section
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® ACSS Bare Overhead Conductor

Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



ACSS, ALUMINUM CONDUCTOR, STEEL-SUPPORTED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	MA2	MA3 (HS)	MA5 (UHS)
Spoonbill/ACSS	266.8	22x0.1101	7x0.0612	0.2300	0.2095	0.624	319.8	250.0	69.8	78.17%	21.81%	6030	6550	7580
Scaup/ACSS	266.8	24x0.1054	7x0.0703	0.2366	0.2094	0.632	342.2	250.1	92.0	73.09%	26.90%	7410	8090	9450
Partridge/ACSS	266.8	26x0.1013	7x0.0788	0.2437	0.2095	0.642	366.1	250.5	115.6	68.42%	31.58%	8880	9730	11400
Junco/ACSS	266.8	30x0.0943	7x0.0943	0.2584	0.2095	0.660	416.4	250.8	165.6	60.23%	39.77%	11700	13000	15200
Ostrich/ACSS	300.0	26x0.1074	7x0.0835	0.2739	0.2355	0.680	411.4	281.6	129.8	68.45%	31.55%	9970	10900	12800
Trogon/ACSS	336.4	20x0.1297	7x0.0576	0.2825	0.2642	0.692	377.3	315.5	61.8	83.62%	16.38%	5990	6440	7350
Woodcock/ACSS	336.4	22x0.1237	7x0.0687	0.2903	0.2644	0.701	403.5	315.6	87.9	78.22%	21.78%	7610	8260	9550
Widgeon/ACSS	336.4	24x0.1184	7x0.0789	0.2985	0.2642	0.710	431.6	315.7	115.9	73.15%	26.85%	9340	10200	11900
Linnet/ACSS	336.4	26x0.1137	7x0.0884	0.3070	0.2640	0.720	461.1	315.6	145.5	68.45%	31.55%	11200	12300	14400
Oriole/ACSS	336.4	30x0.1059	7x0.1059	0.3259	0.2642	0.741	525.2	316.3	208.9	60.22%	39.78%	14800	16300	19100
Ptarmigan/ACSS	397.5	20x0.1410	7x0.0627	0.3339	0.3123	0.752	446.1	372.9	73.2	83.59%	16.41%	7090	7630	8710
Stork/ACSS	397.5	22x0.1344	7x0.0747	0.3428	0.3121	0.762	476.5	372.6	103.9	78.20%	21.80%	8990	9760	11300
Brant/ACSS	397.5	24x0.1287	7x0.0858	0.3527	0.3122	0.772	510.1	373.0	137.1	73.12%	26.88%	11000	12100	14100
Ibis/ACSS	397.5	26x0.1236	7x0.0961	0.3627	0.3120	0.783	544.9	372.9	172.0	68.43%	31.57%	13000	14200	16500
Lark/ACSS	397.5	30x0.1151	7x0.1151	0.3850	0.3121	0.806	620.4	373.7	246.7	60.24%	39.76%	17500	19300	22600
Tailorbird/ACSS	477.0	20x0.1544	7x0.0686	0.4003	0.3745	0.823	534.7	447.1	87.6	83.62%	16.39%	8490	9140	10400
Toucan/ACSS	477.0	22x0.1472	7x0.0818	0.4112	0.3744	0.834	571.5	446.9	124.6	78.20%	21.80%	10800	11700	13500
Flicker/ACSS	477.0	24x0.1410	7x0.0940	0.4233	0.3747	0.846	612.2	447.7	164.6	73.13%	26.89%	13000	14200	16400
Hawk/ACSS	477.0	26x0.1354	7x0.1053	0.4353	0.3744	0.858	654.0	447.5	206.5	68.43%	31.57%	15600	17100	19800
Hen/ACSS	477.0	30x0.1261	7x0.1261	0.4621	0.3747	0.883	744.7	448.5	296.1	60.23%	39.76%	21000	22700	26700
Heron/ACSS	500.0	30x0.1291	7x0.1291	0.4843	0.3927	0.904	780.5	470.1	310.4	60.23%	39.77%	22000	23800	27900
Tody/ACSS	556.5	20x0.1668	7x0.0741	0.4672	0.4370	0.890	624.1	521.8	102.3	83.61%	16.39%	9910	10700	12200
Sapsucker/ACSS	556.5	22x0.1590	7x0.0883	0.4797	0.4368	0.901	666.6	521.4	145.2	78.22%	21.78%	12600	13600	15800
Parakeet/ACSS	556.5	24x0.1523	7x0.1015	0.4939	0.4372	0.914	714.1	522.3	191.9	73.14%	26.87%	15200	16600	19100
Dove/ACSS	556.5	26x0.1463	7x0.1138	0.5083	0.4371	0.927	763.7	522.5	241.2	68.42%	31.58%	18200	19900	23100
Eagle/ACSS	556.5	30x0.1362	7x0.1362	0.5391	0.4371	0.953	868.7	523.3	345.5	60.24%	39.77%	24500	26500	31100
Peacock/ACSS	605.0	24x0.1588	7x0.1059	0.5370	0.4753	0.953	776.7	567.8	208.9	73.10%	26.90%	16500	18100	20800
Squab/ACSS	605.0	26x0.1525	7x0.1186	0.5522	0.4749	0.966	829.7	567.7	261.9	68.42%	31.57%	19700	21700	25100
Wood Duck/ACSS	605.0	30x0.1420	7x0.1420	0.5860	0.4751	0.994	944.3	568.8	375.5	60.24%	39.76%	26000	28300	33300
Teal/ACSS	605.0	30x0.1420	19x0.0852	0.5834	0.4751	0.994	937.2	568.8	368.4	60.69%	39.31%	26600	29300	34700
Turacos/ACSS	636.0	26x0.1783	7x0.0792	0.5339	0.4994	0.951	713.1	596.2	116.8	83.61%	16.38%	11300	12200	13900
Goldfinch/ACSS	636.0	22x0.1700	7x0.0944	0.5483	0.4994	0.963	762.0	596.1	166.0	78.23%	21.78%	14100	15300	17500
Rook/ACSS	636.0	24x0.1628	7x0.1085	0.5643	0.4996	0.977	816.0	596.8	219.2	73.14%	26.86%	17300	19000	21900
Grosbeak/ACSS	636.0	26x0.1564	7x0.1216	0.5808	0.4995	0.990	872.5	597.1	275.4	68.44%	31.56%	20700	22400	26000
Scoter/ACSS	636.0	30x0.1456	7x0.1456	0.6160	0.4995	1.019	992.8	598.0	394.8	60.23%	39.77%	27400	29700	35000
Egret/ACSS	636.0	30x0.1456	19x0.0874	0.6135	0.4995	1.019	985.6	598.0	387.7	60.67%	39.34%	28000	30900	36600
Flamingo/ACSS	666.6	24x0.1667	7x0.1111	0.5917	0.5238	1.000	855.6	625.7	229.9	73.13%	26.87%	18200	19900	22900
Gannet/ACSS	666.6	26x0.1601	7x0.1245	0.6086	0.5234	1.014	914.4	625.7	288.7	68.43%	31.57%	21700	23400	27300
Stilt/ACSS	715.5	24x0.1727	7x0.1151	0.6350	0.5622	1.036	918.3	671.6	246.7	73.14%	26.86%	19500	21300	24600
Starling/ACSS	715.5	26x0.1659	7x0.1290	0.6535	0.5620	1.051	981.8	671.9	309.9	68.44%	31.56%	23300	25200	29300
Redwing/ACSS	715.5	30x0.1544	19x0.0926	0.6897	0.5617	1.081	1108	672.4	435.2	60.69%	39.28%	30800	34000	39800
Macaw/ACSS	795.0	42x0.1376	7x0.0764	0.6567	0.6246	1.055	857.7	749.0	108.7	87.33%	12.67%	11800	12600	14200
Turbit/ACSS	795.0	20x0.1994	7x0.0886	0.6677	0.6246	1.063	891.9	745.7	146.2	83.61%	16.39%	14200	15200	17400
Tern/ACSS	795.0	45x0.1329	7x0.0886	0.6674	0.6242	1.063	895.2	749.0	146.2	83.67%	16.33%	14200	15200	17400
Puffin/ACSS	795.0	22x0.1901	7x0.1056	0.6857	0.6244	1.077	953.0	745.3	207.7	78.21%	21.79%	17700	19200	22000
Cuckoo/ACSS	795.0	24x0.1820	7x0.1213	0.7053	0.6244	1.092	1020	745.8	274.0	73.12%	26.86%	21700	23300	26900
Condor/ACSS	795.0	54x0.1213	7x0.1213	0.7049	0.6240	1.092	1024	749.8	274.0	73.22%	26.76%	21700	23300	26900
Drake/ACSS	795.0	26x0.1749	7x0.1360	0.7263	0.6247	1.108	1091	746.8	344.4	68.45%	31.57%	25900	28000	32600
Mallard/ACSS	795.0	30x0.1628	19x0.0977	0.7669	0.6245	1.140	1232	747.6	484.4	60.68%	39.32%	34300	37900	44300
Ruddy/ACSS	900.0	45x0.1414	7x0.0943	0.7555	0.7066	1.131	1013	847.9	165.6	83.70%	16.35%	15800	17000	19200
Canary/ACSS	900.0	54x0.1291	7x0.1291	0.7985	0.7069	1.162	1160	849.4	310.4	73.22%	26.76%	24600	26400	30500

(1) Code words shown denote ACSS with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (MAA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.
 Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSS Bare Overhead Conductor

Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



ACSS, ALUMINUM CONDUCTOR, STEEL-SUPPORTED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	MA2	MA3 (HS)	MA5 (UHS)
Phoenix/ACSS	954.0	42x0.1507	7x0.0837	0.7877	0.7491	1.155	1029	898.5	130.5	87.32%	12.68%	14200	15200	17100
Corncrake/ACSS	954.0	20x0.2184	7x0.0971	0.8011	0.7492	1.165	1070	894.6	175.6	83.61%	16.41%	16700	18000	20400
Rail/ACSS	954.0	45x0.1456	7x0.0971	0.8011	0.7492	1.165	1075	899.0	175.6	83.63%	16.33%	16700	18000	20400
Towhee/ACSS	954.0	48x0.1410	7x0.1097	0.8157	0.7495	1.175	1124	899.7	224.1	80.04%	19.94%	19700	21300	24300
Redbird/ACSS	954.0	24x0.1994	7x0.1329	0.8466	0.7495	1.196	1224	895.3	328.9	73.15%	26.87%	26000	28000	32300
Cardinal/ACSS	954.0	54x0.1329	7x0.1329	0.8462	0.7491	1.196	1229	900.1	328.9	73.24%	26.76%	26000	28000	32300
Canvasback/ACSS	954.0	30x0.1783	19x0.1070	0.9199	0.7491	1.248	1478	896.7	581.0	60.67%	39.31%	41100	45400	53100
Snowbird/ACSS	1033.5	42x0.1569	7x0.0872	0.8539	0.8121	1.203	1116	973.9	141.6	87.27%	12.69%	15400	16500	18500
Ortolan/ACSS	1033.5	45x0.1515	7x0.1010	0.8673	0.8112	1.212	1163	973.3	190.0	83.69%	16.34%	18100	19500	22000
Whooper/ACSS	1033.5	48x0.1467	7x0.1141	0.8829	0.8113	1.223	1216	974.0	242.4	80.10%	19.93%	21300	23100	26300
Curllew/ACSS	1033.5	54x0.1383	7x0.1383	0.9164	0.8112	1.245	1331	974.7	356.2	73.23%	26.76%	28200	30300	35000
Avocet/ACSS	1113.0	42x0.1628	7x0.0904	0.9192	0.8743	1.248	1201	1049	152.2	87.34%	12.67%	16300	17500	19500
Bluejay/ACSS	1113.0	45x0.1573	7x0.1049	0.9350	0.8745	1.259	1254	1049	204.9	83.65%	16.34%	19500	21100	23800
Bullfinch/ACSS	1113.0	48x0.1523	7x0.1184	0.9515	0.8744	1.269	1311	1050	261.1	80.09%	19.92%	22900	24900	28300
Finch/ACSS	1113.0	54x0.1436	19x0.0862	0.9854	0.8746	1.293	1428	1051	377.1	73.60%	26.41%	30400	33200	38700
Oxbird/ACSS	1192.5	42x0.1685	7x0.0936	0.9847	0.9366	1.292	1286	1123	163.2	87.33%	12.69%	17500	18700	20900
Bunting/ACSS	1192.5	45x0.1628	7x0.1085	1.0010	0.9367	1.302	1343	1124	219.2	83.69%	16.32%	20900	22500	25400
Cormorant/ACSS	1192.5	48x0.1576	7x0.1226	1.0190	0.9364	1.313	1404	1124	279.9	80.06%	19.94%	24600	26200	30000
Grackle/ACSS	1192.5	54x0.1486	19x0.0892	1.0550	0.9365	1.338	1529	1125	403.8	73.58%	26.41%	32600	35500	41500
Scissortail/ACSS	1272.0	42x0.1740	7x0.0967	1.0500	0.9987	1.334	1372	1198	174.1	87.32%	12.69%	18700	20000	22300
Bittern/ACSS	1272.0	45x0.1681	7x0.1121	1.0680	0.9987	1.345	1432	1198	234.0	83.66%	16.34%	22300	24000	27100
Diver/ACSS	1272.0	48x0.1628	7x0.1266	1.0870	0.9992	1.357	1498	1199	298.5	80.04%	19.93%	26200	28000	31900
Pheasant/ACSS	1272.0	54x0.1535	19x0.0921	1.1260	0.9993	1.382	1631	1201	430.5	73.64%	26.39%	34100	37300	43000
Ringdove/ACSS	1351.5	42x0.1794	7x0.0997	1.1160	1.0620	1.376	1458	1273	185.1	87.31%	12.70%	19900	21200	23700
Dipper/ACSS	1351.5	45x0.1733	7x0.1155	1.1350	1.0610	1.386	1522	1274	248.4	83.71%	16.32%	23700	25500	28800
1351.5/ACSS	1351.5	48x0.1678	7x0.1305	1.1550	1.0610	1.398	1591	1274	317.2	80.08%	19.94%	27900	29700	33900
Martin/ACSS	1351.5	54x0.1582	19x0.0949	1.1960	1.0610	1.424	1732	1275	457.0	73.61%	26.39%	36200	39600	45600
Popinjay/ACSS	1431.0	42x0.1846	7x0.1026	1.1820	1.1240	1.415	1544	1348	196.0	87.31%	12.69%	21000	22500	25100
Bobolink/ACSS	1431.0	45x0.1783	7x0.1189	1.2010	1.1240	1.427	1611	1348	263.3	83.67%	16.34%	25100	27000	30500
Wagtail/ACSS	1431.0	48x0.1727	7x0.1343	1.2240	1.1240	1.439	1686	1350	335.9	80.07%	19.92%	29500	31500	35900
Plover/ACSS	1431.0	54x0.1628	19x0.0977	1.2670	1.1240	1.465	1835	1351	484.4	73.62%	26.40%	38400	41900	48300
Nuthatch/ACSS	1510.5	45x0.1832	7x0.1221	1.2680	1.1860	1.466	1701	1423	277.6	83.66%	16.32%	26500	28100	31800
Parrot/ACSS	1510.5	54x0.1672	19x0.1003	1.3360	1.1860	1.505	1935	1425	510.5	73.64%	26.38%	40400	44200	51000
Ratite/ACSS	1590.0	42x0.1946	7x0.1081	1.3130	1.2490	1.492	1716	1498	217.6	87.30%	12.68%	23400	25000	27900
Lapwing/ACSS	1590.0	45x0.1880	7x0.1253	1.3350	1.2490	1.504	1791	1499	292.4	83.70%	16.33%	27900	29600	33500
Hornbill/ACSS	1590.0	48x0.1820	7x0.1416	1.3590	1.2490	1.517	1872	1499	373.4	80.07%	19.95%	32200	34400	39400
Falcon/ACSS	1590.0	54x0.1716	19x0.1030	1.4070	1.2490	1.545	2039	1501	538.4	73.61%	26.41%	42600	46600	53700
Chukar/ACSS	1780.0	84x0.1456	19x0.0874	1.5130	1.3990	1.602	2074	1686	387.7	81.29%	18.69%	35400	38200	43900
Seahawk/ACSS	1869.0	68x0.1658	7x0.0921	1.5150	1.4680	1.603	1925	1768	158.0	91.84%	8.21%	21500	22700	24800
Mockingbird/ACSS	2034.5	72x0.1681	7x0.1121	1.6670	1.5980	1.681	2158	1924	234.0	89.16%	10.84%	27200	28900	32000
Roadrunner/ACSS	2057.5	76x0.1645	19x0.0768	1.7030	1.6150	1.700	2245	1946	299.3	86.68%	13.33%	31700	33900	38300
Bluebird/ACSS	2156.0	84x0.1602	19x0.0961	1.8310	1.6930	1.762	2510	2041	468.7	81.31%	18.67%	42100	45500	51700
Kiwi/ACSS	2167.0	72x0.1735	7x0.1157	1.7760	1.7020	1.735	2299	2050	249.3	89.17%	10.84%	29000	30800	34100
Thrasher/ACSS	2312.0	76x0.1744	19x0.0814	1.9140	1.8160	1.802	2523	2187	336.3	86.68%	13.33%	35600	38100	43000
Joree/ACSS	2515.0	76x0.1819	19x0.0849	2.0830	1.9750	1.880	2745	2379	365.8	86.67%	13.33%	38700	41400	46800

(1) Code words shown denote ACSS with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values. Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSS Bare Overhead Conductor

Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



ACSS, ALUMINUM CONDUCTOR, STEEL-SUPPORTED, CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)																	
CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT				AMPACITY @ 75°C (4)		AMPACITY @ 200°C (4)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
		AL	STEEL	TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	AC @200°C	STD.	E3X®	STD.	E3X®			
Phoenix/ACSS	954.0	42x0.1507	7x0.0837	0.7877	0.7491	1.155	0.0176	0.0185	0.0228	0.0330	985	1130	1770	2000	0.0378	0.0753	0.4752
Corncrake/ACSS	954.0	20x0.2184	7x0.0971	0.8011	0.7492	1.165	0.0174	0.0182	0.0218	0.0307	1010	1160	1840	2085	0.0380	0.0752	0.4739
Rail/ACSS	954.0	45x0.1456	7x0.0971	0.8011	0.7492	1.165	0.0175	0.0184	0.0227	0.0329	990	1135	1780	2010	0.0384	0.0749	0.4739
Towhee/ACSS	954.0	48x0.1410	7x0.1097	0.8157	0.7495	1.175	0.0175	0.0184	0.0227	0.0328	990	1140	1785	2020	0.0390	0.0746	0.4725
Redbird/ACSS	954.0	24x0.1994	7x0.1329	0.8466	0.7495	1.196	0.0173	0.0180	0.0215	0.0304	1025	1180	1865	2120	0.0398	0.0741	0.4697
Cardinal/ACSS	954.0	54x0.1329	7x0.1329	0.8462	0.7491	1.196	0.0174	0.0182	0.0225	0.0326	1000	1150	1800	2040	0.0401	0.0739	0.4698
Canvasback/ACSS	954.0	30x0.1783	19x0.1070	0.9199	0.7491	1.248	0.0171	0.0177	0.0212	0.0300	1040	1205	1905	2170	0.0426	0.0725	0.4631
Snowbird/ACSS	1033.5	42x0.1569	7x0.0872	0.8539	0.8121	1.203	0.0162	0.0172	0.0211	0.0304	1035	1190	1865	2115	0.0394	0.0743	0.4689
Ortolan/ACSS	1033.5	45x0.1515	7x0.1010	0.8673	0.8112	1.212	0.0162	0.0171	0.0211	0.0304	1040	1195	1875	2120	0.0399	0.0740	0.4677
Whooper/ACSS	1033.5	48x0.1467	7x0.1141	0.8829	0.8113	1.223	0.0161	0.0170	0.0210	0.0303	1040	1200	1880	2130	0.0405	0.0737	0.4663
Curlew/ACSS	1033.5	54x0.1383	7x0.1383	0.9164	0.8112	1.245	0.0161	0.0169	0.0208	0.0301	1050	1210	1900	2150	0.0417	0.0730	0.4635
Avocet/ACSS	1113.0	42x0.1628	7x0.0904	0.9192	0.8743	1.248	0.0150	0.0160	0.0196	0.0283	1085	1245	1960	2225	0.0409	0.0735	0.4631
Bluejay/ACSS	1113.0	45x0.1573	7x0.1049	0.9350	0.8745	1.259	0.0150	0.0159	0.0196	0.0282	1085	1255	1970	2235	0.0415	0.0731	0.4618
Bullfinch/ACSS	1113.0	48x0.1523	7x0.1184	0.9515	0.8744	1.269	0.0150	0.0159	0.0195	0.0281	1090	1260	1975	2245	0.0421	0.0728	0.4605
Finch/ACSS	1113.0	54x0.1436	19x0.0862	0.9854	0.8746	1.293	0.0149	0.0157	0.0194	0.0279	1100	1270	1995	2265	0.0434	0.0721	0.4576
Oxbird/ACSS	1192.5	42x0.1685	7x0.0936	0.9847	0.9366	1.292	0.0140	0.0150	0.0184	0.0264	1130	1305	2050	2330	0.0423	0.0727	0.4577
Bunting/ACSS	1192.5	45x0.1628	7x0.1085	1.0010	0.9367	1.302	0.0140	0.0149	0.0183	0.0263	1135	1310	2060	2340	0.0429	0.0724	0.4564
Cormorant/ACSS	1192.5	48x0.1576	7x0.1226	1.0190	0.9364	1.313	0.0140	0.0149	0.0183	0.0263	1140	1315	2070	2350	0.0435	0.0720	0.4551
Grackle/ACSS	1192.5	54x0.1486	19x0.0892	1.0550	0.9365	1.338	0.0139	0.0147	0.0181	0.0261	1150	1330	2090	2375	0.0449	0.0713	0.4522
Scissortail/ACSS	1272.0	42x0.1740	7x0.0967	1.0500	0.9987	1.334	0.0132	0.0142	0.0173	0.0248	1175	1360	2140	2435	0.0437	0.0719	0.4527
Bittern/ACSS	1272.0	45x0.1681	7x0.1121	1.0680	0.9987	1.345	0.0131	0.0141	0.0172	0.0247	1180	1365	2150	2445	0.0443	0.0716	0.4514
Diver/ACSS	1272.0	48x0.1628	7x0.1266	1.0870	0.9992	1.357	0.0131	0.0140	0.0171	0.0246	1185	1370	2160	2455	0.0450	0.0713	0.4500
Pheasant/ACSS	1272.0	54x0.1535	19x0.0921	1.1260	0.9993	1.382	0.0130	0.0139	0.0170	0.0245	1195	1385	2180	2480	0.0463	0.0706	0.4472
Ringdove/ACSS	1351.5	42x0.1794	7x0.0997	1.1160	1.0620	1.376	0.0124	0.0134	0.0163	0.0233	1220	1410	2230	2535	0.0451	0.0712	0.4479
Dipper/ACSS	1351.5	45x0.1733	7x0.1155	1.1350	1.0610	1.386	0.0124	0.0133	0.0163	0.0233	1225	1420	2235	2545	0.0457	0.0709	0.4466
1351.5/ACSS	1351.5	48x0.1678	7x0.1305	1.1550	1.0610	1.398	0.0123	0.0133	0.0162	0.0232	1230	1425	2245	2560	0.0464	0.0706	0.4453
Martin/ACSS	1351.5	54x0.1582	19x0.0949	1.1960	1.0610	1.424	0.0123	0.0131	0.0161	0.0230	1240	1440	2270	2585	0.0478	0.0699	0.4425
Popinjay/ACSS	1431.0	42x0.1846	7x0.1026	1.1240	1.1240	1.415	0.0117	0.0127	0.0155	0.0221	1260	1465	2310	2635	0.0464	0.0706	0.4434
Bobolink/ACSS	1431.0	45x0.1783	7x0.1189	1.2010	1.1240	1.427	0.0117	0.0127	0.0154	0.0220	1265	1470	2320	2645	0.0470	0.0703	0.4422
Wagtail/ACSS	1431.0	48x0.1727	7x0.1343	1.2240	1.1240	1.439	0.0116	0.0126	0.0153	0.0219	1275	1480	2335	2660	0.0477	0.0699	0.4408
Plover/ACSS	1431.0	54x0.1628	19x0.0977	1.2670	1.1240	1.465	0.0116	0.0124	0.0152	0.0218	1285	1495	2355	2690	0.0492	0.0692	0.4380
Nuthatch/ACSS	1510.5	45x0.1832	7x0.1221	1.2680	1.1860	1.466	0.0111	0.0121	0.0146	0.0209	1310	1520	2405	2745	0.0483	0.0696	0.4379
Parrot/ACSS	1510.5	54x0.1672	19x0.1003	1.3360	1.1860	1.505	0.0110	0.0119	0.0144	0.0207	1325	1545	2440	2785	0.0505	0.0686	0.4338
Ratite/ACSS	1590.0	42x0.1946	7x0.1081	1.3130	1.2490	1.492	0.0105	0.0116	0.0140	0.0199	1345	1565	2475	2830	0.0489	0.0694	0.4351
Lapwing/ACSS	1590.0	45x0.1880	7x0.1253	1.3350	1.2490	1.504	0.0105	0.0115	0.0140	0.0198	1350	1570	2490	2845	0.0496	0.0690	0.4339
Hornbill/ACSS	1590.0	48x0.1820	7x0.1416	1.3590	1.2490	1.517	0.0105	0.0114	0.0139	0.0198	1355	1580	2500	2855	0.0503	0.0687	0.4326
Falcon/ACSS	1590.0	54x0.1716	19x0.1030	1.4070	1.2490	1.545	0.0104	0.0113	0.0138	0.0196	1370	1600	2525	2885	0.0518	0.0680	0.4297
Chukar/ACSS	1780.0	84x0.1456	19x0.0874	1.5130	1.3990	1.602	0.00941	0.0104	0.0122	0.0169	1470	1720	2755	3165	0.0532	0.0674	0.4240
Seahawk/ACSS	1869.0	68x0.1658	7x0.0921	1.5150	1.4680	1.603	0.00902	0.0101	0.0119	0.0163	1490	1745	2800	3220	0.0523	0.0678	0.4239
Mockingbird/ACSS	2034.5	72x0.1681	7x0.1121	1.6670	1.5980	1.681	0.00828	0.00942	0.0110	0.0151	1565	1840	2965	3410	0.0551	0.0666	0.4164
Roadrunner/ACSS	2057.5	76x0.1645	19x0.0768	1.7030	1.6150	1.700	0.00818	0.00928	0.0108	0.0149	1580	1860	2995	3450	0.0560	0.0662	0.4147
Bluebird/ACSS	2156.0	84x0.1602	19x0.0961	1.8310	1.6930	1.762	0.00778	0.00882	0.0103	0.0141	1640	1935	3110	3585	0.0585	0.0652	0.4091
Kiwi/ACSS	2167.0	72x0.1735	7x0.1157	1.7760	1.7020	1.735	0.00777	0.00895	0.0104	0.0142	1625	1910	3085	3555	0.0569	0.0659	0.4115
Thrasher/ACSS	2312.0	76x0.1744	19x0.0814	1.9140	1.8160	1.802	0.00727	0.00845	0.00982	0.0134	1690	1995	3220	3720	0.0593	0.0649	0.4055
Joree/ACSS	2515.0	76x0.1819	19x0.0849	2.0830	1.9750	1.880	0.00669	0.00793	0.00916	0.0124	1770	2095	3395	3925	0.0619	0.0639	0.3990

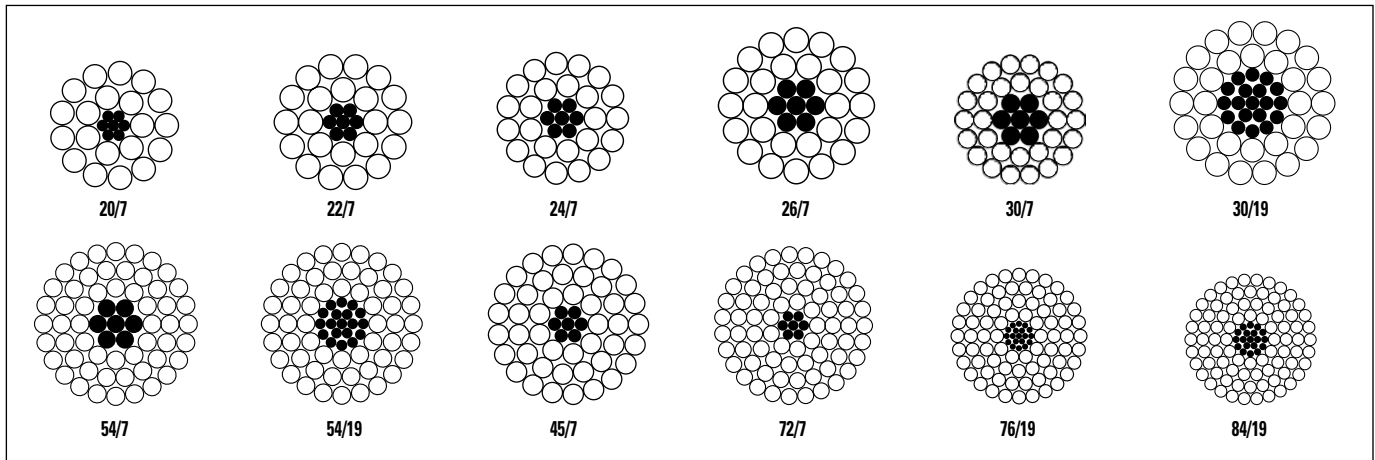
(1) Code words shown denote ACSS with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Based on a conductivity of 63% IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
 (3) Based on a conductor temperature of 75°C or 200°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for an E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for an E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (4) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

TransPowr® ACSS/AW Bare Overhead Conductor

Aluminum Conductor Aluminum-Clad Steel-Supported Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

ACSS/AW is a composite concentric-lay-stranded cable. Aluminum-clad steel strands form the central core of the cable, around which is stranded one or more layers of aluminum 1350-O wires. ACSS/AW conductors are manufactured in accordance with the latest issue of ASTM B856. The "O" temper of the aluminum, a fully annealed or soft temper, causes most or all of the mechanical load of ACSS/AW to be carried by the steel. The aluminum-clad steel core may consist of 7, 19, 37 or more wires. Numerous combinations of aluminum and steel strand and layers are possible. The sizes and strandings listed on the following pages are those most frequently used for overhead lines.

Features and Benefits:

The AW core, which consists of a thick layer of aluminum (approx. 10% of the nominal wire/radius) over steel, gives ACSS/AW conductors the advantages of standard ACSS along with the light weight and good conductivity of aluminum and the high tensile strength and ruggedness of steel. ACSS/AW can operate continuously at high temperatures (250°C) without damage, allowing for a significant increase in conductor current-carrying capacity. The cross-sections above illustrate some common stranding.

Applications:

Aluminum conductor steel-supported with aluminum-clad steel wire (ACSS/AW) are used for overhead distribution and transmission lines where a high degree of corrosion resistance is required.

Options:

- E3X® surface coating (/E3X)
- Trapezoidal-shaped aluminum strands (/TW)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

TransPowr® ACSS/AW Bare Overhead Conductor

Aluminum Conductor Aluminum-Clad Steel-Supported Concentric-Lay-Stranded



ACSS, ALUMINUM CONDUCTOR, STEEL-SUPPORTED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	
Spoonbill/ACSS/AW	266.8	22x0.1101	7x0.0612	0.2300	0.2095	0.624	309.1	250.0	59.1	80.88%	19.12%	1710
Scalp/ACSS/AW	266.8	24x0.1054	7x0.0703	0.2366	0.2094	0.632	328.1	250.1	78.0	76.23%	23.77%	1710
Partridge/ACSS/AW	266.8	26x0.1013	7x0.0788	0.2437	0.2095	0.642	348.5	250.5	98.0	71.88%	28.11%	8370
Junco/ACSS/AW	266.8	30x0.0943	7x0.0943	0.2584	0.2095	0.660	391.2	250.8	140.3	64.11%	35.86%	11200
Ostrich/ACSS/AW	300.0	26x0.1074	7x0.0835	0.2739	0.2355	0.680	391.6	281.6	110.0	71.91%	28.09%	9400
Trogon/ACSS/AW	336.4	20x0.1297	7x0.0576	0.2825	0.2642	0.692	367.9	315.5	52.4	85.76%	14.23%	2160
Woodcock/ACSS/AW	336.4	22x0.1237	7x0.0687	0.2903	0.2644	0.701	390.1	315.6	74.5	80.90%	19.09%	2160
Widgeon/ACSS/AW	336.4	24x0.1184	7x0.0789	0.2985	0.2642	0.710	413.9	315.7	98.2	76.27%	23.73%	8830
Linnet/ACSS/AW	336.4	26x0.1137	7x0.0884	0.3070	0.2640	0.720	438.9	315.6	123.3	71.91%	28.09%	10500
Oriole/ACSS/AW	336.4	30x0.1059	7x0.1059	0.3259	0.2642	0.741	493.3	316.3	177.0	64.12%	35.88%	14200
Ptarmigan/ACSS/AW	397.5	20x0.1410	7x0.0627	0.3339	0.3123	0.752	434.9	372.9	62.0	85.74%	14.26%	2550
Stork/ACSS/AW	397.5	22x0.1344	7x0.0747	0.3428	0.3121	0.762	460.6	372.6	88.0	80.89%	19.12%	2550
Brant/ACSS/AW	397.5	24x0.1287	7x0.0858	0.3527	0.3122	0.772	489.1	373.0	116.2	76.26%	23.76%	10400
Ibis/ACSS/AW	397.5	26x0.1236	7x0.0961	0.3627	0.3120	0.783	518.7	372.9	145.7	71.89%	28.09%	12400
Lark/ACSS/AW	397.5	30x0.1151	7x0.1151	0.3850	0.3121	0.806	582.7	373.7	209.1	64.13%	35.88%	16700
Tailorbird/ACSS/AW	477.0	20x0.1544	7x0.0686	0.4003	0.3745	0.823	521.4	447.1	74.3	85.75%	14.24%	3060
Toucan/ACSS/AW	477.0	22x0.1472	7x0.0818	0.4112	0.3744	0.834	552.5	446.9	105.6	80.89%	19.11%	10200
Flicker/ACSS/AW	477.0	24x0.1410	7x0.0940	0.4233	0.3747	0.846	587.1	447.7	139.4	76.26%	23.74%	12500
Hawk/ACSS/AW	477.0	26x0.1354	7x0.1053	0.4353	0.3744	0.858	622.5	447.5	175.0	71.89%	28.11%	14900
Hen/ACSS/AW	477.0	30x0.1261	7x0.1261	0.4621	0.3747	0.883	699.4	448.5	250.9	64.13%	35.87%	20100
Heron/ACSS/AW	500.0	30x0.1291	7x0.1291	0.4843	0.3927	0.904	733.1	470.1	263.0	64.12%	35.88%	20600
Tody/ACSS/AW	556.5	20x0.1668	7x0.0741	0.4672	0.4370	0.890	608.5	521.8	86.6	85.75%	14.24%	3570
Sapsucker/ACSS/AW	556.5	22x0.1590	7x0.0883	0.4797	0.4368	0.901	644.4	521.4	123.0	80.91%	19.09%	11900
Parakeet/ACSS/AW	556.5	24x0.1523	7x0.1015	0.4939	0.4372	0.914	684.8	522.3	162.6	76.27%	23.74%	14600
Dove/ACSS/AW	556.5	26x0.1463	7x0.1138	0.5083	0.4371	0.927	726.9	522.5	204.4	71.88%	28.12%	17500
Eagle/ACSS/AW	556.5	30x0.1362	7x0.1362	0.5391	0.4371	0.953	816.0	523.3	292.7	64.13%	35.87%	22900
Peacock/ACSS/AW	605.0	24x0.1588	7x0.1059	0.5370	0.4753	0.953	744.8	567.8	177.0	76.24%	23.76%	15900
Squab/ACSS/AW	605.0	26x0.1525	7x0.1186	0.5522	0.4749	0.966	789.7	567.7	222.0	71.89%	28.11%	19000
Wood Duck/ACSS/AW	605.0	30x0.1420	7x0.1420	0.5860	0.4751	0.994	887.0	568.8	318.2	64.13%	35.87%	24400
Teal/ACSS/AW	605.0	30x0.1420	19x0.0852	0.5834	0.4751	0.994	880.9	568.8	312.1	64.57%	35.43%	25000
Turacos/ACSS/AW	636.0	20x0.1783	7x0.0792	0.5339	0.4994	0.951	695.2	596.2	99.0	85.76%	14.24%	10800
Goldfinch/ACSS/AW	636.0	22x0.1700	7x0.0944	0.5483	0.4994	0.963	736.7	596.1	140.6	80.91%	19.09%	13600
Rook/ACSS/AW	636.0	24x0.1628	7x0.1085	0.5643	0.4996	0.977	782.5	596.8	185.8	76.27%	23.74%	16700
Grosbeak/ACSS/AW	636.0	26x0.1564	7x0.1216	0.5808	0.4995	0.990	830.5	597.1	233.3	71.90%	28.09%	19900
Scoter/ACSS/AW	636.0	30x0.1456	7x0.1456	0.6160	0.4995	1.019	932.5	598.0	334.5	64.13%	35.87%	25100
Egret/ACSS/AW	636.0	30x0.1456	19x0.0874	0.6135	0.4995	1.019	926.4	598.0	328.5	64.55%	35.46%	26300
Flamingo/ACSS/AW	666.6	24x0.1667	7x0.1111	0.5917	0.5238	1.000	820.5	625.7	194.8	76.26%	23.74%	17500
Gannet/ACSS/AW	666.6	26x0.1601	7x0.1245	0.6086	0.5234	1.014	870.3	625.7	244.6	71.89%	28.11%	20900
Stilt/ACSS/AW	715.5	24x0.1727	7x0.1151	0.6350	0.5622	1.036	880.6	671.6	209.1	76.27%	23.75%	18800
Starling/ACSS/AW	715.5	26x0.1659	7x0.1290	0.6535	0.5620	1.051	934.5	671.9	262.6	71.90%	28.10%	22000
Redwing/ACSS/AW	715.5	30x0.1544	19x0.0926	0.6897	0.5617	1.081	1041	672.4	368.7	64.59%	35.42%	29500
Macaw/ACSS/AW	795.0	42x0.1376	7x0.0764	0.6567	0.6246	1.055	841.2	749.0	92.1	89.04%	10.95%	5100
Turbit/ACSS/AW	795.0	20x0.1994	7x0.0886	0.6677	0.6246	1.063	869.6	745.7	123.9	85.75%	14.25%	13500
Tern/ACSS/AW	795.0	45x0.1329	7x0.0886	0.6674	0.6242	1.063	872.9	749.0	123.9	85.81%	14.19%	13500
Puffin/ACSS/AW	795.0	22x0.1901	7x0.1056	0.6857	0.6244	1.077	921.3	745.3	176.0	80.90%	19.10%	17100
Cuckoo/ACSS/AW	795.0	24x0.1820	7x0.1213	0.7053	0.6244	1.092	978.0	745.8	232.2	76.26%	23.74%	20900
Condor/ACSS/AW	795.0	54x0.1213	7x0.1213	0.7049	0.6240	1.092	982.0	749.8	232.2	76.35%	23.65%	20900
Drake/ACSS/AW	795.0	26x0.1749	7x0.1360	0.7263	0.6247	1.108	1039	746.8	291.9	71.88%	28.09%	24400
Mallard/ACSS/AW	795.0	30x0.1628	19x0.0977	0.7669	0.6245	1.140	1158	747.6	410.5	64.56%	35.45%	32900
Ruddy/ACSS/AW	900.0	45x0.1414	7x0.0943	0.7555	0.7066	1.131	988.2	847.9	140.3	85.80%	14.20%	15300
Canary/ACSS/AW	900.0	54x0.1291	7x0.1291	0.7985	0.7069	1.162	1112	849.4	263.0	76.38%	23.65%	23200

(1) Code words shown, including suffix /AW, denote ACSS with aluminum-clad steel core. See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSS/AW Bare Overhead Conductor

Aluminum Conductor Aluminum-Clad Steel-Supported Concentric-Lay-Stranded



ACSS, ALUMINUM CONDUCTOR, STEEL-SUPPORTED, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS
		AL	STEEL	TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	
Phoenix/ACSS/AW	954.0	42x0.1507	7x0.0837	0.7877	0.7491	1.155	1009	898.5	110.5	89.05%	10.95%	13600
Corncrake/ACSS/AW	954.0	20x0.2184	7x0.0971	0.8011	0.7492	1.165	1043	894.6	148.8	85.77%	14.27%	16200
Rail/ACSS/AW	954.0	45x0.1456	7x0.0971	0.8011	0.7492	1.165	1048	899.0	148.8	85.78%	14.20%	16200
Towhee/ACSS/AW	954.0	48x0.1410	7x0.1097	0.8157	0.7495	1.175	1090	899.7	189.9	82.54%	17.42%	19000
Redbird/ACSS/AW	954.0	24x0.1994	7x0.1329	0.8466	0.7495	1.196	1174	895.3	278.7	76.26%	23.74%	24600
Cardinal/ACSS/AW	954.0	54x0.1329	7x0.1329	0.8462	0.7491	1.196	1179	900.1	278.7	76.34%	23.64%	24600
Canvasback/ACSS/AW	954.0	30x0.1783	19x0.1070	0.9199	0.7491	1.248	1389	896.7	492.3	64.56%	35.44%	39400
Snowbird/ACSS/AW	1033.5	42x0.1569	7x0.0872	0.8539	0.8121	1.203	1094	973.9	120.0	89.02%	10.97%	14800
Ortolan/ACSS/AW	1033.5	45x0.1515	7x0.1010	0.8673	0.8112	1.212	1134	973.3	161.0	85.83%	14.20%	17600
Whooper/ACSS/AW	1033.5	48x0.1467	7x0.1141	0.8829	0.8113	1.223	1179	974.0	205.4	82.61%	17.42%	20600
Curlew/ACSS/AW	1033.5	54x0.1383	7x0.1383	0.9164	0.8112	1.245	1277	974.7	301.8	76.33%	23.63%	26100
Avocet/ACSS/AW	1113.0	42x0.1628	7x0.0904	0.9192	0.8743	1.248	1177	1049	129.0	89.12%	10.96%	15900
Bluejay/ACSS/AW	1113.0	45x0.1573	7x0.1049	0.9350	0.8745	1.259	1223	1049	173.6	85.77%	14.19%	18900
Bullfinch/ACSS/AW	1113.0	48x0.1523	7x0.1184	0.9515	0.8744	1.269	1271	1050	221.2	82.61%	17.40%	22200
Finch/ACSS/AW	1113.0	54x0.1436	19x0.0862	0.9854	0.8746	1.293	1370	1051	319.5	76.72%	23.32%	28800
Oxbird/ACSS/AW	1192.5	42x0.1685	7x0.0936	0.9847	0.9366	1.292	1261	1123	138.2	89.06%	10.96%	17000
Bunting/ACSS/AW	1192.5	45x0.1628	7x0.1085	1.0010	0.9367	1.302	1310	1124	185.8	85.80%	14.18%	20300
Cormorant/ACSS/AW	1192.5	48x0.1576	7x0.1226	1.0190	0.9364	1.313	1361	1124	237.2	82.59%	17.43%	23800
Grackle/ACSS/AW	1192.5	54x0.1486	19x0.0892	1.0550	0.9365	1.338	1467	1125	342.1	76.69%	23.32%	30800
Scissortail/ACSS/AW	1272.0	42x0.1740	7x0.0967	1.0500	0.9987	1.334	1345	1198	147.6	89.07%	10.97%	18200
Bittern/ACSS/AW	1272.0	45x0.1681	7x0.1121	1.0680	0.9987	1.345	1397	1198	198.3	85.76%	14.19%	21600
Diver/ACSS/AW	1272.0	48x0.1628	7x0.1266	1.0870	0.9992	1.357	1452	1199	252.9	82.58%	17.42%	25300
Pheasant/ACSS/AW	1272.0	54x0.1535	19x0.0921	1.1260	0.9993	1.382	1566	1201	364.8	76.69%	23.30%	32800
Ringdove/ACSS/AW	1351.5	42x0.1794	7x0.0997	1.1160	1.0620	1.376	1430	1273	156.9	89.02%	10.97%	19300
Dipper/ACSS/AW	1351.5	45x0.1733	7x0.1155	1.1350	1.0610	1.386	1484	1274	210.5	85.85%	14.18%	23000
1351.5/ACSS/AW	1351.5	48x0.1678	7x0.1305	1.1550	1.0610	1.398	1543	1274	268.7	82.57%	17.41%	26500
Martin/ACSS/AW	1351.5	54x0.1582	19x0.0949	1.1960	1.0610	1.424	1663	1275	387.3	76.67%	23.29%	34900
Popinjay/ACSS/AW	1431.0	42x0.1846	7x0.1026	1.1820	1.1240	1.415	1514	1348	166.1	89.04%	10.97%	20500
Bobolink/ACSS/AW	1431.0	45x0.1783	7x0.1189	1.2010	1.1240	1.427	1571	1348	223.1	85.81%	14.20%	24300
Wagtail/ACSS/AW	1431.0	48x0.1727	7x0.1343	1.2240	1.1240	1.439	1634	1350	284.6	82.62%	17.42%	28000
Plover/ACSS/AW	1431.0	54x0.1628	19x0.0977	1.2670	1.1240	1.465	1761	1351	410.5	76.72%	23.31%	36900
Nuthatch/ACSS/AW	1510.5	45x0.1832	7x0.1221	1.2680	1.1860	1.466	1659	1423	235.3	85.77%	14.18%	25700
Parrot/ACSS/AW	1510.5	54x0.1672	19x0.1003	1.3360	1.1860	1.505	1857	1425	432.6	76.74%	23.30%	38900
Ratite/ACSS/AW	1590.0	42x0.1946	7x0.1081	1.3130	1.2490	1.492	1683	1498	184.4	89.01%	10.96%	22700
Lapwing/ACSS/AW	1590.0	45x0.1880	7x0.1253	1.3350	1.2490	1.504	1747	1499	247.7	85.80%	14.18%	27000
Hornbill/ACSS/AW	1590.0	48x0.1820	7x0.1416	1.3590	1.2490	1.517	1815	1499	316.4	82.59%	17.43%	30600
Falcon/ACSS/AW	1590.0	54x0.1716	19x0.1030	1.4070	1.2490	1.545	1957	1501	456.2	76.70%	23.31%	41100
Chukar/ACSS/AW	1780.0	84x0.1456	19x0.0874	1.5130	1.3990	1.602	2014	1686	328.5	83.71%	16.31%	33600
Seahawk/ACSS/AW	1869.0	68x0.1658	7x0.0921	1.5150	1.4680	1.603	1901	1768	133.9	93.00%	7.04%	21100
Mockingbird/ACSS/AW	2034.5	72x0.1681	7x0.1121	1.6670	1.5980	1.681	2123	1924	198.3	90.63%	9.34%	26500
Roadrunner/ACSS/AW	2057.5	76x0.1645	19x0.0768	1.7030	1.6150	1.700	2200	1946	253.6	88.45%	11.53%	13200
Bluebird/ACSS/AW	2156.0	84x0.1602	19x0.0961	1.8310	1.6930	1.762	2438	2041	397.1	83.72%	16.29%	40700
Kiwi/ACSS/AW	2167.0	72x0.1735	7x0.1157	1.7760	1.7020	1.735	2261	2050	211.2	90.67%	9.34%	28200
Thrasher/ACSS/AW	2312.0	76x0.1744	19x0.0814	1.9140	1.8160	1.802	2472	2187	284.9	88.47%	11.53%	34100
Joree/ACSS/AW	2515.0	76x0.1819	19x0.0849	2.0830	1.9750	1.880	2689	2379	310.0	88.47%	11.53%	37100

(1) Code words shown, including suffix /AW, denote ACSS with aluminum-clad steel core. See the Options section to find the appropriate code word modifier designation for alternative design options.

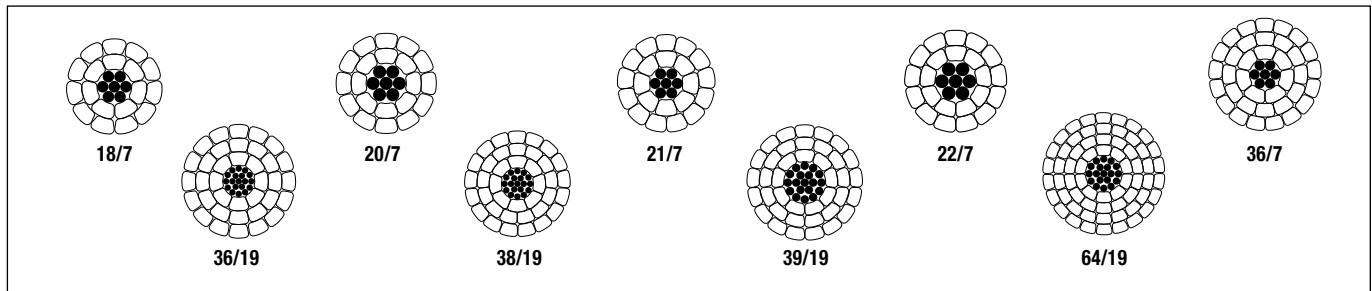
(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Notes

TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

TransPowr® ACSS/TW is a trapezoidal aluminum conductor steel-supported concentric-lay-stranded conductor. The aluminum strands are trapezoidal in shape.

The wedge-shaped aluminum strands enable a more compact alignment of the aluminum wires. Conductor designs that maintain the same circular mil cross-sectional area of aluminum as a conventional round conductor result in a TW conductor that is 10 to 15 percent smaller in overall diameter. Conductor designs that maintain the same overall diameter as a conventional round conductor result in a TW conductor that has 20 to 25 percent more aluminum cross-sectional area packed in.

The ACSS/TW conductors are manufactured in accordance with the requirements of the latest issue of ASTM B857.

The steel strands form the central core of the conductor, around which is stranded two, three or four layers of aluminum 1350 O temper (annealed) wires. The steel core may consist of a concentric stranded cable of 7, 19 or more wires. Numerous combinations of aluminum and steel strands and layers are possible. The sizes and constructions listed on the following pages are common examples used in overhead lines.

Standard ACSS/TW designs are manufactured with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2).

Features and Benefits:

TransPowr ACSS/TW conductors are similar to conventional ACSR/TW conductors but have some very important additional advantages. ACSS/TW conductors can operate continuously at high temperatures (up to 250°C) without damage. ACSS sags less than ACSR/TW under emergency electrical loadings, it has self-damping properties, and its final sags are not affected by long-term creep of the aluminum.

ACSS/TW conductors constructed of equivalent aluminum circular mil cross-sectional area provide a conductor that is smaller in overall diameter than the equivalent conventional round wire ACSR conductor. The reduced conductor diameter is advantageous in reducing the effects of ice and wind loading on the conductor.

ACSS/TW conductors constructed to be equivalent overall diameter enable a greater circular mil cross-sectional area of aluminum within the conductor, reducing power loss in the conductor for day-to-day operations as well as allowing a significant increase in conductor current-carrying capacity.

Applications:

Trapezoidal aluminum conductors steel-supported (ACSS/TW) are used for overhead transmission lines. They are especially useful in reconductoring applications requiring increased current with existing tensions and clearances; new line applications where structures can be economized due to reduced sag; new line applications requiring high emergency loadings; and lines where aeolian vibration is a problem.

Options:

- E3X® surface coating (/E3X)
- High-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA3 to ASTM B803)
- Extra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA4 to ASTM B958)
- Ultra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA5 to ASTM B958)
- Aluminum-clad steel core (/AW)
- 250°C operating temperature rating utilizing either the zinc-5% aluminum mischmetal alloy-coated steel core wires or the aluminum-clad steel core wires
- Non-specular surface finish (/NS)

For more information, or information on conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



ACSS/TW (MECHANICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIVALENT AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
								TOTAL	AL		TOTAL	AL	STEEL	AL	STEEL	MA2	MA3 (HS)	MA5 (UHS)
Oriole/ACSS/TW	336.4	23	18	88.7	0.1367	7x0.1059	0.318	0.3258	0.2642	0.692	524.7	315.9	208.9	60.21%	39.81%	14800	16300	19100
Flicker/ACSS/TW	477.0	13	18	90.8	0.1628	7x0.0940	0.282	0.4233	0.3747	0.777	612.6	448.1	164.6	73.15%	26.87%	13000	14200	16400
Hawk/ACSS/TW	477.0	16	18	90.8	0.1628	7x0.1053	0.316	0.4356	0.3747	0.790	654.8	448.3	206.5	68.46%	31.54%	15600	17100	19800
Hen/ACSS/TW	477.0	23	22	89.5	0.1472	7x0.1261	0.378	0.4618	0.3744	0.821	744.5	448.4	296.1	60.23%	39.77%	21000	22700	26700
Parakeet/ACSS/TW	556.5	13	18	91.7	0.1758	7x0.1015	0.304	0.4939	0.4372	0.835	714.5	522.7	191.9	73.16%	26.86%	15200	16600	19100
Dove/ACSS/TW	556.5	16	20	91.1	0.1668	7x0.1138	0.341	0.5082	0.4370	0.852	764.1	522.9	241.2	68.43%	31.57%	18200	19900	23100
Rook/ACSS/TW	636.0	13	18	92.4	0.1880	7x0.1085	0.326	0.5644	0.4997	0.890	816.8	597.5	219.2	73.15%	26.84%	17300	19000	21900
Grosbeak/ACSS/TW	636.0	16	20	91.8	0.1783	7x0.1216	0.365	0.5807	0.4994	0.908	872.9	597.5	275.4	68.45%	31.55%	20700	22400	26000
Tern/ACSS/TW	795.0	7	17	93.5	0.2163	7x0.0888	0.266	0.6678	0.6244	0.958	892.2	745.3	146.8	83.54%	16.45%	14200	15300	17500
Puffin/ACSS/TW	795.0	11	18	93.3	0.2102	7x0.1108	0.332	0.6921	0.6246	0.980	975.3	746.7	228.6	76.56%	23.44%	18900	20600	23700
Condor/ACSS/TW	795.0	13	18	93.3	0.2102	7x0.1213	0.364	0.7055	0.6246	0.991	1021	747.0	274.0	73.16%	26.84%	21700	23300	26900
Drake/ACSS/TW	795.0	16	20	92.8	0.1994	7x0.1360	0.408	0.7262	0.6246	1.010	1092	747.3	344.4	68.43%	31.54%	25900	28000	32600
Mallard/ACSS/TW	795.0	23	22	92.4	0.1901	19x0.0977	0.488	0.7669	0.6244	1.047	1232	747.9	484.4	60.71%	39.32%	34300	37900	44300
Phoenix/ACSS/TW	954.0	5	30	91.4	0.1783	7x0.0837	0.251	0.7876	0.7491	1.050	1029	899.0	130.5	87.37%	12.68%	14200	15200	17100
Rail/ACSS/TW	954.0	7	33	90.9	0.1700	7x0.0971	0.291	0.8009	0.7490	1.063	1075	899.3	175.6	83.66%	16.33%	16700	18000	20400
Cardinal/ACSS/TW	954.0	13	20	94.1	0.2184	7x0.1329	0.399	0.8464	0.7493	1.081	1224	895.2	328.9	73.14%	26.87%	26000	28000	32300
Snowbird/ACSS/TW	1033.5	5	30	91.8	0.1856	7x0.0871	0.261	0.8534	0.8116	1.091	1115	974.1	141.3	87.36%	12.67%	15400	16400	18500
Ortolan/ACSS/TW	1033.5	7	33	91.4	0.1770	7x0.1010	0.303	0.8681	0.8120	1.104	1165	974.9	190.0	83.68%	16.31%	18100	19500	22000
Curlew/ACSS/TW	1033.5	13	20	93.8	0.2273	7x0.1383	0.415	0.9167	0.8116	1.127	1327	970.5	356.2	73.13%	26.84%	28200	30300	35000
Avocet/ACSS/TW	1113.0	5	30	92.2	0.1926	7x0.0904	0.271	0.9190	0.8740	1.130	1201	1049	152.2	87.34%	12.67%	16300	17500	19500
Bluejay/ACSS/TW	1113.0	7	33	91.7	0.1836	7x0.1049	0.315	0.9342	0.8737	1.144	1254	1049	204.9	83.65%	16.34%	19500	21000	23800
Finch/ACSS/TW	1113.0	13	20	94.0	0.2359	19x0.0862	0.431	0.9850	0.8741	1.169	1422	1045	377.1	73.49%	26.52%	30400	33200	38700
Oxbird/ACSS/TW	1192.5	5	30	92.5	0.1994	7x0.0936	0.281	0.9850	0.9368	1.168	1287	1124	163.2	87.33%	12.68%	17500	18700	20900
Bunting/ACSS/TW	1192.5	7	33	92.0	0.1901	7x0.1086	0.326	1.0010	0.9366	1.182	1344	1125	219.6	83.71%	16.34%	20900	22600	25500
Grackle/ACSS/TW	1192.5	13	38	91.3	0.1771	19x0.0892	0.446	1.0550	0.9358	1.224	1529	1125	403.8	73.58%	26.41%	32600	35500	41500
Scissortail/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	1373	1199	174.1	87.33%	12.68%	18700	20000	22300
Bittern/ACSS/TW	1272.0	7	33	92.2	0.1963	7x0.1121	0.336	1.0680	0.9987	1.219	1433	1199	234.0	83.67%	16.33%	22300	24000	27100
Pheasant/ACSS/TW	1272.0	13	39	91.5	0.1806	19x0.0921	0.460	1.1260	0.9989	1.264	1631	1201	430.5	73.64%	26.39%	34100	37300	43000
Dipper/ACSS/TW	1351.5	7	33	92.5	0.2024	7x0.1155	0.346	1.1350	1.0620	1.255	1523	1275	248.4	83.72%	16.31%	23700	25500	28800
Martin/ACSS/TW	1351.5	13	39	91.8	0.1862	19x0.0949	0.474	1.1960	1.0620	1.301	1733	1276	457.0	73.63%	26.37%	36200	39600	45600
Bobolink/ACSS/TW	1431.0	7	33	92.7	0.2082	7x0.1189	0.357	1.2010	1.1230	1.290	1612	1349	263.3	83.68%	16.33%	25100	27000	30500
Plover/ACSS/TW	1431.0	13	39	92.1	0.1916	19x0.0977	0.488	1.2670	1.1240	1.337	1836	1352	484.4	73.64%	26.38%	38400	41900	48300
Lapwing/ACSS/TW	1590.0	7	33	93.2	0.2195	7x0.1253	0.376	1.3350	1.2490	1.357	1792	1499	292.4	83.65%	16.32%	27900	29600	33500
Falcon/ACSS/TW	1590.0	13	42	92.1	0.1946	19x0.1030	0.515	1.4060	1.2480	1.408	2038	1500	538.4	73.60%	26.42%	42600	46600	53700
Chukar/ACSS/TW	1780.0	8	36	93.2	0.2224	19x0.0874	0.437	1.5120	1.3980	1.447	2067	1680	387.7	81.28%	18.76%	35300	38200	43900
Bluebird/ACSS/TW	2156.0	8	60	91.6	0.1896	19x0.0961	0.480	1.8320	1.6940	1.604	2511	2043	468.7	81.36%	18.67%	42100	45500	51700

(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



ACSS/TW (ELECTRICAL PROPERTIES) - REDUCED DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT CIRCULAR MIL AREA TO REGULAR ACSR

CODE WORD	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES		O.D. IN	RESISTANCE (3) OHMS/KFT				AMPACITY @ 75°C (4)		AMPACITY @ 200°C (4)		GEO. MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
								TOTAL	AL		DC @20°C	AC @25°C	AC @75°C	AC @200°C	STD.	E3X®	STD.	E3X®			
Oriole/ACSS/TW	336.4	23	18	88.7	0.1367	7x0.1059	0.318	0.3258	0.2642	0.692	0.0484	0.0495	0.0594	0.0843	535	595	940	1050	0.0241	0.0856	0.5554
Flicker/ACSS/TW	477.0	13	18	90.8	0.1628	7x0.0940	0.282	0.4233	0.3747	0.777	0.0346	0.0355	0.0426	0.0605	650	730	1150	1285	0.0263	0.0836	0.5374
Hawk/ACSS/TW	477.0	16	18	90.8	0.1628	7x0.1053	0.316	0.4356	0.3747	0.790	0.0345	0.0353	0.0424	0.0602	655	735	1160	1300	0.0270	0.0830	0.5348
Hen/ACSS/TW	477.0	23	22	89.5	0.1472	7x0.1261	0.378	0.4618	0.3744	0.821	0.0342	0.0350	0.0420	0.0596	665	750	1180	1320	0.0285	0.0818	0.5286
Parakeet/ACSS/TW	556.5	13	18	91.7	0.1758	7x0.1015	0.304	0.4939	0.4372	0.835	0.0297	0.0305	0.0366	0.0519	715	805	1275	1425	0.0283	0.0819	0.5260
Dove/ACSS/TW	556.5	16	20	91.1	0.1668	7x0.1138	0.341	0.5082	0.4370	0.852	0.0296	0.0303	0.0364	0.0517	720	815	1285	1440	0.0291	0.0813	0.5229
Rook/ACSS/TW	636.0	13	18	92.4	0.1880	7x0.1085	0.326	0.5644	0.4997	0.890	0.0260	0.0267	0.0321	0.0454	775	880	1390	1560	0.0302	0.0804	0.5160
Grosbeak/ACSS/TW	636.0	16	20	91.8	0.1783	7x0.1216	0.365	0.5807	0.4994	0.908	0.0259	0.0266	0.0319	0.0452	780	885	1400	1575	0.0310	0.0798	0.5130
Tern/ACSS/TW	795.0	7	17	93.5	0.2163	7x0.0888	0.266	0.6678	0.6244	0.958	0.0209	0.0217	0.0260	0.0367	880	1000	1580	1780	0.0318	0.0792	0.5045
Puffin/ACSS/TW	795.0	11	18	93.3	0.2102	7x0.1108	0.332	0.6921	0.6246	0.980	0.0208	0.0215	0.0258	0.0365	885	1010	1595	1800	0.0330	0.0784	0.5010
Condor/ACSS/TW	795.0	13	18	93.3	0.2102	7x0.1213	0.364	0.7055	0.6246	0.991	0.0208	0.0215	0.0257	0.0364	890	1015	1605	1810	0.0336	0.0780	0.4992
Drake/ACSS/TW	795.0	16	20	92.8	0.1994	7x0.1360	0.408	0.7262	0.6246	1.010	0.0207	0.0214	0.0256	0.0362	895	1025	1620	1825	0.0346	0.0773	0.4962
Mallard/ACSS/TW	795.0	23	22	92.4	0.1901	19x0.0977	0.488	0.7669	0.6244	1.047	0.0205	0.0211	0.0253	0.0359	910	1040	1645	1860	0.0365	0.0761	0.4906
Phoenix/ACSS/TW	954.0	5	30	91.4	0.1783	7x0.0837	0.251	0.7876	0.7491	1.050	0.0176	0.0185	0.0228	0.0329	960	1095	1720	1935	0.0347	0.0772	0.4902
Rail/ACSS/TW	954.0	7	33	90.9	0.1700	7x0.0971	0.291	0.8009	0.7490	1.063	0.0175	0.0184	0.0227	0.0329	965	1100	1725	1945	0.0354	0.0768	0.4883
Cardinal/ACSS/TW	954.0	13	20	94.1	0.2184	7x0.1329	0.399	0.8464	0.7493	1.081	0.0173	0.0180	0.0215	0.0304	995	1140	1805	2045	0.0367	0.0760	0.4856
Snowbird/ACSS/TW	1033.5	5	30	91.8	0.1856	7x0.0871	0.261	0.8534	0.8116	1.091	0.0162	0.0171	0.0211	0.0304	1010	1155	1810	2040	0.0361	0.0763	0.4842
Ortolan/ACSS/TW	1033.5	7	33	91.4	0.1770	7x0.1010	0.303	0.8681	0.8120	1.104	0.0162	0.0171	0.0210	0.0303	1015	1160	1820	2055	0.0368	0.0759	0.4823
Curlew/ACSS/TW	1033.5	13	20	93.8	0.2273	7x0.1383	0.415	0.9167	0.8116	1.127	0.0160	0.0167	0.0199	0.0281	1045	1200	1905	2155	0.0382	0.0750	0.4790
Avocet/ACSS/TW	1113.0	5	30	92.2	0.1926	7x0.0904	0.271	0.9190	0.8740	1.130	0.0151	0.0160	0.0196	0.0282	1055	1210	1900	2145	0.0374	0.0755	0.4787
Bluejay/ACSS/TW	1113.0	7	33	91.7	0.1836	7x0.1049	0.315	0.9342	0.8737	1.144	0.0150	0.0159	0.0196	0.0282	1060	1215	1910	2160	0.0381	0.0751	0.4768
Finch/ACSS/TW	1113.0	13	20	94.0	0.2359	19x0.0862	0.431	0.9850	0.8741	1.169	0.0148	0.0155	0.0185	0.0261	1095	1260	1995	2265	0.0396	0.0742	0.4734
Oxbird/ACSS/TW	1192.5	5	30	92.5	0.1994	7x0.0936	0.281	0.9850	0.9368	1.168	0.0141	0.0150	0.0184	0.0264	1100	1265	1985	2250	0.0386	0.0748	0.4735
Bunting/ACSS/TW	1192.5	7	33	92.0	0.1901	7x0.1086	0.326	1.0010	0.9366	1.182	0.0140	0.0149	0.0183	0.0263	1105	1270	2000	2260	0.0394	0.0743	0.4716
Grackle/ACSS/TW	1192.5	13	38	91.3	0.1771	19x0.0892	0.446	1.0550	0.9358	1.224	0.0139	0.0147	0.0181	0.0261	1125	1290	2030	2300	0.0416	0.0731	0.4661
Scissortail/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	0.0132	0.0141	0.0173	0.0247	1145	1315	2070	2345	0.0398	0.0741	0.4687
Bittern/ACSS/TW	1272.0	7	33	92.2	0.1963	7x0.1121	0.336	1.0680	0.9987	1.219	0.0132	0.0141	0.0172	0.0247	1150	1325	2085	2360	0.0406	0.0736	0.4668
Pheasant/ACSS/TW	1272.0	13	39	91.5	0.1806	19x0.0921	0.460	1.1260	0.9989	1.264	0.0131	0.0138	0.0170	0.0244	1170	1345	2120	2405	0.0429	0.0724	0.4612
Dipper/ACSS/TW	1351.5	7	33	92.5	0.2024	7x0.1155	0.346	1.1350	1.0620	1.255	0.0124	0.0133	0.0162	0.0232	1195	1375	2165	2460	0.0418	0.0730	0.4623
Martin/ACSS/TW	1351.5	13	39	91.8	0.1862	19x0.0949	0.474	1.1960	1.0620	1.301	0.0123	0.0131	0.0160	0.0230	1215	1400	2205	2505	0.0442	0.0717	0.4567
Bobolink/ACSS/TW	1431.0	7	33	92.7	0.2082	7x0.1189	0.357	1.2010	1.1230	1.290	0.0117	0.0126	0.0154	0.0220	1235	1425	2250	2555	0.0430	0.0723	0.4580
Plover/ACSS/TW	1431.0	13	39	92.1	0.1916	19x0.0977	0.488	1.2670	1.1240	1.337	0.0116	0.0124	0.0151	0.0217	1255	1455	2290	2605	0.0454	0.0711	0.4523
Lapwing/ACSS/TW	1590.0	7	33	93.2	0.2195	7x0.1253	0.376	1.3350	1.2490	1.357	0.0105	0.0115	0.0139	0.0198	1315	1520	2405	2740	0.0452	0.0712	0.4500
Falcon/ACSS/TW	1590.0	13	42	92.1	0.1946	19x0.1030	0.515	1.4060	1.2480	1.408	0.0105	0.0113	0.0137	0.0196	1340	1550	2450	2795	0.0478	0.0699	0.4442
Chukar/ACSS/TW	1780.0	8	36	93.2	0.2224	19x0.0874	0.437	1.5120	1.3980	1.447	0.00938	0.0103	0.0125	0.0177	1410	1640	2600	2970	0.0485	0.0695	0.4399
Bluebird/ACSS/TW	2156.0	8	60	91.6	0.1896	19x0.0961	0.480	1.8320	1.6940	1.604	0.00777	0.00877	0.0103	0.0141	1600	1880	3015	3470	0.0537	0.0672	0.4238

(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Based on a conductivity of 63% IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
 (3) Based on a conductor temperature of 75°C or 200°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for an E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for an E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (4) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



ACSS/TW (MECHANICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR ACSR

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIVALENT AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES			APPROX. WEIGHT LB/KFT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS		
								TOTAL	AL	O.D. IN	TOTAL	AL	STEEL	AL	STEEL	MA2	MA3 (HS)	MA5 (UHS)
Calumet/ACSS/TW	565.3	16	20	91.1	0.1681	7x0.1146	0.344	0.5161	0.4439	0.858	775.7	531.1	244.6	68.47%	31.53%	18400	20200	23500
Mohawk/ACSS/TW	571.7	13	18	91.8	0.1782	7x0.1030	0.309	0.5073	0.4489	0.846	734.4	536.9	197.6	73.11%	26.91%	15600	17100	19700
Oswego/ACSS/TW	664.8	16	20	92.0	0.1823	7x0.1244	0.373	0.6071	0.5220	0.927	912.8	624.6	288.2	68.43%	31.57%	21700	23400	27200
Mystic/ACSS/TW	666.6	13	18	92.5	0.1924	7x0.1111	0.333	0.5912	0.5233	0.911	855.7	625.8	229.9	73.13%	26.87%	18200	19900	22900
Wabash/ACSS/TW	762.8	16	20	92.6	0.1953	7x0.1331	0.399	0.6965	0.5991	0.990	1047	716.9	329.9	68.47%	31.51%	24900	26800	31200
Maumee/ACSS/TW	768.2	13	20	92.7	0.1960	7x0.1195	0.358	0.6819	0.6034	0.977	986.8	720.9	265.9	73.05%	26.95%	21000	23000	26500
Kettle/ACSS/TW	957.2	7	33	91.0	0.1703	7x0.0973	0.292	0.8037	0.7517	1.065	1079	902.5	176.3	83.64%	16.34%	16800	18100	20400
Suwannee/ACSS/TW	959.6	16	22	93.2	0.2088	7x0.1493	0.448	0.8763	0.7538	1.108	1317	902.0	415.1	68.49%	31.52%	30700	33100	38600
Columbia/ACSS/TW	966.2	13	18	93.9	0.2317	7x0.1338	0.401	0.8574	0.7590	1.089	1241	907.7	333.4	73.14%	26.87%	26400	28300	32800
Genesee/ACSS/TW	1158.0	7	33	91.9	0.1873	7x0.1078	0.323	0.9731	0.9092	1.166	1308	1092	216.4	83.49%	16.54%	20500	22100	25000
Hudson/ACSS/TW	1158.4	13	39	91.0	0.1723	7x0.1467	0.440	1.0280	0.9093	1.209	1494	1093	400.8	73.16%	26.83%	31100	33400	38800
Cheyenne/ACSS/TW	1168.1	5	30	92.3	0.1973	7x0.0926	0.278	0.9643	0.9172	1.156	1260	1101	159.7	87.38%	12.67%	17100	18300	20400
Yukon/ACSS/TW	1233.6	13	38	91.5	0.1802	19x0.0910	0.455	1.0920	0.9689	1.245	1585	1165	420.2	73.50%	26.51%	33200	36300	41900
Nelson/ACSS/TW	1257.1	7	33	92.3	0.1952	7x0.1115	0.334	1.0560	0.9876	1.212	1417	1186	231.5	83.70%	16.34%	22100	23800	26900
Catawba/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	1373	1199	174.1	87.33%	12.68%	18700	20000	22300
Thames/ACSS/TW	1334.6	13	39	91.7	0.1850	19x0.0944	0.472	1.1810	1.0480	1.293	1712	1260	452.2	73.60%	26.41%	35800	39100	45100
Mackenzie/ACSS/TW	1359.7	7	33	92.6	0.2030	7x0.1159	0.348	1.1420	1.0680	1.258	1533	1282	250.2	83.63%	16.32%	23900	25700	29000
Truckee/ACSS/TW	1372.5	5	30	93.0	0.2139	7x0.1004	0.301	1.1330	1.0780	1.249	1482	1294	187.7	87.31%	12.67%	20200	21500	24000
Merrimack/ACSS/TW	1433.6	13	39	92.0	0.1917	19x0.0978	0.489	1.2680	1.1260	1.338	1838	1353	485.4	73.61%	26.41%	38400	42000	48400
Miramichi/ACSS/TW	1455.3	7	33	92.9	0.2100	7x0.1200	0.360	1.2220	1.1430	1.300	1640	1372	268.2	83.66%	16.35%	25600	27100	30700
St. Croix/ACSS/TW	1467.8	5	30	93.2	0.2212	7x0.1041	0.312	1.2120	1.1530	1.291	1585	1384	201.8	87.32%	12.73%	21600	23100	25800
Rio Grande/ACSS/TW	1533.3	13	39	92.3	0.1983	19x0.1012	0.506	1.3570	1.2040	1.382	1967	1448	519.7	73.61%	26.42%	41200	45000	51900
Potomac/ACSS/TW	1557.4	7	36	92.7	0.2080	7x0.1241	0.372	1.3080	1.2230	1.345	1754	1467	286.8	83.64%	16.35%	27300	29000	32800
Platte/ACSS/TW	1569.0	5	30	93.4	0.2287	7x0.1074	0.322	1.2960	1.2320	1.333	1694	1479	214.8	87.31%	12.68%	23100	24600	27500
Pecos/ACSS/TW	1622.0	13	39	92.5	0.2039	19x0.1064	0.532	1.4420	1.2730	1.424	2105	1531	574.5	72.73%	27.29%	45000	49200	56800
Schuylkill/ACSS/TW	1657.4	7	33	93.3	0.2241	7x0.1280	0.384	1.3920	1.3020	1.384	1868	1563	305.1	83.67%	16.33%	29100	30900	34900
James/ACSS/TW	1730.6	13	39	92.8	0.2107	19x0.1075	0.538	1.5320	1.3600	1.465	2221	1634	586.5	73.57%	26.41%	46400	50800	58500
Pee Dee/ACSS/TW	1758.6	7	33	93.4	0.2308	7x0.1319	0.396	1.4760	1.3810	1.425	1982	1658	324.0	83.65%	16.35%	30900	32800	37100
Cumberland/ACSS/TW	1926.9	13	42	92.9	0.2142	19x0.1133	0.566	1.7050	1.5130	1.545	2470	1819	651.5	73.64%	26.38%	51600	56400	65000
Athabaska/ACSS/TW	1949.6	7	36	93.5	0.2327	7x0.1392	0.418	1.6380	1.5310	1.500	2199	1838	360.8	83.58%	16.41%	34300	36500	41300
Powder/ACSS/TW	2153.8	8	60	91.6	0.1895	19x0.0961	0.480	1.8300	1.6920	1.604	2509	2040	468.7	81.31%	18.68%	42100	45500	51700
Santee/ACSS/TW	2627.3	8	60	92.4	0.2093	19x0.1062	0.531	2.2330	2.0640	1.764	3061	2489	572.4	81.31%	18.70%	51300	55600	63100

(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACSS/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor Steel-Supported Concentric-Lay-Stranded



ACSS/TW (ELECTRICAL PROPERTIES) - EQUIVALENT DIAMETER - CONDUCTORS SIZED TO HAVE EQUIVALENT DIAMETER TO REGULAR ACSR

CODE WORD	SIZE AWG OR kcmil	TYPE	NO. AL WIRES	FILL FACTOR	EQUIV. AL DIA. INCHES	STEEL CORE NO. X DIA. INCHES	STEEL CORE O.D. INCHES	CROSS-SECTION SQ. INCHES			RESISTANCE (3) OHMS/KFT				AMPACITY @ 75°C (4)		AMPACITY @ 200°C (4)		GEO. MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (5)	CAPACITIVE REACTANCE MEGAOHM/KFT (5)
								TOTAL	AL	O.D. IN	DC @20°C	AC @25°C	AC @75°C	AC @200°C	STD.	E3X®	STD.	E3X®			
Calumet/ACSS/TW	565.3	16	20	91.1	0.1681	7x0.1146	0.344	0.5161	0.4439	0.858	0.0291	0.0299	0.0359	0.0509	725	820	1295	1455	0.0293	0.0811	0.5218
Mohawk/ACSS/TW	571.7	13	18	91.8	0.1782	7x0.1030	0.309	0.5073	0.4489	0.846	0.0289	0.0297	0.0356	0.0505	725	820	1295	1450	0.0287	0.0816	0.5240
Oswego/ACSS/TW	664.8	16	20	92.0	0.1823	7x0.1244	0.373	0.6071	0.5220	0.927	0.0247	0.0255	0.0305	0.0433	805	910	1440	1620	0.0317	0.0793	0.5096
Mystic/ACSS/TW	666.6	13	18	92.5	0.1924	7x0.1111	0.333	0.5912	0.5233	0.911	0.0248	0.0255	0.0306	0.0434	800	905	1430	1610	0.0309	0.0799	0.5125
Wabash/ACSS/TW	762.8	16	20	92.6	0.1953	7x0.1331	0.399	0.6965	0.5991	0.990	0.0216	0.0222	0.0267	0.0377	875	995	1575	1775	0.0339	0.0778	0.4994
Maumee/ACSS/TW	768.2	13	20	92.7	0.1960	7x0.1195	0.358	0.6819	0.6034	0.977	0.0215	0.0222	0.0266	0.0376	875	995	1570	1770	0.0331	0.0783	0.5014
Kettle/ACSS/TW	957.2	7	33	91.0	0.1703	7x0.0973	0.292	0.8037	0.7517	1.065	0.0175	0.0184	0.0227	0.0327	965	1105	1730	1950	0.0354	0.0768	0.4880
Suwannee/ACSS/TW	959.6	16	22	93.2	0.2088	7x0.1493	0.448	0.8763	0.7538	1.108	0.0171	0.0178	0.0213	0.0301	1010	1155	1830	2070	0.0379	0.0752	0.4817
Columbia/ACSS/TW	966.2	13	18	93.9	0.2317	7x0.1338	0.401	0.8574	0.7590	1.089	0.0171	0.0178	0.0213	0.0300	1005	1150	1820	2060	0.0370	0.0758	0.4844
Genesee/ACSS/TW	1158.0	7	33	91.9	0.1873	7x0.1078	0.323	0.9731	0.9092	1.166	0.0144	0.0153	0.0188	0.0271	1085	1245	1960	2215	0.0388	0.0747	0.4737
Hudson/ACSS/TW	1158.4	13	39	91.0	0.1723	7x0.1467	0.440	1.0280	0.9093	1.209	0.0143	0.0151	0.0186	0.0268	1105	1270	1995	2260	0.0410	0.0734	0.4681
Cheyenne/ACSS/TW	1168.1	5	30	92.3	0.1973	7x0.0926	0.278	0.9643	0.9172	1.156	0.0144	0.0153	0.0187	0.0269	1085	1245	1960	2215	0.0382	0.0750	0.4751
Yukon/ACSS/TW	1233.6	13	38	91.5	0.1802	19x0.0910	0.455	1.0920	0.9689	1.245	0.0135	0.0142	0.0175	0.0252	1145	1320	2075	2355	0.0423	0.0727	0.4635
Nelson/ACSS/TW	1257.1	7	33	92.3	0.1952	7x0.1115	0.334	1.0560	0.9876	1.212	0.0133	0.0142	0.0174	0.0249	1140	1315	2070	2345	0.0404	0.0737	0.4677
Catawba/ACSS/TW	1272.0	5	30	92.7	0.2059	7x0.0967	0.290	1.0500	0.9989	1.204	0.0132	0.0141	0.0173	0.0247	1145	1315	2070	2345	0.0398	0.0741	0.4687
Thames/ACSS/TW	1334.6	13	39	91.7	0.1850	19x0.0944	0.472	1.1810	1.0480	1.293	0.0124	0.0132	0.0162	0.0233	1205	1390	2185	2485	0.0439	0.0718	0.4576
Mackenzie/ACSS/TW	1359.7	7	33	92.6	0.2030	7x0.1159	0.348	1.1420	1.0680	1.258	0.0123	0.0132	0.0161	0.0231	1200	1380	2175	2470	0.0419	0.0729	0.4618
Truckee/ACSS/TW	1372.5	5	30	93.0	0.2139	7x0.1004	0.301	1.1330	1.0780	1.249	0.0122	0.0132	0.0161	0.0229	1200	1380	2175	2470	0.0413	0.0732	0.4630
Merrimack/ACSS/TW	1433.6	13	39	92.0	0.1917	19x0.0978	0.489	1.2680	1.1260	1.338	0.0116	0.0124	0.0151	0.0217	1255	1455	2290	2605	0.0454	0.0711	0.4522
Miramichi/ACSS/TW	1455.3	7	33	92.9	0.2100	7x0.1200	0.360	1.2220	1.1430	1.300	0.0115	0.0124	0.0151	0.0216	1245	1440	2275	2585	0.0433	0.0722	0.4567
St. Croix/ACSS/TW	1467.8	5	30	93.2	0.2212	7x0.1041	0.312	1.2120	1.1530	1.291	0.0114	0.0124	0.0151	0.0215	1245	1440	2275	2585	0.0427	0.0725	0.4579
Rio Grande/ACSS/TW	1533.3	13	39	92.3	0.1983	19x0.1012	0.506	1.3570	1.2040	1.382	0.0108	0.0116	0.0142	0.0203	1310	1515	2395	2725	0.0469	0.0703	0.4471
Potomac/ACSS/TW	1557.4	7	36	92.7	0.2080	7x0.1241	0.372	1.3080	1.2230	1.345	0.0107	0.0117	0.0142	0.0202	1300	1505	2380	2705	0.0448	0.0714	0.4513
Platte/ACSS/TW	1569.0	5	30	93.4	0.2287	7x0.1074	0.322	1.2960	1.2320	1.333	0.0107	0.0117	0.0142	0.0201	1295	1500	2375	2700	0.0441	0.0717	0.4528
Pecos/ACSS/TW	1622.0	13	39	92.5	0.2039	19x0.1064	0.532	1.4420	1.2730	1.424	0.0102	0.0110	0.0134	0.0192	1355	1575	2485	2835	0.0485	0.0695	0.4424
Schuykill/ACSS/TW	1657.4	7	33	93.3	0.2241	7x0.1280	0.384	1.3920	1.3020	1.384	0.0101	0.0111	0.0134	0.0190	1345	1560	2475	2815	0.0461	0.0707	0.4469
James/ACSS/TW	1730.6	13	39	92.8	0.2107	19x0.1075	0.538	1.5320	1.3600	1.465	0.00959	0.0104	0.0127	0.0180	1410	1635	2590	2955	0.0498	0.0689	0.4380
Pee Dee/ACSS/TW	1758.6	7	33	93.4	0.2308	7x0.1319	0.396	1.4760	1.3810	1.425	0.00951	0.0105	0.0127	0.0180	1395	1620	2570	2930	0.0475	0.0700	0.4423
Cumberland/ACSS/TW	1926.9	13	42	92.9	0.2142	19x0.1133	0.566	1.7050	1.5130	1.545	0.00862	0.00949	0.0115	0.0162	1500	1750	2775	3175	0.0525	0.0677	0.4297
Athabaska/ACSS/TW	1949.6	7	36	93.5	0.2327	7x0.1392	0.418	1.6380	1.5310	1.500	0.00858	0.00962	0.0116	0.0163	1480	1725	2745	3140	0.0500	0.0688	0.4343
Powder/ACSS/TW	2153.8	8	60	91.6	0.1895	19x0.0961	0.480	1.8300	1.6920	1.604	0.00778	0.00877	0.0103	0.0141	1600	1875	3015	3465	0.0537	0.0672	0.4238
Santee/ACSS/TW	2627.3	8	60	92.4	0.2093	19x0.1062	0.531	2.2330	2.0640	1.764	0.00638	0.00749	0.00867	0.0118	1785	2105	3410	3935	0.0591	0.0650	0.4089

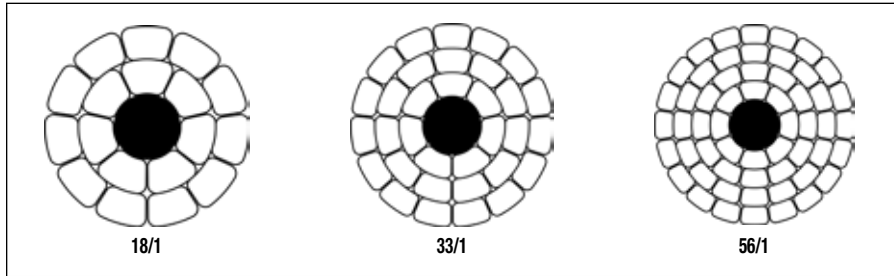
(1) Code words shown denote ACSS/TW with regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (MA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (3) Based on a conductivity of 63% IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
 (4) Based on a conductor temperature of 75°C or 200°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

TransPowr® ACCC®/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor, Composite Core - Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

TransPowr® ACCC®/TW is an aluminum conductor composite core trapezoidal concentric-lay-stranded conductor. The aluminum strands are trapezoidal in shape and enable a more compact placement of the aluminum strand wires. ACCC/TW conductors are designed to maintain the same overall diameter as a conventional round wire ACSR. The compact trapezoidal conductors, coupled with a smaller composite core, result in a TW conductor that has approximately 28% more aluminum cross-sectional area than ACSR.

The design features follow the applicable requirements of ASTM B857 (Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductors, Coated-Steel Supported (ACSS/TW)). The annealed aluminum strand wires are in accordance to ASTM B609. The composite core strength member is a proprietary high-strength carbon and glass fiber composite core in accordance to ASTM B987, around which are stranded two, three or four layers of the annealed 1350 aluminum wires.

Features and Benefits:

- Doubles the current carrying capacity over conventional ACSR. This can allow a utility to re-conductor existing pathways without structural modifications.
- Can be operated to 180°C versus the existing ACSR with its conventional 75°C limit.
- The composite core has a very low thermal expansion coefficient and as such virtually eliminates high-temperature sag problems.
- The conductor is not affected by long-term creep of the aluminum. The high temperature sag limits are controlled by the composite core.
- The overall mass (weight) of the ACCC/TW conductor, even with the increased aluminum content, can be lighter than the original ACSR conductor it is replacing.
- Uses conventional installation methods and tools familiar to transmission line construction crews.
- May reduce construction costs by allowing the use of fewer support structures. The conductor's higher strength allows longer spans.
- The composite core resists environmental degradation. It will not rust, corrode or cause electrolysis with aluminum conductors or other components.
- With the higher aluminum content, it can offer higher operating efficiencies to help decrease power generation and transmission costs.

Applications:

TransPowr ACCC/TW conductors have been

specifically designed for overhead power distribution and transmission lines and are especially useful in re-conductoring applications requiring minimal thermal sag without structure modifications.

Options:

- E3X® surface coating (/E3X)
- Non-Specular surface finish (/NS)
- ULS - Extra High Strength composite carbon fiber core enabling greater strength and lower sag due to ice for use in locations where heavy or extreme ice loading conditions exist (ULS ACCC).

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

ACCC is a registered trademark of CTC Global Corporation.



TransPowr® ACCC®/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor, Composite Core - Concentric-Lay-Stranded



TRAPEZOIDAL ALUMINUM CONDUCTOR, COMPOSITE CORE, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (FORMER CODE WORD) (1)	SIZE kcmil	EQUIVALENT ACSR SIZE kcmil	NO. AL WIRES	COMPOSITE CORE O.D. INCHES	CROSS SECTION SQ. INCHES		O.D. INCHES	APPROX. WEIGHT LBS/1000 FT (2)			RATED STRENGTH LBS	
					TOTAL	AL		TOTAL	AL	CORE	STANDARD	ULS
Oceanside/ACCC/TW (Ostrich/ACCC/TW)	383	300	18	0.235	0.3443	0.3009	0.68	395	360	35	16000	—
Linnet/ACCC/TW	430	336.4	16	0.235	0.3816	0.3382	0.72	439	404	35	16300	—
Oriole/ACCC/TW	439	336.4	18	0.280	0.4062	0.3447	0.74	462	412	50	22100	—
Waco/ACCC/TW	454	—	18	0.305	0.4296	0.3565	0.77	485	427	59	25800	—
Laredo/ACCC/TW	530	—	16	0.280	0.4778	0.4162	0.81	547	498	50	22700	—
Irving/ACCC/TW	609	—	18	0.345	0.5721	0.4786	0.88	648	573	75	33200	39000
Hawk/ACCC/TW	611	477	16	0.280	0.5414	0.4798	0.86	623	573	50	23200	—
Dove/ACCC/TW	714	556.5	18	0.305	0.6334	0.5603	0.93	729	670	59	27400	—
Grosbeak/ACCC/TW	821	636	18	0.320	0.7254	0.6450	0.99	836	771	65	30400	—
Lubbock/ACCC/TW	904	—	18	0.345	0.8035	0.7100	1.04	924	849	75	35100	40800
Galveston/ACCC/TW	1011	—	18	0.345	0.8876	0.7941	1.09	1024	949	75	35700	41500
Drake/ACCC/TW	1026	795	18	0.375	0.9159	0.8055	1.11	1052	963	89	41100	48000
Curlew/ACCC/TW	1053	1033.5	20	0.415	0.9626	0.8273	1.14	1099	990	109	49100	57500
Plano/ACCC/TW	1059	—	33	0.345	0.9258	0.8323	1.13	1074	999	75	36100	41800
Corpus Christi/ACCC/TW	1103	—	33	0.345	0.9596	0.8661	1.15	1115	1040	75	36300	42100
Arlington/ACCC/TW	1151	—	33	0.375	1.0144	0.9040	1.18	1173	1084	89	41900	48800
Cardinal/ACCC/TW	1222	954	33	0.345	1.0529	0.9594	1.20	1224	1149	75	37100	42900
Fort Worth/ACCC/TW	1300	—	33	0.375	1.1317	1.0212	1.24	1312	1223	89	42900	49800
El Paso/ACCC/TW	1350	—	33	0.345	1.1536	1.0601	1.25	1344	1269	75	37900	43700
Beaumont/ACCC/TW	1429	—	33	0.375	1.2328	1.1224	1.30	1436	1347	89	43700	50600
San Antonio/ACCC/TW	1475	—	33	0.385	1.2747	1.1583	1.32	1484	1390	94	45900	53100
Bittern/ACCC/TW	1582	1272	33	0.345	1.3365	1.2431	1.34	1567	1491	75	39400	45200
Dallas/ACCC/TW	1795	—	56	0.385	1.5257	1.4092	1.45	1792	1698	94	47900	55200
Houston/ACCC/TW	1927	—	56	0.415	1.6487	1.5134	1.51	1933	1824	109	54700	63100
Lapwing/ACCC/TW	1949	1590	56	0.385	1.6469	1.5304	1.50	1938	1844	94	48900	56100
Falcon/ACCC/TW	2045	1590	56	0.415	1.7419	1.6067	1.54	2045	1936	109	55400	63800
Chukar/ACCC/TW	2242	1780	54	0.395	1.8834	1.7609	1.60	2220	2121	99	52700	60300
Chukar II/ACCC/TW	2606	1780	52	0.395	2.1681	2.0456	1.72	2564	2465	99	55000	62600
Bluebird/ACCC/TW	2741	2156	53	0.415	2.2878	2.1525	1.76	2702	2593	109	59900	68300

(1) Code words shown denote ACCC/TW with standard composite core. See the Options section to find the appropriate code word modifier designation for alternative design options (e.g., /E3X or /NS). Use the "ULS" prefix (e.g., ULS Drake/ACCC) to denote ULS ACCC designs.

(2) Due to rounding, total values may not exactly equal the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACCC®/TW Bare Overhead Conductor

Trapezoidal Aluminum Conductor, Composite Core - Concentric-Lay-Stranded



TRAPEZOIDAL ALUMINUM CONDUCTOR, COMPOSITE CORE, CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

CODE WORD (FORMER CODE WORD) (1)	SIZE kcmil	O.D. INCHES	RESISTANCE (3) OHMS/1000 FT			AMPACITY @ 75°C (4)		AMPACITY @ 180°C (4)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHMS/1000 FT (5)	CAPACITIVE REACTANCE MEGAOHMS/1000 FT (5)
			DC @ 20°C	AC @ 25°C	AC @ 75°C	STANDARD	E3X®	STANDARD	E3X®			
Oceanside/ACCC/TW (Ostrich/ACCC/TW)	383	0.680	0.0439	0.0449	0.0541	555	620	935	1035	0.0231	0.0866	0.5582
Linnet/ACCC/TW	430	0.720	0.0390	0.0400	0.0481	600	670	1005	1120	0.0243	0.0854	0.5492
Oriole/ACCC/TW	439	0.741	0.0383	0.0393	0.0472	610	685	1025	1140	0.0254	0.0844	0.5448
Waco/ACCC/TW	454	0.770	0.0371	0.0380	0.0457	625	705	1055	1175	0.0265	0.0834	0.5388
Laredo/ACCC/TW	530	0.808	0.0317	0.0326	0.0392	685	770	1155	1290	0.0274	0.0827	0.5313
Irving/ACCC/TW	609	0.882	0.0276	0.0284	0.0341	750	850	1275	1425	0.0303	0.0804	0.5174
Hawk/ACCC/TW	611	0.857	0.0275	0.0283	0.0340	745	845	1265	1410	0.0290	0.0814	0.5219
Dove/ACCC/TW	714	0.927	0.0236	0.0243	0.0292	820	935	1400	1565	0.0313	0.0796	0.5097
Grosbeak/ACCC/TW	821	0.990	0.0205	0.0212	0.0254	895	1020	1530	1720	0.0333	0.0782	0.4995
Lubbock/ACCC/TW	904	1.04	0.0186	0.0193	0.0231	950	1085	1630	1835	0.0351	0.0770	0.4917
Galveston/ACCC/TW	1011	1.09	0.0166	0.0174	0.0208	1015	1165	1750	1970	0.0367	0.0760	0.4841
Drake/ACCC/TW	1026	1.11	0.0164	0.0171	0.0205	1030	1180	1770	1995	0.0375	0.0755	0.4818
Curlew/ACCC/TW	1053	1.14	0.0160	0.0167	0.0199	1050	1205	1810	2040	0.0387	0.0747	0.4778
Plano/ACCC/TW	1059	1.13	0.0159	0.0167	0.0199	1045	1200	1805	2035	0.0380	0.0752	0.4790
Corpus Christi/ACCC/TW	1103	1.15	0.0153	0.0161	0.0192	1070	1230	1850	2090	0.0386	0.0748	0.4763
Arlington/ACCC/TW	1151	1.18	0.0147	0.0154	0.0184	1100	1270	1905	2155	0.0398	0.0741	0.4723
Cardinal/ACCC/TW	1222	1.20	0.0138	0.0146	0.0174	1140	1310	1975	2235	0.0402	0.0739	0.4695
Fort Worth/ACCC/TW	1300	1.24	0.0130	0.0137	0.0164	1185	1365	2055	2330	0.0417	0.0730	0.4641
El Paso/ACCC/TW	1350	1.25	0.0125	0.0133	0.0158	1210	1395	2100	2380	0.0418	0.0730	0.4626
Beaumont/ACCC/TW	1429	1.30	0.0118	0.0126	0.0150	1250	1445	2180	2475	0.0434	0.0721	0.4575
San Antonio/ACCC/TW	1475	1.32	0.0115	0.0123	0.0146	1275	1475	2225	2525	0.0441	0.0717	0.4549
Bittern/ACCC/TW	1582	1.34	0.0107	0.0116	0.0137	1325	1535	2315	2635	0.0448	0.0714	0.4513
Dallas/ACCC/TW	1795	1.45	0.00945	0.0104	0.0123	1425	1665	2515	2870	0.0484	0.0696	0.4394
Houston/ACCC/TW	1927	1.51	0.00880	0.00977	0.0115	1490	1740	2630	3005	0.0504	0.0687	0.4336
Lapwing/ACCC/TW	1949	1.50	0.00870	0.00971	0.0114	1495	1745	2645	3020	0.0501	0.0688	0.4338
Falcon/ACCC/TW	2045	1.54	0.00829	0.00930	0.0109	1540	1800	2730	3120	0.0516	0.0681	0.4296
Chukar/ACCC/TW	2242	1.60	0.00756	0.00867	0.0101	1615	1890	2875	3295	0.0533	0.0674	0.4238
Chukar II/ACCC/TW	2606	1.72	0.00651	0.00776	0.00896	1745	2055	3140	3610	0.0569	0.0659	0.4132
Bluebird/ACCC/TW	2741	1.76	0.00618	0.00746	0.00859	1795	2115	3240	3730	0.0584	0.0653	0.4091

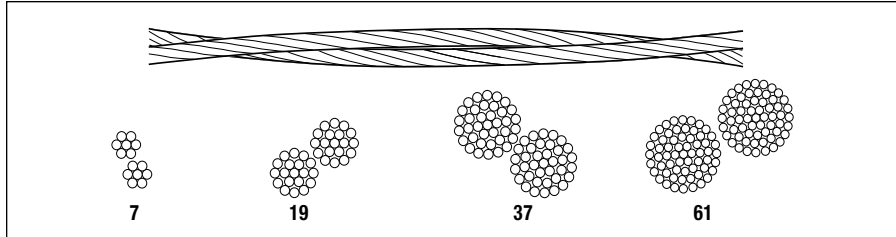
(1) Code words shown denote ACCC/TW with standard composite core. See the Options section to find the appropriate code word modifier designation for alternative design options (e.g., /E3X or /NS). Use the "ULS" prefix (e.g., ULS Drake/ACCC) to denote ULS ACCC designs.
 (3) Based on a conductivity of 63.0% IACS at 20°C for aluminum and ignores the effects of the composite core. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (4) Based on the following conditions, 60 Hz, 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and sky radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.
 Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.



Notes

TransPowr® AAC/T-2® Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded Twisted Pair



Product Construction:

Complete Conductor:

AAC/T-2® is a twisted pair of stranded aluminum conductors twisted around each other at nine-foot intervals. AAC/T-2 conductors are manufactured in accordance with the requirements of the latest issues of ASTM B230, B231 and B911, as applicable. The sizes and strandings listed on the following pages are those most frequently used for overhead lines. Additional sizes and strandings are available.

Features and Benefits:

The AAC/T-2 conductor design effectively resists wind-induced motion in two ways. First, the constantly varying diameter prevents buildup of resonant vibration in the line. Second, the low torsional stiffness reduces motion-causing wind forces to ineffective levels. These mechanical properties eliminate galloping, reduce aeolian vibration and control subconductor oscillation. AAC/T-2 can reduce structural costs by permitting higher conductor tensions, resulting in less sag and longer spans. Also, right-of-way cost may be reduced by utilizing compact line designs. Electrically, AAC/T-2 operates at lower temperatures and has a lower AC resistance than a single conventional conductor with the same aluminum area. AAC/T-2 can be installed with many of the same methods and equipment used for standard round conductors.

Applications:

AAC/T-2 conductors are used for overhead distribution and transmission lines which are subject to wind-induced motion damage.

Options:

- E3X® surface coating (/E3X)
- High-conductivity aluminum (/HC) (62.2% IACS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® AAC/T-2® Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded Twisted Pair

AAC/T-2, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	COMPONENT		OUTER AREA SQ. INCHES	OVERALL DIMENSIONS INCHES	EQUIV. DIA. INCHES	APPROX. WEIGHT LB/KFT	RATED STRENGTH LBS
		AWG OR kcmil	STRANDING NO. X DIA. INCHES					
T-2 Lily	105.2	#3	7x0.0867	0.0826	0.260 x 0.520	0.426	98.0	2180
T-2 Iris	132.7	#2	7x0.0974	0.1043	0.292 x 0.584	0.478	123.6	2700
T-2 Pansy	167.4	#1	7x0.1093	0.1314	0.328 x 0.656	0.537	155.7	3280
T-2 Poppy	211.2	1/0	7x0.1228	0.1658	0.368 x 0.736	0.603	196.5	3980
T-2 Aster	266.2	2/0	7x0.1379	0.2091	0.414 x 0.828	0.677	247.8	5020
T-2 Phlox	335.6	3/0	7x0.1548	0.2635	0.464 x 0.928	0.760	312.3	6070
T-2 Oxlip	423.2	4/0	7x0.1739	0.3325	0.522 x 1.044	0.854	394.1	7660
T-2 Daisy	533.6	266.8	7x0.1952	0.4190	0.586 x 1.172	0.959	496.5	9650
T-2 Laurel	533.6	266.8	19x0.1185	0.4191	0.592 x 1.184	0.970	498.8	9940
T-2 Tulip	672.8	336.4	19x0.1331	0.5287	0.666 x 1.332	1.089	629.3	12300
T-2 Daffodil	700.0	350.0	19x0.1357	0.5496	0.678 x 1.356	1.111	654.1	12800
T-2 Canna	795.0	397.5	19x0.1446	0.6240	0.723 x 1.446	1.184	742.7	14200
T-2 Cosmos	954.0	477.0	19x0.1584	0.7488	0.792 x 1.584	1.297	891.3	16700
T-2 Syringa	954.0	477.0	37x0.1135	0.7487	0.794 x 1.588	1.301	894.1	17400
T-2 Zinnia	1000.0	500.0	19x0.1622	0.7852	0.811 x 1.622	1.328	934.5	17500
T-2 Hyacinth	1000.0	500.0	37x0.1162	0.7848	0.813 x 1.626	1.332	937.1	18200
T-2 Dahlia	1113.0	556.5	19x0.1711	0.8737	0.856 x 1.712	1.400	1040	19500
T-2 Mistletoe	1113.0	556.5	37x0.1226	0.8736	0.858 x 1.716	1.405	1043	19900
T-2 Day Lily	1192.0	596.0	19x0.1771	0.9361	0.886 x 1.772	1.450	1114	20900
T-2 Meadowsweet	1200.0	600.0	37x0.1273	0.9418	0.891 x 1.782	1.459	1125	21400
T-2 Orchid	1272.0	636.0	37x0.1311	0.9989	0.918 x 1.836	1.502	1193	22700
T-2 Violet	1431.0	715.5	37x0.1391	1.1250	0.974 x 1.948	1.594	1343	25600
T-2 Nasturtium	1431.0	715.5	61x0.1083	1.1240	0.975 x 1.950	1.596	1348	26300
T-2 Petunia	1500.0	750.0	37x0.1424	1.1790	0.997 x 1.994	1.632	1407	26300
T-2 Arbutus	1590.0	795.0	37x0.1466	1.2490	1.026 x 2.052	1.680	1492	27800
T-2 Lilac	1590.0	795.0	61x0.1142	1.2500	1.028 x 2.056	1.683	1499	28700
T-2 Fuchsia	1600.0	800.0	37x0.1470	1.2560	1.029 x 2.058	1.684	1500	28000
T-2 Heliotrope	1600.0	800.0	61x0.1145	1.2560	1.031 x 2.062	1.687	1507	28800
T-2 Anemone	1749.0	874.5	37x0.1537	1.3730	1.076 x 2.152	1.761	1640	30000
T-2 Crocus	1749.0	874.5	61x0.1197	1.3730	1.077 x 2.154	1.764	1646	31500
T-2 Magnolia	1908.0	954.0	37x0.1606	1.4990	1.124 x 2.248	1.840	1790	32700
T-2 Goldenrod	1908.0	954.0	61x0.1251	1.5000	1.126 x 2.252	1.843	1798	33700
T-2 Camellia	2000.0	1000.0	61x0.1280	1.5700	1.152 x 2.304	1.886	1883	35300
T-2 Bluebell	2067.0	1033.5	37x0.1671	1.6230	1.170 x 2.340	1.915	1938	35400
T-2 Larkspur	2067.0	1033.5	61x0.1302	1.6240	1.172 x 2.344	1.918	1948	36500
T-2 Marigold	2226.0	1113.0	61x0.1351	1.7490	1.216 x 2.432	1.990	2097	39300

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® AAC/T-2® Bare Overhead Conductor

All-Aluminum 1350 Conductor Concentric-Lay-Stranded Twisted Pair

AAC/T-2, CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

CODE WORD	COMPONENT			OUTER AREA SQ. INCHES	OVERALL DIMENSIONS INCHES	EQUIV. DIA. INCHES	RESISTANCE (1) OHMS/KFT			AMPACITY @75°C (2)		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT (3)	CAPACITIVE REACTANCE MEGAOHM/KFT (3)
	SIZE AWG OR kcmil	AWG OR kcmil	STRANDING NO. X DIA. INCHES				DC @20°C	AC @25°C	AC @75°C	STD.	E3X®			
T-2 Lily	105.2	#3	7x0.0867	0.0826	0.260 x 0.520	0.426	0.163	0.166	0.199	255	280	0.0131	0.0996	0.6545
T-2 Iris	132.7	#2	7x0.0974	0.1043	0.292 x 0.584	0.478	0.129	0.132	0.158	295	325	0.0147	0.0970	0.6362
T-2 Pansy	167.4	#1	7x0.1093	0.1314	0.328 x 0.656	0.537	0.103	0.105	0.125	345	380	0.0165	0.0943	0.6182
T-2 Poppy	211.2	1/0	7x0.1228	0.1658	0.368 x 0.736	0.603	0.0813	0.0830	0.0994	400	440	0.0185	0.0917	0.5999
T-2 Aster	266.2	2/0	7x0.1379	0.2091	0.414 x 0.828	0.677	0.0645	0.0659	0.0789	460	515	0.0208	0.0890	0.5818
T-2 Phlox	335.6	3/0	7x0.1548	0.2635	0.464 x 0.928	0.760	0.0511	0.0523	0.0626	535	600	0.0233	0.0864	0.5637
T-2 Oxlip	423.2	4/0	7x0.1739	0.3325	0.522 x 1.044	0.854	0.0406	0.0415	0.0497	615	695	0.0262	0.0837	0.5454
T-2 Daisy	533.6	266.8	7x0.1952	0.4190	0.586 x 1.172	0.959	0.0322	0.0330	0.0394	715	810	0.0294	0.0810	0.5273
T-2 Laurel	533.6	266.8	19x0.1185	0.4191	0.592 x 1.184	0.970	0.0323	0.0332	0.0397	715	810	0.0304	0.0803	0.5255
T-2 Tulip	672.8	336.4	19x0.1331	0.5287	0.666 x 1.332	1.089	0.0256	0.0264	0.0316	825	945	0.0341	0.0776	0.5073
T-2 Daffodil	700.0	350.0	19x0.1357	0.5496	0.678 x 1.356	1.111	0.0246	0.0254	0.0304	845	970	0.0348	0.0772	0.5043
T-2 Canna	795.0	397.5	19x0.1446	0.6240	0.723 x 1.446	1.184	0.0217	0.0225	0.0268	915	1050	0.0371	0.0757	0.4943
T-2 Cosmos	954.0	477.0	19x0.1584	0.7488	0.792 x 1.584	1.297	0.0181	0.0189	0.0224	1025	1185	0.0406	0.0736	0.4801
T-2 Syringa	954.0	477.0	37x0.1135	0.7487	0.794 x 1.588	1.301	0.0181	0.0190	0.0226	1020	1180	0.0410	0.0734	0.4796
T-2 Zinnia	1000.0	500.0	19x0.1622	0.7852	0.811 x 1.622	1.328	0.0172	0.0180	0.0214	1055	1220	0.0416	0.0731	0.4763
T-2 Hyacinth	1000.0	500.0	37x0.1162	0.7848	0.813 x 1.626	1.332	0.0173	0.0182	0.0216	1050	1220	0.0420	0.0729	0.4759
T-2 Dahlia	1113.0	556.5	19x0.1711	0.8737	0.856 x 1.712	1.400	0.0155	0.0163	0.0194	1125	1305	0.0439	0.0718	0.4680
T-2 Mistletoe	1113.0	556.5	37x0.1226	0.8736	0.858 x 1.716	1.405	0.0155	0.0164	0.0195	1120	1305	0.0443	0.0716	0.4675
T-2 Day Lily	1192.0	596.0	19x0.1771	0.9361	0.886 x 1.772	1.450	0.0145	0.0153	0.0181	1175	1365	0.0454	0.0711	0.4626
T-2 Meadowsweet	1200.0	600.0	37x0.1273	0.9418	0.891 x 1.782	1.459	0.0144	0.0153	0.0181	1175	1370	0.0460	0.0708	0.4616
T-2 Orchid	1272.0	636.0	37x0.1311	0.9989	0.918 x 1.836	1.502	0.0136	0.0145	0.0172	1215	1420	0.0474	0.0701	0.4570
T-2 Violet	1431.0	715.5	37x0.1391	1.1250	0.974 x 1.948	1.594	0.0121	0.0131	0.0154	1305	1530	0.0503	0.0687	0.4477
T-2 Nasturtium	1431.0	715.5	61x0.1083	1.1240	0.975 x 1.950	1.596	0.0121	0.0131	0.0155	1300	1525	0.0505	0.0686	0.4475
T-2 Petunia	1500.0	750.0	37x0.1424	1.1790	0.997 x 1.994	1.632	0.0115	0.0125	0.0147	1340	1575	0.0515	0.0682	0.4440
T-2 Arbutus	1590.0	795.0	37x0.1466	1.2490	1.026 x 2.052	1.680	0.0109	0.0119	0.0140	1390	1635	0.0530	0.0675	0.4395
T-2 Lilac	1590.0	795.0	61x0.1142	1.2500	1.028 x 2.056	1.683	0.0109	0.0120	0.0141	1385	1630	0.0532	0.0674	0.4392
T-2 Fuchsia	1600.0	800.0	37x0.1470	1.2560	1.029 x 2.058	1.684	0.0108	0.0118	0.0139	1395	1640	0.0531	0.0675	0.4390
T-2 Heliotrope	1600.0	800.0	61x0.1145	1.2560	1.031 x 2.062	1.687	0.0109	0.0119	0.0140	1390	1635	0.0534	0.0673	0.4388
T-2 Anemone	1749.0	874.5	37x0.1537	1.3730	1.076 x 2.152	1.761	0.00989	0.0110	0.0128	1470	1730	0.0556	0.0664	0.4321
T-2 Crocus	1749.0	874.5	61x0.1197	1.3730	1.077 x 2.154	1.764	0.00993	0.0110	0.0129	1465	1725	0.0558	0.0663	0.4319
T-2 Magnolia	1908.0	954.0	37x0.1606	1.4990	1.124 x 2.248	1.840	0.00906	0.0102	0.0119	1545	1825	0.0580	0.0654	0.4252
T-2 Goldenrod	1908.0	954.0	61x0.1251	1.5000	1.126 x 2.252	1.843	0.00910	0.0103	0.0120	1540	1820	0.0583	0.0653	0.4249
T-2 Camellia	2000.0	1000.0	61x0.1280	1.5700	1.152 x 2.304	1.886	0.00868	0.00988	0.0115	1580	1870	0.0596	0.0648	0.4214
T-2 Bluebell	2067.0	1033.5	37x0.1671	1.6230	1.170 x 2.340	1.915	0.00837	0.00954	0.0111	1615	1915	0.0604	0.0645	0.4190
T-2 Larkspur	2067.0	1033.5	61x0.1302	1.6240	1.172 x 2.344	1.918	0.00840	0.00963	0.0112	1610	1910	0.0607	0.0644	0.4187
T-2 Marigold	2226.0	1113.0	61x0.1351	1.7490	1.216 x 2.432	1.990	0.00780	0.00908	0.0105	1675	1995	0.0630	0.0635	0.4129

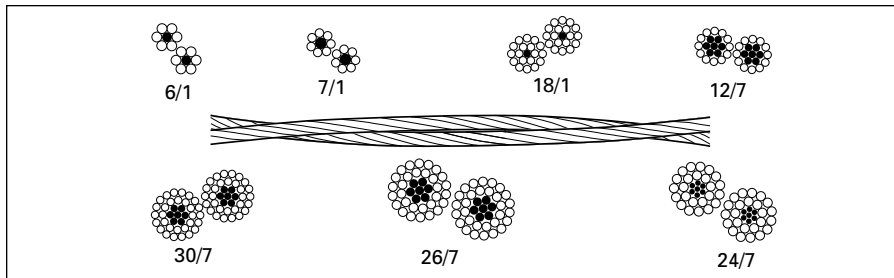
(1) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C. To convert to ohms/mile, multiply by 5.28. To convert of ohms/km, multiply by 3.281.
 (2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (3) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

TransPowr® ACSR/T-2® Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded Twisted Pair



Product Construction:

Complete Conductor:

ACSR/T-2® is a pair of stranded aluminum, steel reinforced conductors twisted around each other at nine foot intervals. ACSR/T-2 conductors are manufactured in accordance with the latest applicable issue of ASTM B911. The sizes and strandings listed on the following pages are those most frequently used for overhead lines. The steel core wires are protected by galvanizing, aluminizing or aluminum cladding. The standard Class A zinc coating is usually adequate for ordinary environments. For greater protection, Class B and C galvanized coatings, aluminized or aluminum-clad steel cores may be specified.

Features and Benefits:

The ACSR/T-2 conductor design effectively resists wind-induced motion in two ways. First, the constantly varying diameter prevents buildup of resonant vibration in the line. Second, the low torsional stiffness reduces motion-causing wind forces to ineffective levels. These mechanical properties eliminate galloping, reduce aeolian vibration and control sub-conductor oscillation. ACSR/T-2 can reduce structural costs by permitting higher conductor tensions, resulting in less sag and longer spans. Also, right-of-way costs maybe reduced by utilizing compact line designs. Electrically, ACSR/T-2 operates at lower temperatures and has a lower AC resistance than a single conventional conductor with the same aluminum area. ACSR/T-2 can be installed with many of the same methods and equipment used for standard round conductors.

Applications:

ACSR/T-2 conductors are used for overhead distribution and transmission lines which are subject to wind-induced motion damage.

Options:

- E3X® surface coating (/E3X)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Regular-strength Class C galvanized steel core (/GC2)
- High-strength Class A galvanized steel core (/GA3 to ASTM B606)
- Extra-high-strength Class A galvanized steel core (/GA4 to ASTM B957)
- Ultra-high-strength Class A galvanized steel core (/GA5 to ASTM B957)
- Regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2 to ASTM B802)
- High-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA3 to ASTM B803)
- Extra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA4 to ASTM B958)
- Ultra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA5 to ASTM B958)
- Aluminum-clad steel core (/AW)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

TransPowr® ACSR/T-2® Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded Twisted Pair

ACSR/T-2, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	COMPONENT			OUTER AREA SQ. INCHES		OVERALL DIMENSIONS INCHES	EQUIV. DIA. INCHES	APPROX. WEIGHT LB/KFT		RATED STRENGTH LBS
		AWG OR kcmil	STRANDING NO. X DIA. INCHES		TOTAL	AL			TOTAL	AL	
			AL	STEEL							
T-2 Swan	#1	#4	6x0.0834	1x0.0834	0.0765	0.0656	0.250 x 0.500	0.410	114.7	77.9	3720
T-2 Swanate	#1	#4	7x0.0772	1x0.1029	0.0822	0.0655	0.257 x 0.514	0.421	133.8	77.7	4720
T-2 Swallow	1/0	#3	6x0.0936	1x0.0937	0.0964	0.0826	0.281 x 0.562	0.460	144.6	98.1	4590
T-2 Sparrow	2/0	#2	6x0.1052	1x0.1052	0.1217	0.1043	0.316 x 0.632	0.517	182.5	123.9	5690
T-2 Sparate	2/0	#2	7x0.0974	1x0.1299	0.1308	0.1043	0.325 x 0.650	0.532	213.1	123.7	7280
T-2 Robin	3/0	#1	6x0.1181	1x0.1181	0.1534	0.1315	0.354 x 0.708	0.580	230.0	156.1	7110
T-2 Raven	4/0	1/0	6x0.1327	1x0.1327	0.1936	0.1660	0.398 x 0.796	0.652	290.4	197.1	8760
T-2 Quail	266.2	2/0	6x0.1489	1x0.1489	0.2438	0.2090	0.447 x 0.894	0.731	365.6	248.2	10600
T-2 Pigeon	335.6	3/0	6x0.1672	1x0.1672	0.3074	0.2635	0.502 x 1.004	0.821	461.0	312.9	13200
T-2 Penguin	423.2	4/0	6x0.1878	1x0.1878	0.3878	0.3324	0.563 x 1.126	0.922	581.6	394.8	16700
T-2 Jaegar	456.4	228.2	18x0.1126	1x0.1126	0.3784	0.3585	0.563 x 1.126	0.922	494.2	427.1	12000
T-2 Waxwing	533.6	266.8	18x0.1217	1x0.1217	0.4420	0.4188	0.608 x 1.216	0.996	577.3	498.9	13800
T-2 Spoonbill	533.6	266.8	22x0.1101	7x0.0612	0.4601	0.4189	0.624 x 1.248	1.021	639.5	500.0	17400
T-2 Scaup	533.6	266.8	24x0.1054	7x0.0703	0.4731	0.4188	0.632 x 1.264	1.035	684.4	500.3	20000
T-2 Partridge	533.6	266.8	26x0.1013	7x0.0788	0.4874	0.4191	0.642 x 1.284	1.050	732.3	501.0	22600
T-2 Junco	533.6	266.8	30x0.0943	7x0.0943	0.5168	0.4190	0.660 x 1.320	1.081	832.9	501.7	27900
T-2 Ostrich	600.0	300.0	26x0.1074	7x0.0835	0.5478	0.4711	0.680 x 1.360	1.113	822.9	563.2	25400
T-2 Merlin	672.8	336.4	18x0.1367	1x0.1367	0.5577	0.5284	0.684 x 1.368	1.119	728.4	629.4	17400
T-2 Trogon	672.8	336.4	20x0.1297	7x0.0576	0.5650	0.5285	0.692 x 1.384	1.132	754.6	631.0	18900
T-2 Woodcock	672.8	336.4	22x0.1237	7x0.0687	0.5807	0.5288	0.701 x 1.402	1.147	807.0	631.2	21800
T-2 Widgeon	672.8	336.4	24x0.1184	7x0.0789	0.5969	0.5285	0.710 x 1.420	1.163	863.2	631.3	25000
T-2 Linnet	672.8	336.4	26x0.1137	7x0.0884	0.6139	0.5280	0.720 x 1.440	1.179	922.2	631.2	28200
T-2 Oriole	672.8	336.4	30x0.1059	7x0.1059	0.6518	0.5285	0.741 x 1.482	1.214	1050	632.7	34700
T-2 Chickadee	795.0	397.5	18x0.1486	1x0.1486	0.6590	0.6244	0.743 x 1.486	1.216	860.8	743.8	19900
T-2 Ptarmigan	795.0	397.5	20x0.1410	7x0.0627	0.6678	0.6246	0.752 x 1.504	1.231	892.2	745.7	22100
T-2 Stork	795.0	397.5	22x0.1344	7x0.0747	0.6856	0.6242	0.762 x 1.524	1.247	952.9	745.1	25700
T-2 Brant	795.0	397.5	24x0.1287	7x0.0858	0.7054	0.6244	0.772 x 1.544	1.264	1020	745.9	29300
T-2 Ibis	795.0	397.5	26x0.1236	7x0.0961	0.7255	0.6239	0.783 x 1.566	1.281	1090	745.9	32500
T-2 Lark	795.0	397.5	30x0.1151	7x0.1151	0.7700	0.6243	0.806 x 1.612	1.319	1241	747.4	40700
T-2 Pelican	954.0	477.0	18x0.1628	1x0.1628	0.7910	0.7494	0.814 x 1.628	1.333	1033	892.8	23500
T-2 Tailorbird	954.0	477.0	20x0.1544	7x0.0686	0.8007	0.7489	0.823 x 1.646	1.348	1069	894.2	26200
T-2 Toucan	954.0	477.0	22x0.1472	7x0.0818	0.8224	0.7488	0.834 x 1.668	1.366	1143	893.8	30500
T-2 Flicker	954.0	477.0	24x0.1410	7x0.0940	0.8467	0.7495	0.846 x 1.692	1.385	1224	895.3	34300
T-2 Hawk	954.0	477.0	26x0.1354	7x0.1053	0.8707	0.7487	0.858 x 1.716	1.404	1308	895.1	39100
T-2 Hen	954.0	477.0	30x0.1261	7x0.1261	0.9242	0.7493	0.883 x 1.766	1.445	1489	897.1	47600
T-2 Heron	1000.0	500.0	30x0.1291	7x0.1291	0.9687	0.7854	0.904 x 1.808	1.479	1561	940.2	49900
T-2 Nightingale	1034.0	517.0	18x0.1695	1x0.1694	0.8574	0.8123	0.847 x 1.694	1.387	1120	967.7	25500
T-2 Creeper	1034.0	517.0	20x0.1608	7x0.0714	0.8684	0.8123	0.857 x 1.714	1.404	1160	969.9	28400
T-2 Osprey	1113.0	556.5	18x0.1758	1x0.1758	0.9224	0.8738	0.879 x 1.758	1.439	1205	1041	27400
T-2 Tody	1113.0	556.5	20x0.1668	7x0.0741	0.9344	0.8741	0.890 x 1.780	1.456	1248	1044	30500
T-2 Sapsucker	1113.0	556.5	22x0.1590	7x0.0883	0.9594	0.8736	0.901 x 1.802	1.475	1333	1043	35100
T-2 Parakeet	1113.0	556.5	24x0.1523	7x0.1015	0.9877	0.8744	0.914 x 1.828	1.496	1428	1045	39600
T-2 Dove	1113.0	556.5	26x0.1463	7x0.1138	1.0170	0.8741	0.927 x 1.854	1.517	1527	1045	45200
T-2 Eagle	1113.0	556.5	30x0.1362	7x0.1362	1.0780	0.8742	0.953 x 1.906	1.561	1737	1047	55600
T-2 Kittiwake	1192.0	596.0	18x0.1820	1x0.1820	0.9886	0.9366	0.910 x 1.820	1.490	1291	1116	29400

(1) Code words shown denote ACSR/T-2 with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr® ACSR/T-2® Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded Twisted Pair

ACSR/T-2, CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	COMPONENT				OUTER AREA SQ. INCHES	OVERALL DIMENSIONS INCHES	EQUIV. DIA. INCHES	RESISTANCE OHMS/KFT			AMPACITY @75°C		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT	CAPACITIVE REACTANCE MEGAOHM/ KFT	
		AWG OR kcmil	STRANDING NO. X DIA. INCHES		TOTAL				AL	DC @20°C	AC @25°C	AC @75°C	STD.				E3X®
			AL	STEEL													
T-2 Swan	#1	#4	6x0.0834	1x0.0834	0.0765	0.0656	0.250 x 0.500	0.410	0.201	0.205	0.246	230	250	0.0129	0.100	0.6605	
T-2 Swanate	#1	#4	7x0.0772	1x0.1029	0.0822	0.0655	0.257 x 0.514	0.421	0.198	0.202	0.242	230	255	0.0134	0.0991	0.6562	
T-2 Swallow	1/0	#3	6x0.0936	1x0.0937	0.0964	0.0826	0.281 x 0.562	0.460	0.160	0.163	0.195	265	290	0.0145	0.0973	0.6424	
T-2 Sparrow	2/0	#2	6x0.1052	1x0.1052	0.1217	0.1043	0.316 x 0.632	0.517	0.126	0.129	0.154	305	340	0.0162	0.0947	0.6242	
T-2 Sparate	2/0	#2	7x0.0974	1x0.1299	0.1308	0.1043	0.325 x 0.650	0.532	0.125	0.127	0.152	310	345	0.0169	0.0938	0.6197	
T-2 Robin	3/0	#1	6x0.1181	1x0.1181	0.1534	0.1315	0.354 x 0.708	0.580	0.100	0.102	0.122	355	395	0.0182	0.0921	0.6061	
T-2 Raven	4/0	1/0	6x0.1327	1x0.1327	0.1936	0.1660	0.398 x 0.796	0.652	0.0794	0.0811	0.0970	410	460	0.0205	0.0893	0.5878	
T-2 Quail	266.2	2/0	6x0.1489	1x0.1489	0.2438	0.2090	0.447 x 0.894	0.731	0.0631	0.0644	0.0771	475	535	0.0230	0.0867	0.5698	
T-2 Pigeon	335.6	3/0	6x0.1672	1x0.1672	0.3074	0.2635	0.502 x 1.004	0.821	0.0500	0.0511	0.0612	550	620	0.0258	0.0841	0.5516	
T-2 Penguin	423.2	4/0	6x0.1878	1x0.1878	0.3878	0.3324	0.563 x 1.126	0.922	0.0397	0.0406	0.0485	635	720	0.0290	0.0814	0.5334	
T-2 Jaegar	456.4	228.2	18x0.1126	1x0.1126	0.3784	0.3585	0.563 x 1.126	0.922	0.0375	0.0385	0.0460	655	740	0.0292	0.0812	0.5335	
T-2 Waxwing	533.6	266.8	18x0.1217	1x0.1217	0.4420	0.4188	0.608 x 1.216	0.996	0.0321	0.0330	0.0394	720	820	0.0315	0.0795	0.5213	
T-2 Spoonbill	533.6	266.8	22x0.1101	7x0.0612	0.4601	0.4189	0.624 x 1.248	1.021	0.0319	0.0328	0.0392	725	830	0.0327	0.0786	0.5174	
T-2 Scaup	533.6	266.8	24x0.1054	7x0.0703	0.4731	0.4188	0.632 x 1.264	1.035	0.0318	0.0326	0.0390	730	835	0.0333	0.0782	0.5153	
T-2 Partridge	533.6	266.8	26x0.1013	7x0.0788	0.4874	0.4191	0.642 x 1.284	1.050	0.0317	0.0324	0.0388	735	840	0.0339	0.0778	0.5130	
T-2 Junco	533.6	266.8	30x0.0943	7x0.0943	0.5168	0.4190	0.660 x 1.320	1.081	0.0314	0.0321	0.0384	745	855	0.0352	0.0769	0.5086	
T-2 Ostrich	600.0	300.0	26x0.1074	7x0.0835	0.5478	0.4711	0.680 x 1.360	1.113	0.0282	0.0289	0.0345	790	910	0.0360	0.0764	0.5039	
T-2 Merlin	672.8	336.4	18x0.1367	1x0.1367	0.5577	0.5284	0.684 x 1.368	1.119	0.0254	0.0263	0.0313	835	955	0.0354	0.0768	0.5031	
T-2 Trogon	672.8	336.4	20x0.1297	7x0.0576	0.5650	0.5285	0.692 x 1.384	1.132	0.0254	0.0262	0.0313	835	960	0.0361	0.0763	0.5013	
T-2 Woodcock	672.8	336.4	22x0.1237	7x0.0687	0.5807	0.5288	0.701 x 1.402	1.147	0.0253	0.0260	0.0311	840	965	0.0367	0.0760	0.4992	
T-2 Widgeon	672.8	336.4	24x0.1184	7x0.0789	0.5969	0.5285	0.710 x 1.420	1.163	0.0252	0.0259	0.0310	845	975	0.0374	0.0755	0.4971	
T-2 Linnet	672.8	336.4	26x0.1137	7x0.0884	0.6139	0.5280	0.720 x 1.440	1.179	0.0251	0.0258	0.0308	850	980	0.0381	0.0751	0.4950	
T-2 Oriole	672.8	336.4	30x0.1059	7x0.1059	0.6518	0.5285	0.741 x 1.482	1.214	0.0249	0.0255	0.0305	865	995	0.0395	0.0743	0.4904	
T-2 Chickadee	795.0	397.5	18x0.1486	1x0.1486	0.6590	0.6244	0.743 x 1.486	1.216	0.0215	0.0223	0.0266	925	1065	0.0385	0.0749	0.4901	
T-2 Ptarmigan	795.0	397.5	20x0.1410	7x0.0627	0.6678	0.6246	0.752 x 1.504	1.231	0.0215	0.0223	0.0266	930	1070	0.0392	0.0744	0.4881	
T-2 Stork	795.0	397.5	22x0.1344	7x0.0747	0.6856	0.6242	0.762 x 1.524	1.247	0.0214	0.0221	0.0264	935	1080	0.0399	0.0740	0.4862	
T-2 Brant	795.0	397.5	24x0.1287	7x0.0858	0.7054	0.6244	0.772 x 1.544	1.264	0.0213	0.0220	0.0263	940	1085	0.0407	0.0736	0.4840	
T-2 Ibis	795.0	397.5	26x0.1236	7x0.0961	0.7255	0.6239	0.783 x 1.566	1.281	0.0213	0.0219	0.0261	945	1095	0.0414	0.0732	0.4819	
T-2 Lark	795.0	397.5	30x0.1151	7x0.1151	0.7700	0.6243	0.806 x 1.612	1.319	0.0211	0.0216	0.0259	960	1110	0.0430	0.0723	0.4774	
T-2 Pelican	954.0	477.0	18x0.1628	1x0.1628	0.7910	0.7494	0.814 x 1.628	1.333	0.0179	0.0187	0.0223	1035	1200	0.0422	0.0727	0.4758	
T-2 Tailorbird	954.0	477.0	20x0.1544	7x0.0686	0.8007	0.7489	0.823 x 1.646	1.348	0.0180	0.0187	0.0222	1040	1205	0.0429	0.0724	0.4740	
T-2 Toucan	954.0	477.0	22x0.1472	7x0.0818	0.8224	0.7488	0.834 x 1.668	1.366	0.0179	0.0186	0.0221	1045	1215	0.0437	0.0719	0.4719	
T-2 Flicker	954.0	477.0	24x0.1410	7x0.0940	0.8467	0.7495	0.846 x 1.692	1.385	0.0178	0.0184	0.0220	1055	1225	0.0445	0.0715	0.4697	
T-2 Hawk	954.0	477.0	26x0.1354	7x0.1053	0.8707	0.7487	0.858 x 1.716	1.404	0.0177	0.0183	0.0219	1060	1230	0.0454	0.0711	0.4676	
T-2 Hen	954.0	477.0	30x0.1261	7x0.1261	0.9242	0.7493	0.883 x 1.766	1.445	0.0176	0.0181	0.0216	1075	1250	0.0471	0.0702	0.4631	
T-2 Heron	1000.0	500.0	30x0.1291	7x0.1291	0.9687	0.7854	0.904 x 1.808	1.479	0.0168	0.0173	0.0206	1105	1290	0.0482	0.0697	0.4594	
T-2 Nightingale	1034.0	517.0	18x0.1695	1x0.1694	0.8574	0.8123	0.847 x 1.694	1.387	0.0165	0.0174	0.0206	1085	1265	0.0439	0.0718	0.4695	
T-2 Creeper	1034.0	517.0	20x0.1608	7x0.0714	0.8684	0.8123	0.857 x 1.714	1.404	0.0165	0.0173	0.0206	1090	1270	0.0447	0.0714	0.4676	
T-2 Osprey	1113.0	556.5	18x0.1758	1x0.1758	0.9224	0.8738	0.879 x 1.758	1.439	0.0154	0.0162	0.0192	1135	1325	0.0456	0.0710	0.4637	
T-2 Tody	1113.0	556.5	20x0.1668	7x0.0741	0.9344	0.8741	0.890 x 1.780	1.456	0.0154	0.0161	0.0192	1140	1330	0.0464	0.0706	0.4619	
T-2 Sapsucker	1113.0	556.5	22x0.1590	7x0.0883	0.9594	0.8736	0.901 x 1.802	1.475	0.0153	0.0160	0.0190	1150	1340	0.0472	0.0702	0.4599	
T-2 Parakeet	1113.0	556.5	24x0.1523	7x0.1015	0.9877	0.8744	0.914 x 1.828	1.496	0.0152	0.0159	0.0189	1160	1350	0.0481	0.0697	0.4577	
T-2 Dove	1113.0	556.5	26x0.1463	7x0.1138	1.0170	0.8741	0.927 x 1.854	1.517	0.0152	0.0158	0.0188	1165	1360	0.0490	0.0693	0.4555	
T-2 Eagle	1113.0	556.5	30x0.1362	7x0.1362	1.0780	0.8742	0.953 x 1.906	1.561	0.0151	0.0156	0.0185	1180	1385	0.0508	0.0685	0.4510	
T-2 Kittiwake	1192.0	596.0	18x0.1820	1x0.1820	0.9886	0.9366	0.910 x 1.820	1.490	0.0144	0.0152	0.0180	1185	1385	0.0472	0.0702	0.4583	

(1) Code words shown denote ACSR/T-2 with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (3) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (4) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



TransPowr® ACSR/T-2® Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded Twisted Pair

ACSR/T-2, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	COMPONENT			OUTER AREA SQ. INCHES		OVERALL DIMENSIONS INCHES	EQUIV. DIA. INCHES	APPROX. WEIGHT LB/KFT		RATED STRENGTH LBS
		AWG OR kcmil	STRANDING NO. X DIA. INCHES		TOTAL	AL			TOTAL	AL	
			AL	STEEL							
T-2 Skua	1210.0	605.0	20x0.1739	7x0.0773	1.0160	0.9501	0.928 x 1.856	1.518	1357	1134	33200
T-2 Peacock	1210.0	605.0	24x0.1588	7x0.1059	1.0740	0.9507	0.953 x 1.906	1.560	1553	1136	43100
T-2 Squab	1210.0	605.0	26x0.1525	7x0.1186	1.1040	0.9498	0.966 x 1.932	1.581	1659	1135	48700
T-2 Wood Duck	1210.0	605.0	30x0.1420	7x0.1420	1.1720	0.9502	0.994 x 1.988	1.627	1889	1138	57800
T-2 Teal	1210.0	605.0	30x0.1420	19x0.0852	1.1670	0.9502	0.994 x 1.988	1.627	1874	1138	59900
T-2 Swift	1272.0	636.0	36x0.1329	1x0.1329	1.0270	0.9988	0.930 x 1.860	1.523	1287	1193	27500
T-2 Kingbird	1272.0	636.0	18x0.1880	1x0.1880	1.0550	0.9993	0.940 x 1.880	1.539	1378	1191	31400
T-2 Turacos	1272.0	636.0	20x0.1783	7x0.0792	1.0680	0.9987	0.951 x 1.902	1.556	1426	1192	34900
T-2 Rook	1272.0	636.0	24x0.1628	7x0.1085	1.1290	0.9992	0.977 x 1.954	1.599	1632	1194	45300
T-2 Grosbeak	1272.0	636.0	26x0.1564	7x0.1216	1.1620	0.9990	0.990 x 1.980	1.621	1745	1194	50400
T-2 Scoter	1272.0	636.0	30x0.1456	7x0.1456	1.2320	0.9990	1.019 x 2.038	1.668	1986	1196	60800
T-2 Egret	1272.0	636.0	30x0.1456	19x0.0874	1.2270	0.9990	1.019 x 2.038	1.669	1971	1196	63000
T-2 Siskin	1333.2	666.6	20x0.1826	7x0.0812	1.1200	1.0470	0.974 x 1.948	1.594	1496	1251	36600
T-2 Flamingo	1333.2	666.6	24x0.1667	7x0.1111	1.1830	1.0480	1.000 x 2.000	1.637	1711	1251	47500
T-2 Gannet	1333.2	666.6	26x0.1601	7x0.1245	1.2170	1.0470	1.014 x 2.028	1.660	1829	1251	52800
T-2 Dunlin	1431.0	715.5	20x0.1891	7x0.0840	1.2010	1.1230	1.008 x 2.016	1.651	1604	1341	39200
T-2 Stilt	1431.0	715.5	24x0.1727	7x0.1151	1.2700	1.1240	1.036 x 2.072	1.696	1837	1343	51000
T-2 Starling	1431.0	715.5	26x0.1659	7x0.1290	1.3070	1.1240	1.051 x 2.102	1.720	1964	1344	56700
T-2 Redwing	1431.0	715.5	30x0.1544	19x0.0926	1.3790	1.1230	1.081 x 2.162	1.769	2215	1345	69100
T-2 Coot	1590.0	795.0	36x0.1486	1x0.1486	1.2830	1.2490	1.040 x 2.080	1.703	1609	1492	33500
T-2 Macaw	1590.0	795.0	42x0.1376	7x0.0764	1.3130	1.2490	1.055 x 2.110	1.727	1715	1498	40100
T-2 Turbit	1590.0	795.0	20x0.1994	7x0.0886	1.3350	1.2490	1.063 x 2.126	1.741	1784	1491	43600
T-2 Tern	1590.0	795.0	45x0.1329	7x0.0886	1.3350	1.2480	1.063 x 2.126	1.740	1790	1498	44100
T-2 Puffin	1590.0	795.0	22x0.1901	7x0.1056	1.3710	1.2490	1.077 x 2.154	1.763	1906	1491	49700
T-2 Cuckoo	1590.0	795.0	24x0.1820	7x0.1213	1.4110	1.2490	1.092 x 2.184	1.787	2040	1492	55800
T-2 Condor	1590.0	795.0	54x0.1213	7x0.1213	1.4100	1.2480	1.092 x 2.184	1.787	2048	1500	56300
T-2 Drake	1590.0	795.0	26x0.1749	7x0.1360	1.4530	1.2490	1.108 x 2.216	1.813	2182	1494	63000
T-2 Mallard	1590.0	795.0	30x0.1628	19x0.0977	1.5340	1.2490	1.140 x 2.280	1.866	2464	1495	76900
T-2 Surfbird	1749.0	874.5	20x0.2091	7x0.0929	1.4680	1.3740	1.115 x 2.230	1.825	1961	1640	47500
T-2 Turnstone	1800.0	900.0	20x0.2121	7x0.0943	1.5110	1.4130	1.131 x 2.262	1.852	2019	1687	48300
T-2 Ruddy	1800.0	900.0	45x0.1414	7x0.0943	1.5110	1.4130	1.131 x 2.262	1.852	2027	1696	48900
T-2 Canary	1800.0	900.0	54x0.1291	7x0.1291	1.5970	1.4140	1.162 x 2.324	1.902	2319	1699	63800
T-2 Catbird	1908.0	954.0	36x0.1628	1x0.1628	1.5400	1.4990	1.140 x 2.280	1.866	1931	1791	39500
T-2 Phoenix	1908.0	954.0	42x0.1507	7x0.0837	1.5750	1.4980	1.155 x 2.310	1.891	2058	1797	46800
T-2 Comcrake	1908.0	954.0	20x0.2184	7x0.0971	1.6020	1.4980	1.165 x 2.330	1.907	2140	1789	51200
T-2 Rail	1908.0	954.0	45x0.1456	7x0.0971	1.6020	1.4980	1.165 x 2.330	1.907	2149	1798	51800
T-2 Towhee	1908.0	954.0	48x0.1410	7x0.1097	1.6310	1.4990	1.175 x 2.350	1.924	2248	1799	56900
T-2 Redbird	1908.0	954.0	24x0.1994	7x0.1329	1.6930	1.4990	1.196 x 2.392	1.958	2448	1791	67000
T-2 Cardinal	1908.0	954.0	54x0.1329	7x0.1329	1.6920	1.4980	1.196 x 2.392	1.958	2458	1800	67600
T-2 Canvasback	1908.0	954.0	30x0.1783	19x0.107	1.8400	1.4980	1.248 x 2.496	2.043	2956	1793	92200
T-2 Snowbird	2067.0	1033.5	42x0.1569	7x0.0872	1.7080	1.6240	1.203 x 2.406	1.969	2231	1948	50700
T-2 Ortolan	2067.0	1033.5	45x0.1515	7x0.1010	1.7350	1.6220	1.212 x 2.424	1.984	2327	1947	55400
T-2 Whooper	2067.0	1033.5	48x0.1467	7x0.1141	1.7660	1.6230	1.223 x 2.446	2.001	2433	1948	61600
T-2 Curlew	2067.0	1033.5	54x0.1383	7x0.1383	1.8330	1.6220	1.245 x 2.490	2.038	2662	1949	73300
T-2 Avocet	2226.0	1113.0	42x0.1628	7x0.0904	1.8380	1.7490	1.248 x 2.496	2.043	2401	2097	54100
T-2 Bluejay	2226.0	1113.0	45x0.1573	7x0.1049	1.8700	1.7490	1.259 x 2.518	2.060	2508	2099	59700
T-2 Bullfinch	2226.0	1113.0	48x0.1523	7x0.1185	1.9030	1.7490	1.269 x 2.538	2.078	2622	2099	65600
T-2 Finch	2226.0	1113.0	54x0.1436	19x0.0862	1.9710	1.7490	1.293 x 2.586	2.116	2856	2102	78200

(1) Code words shown denote ACSR/T-2 with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr® ACSR/T-2® Bare Overhead Conductor

Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded Twisted Pair

ACSR/T-2, CONCENTRIC-LAY-STRANDED (ELECTRICAL PROPERTIES)

CODE WORD	SIZE AWG OR kcmil	COMPONENT					OUTER AREA SQ. INCHES	OVERALL DIMENSIONS INCHES	EQUIV. DIA. INCHES	RESISTANCE OHMS/KFT			AMPACITY @75°C		GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/KFT	CAPACITIVE REACTANCE MEGAOHM/KFT
		AWG OR kcmil	STRANDING NO. X DIA. INCHES		TOTAL	AL				DC @20°C	AC @25°C	AC @75°C	STD.	E3X®			
			AL	STEEL													
T-2 Skua	1210.0	605.0	20x0.1739	7x0.0773	1.0160	0.9501	0.928 x 1.856	1.518	0.0142	0.0149	0.0177	1200	1405	0.0484	0.0696	0.4553	
T-2 Peacock	1210.0	605.0	24x0.1588	7x0.1059	1.0740	0.9507	0.953 x 1.906	1.560	0.0140	0.0147	0.0174	1220	1430	0.0502	0.0688	0.4511	
T-2 Squab	1210.0	605.0	26x0.1525	7x0.1186	1.1040	0.9498	0.966 x 1.932	1.581	0.0140	0.0146	0.0173	1230	1440	0.0511	0.0683	0.4490	
T-2 Wood Duck	1210.0	605.0	30x0.1420	7x0.1420	1.1720	0.9502	0.994 x 1.988	1.627	0.0138	0.0144	0.0171	1245	1460	0.0530	0.0675	0.4445	
T-2 Teal	1210.0	605.0	30x0.1420	19x0.0852	1.1670	0.9502	0.994 x 1.988	1.627	0.0139	0.0144	0.0171	1245	1460	0.0530	0.0675	0.4445	
T-2 Swift	1272.0	636.0	36x0.1329	1x0.1329	1.0270	0.9988	0.930 x 1.860	1.523	0.0136	0.0146	0.0182	1185	1380	0.0483	0.0696	0.4548	
T-2 Kingbird	1272.0	636.0	18x0.1880	1x0.1880	1.0550	0.9993	0.940 x 1.880	1.539	0.0134	0.0143	0.0169	1235	1440	0.0487	0.0695	0.4532	
T-2 Turacos	1272.0	636.0	20x0.1783	7x0.0792	1.0680	0.9987	0.951 x 1.902	1.556	0.0135	0.0142	0.0169	1240	1450	0.0496	0.0690	0.4514	
T-2 Rook	1272.0	636.0	24x0.1628	7x0.1085	1.1290	0.9992	0.977 x 1.954	1.599	0.0133	0.0140	0.0166	1260	1475	0.0514	0.0682	0.4472	
T-2 Grosbeak	1272.0	636.0	26x0.1564	7x0.1216	1.1620	0.9990	0.990 x 1.980	1.621	0.0133	0.0139	0.0165	1265	1485	0.0524	0.0678	0.4450	
T-2 Scoter	1272.0	636.0	30x0.1456	7x0.1456	1.2320	0.9990	1.019 x 2.038	1.668	0.0132	0.0137	0.0163	1285	1510	0.0543	0.0670	0.4405	
T-2 Egret	1272.0	636.0	30x0.1456	19x0.0874	1.2270	0.9990	1.019 x 2.038	1.669	0.0132	0.0137	0.0163	1285	1510	0.0544	0.0669	0.4405	
T-2 Siskin	1333.2	666.6	20x0.1826	7x0.0812	1.1200	1.0470	0.974 x 1.948	1.594	0.0128	0.0136	0.0161	1275	1495	0.0508	0.0685	0.4476	
T-2 Flamingo	1333.2	666.6	24x0.1667	7x0.1111	1.1830	1.0480	1.000 x 2.000	1.637	0.0127	0.0134	0.0159	1295	1520	0.0527	0.0676	0.4435	
T-2 Gannet	1333.2	666.6	26x0.1601	7x0.1245	1.2170	1.0470	1.014 x 2.028	1.660	0.0127	0.0133	0.0158	1305	1530	0.0536	0.0672	0.4414	
T-2 Dunlin	1431.0	715.5	20x0.1891	7x0.0840	1.2010	1.1230	1.008 x 2.016	1.651	0.0120	0.0128	0.0151	1330	1565	0.0526	0.0677	0.4422	
T-2 Stilt	1431.0	715.5	24x0.1727	7x0.1151	1.2700	1.1240	1.036 x 2.072	1.696	0.0119	0.0125	0.0148	1350	1590	0.0546	0.0668	0.4380	
T-2 Starling	1431.0	715.5	26x0.1659	7x0.1290	1.3070	1.1240	1.051 x 2.102	1.720	0.0118	0.0124	0.0147	1360	1605	0.0556	0.0664	0.4358	
T-2 Redwing	1431.0	715.5	30x0.1544	19x0.0926	1.3790	1.1230	1.081 x 2.162	1.769	0.0117	0.0122	0.0145	1380	1630	0.0576	0.0656	0.4314	
T-2 Coot	1590.0	795.0	36x0.1486	1x0.1486	1.2830	1.2490	1.040 x 2.080	1.703	0.0108	0.0119	0.0148	1355	1590	0.0540	0.0671	0.4373	
T-2 Macaw	1590.0	795.0	42x0.1376	7x0.0764	1.3130	1.2490	1.055 x 2.110	1.727	0.0108	0.0118	0.0147	1365	1600	0.0551	0.0666	0.4352	
T-2 Turbit	1590.0	795.0	20x0.1994	7x0.0886	1.3350	1.2490	1.063 x 2.126	1.741	0.0108	0.0116	0.0137	1420	1670	0.0554	0.0665	0.4339	
T-2 Tern	1590.0	795.0	45x0.1329	7x0.0886	1.3350	1.2480	1.063 x 2.126	1.740	0.0108	0.0117	0.0146	1375	1610	0.0557	0.0664	0.4339	
T-2 Puffin	1590.0	795.0	22x0.1901	7x0.1056	1.3710	1.2490	1.077 x 2.154	1.763	0.0107	0.0115	0.0135	1430	1685	0.0564	0.0661	0.4319	
T-2 Cuckoo	1590.0	795.0	24x0.1820	7x0.1213	1.4110	1.2490	1.092 x 2.184	1.787	0.0107	0.0113	0.0134	1440	1700	0.0575	0.0656	0.4298	
T-2 Condor	1590.0	795.0	54x0.1213	7x0.1213	1.4100	1.2480	1.092 x 2.184	1.787	0.0107	0.0115	0.0143	1395	1640	0.0577	0.0656	0.4298	
T-2 Drake	1590.0	795.0	26x0.1749	7x0.1360	1.4530	1.2490	1.108 x 2.216	1.813	0.0106	0.0112	0.0133	1455	1715	0.0586	0.0652	0.4275	
T-2 Mallard	1590.0	795.0	30x0.1628	19x0.0977	1.5340	1.2490	1.140 x 2.280	1.866	0.0105	0.0111	0.0131	1475	1745	0.0608	0.0644	0.4230	
T-2 Surfbird	1749.0	874.5	20x0.2091	7x0.0929	1.4680	1.3740	1.115 x 2.230	1.825	0.00979	0.0107	0.0125	1500	1775	0.0581	0.0654	0.4265	
T-2 Turnstone	1800.0	900.0	20x0.2121	7x0.0943	1.5110	1.4130	1.131 x 2.262	1.852	0.00951	0.0104	0.0122	1525	1805	0.0590	0.0650	0.4242	
T-2 Ruddy	1800.0	900.0	45x0.1414	7x0.0943	1.5110	1.4130	1.131 x 2.262	1.852	0.00956	0.0105	0.0130	1480	1745	0.0593	0.0649	0.4242	
T-2 Canary	1800.0	900.0	54x0.1291	7x0.1291	1.5970	1.4140	1.162 x 2.324	1.902	0.00948	0.0103	0.0127	1505	1775	0.0614	0.0641	0.4200	
T-2 Catbird	1908.0	954.0	36x0.1628	1x0.1628	1.5400	1.4990	1.140 x 2.280	1.866	0.00903	0.0102	0.0125	1510	1780	0.0592	0.0650	0.4231	
T-2 Phoenix	1908.0	954.0	42x0.1507	7x0.0837	1.5750	1.4980	1.155 x 2.310	1.891	0.00904	0.0101	0.0124	1525	1795	0.0604	0.0645	0.4209	
T-2 Corncrake	1908.0	954.0	20x0.2184	7x0.0971	1.6020	1.4980	1.165 x 2.330	1.907	0.00897	0.00987	0.0116	1580	1870	0.0607	0.0644	0.4196	
T-2 Rail	1908.0	954.0	45x0.1456	7x0.0971	1.6020	1.4980	1.165 x 2.330	1.907	0.00902	0.00998	0.0123	1530	1810	0.0610	0.0643	0.4196	
T-2 Towhee	1908.0	954.0	48x0.1410	7x0.1097	1.6310	1.4990	1.175 x 2.350	1.924	0.00899	0.00989	0.0122	1540	1820	0.0618	0.0640	0.4182	
T-2 Redbird	1908.0	954.0	24x0.1994	7x0.1329	1.6930	1.4990	1.196 x 2.392	1.958	0.00889	0.00961	0.0113	1610	1910	0.0630	0.0635	0.4154	
T-2 Cardinal	1908.0	954.0	54x0.1329	7x0.1329	1.6920	1.4980	1.196 x 2.392	1.958	0.00895	0.00973	0.0120	1560	1845	0.0632	0.0635	0.4155	
T-2 Canvasback	1908.0	954.0	30x0.1783	19x0.107	1.8400	1.4980	1.248 x 2.496	2.043	0.00879	0.00932	0.0110	1645	1965	0.0666	0.0623	0.4088	
T-2 Snowbird	2067.0	1033.5	42x0.1569	7x0.0872	1.7080	1.6240	1.203 x 2.406	1.969	0.00834	0.00941	0.0115	1595	1890	0.0628	0.0636	0.4146	
T-2 Ortolan	2067.0	1033.5	45x0.1515	7x0.1010	1.7350	1.6220	1.212 x 2.424	1.984	0.00833	0.00933	0.0114	1605	1900	0.0635	0.0634	0.4134	
T-2 Whooper	2067.0	1033.5	48x0.1467	7x0.1141	1.7660	1.6230	1.223 x 2.446	2.001	0.00831	0.00923	0.0113	1615	1915	0.0643	0.0631	0.4121	
T-2 Curlew	2067.0	1033.5	54x0.1383	7x0.1383	1.8330	1.6220	1.245 x 2.490	2.038	0.00826	0.00907	0.0112	1635	1940	0.0658	0.0625	0.4092	
T-2 Avocet	2226.0	1113.0	42x0.1628	7x0.0904	1.8380	1.7490	1.248 x 2.496	2.043	0.00774	0.00886	0.0108	1665	1975	0.0652	0.0627	0.4088	
T-2 Bluejay	2226.0	1113.0	45x0.1573	7x0.1049	1.8700	1.7490	1.259 x 2.518	2.060	0.00772	0.00876	0.0107	1675	1990	0.0659	0.0625	0.4075	
T-2 Bullfinch	2226.0	1113.0	48x0.1523	7x0.1185	1.9030	1.7490	1.269 x 2.538	2.078	0.00771	0.00867	0.0106	1690	2005	0.0667	0.0622	0.4062	
T-2 Finch	2226.0	1113.0	54x0.1436	19x0.0862	1.9710	1.7490	1.293 x 2.586	2.116	0.00767	0.00850	0.0104	1710	2035	0.0683	0.0617	0.4033	

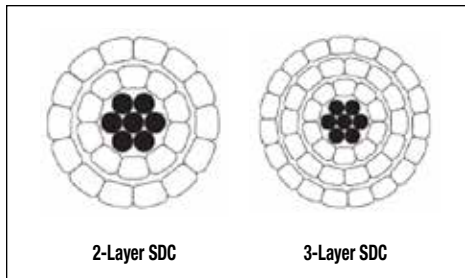
(1) Code words shown denote ACSR/T-2 with regular-strength Class A Galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (2) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for single-layer and three-layer designs approximates the effects of core magnetization. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (3) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity for a standard conductor and 0.9 for a E3X coated conductor, 0.5 coefficient of absorptivity for a standard conductor and 0.2 for a E3X coated conductor, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (4) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

TransPwr® ACSR/SD Bare Overhead Conductor

Self-Damping Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

ACSR/SD conductors are manufactured with two layers of 1350 H19 trapezoidal-shaped aluminum wires concentrically stranded around a steel core of round coated steel wires. On certain larger conductor constructions, the trapezoidal-shaped wires are surrounded by a layer of round 1350 H19 aluminum wires. The steel core and the two layers of trapezoidal-shaped aluminum wires are separated by a gap to provide the self-damping characteristics. Steel core wires are protected from corrosion by aluminum-clad, galvanized, or zinc-5% aluminum mischmetal alloy coating. Standard, high, extra- and ultra-high-strength steel is also available. The ACSR/SD conductors are manufactured in accordance with the requirements of the latest issue of ASTM B701.

Features and Benefits:

The steel core and the two layers of trapezoidal-shaped aluminum wires in ACSR/SD are separated by a gap designed to provide self-damping characteristics to control Aeolian vibration—eliminating the need for vibration dampers. Additional advantages in using ACSR/SD include: shorter, more economical towers, increased reliability, lower overall line cost, reduced sag, reduced ice and wind loads as well as permitting longer spans.

Applications:

ACSR/SD conductors are used for overhead transmission lines to control Aeolian vibration.

Options:

- E3X® surface coating (/E3X)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Regular-strength Class C galvanized steel core (/GC2)
- High-strength Class A galvanized steel core (/GA3 to ASTM B606)
- Extra-high-strength Class A galvanized steel core (/GA4 to ASTM B957)

- Ultra-high-strength Class A galvanized steel core (/GA5 to ASTM B957)
- Regular-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA2 to ASTM B802)
- High-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA3 to ASTM B803)
- Extra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA4 to ASTM B958)
- Ultra-high-strength Class A zinc-5% aluminum mischmetal alloy-coated steel core (/MA5 to ASTM B958)
- Aluminum-clad steel core (/AW)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® ACSR/SD Bare Overhead Conductor

Self-Damping Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR/SD, CONCENTRIC-LAY-STRAINED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	STEEL CORE O.D. INCHES	O.D. INCHES	APPROX. WEIGHT LB/1000 FT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS	STANDARD PACKAGES (3)		
					TOTAL	AL	STEEL	AL	STEEL		REEL DESIGNATION	WEIGHT POUNDS	LENGTH FEET
Titmouse/SD	266.8	5	0.117	0.593	287	251	36	87.3	12.7	6920	RM 66.32	4017	14000
Eider/SD	266.8	7	0.136	0.601	299	251	49	83.7	16.3	7610	RM 66.32	4192	14000
Spoonbill/SD	266.8	10	0.162	0.610	320	251	69	78.3	21.7	8450	RM 66.32	4480	14000
Partridge/SD	266.8	16	0.236	0.645	367	251	116	68.5	31.5	11350	RM 66.32	4771	13000
Cowbird/SD	336.4	5	0.132	0.667	362	316	46	87.3	12.7	8500	RM 66.32	4343	12000
Hummingbird/SD	336.4	7	0.153	0.664	378	316	62	83.7	16.3	9130	RM 66.32	4532	12000
Woodcock/SD	336.4	10	0.206	0.688	405	317	88	78.3	21.7	11000	RM 66.32	4450	11000
Linnet/SD	326.4	16	0.265	0.716	462	317	145	68.5	31.5	14300	RM 68.38	6011	13000
Erne/SD	397.5	5	0.143	0.717	428	374	54	87.3	12.7	9740	RM 66.32	4277	10000
Longspur/SD	397.5	7	0.166	0.725	446	373	73	83.7	16.3	10600	RM 68.38	5799	13000
Stork/SD	397.5	10	0.224	0.750	478	374	104	78.3	21.7	12900	RM 68.38	5735	12000
Ibis/SD	397.5	16	0.288	0.771	547	375	172	68.5	31.5	16400	RM 68.38	6558	12000
Kestrel/SD	477.0	5	0.157	0.787	513	448	65	87.3	12.7	11700	RM 68.38	5646	11000
Jackdaw/SD	477.0	7	0.206	0.808	536	449	87	83.7	16.3	13300	RM 68.38	5894	11000
Toucan/SD	477.0	10	0.245	0.824	573	449	125	78.3	21.7	15300	RM 68.38	5734	10000
Flicker/SD	477.0	13	0.282	0.843	614	449	165	73.2	26.8	17200	RMT 84.36	7362	12000
Hawk/SD	477.0	16	0.316	0.860	656	449	206	68.5	31.5	19500	RMT 84.36	7214	11000
Blackbird/SD	556.5	5	0.169	0.843	599	523	76	87.3	12.7	13600	RM 68.38	5990	10000
Sunbird/SD	556.5	7	0.222	0.863	625	523	102	83.7	16.3	15500	RMT 84.36	6875	11000
Sapsucker/SD	556.5	10	0.265	0.882	669	524	145	78.3	21.7	17800	RMT 84.36	7359	11000
Parakeet/SD	556.5	13	0.305	0.901	716	524	192	73.2	26.8	20000	RMT 84.36	7160	10000
Dove/SD	556.5	16	0.341	0.919	765	524	241	68.5	31.5	22600	RMT 84.36	7650	10000
Pippit/SD	636.0	5	0.205	0.903	684	598	87	87.3	12.7	16100	RMT 84.36	7524	11000
Killdeer/SD	636.0	7	0.238	0.917	715	598	117	83.6	16.4	17700	RMT 84.36	7150	10000
Goldfinch/SD	636.0	10	0.284	0.935	765	599	166	78.3	21.7	20100	RMT 84.36	7650	10000
Rook/SD	636.0	13	0.326	0.955	818	599	219	73.2	26.8	22900	RMT 84.36	7362	9000
Grosbeak/SD	636.0	16	0.365	0.975	874	599	275	68.5	31.5	25400	RMT 84.36	7866	9000
Macaw/SD	795.0	5	0.229	0.999	856	747	109	87.3	12.7	19800	RMT 90.45	11984	14000
Tern/SD	795.0	7	0.266	1.013	893	747	146	83.6	16.4	21900	RMT 90.45	11609	13000
Puffin/SD	795.0	10	0.317	1.034	956	746	208	78.3	21.7	25100	RMT 90.45	12428	13000
Condor/SD	795.0	13	0.364	1.055	1023	749	274	73.2	26.8	28200	RMT 90.45	12276	12000
Drake/SD	795.0	16	0.408	1.077	1093	749	344	68.5	31.5	31800	RMT 90.45	12023	11000
Phoenix/SD	954.0	5	0.251	1.088	1027	897	130	87.3	12.7	23700	RMT 90.45	11297	11000
Rail/SD	954.0	7	0.291	1.103	1073	897	176	83.6	16.4	26100	RMT 90.45	11803	11000
Cardinal/SD	954.0	13	0.399	1.147	1227	898	329	73.2	26.8	33500	RMT 90.45	12270	10000

(1) Code words shown denote ACSR/SD with regular-strength Class A galvanized steel core ((GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may not exactly equal the sum of the component values.

(3) Weights shown are for conductor only and do not include the reel. Normal length and shipping tolerances apply.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr® ACSR/SD Bare Overhead Conductor

Self-Damping Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR/SD, CONCENTRIC-LAY-STRANDED (electrical PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	STEEL CORE O.D. INCHES	O.D. INCHES	RESISTANCE (4) OHMS/1000 FT			GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM / 1000 FT (5)	CAPACITIVE REACTANCE MEGAOHM - 1000 FT (5)
					DC @ 20°C	AC @ 25°C	AC @ 75°C			
Titmouse/SD	266.8	5	0.117	0.593	0.0646	0.0660	0.0790	0.0195	0.0905	0.5797
Eider/SD	266.8	7	0.136	0.601	0.0645	0.0658	0.0788	0.0199	0.0900	0.5776
Spoonbill/SD	266.8	10	0.162	0.610	0.0642	0.0656	0.0785	0.0203	0.0895	0.5755
Partridge/SD	266.8	16	0.236	0.645	0.0637	0.0650	0.0779	0.0220	0.0877	0.5665
Cowbird/SD	336.4	5	0.132	0.667	0.0512	0.0523	0.0626	0.0217	0.0880	0.5613
Hummingbird/SD	336.4	7	0.153	0.664	0.0510	0.0522	0.0625	0.0218	0.0880	0.5618
Woodcock/SD	336.4	10	0.206	0.688	0.0509	0.0520	0.0623	0.0230	0.0867	0.5565
Linnet/SD	326.4	16	0.265	0.716	0.0505	0.0516	0.0618	0.0245	0.0853	0.5502
Erne/SD	397.5	5	0.143	0.717	0.0433	0.0443	0.0530	0.0233	0.0864	0.5496
Longspur/SD	397.5	7	0.166	0.725	0.0432	0.0442	0.0529	0.0238	0.0859	0.5481
Stork/SD	397.5	10	0.224	0.750	0.0431	0.0441	0.0527	0.0249	0.0848	0.5428
Ibis/SD	397.5	16	0.288	0.771	0.0428	0.0437	0.0523	0.0261	0.0838	0.5386
Kestrel/SD	477.0	5	0.157	0.787	0.0361	0.0370	0.0442	0.0257	0.0842	0.5354
Jackdaw/SD	477.0	7	0.206	0.808	0.0360	0.0369	0.0441	0.0261	0.0838	0.5333
Toucan/SD	477.0	10	0.245	0.824	0.0359	0.0368	0.0440	0.0274	0.0827	0.5280
Flicker/SD	477.0	13	0.282	0.843	0.0358	0.0366	0.0438	0.0283	0.0819	0.5243
Hawk/SD	477.0	16	0.316	0.860	0.0356	0.0365	0.0437	0.0291	0.0813	0.5217
Blackbird/SD	556.5	5	0.169	0.843	0.0309	0.0317	0.0379	0.0274	0.0827	0.5243
Sunbird/SD	556.5	7	0.222	0.863	0.0309	0.0317	0.0379	0.0285	0.0818	0.5206
Sapsucker/SD	556.5	10	0.265	0.882	0.0308	0.0316	0.0377	0.0293	0.0811	0.5174
Parakeet/SD	556.5	13	0.305	0.901	0.0307	0.0314	0.0376	0.0302	0.0804	0.5143
Dove/SD	556.5	16	0.341	0.919	0.0305	0.0313	0.0374	0.0311	0.0798	0.5111
Pippit/SD	636.0	5	0.205	0.903	0.0271	0.0278	0.0333	0.0291	0.0813	0.5153
Killdeer/SD	636.0	7	0.238	0.917	0.0270	0.0277	0.0332	0.0302	0.0804	0.5111
Goldfinch/SD	636.0	10	0.284	0.935	0.0269	0.0276	0.0330	0.0311	0.0798	0.5085
Rook/SD	636.0	13	0.326	0.955	0.0268	0.0275	0.0329	0.0320	0.0791	0.5048
Grosbeak/SD	636.0	16	0.365	0.975	0.0267	0.0274	0.0328	0.0329	0.0784	0.5016
Macaw/SD	795.0	5	0.229	0.999	0.0217	0.0224	0.0267	0.0326	0.0787	0.4979
Tern/SD	795.0	7	0.266	1.013	0.0216	0.0223	0.0266	0.0333	0.0782	0.4958
Puffin/SD	795.0	10	0.317	1.034	0.0215	0.0222	0.0265	0.0343	0.0775	0.4926
Condor/SD	795.0	13	0.364	1.055	0.0215	0.0221	0.0264	0.0353	0.0769	0.4895
Drake/SD	795.0	16	0.408	1.077	0.0214	0.0220	0.0263	0.0364	0.0762	0.4863
Phoenix/SD	954.0	5	0.251	1.088	0.0180	0.0187	0.0223	0.0357	0.0766	0.4847
Rail/SD	954.0	7	0.291	1.103	0.0180	0.0187	0.0222	0.0364	0.0762	0.4826
Cardinal/SD	954.0	13	0.399	1.147	0.0179	0.0185	0.0220	0.0384	0.0749	0.4763

(1) Code words shown denote ACSR/SD with regular-strength Class A galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (4) Based on a conductivity of 61.0% IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for three-layer designs must be increased by 1.1%, 2.7%, 3.7%, and 4.3% for current densities of 200, 600, 1000, and 1400 amperes per 1000 kcmil of aluminum to allow for the magnetic losses in the steel core. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



TransPowr® ACSR/SD Bare Overhead Conductor

Self-Damping Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR/SD, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	STEEL CORE O.D. INCHES	O.D. INCHES	APPROX. WEIGHT LB/1000 FT (2)			PERCENT BY WEIGHT		RATED STRENGTH LBS	STANDARD PACKAGES (3)		
					TOTAL	AL	STEEL	AL	STEEL		REEL DESIGNATION	WEIGHT POUNDS	LENGTH FEET
Snowbird/SD	1033.5	5	0.261	1.185	1115	974	141	87.3	12.7	25900	RMT 90.45	11150	10000
Ortolan/SD	1033.5	7	0.303	1.145	1161	971	190	83.6	16.4	28100	RMT 90.45	11610	10000
Curlew/SD	1033.5	13	0.415	1.191	1329	973	356	73.2	26.8	36300	RMT 90.45	11961	9000
Avocet/SD	1113.0	5	0.271	1.226	1200	1048	152	87.3	12.7	27500	RMT 90.45	10800	9000
Bluejay/SD	1113.0	7	0.315	1.242	1254	1049	205	83.7	16.3	30300	RMT 90.45	11286	9000
Finch/SD	1113.0	13	0.431	1.233	1424	1048	376	73.6	26.4	39100	RMT 90.45	12816	9000
Oxbird/SD	1192.5	5	0.281	1.266	1286	1123	163	87.3	12.7	29500	RMT 90.45	11574	9000
Bunting/SD	1192.5	7	0.326	1.284	1343	1124	219	83.7	16.3	32400	RMT 90.45	10744	8000
Grackle/SD	1192.5	13	0.446	1.274	1526	1123	403	73.6	26.4	41900	RMT 90.45	12208	8000
Scissortail/SD	1272.0	5	0.290	1.305	1372	1198	174	87.3	12.7	31400	RMT 96.60	16464	12000
Bittern/SD	1272.0	7	0.336	1.323	1433	1199	234	83.7	16.3	34600	RMT 96.60	17196	12000
Pheasant/SD	1272.0	13	0.461	1.378	1631	1202	429	73.7	26.3	44100	RMT 96.60	19572	12000
Ringdove/SD	1351.5	5	0.299	1.344	1458	1273	185	87.3	12.7	33400	RMT 96.60	17496	12000
Dipper/SD	1351.5	7	0.347	1.361	1522	1274	248	83.7	16.3	36700	RMT 96.60	18264	12000
Frigate/SD	1351.5	10	0.413	1.389	1629	1276	353	78.3	21.7	41700	RMT 96.60	17919	11000
Martin/SD	1351.5	13	0.475	1.417	1733	1277	456	73.7	26.3	46800	RMT 96.60	19063	11000
Popinjay/SD	1431.0	5	0.308	1.381	1544	1348	196	87.3	12.7	35300	RMT 96.60	16984	11000
Bobolink/SD	1431.0	7	0.357	1.398	1612	1349	263	83.7	16.3	38900	RMT 96.60	17732	11000
Plover/SD	1431.0	13	0.489	1.448	1835	1352	483	73.7	26.3	49600	RMT 96.60	20185	11000
Ratite/SD	1590.0	5	0.325	1.447	1715	1498	218	87.3	12.7	39100	RMT 96.60	17150	10000
Lapwing/SD	1590.0	7	0.376	1.468	1791	1499	292	83.7	16.3	42600	RMT 96.60	17910	10000
Falcon/SD	1590.0	13	0.515	1.521	2039	1502	537	73.7	26.3	55100	RMT 96.60	18351	9000
Smew/SD	1780.0	5	0.343	1.531	1921	1677	244	87.3	12.7	43600	RMT 96.60	17289	9000
Chukar/SD	1780.0	8	0.437	1.565	2068	1681	387	81.3	18.7	51100	RMT 96.60	18612	9000
Cockatoo/SD	2156.0	5	0.378	1.731	2331	2036	295	87.3	12.7	52500	RMT 96.60	17483	7500
Bluebird/SD	2156.0	8	0.481	1.716	2504	2036	468	81.3	18.7	60700	RMT 96.60	18780	7500
Kiwi/SD	2167.0	4	0.347	1.725	2296	2047	249	89.2	10.8	50700	RMT 96.60	16072	7000

(1) Code words shown denote ACSR/SD with regular-strength Class A galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.

(2) Due to rounding, total values may not exactly equal the sum of the component values.

(3) Weights shown are for conductor only and do not include the reel. Normal length and shipping tolerances apply.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr® ACSR/SD Bare Overhead Conductor

Self-Damping Aluminum Conductor Steel-Reinforced Concentric-Lay-Stranded

ACSR/SD, CONCENTRIC-LAY-STRADED (electrical PROPERTIES)

CODE WORD (1)	SIZE AWG OR kcmil	TYPE	STEEL CORE O.D. INCHES	O.D. INCHES	RESISTANCE (4) OHMS/1000 FT			GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM / 1000 FT (5)	CAPACITIVE REACTANCE MEGAOHM - 1000 FT (5)
					DC @ 20°C	AC @ 25°C	AC @ 75°C			
Snowbird/SD	1033.5	5	0.261	1.185	0.0167	0.0175	0.0208	0.0389	0.0746	0.4710
Ortolan/SD	1033.5	7	0.303	1.145	0.0166	0.0174	0.0206	0.0378	0.0753	0.4768
Curlew/SD	1033.5	13	0.415	1.191	0.0165	0.0171	0.0204	0.0400	0.0740	0.4704
Avocet/SD	1113.0	5	0.271	1.226	0.0155	0.0163	0.0193	0.0402	0.0739	0.4657
Bluejay/SD	1113.0	7	0.315	1.242	0.0155	0.0162	0.0192	0.0410	0.0734	0.4636
Finch/SD	1113.0	13	0.431	1.233	0.0153	0.0159	0.0190	0.0414	0.0732	0.4652
Oxbird/SD	1192.5	5	0.281	1.266	0.0145	0.0153	0.0181	0.0415	0.0732	0.4609
Bunting/SD	1192.5	7	0.326	1.284	0.0144	0.0152	0.0180	0.0423	0.0727	0.4588
Grackle/SD	1192.5	13	0.446	1.274	0.0143	0.0149	0.0177	0.0428	0.0724	0.4599
Scissortail/SD	1272.0	5	0.290	1.305	0.0136	0.0144	0.0170	0.0427	0.0725	0.4562
Bittern/SD	1272.0	7	0.336	1.323	0.0135	0.0143	0.0170	0.0436	0.0720	0.4541
Pheasant/SD	1272.0	13	0.461	1.378	0.0134	0.0141	0.0167	0.0464	0.0705	0.4477
Ringdove/SD	1351.5	5	0.299	1.344	0.0128	0.0136	0.0180	0.0440	0.0718	0.4514
Dipper/SD	1351.5	7	0.347	1.361	0.0128	0.0135	0.0160	0.0449	0.0713	0.4493
Frigate/SD	1351.5	10	0.413	1.389	0.0127	0.0134	0.0159	0.0463	0.0706	0.4462
Martin/SD	1351.5	13	0.475	1.417	0.0126	0.0133	0.0158	0.0477	0.0699	0.4430
Popinjay/SD	1431.0	5	0.308	1.381	0.0121	0.0129	0.0152	0.0452	0.0711	0.4472
Bobolink/SD	1431.0	7	0.357	1.398	0.0120	0.0128	0.0152	0.0461	0.0707	0.4451
Plover/SD	1431.0	13	0.489	1.448	0.0120	0.0127	0.0150	0.0488	0.0694	0.4398
Ratite/SD	1590.0	5	0.325	1.447	0.0109	0.0118	0.0138	0.0477	0.0699	0.4382
Lapwing/SD	1590.0	7	0.376	1.468	0.0108	0.0116	0.0137	0.0484	0.0696	0.4377
Falcon/SD	1590.0	13	0.515	1.521	0.0108	0.0115	0.0136	0.0512	0.0683	0.4319
Smew/SD	1780.0	5	0.343	1.531	0.0097	0.0106	0.0125	0.0502	0.0688	0.4308
Chukar/SD	1780.0	8	0.437	1.565	0.0097	0.0105	0.0124	0.0519	0.0680	0.4277
Cockatoo/SD	2156.0	5	0.378	1.731	0.0080	0.0091	0.0105	0.0573	0.0657	0.4118
Bluebird/SD	2156.0	8	0.481	1.716	0.0080	0.0089	0.0104	0.0570	0.0658	0.4134
Kiwi/SD	2167.0	4	0.347	1.725	0.0080	0.0090	0.0105	0.0570	0.0659	0.4124

(1) Code words shown denote ACSR/SD with regular-strength Class A galvanized steel core (GA2). See the Options section to find the appropriate code word modifier designation for alternative design options.
 (4) Based on a conductivity of 61.0% IACS at 20°C for aluminum and 8% IACS at 20°C for the steel core. AC resistance for three-layer designs must be increased by 1.1%, 2.7%, 3.7%, and 4.3% for current densities of 200, 600, 1000, and 1400 amperes per 1000 kcmil of aluminum to allow for the magnetic losses in the steel core. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.
 (5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



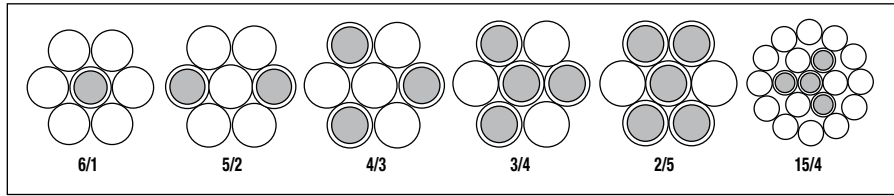
AWAC Bare Overhead Conductor

Aluminum Conductor, Aluminum-Clad Steel-Reinforced Concentric-Lay-Stranded

Product Construction:

Complete Conductor:

Aluminum Conductor, Aluminum-Clad Steel-Reinforced conductors are a concentric-lay-stranded construction consisting of a combination of 1350-H19 aluminum and aluminum-clad steel wires. AWAC conductors are manufactured in accordance with the requirements of ASTM Specification B549.



Features and Benefits:

Aluminum-clad steel wires offer increased corrosion resistance and higher conductivity versus standard galvanized steel wires.

Applications:

AWAC conductors are used as guy wires, shield wires, static wires, overhead ground wires, messengers, span wires, etc.

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail at info@generalcable.com.

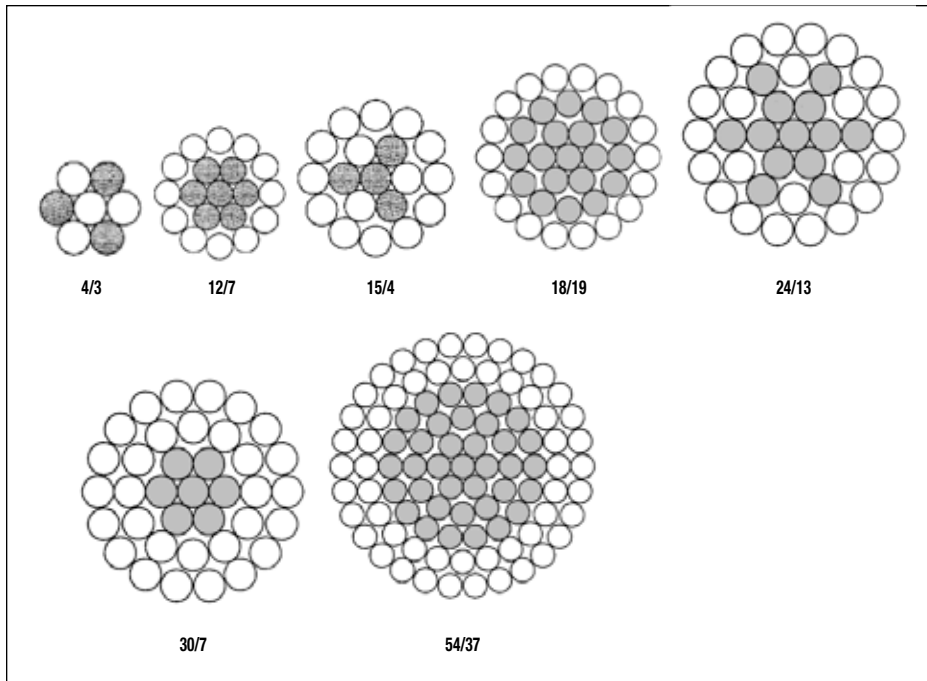
AWAC, ALUMINUM CONDUCTOR, ALUMINUM-CLAD, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED

CONDUCTOR DESIGNATION (SIZE- AL & AL-CLAD)	CROSS-SECTIONAL AREA OF ALUMINUM* (CMIL)	DIAMETER OF AL & AL-CLAD WIRES (INCHES)	TOTAL CROSS-SECTIONAL AREA (SQ. INCH)	OVERALL DIAMETER (INCHES)	APPROXIMATE WEIGHT (LB/KFT)			RATED STRENGTH (LBS)	DC RESISTANCE @ 20°C (OHM/KFT)
					TOTAL	AL WIRE	AL-CLAD STEEL WIRE		
#4-6/1	41740	0.0817	0.0367	0.245	52.3	37.4	14.9	1700	0.4067
#4-5/2	41740	0.0871	0.0471	0.261	69.8	35.3	34.5	2800	0.3993
#4-4/3	41740	0.0937	0.0483	0.281	92.6	32.6	60.0	4200	0.3910
#4-3/4	41740	0.1022	0.0574	0.307	124	29.2	94.7	6100	0.3801
#4-2/5	41740	0.1133	0.0706	0.340	170	23.8	146	9000	0.3648
#3-6/1	52620	0.0918	0.0463	0.275	66.0	47.1	18.9	2100	0.3221
#3-5/2	52620	0.0978	0.0526	0.293	88.0	44.5	43.5	3500	0.3167
#3-4/3	52620	0.1053	0.0609	0.316	117	41.2	75.7	5300	0.3096
#3-3/4	52620	0.1147	0.0723	0.344	156	36.8	119	7700	0.3018
#3-2/5	52620	0.1273	0.0891	0.382	214	30.1	184	11300	0.2889
#2-6/1	66360	0.1030	0.0583	0.309	83.1	59.4	23.7	2600	0.2559
#2-5/2	66360	0.1099	0.0664	0.330	111	56.1	55.1	4400	0.2508
#2-4/3	66360	0.1182	0.0768	0.355	147	51.9	95.4	6600	0.2457
#2-3/4	66360	0.1288	0.0912	0.386	197	46.4	150	9700	0.2393
#2-2/5	66360	0.1429	0.1123	0.429	270	37.8	233	13500	0.2293
#1-6/1	83690	0.1157	0.0736	0.347	105	74.9	30.0	3300	0.2028
#1-5/2	83690	0.1234	0.0837	0.370	140	70.8	69.3	5500	0.1989
#1-4/3	83690	0.1327	0.0968	0.398	186	65.4	120	8100	0.1949
#1-3/4	83690	0.1446	0.1150	0.434	248	58.5	190	11300	0.1899
#1-2/5	83690	0.1605	0.1417	0.482	341	47.7	294	16500	0.1818
1/0-6/1	105600	0.1300	0.0929	0.390	132	94.5	38.0	4100	0.1606
1/0-5/2	105600	0.1385	0.1054	0.416	176	89.2	87.3	6600	0.1579
1/0-4/3	105600	0.1490	0.1220	0.447	234	82.4	152	9700	0.1546
1/0-3/4	105600	0.1624	0.1450	0.487	313	73.7	240	13800	0.1505
1/0-2/5	105600	0.1802	0.1785	0.541	430	60.1	370	19500	0.1442
2/0-6/1	133100	0.1459	0.1170	0.438	167	119	47.7	4900	0.1275
2/0-5/2	133100	0.1556	0.1331	0.467	223	113	110	8000	0.1251
2/0-4/3	133100	0.1674	0.1540	0.502	296	104	191	11800	0.1225
2/0-3/4	133100	0.1824	0.1829	0.547	395	93.1	302	16400	0.1193
3/0-6/1	167800	0.1639	0.1477	0.492	211	150	60.3	6100	0.1010
3/0-5/2	167800	0.1747	0.1678	0.524	281	142	139	9700	0.0993
3/0-4/3	167800	0.1880	0.1943	0.564	373	131	242	14200	0.0971
4/0-6/1	211600	0.1840	0.1861	0.552	265	189	76.0	7400	0.0802
4/0-15/4	211600	0.1150	0.1973	0.575	306	186	120	10800	0.0799

* = assumes that 25% of the cross sectional area of the AW wire is aluminum. Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPowr® ACAR Bare Overhead Conductor

Aluminum Conductor Alloy-Reinforced Concentric-Lay-Stranded



Product Construction:

Complete Conductor:

Aluminum Conductor Alloy-Reinforced (ACAR) cable has aluminum 1350 H19 wires concentrically stranded around a 6201-T81 aluminum alloy core. Typically, the 6201-T81 is the conductor core, but in certain designs, the 1350 H19 and the 6201-T81 wires may be stranded in the same layer.

ACAR conductors are manufactured in accordance with the requirements of the latest issue of ASTM B524.

Features and Benefits:

Aluminum Conductor Alloy-Reinforced (ACAR) cable delivers high current-carrying capacity and strength combined with lower conductor weight. It is an excellent conductor choice where current-carrying capacity, higher strength and a lower conductor weight are critical to the line design.

Applications:

ACAR conductors are used for overhead distribution and transmission lines requiring all aluminum conductors but requiring higher strength and longer spans than what is capable with AAC conductors.

Options:

- E3X® surface coating (/E3X)
- High-conductivity aluminum (/HC) (62.2% IACS)
- Non-specular surface finish (/NS)

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



TransPowr® ACAR Bare Overhead Conductor

Aluminum Conductor Alloy-Reinforced Concentric-Lay-Stranded

ACAR, CONCENTRIC-LAY-STRANDED (MECHANICAL PROPERTIES)

SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. INCHES	APPROX. WEIGHT LB/1000 FT (1)			PERCENT BY WEIGHT		RATED STRENGTH LBS	STANDARD PACKAGES (2)		
	AL	ALLOY	TOTAL	AL		TOTAL	AL	ALLOY	AL	ALLOY		REEL DESIGNATION	WEIGHT LBS	LENGTH FEET
503.6	15x0.1628	4x0.1628	0.3955	0.3123	0.814	472	373	99	79.03	20.97	10500	NR 66.28	3800	8030
587.2	15x0.1758	4x0.1758	0.4612	0.3641	0.879	550	435	115	79.03	20.97	12200	NR 66.28	4430	8030
649.5	18x0.1325	19x0.1325	0.5102	0.2481	0.927	607	296	311	48.77	51.23	16600	NR 66.28	4200	6890
653.1	12x0.1854	7x0.1854	0.5129	0.3240	0.927	611	387	224	63.28	36.72	15400	RMT 84.45	6070	9910
739.8	18x0.1414	19x0.1414	0.5810	0.2827	0.990	692	337	354	48.78	51.22	18800	RMT 90.45	9020	13010
853.7	30x0.1519	7x0.1519	0.6705	0.5436	1.063	799	649	151	81.16	18.84	17500	RMT 96.60	14500	18000
853.7	24x0.1519	13x0.1519	0.6705	0.4349	1.063	799	519	280	64.98	35.02	19300	RMT 96.60	14500	18000
927.2	24x0.1583	13x0.1583	0.7282	0.4724	1.108	867	564	304	64.98	35.02	20900	RMT 90.45	9050	10400
1024.5	30x0.1664	7x0.1664	0.8046	0.6524	1.165	959	779	181	81.16	18.84	20900	RMT 96.60	14500	15000
1024.5	24x0.1664	13x0.1664	0.8046	0.5219	1.165	959	623	336	64.98	35.02	23100	RMT 96.60	14500	15000
1080.6	24x0.1709	13x0.1709	0.8487	0.5505	1.196	1011	657	354	64.98	35.02	24400	RMT 96.60	15800	15600
1080.6	18x0.1709	19x0.1709	0.8487	0.4129	1.196	1010	493	517	48.77	51.23	27200	RMT 96.60	15800	15600
1109.0	30x0.1731	7x0.1731	0.8707	0.7063	1.212	1038	843	196	81.17	18.83	22700	RMT 96.60	14500	13850
1109.0	24x0.1731	13x0.1731	0.8707	0.5650	1.212	1038	674	363	64.99	35.01	25000	RMT 96.60	14500	13850
1172.0	30x0.1780	7x0.1780	0.9207	0.7463	1.246	1097	891	207	81.15	18.85	24000	RMT 96.60	15900	14400
1172.0	18x0.1780	19x0.1780	0.9207	0.4477	1.246	1096	534	561	48.76	51.24	29500	RMT 96.60	15900	14400
1198.0	30x0.1799	7x0.1799	0.9410	0.7630	1.260	1122	911	211	81.17	18.83	24500	RMT 96.60	14500	12850
1198.0	24x0.1799	13x0.1799	0.9410	0.6104	1.260	1121	728	392	65.00	35.00	27100	RMT 96.60	14500	12850
1277.0	54x0.1447	7x0.1447	1.0031	0.8879	1.302	1196	1060	137	88.58	11.42	24600	RMT 96.60	14400	12000
1277.0	42x0.1447	19x0.1447	1.0031	0.6905	1.302	1195	824	371	68.96	31.04	28400	RMT 96.60	14400	12000
1361.5	54x0.1494	7x0.1494	1.0693	0.9466	1.345	1275	1130	146	88.58	11.42	26300	RMT 96.60	14400	11250
1534.4	42x0.1586	19x0.1586	1.2051	0.8298	1.427	1436	990	446	68.96	31.04	33800	RMT 96.60	14400	10000
1703.0	48x0.1671	13x0.1671	1.3377	1.0524	1.504	1594	1256	338	78.77	21.23	34600	RMT 96.60	14400	9000
1798.0	42x0.1717	19x0.1717	1.4124	0.9722	1.545	1683	1160	522	68.96	31.04	39600	RMT 96.60	15600	9200
1933.0	42x0.1780	19x0.1780	1.5180	1.0454	1.602	1809	1248	561	68.97	31.03	42500	RMT 96.60	16700	9200
2338.0	42x0.1958	19x0.1958	1.8367	1.2642	1.762	2209	1523	686	68.95	31.05	51500	RMT 96.60	16700	7500
2338.0	48x0.1958	13x0.1958	1.8367	1.4447	1.762	2210	1741	469	78.77	21.23	47500	RMT 96.60	16700	7500
2493.0	54x0.1655	37x0.1655	1.9576	1.1620	1.821	2355	1400	954	59.47	40.53	57600	RMT 96.60	15400	6500
2493.0	72x0.1655	19x0.1655	1.9577	1.5491	1.821	2357	1867	490	79.21	20.79	50400	RMT 96.60	15400	6500

(1) Due to rounding, total values may be slightly greater or slightly less than the sum of the component values.

(2) Weights shown are for conductor only and do not include the reel. Normal length and shipping tolerances apply.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

TransPwr® ACAR Bare Overhead Conductor

Aluminum Conductor Alloy-Reinforced Concentric-Lay-Stranded

ACAR, CONCENTRIC-LAY-STRANDED (electrical PROPERTIES)

SIZE AWG OR kcmil	STRANDING NO. X DIA. INCHES		CROSS-SECTION SQ. INCHES		O.D. INCHES	RESISTANCE (3) OHMS/1000 FT			AMPACITY 75° C (4)	GEOMETRIC MEAN RADIUS FT	INDUCTIVE REACTANCE OHM/1000 FT (5)	CAPACITIVE REACTANCE MEGAOHM - 1000 FT (5)
	AL	ALLOY	TOTAL	AL		DC @ 20°C	AC @ 25°C	AC @ 75°C				
503.6	15x0.1628	4x0.1628	0.3955	0.3123	0.814	0.0354	0.0364	0.0433	650	0.0262	0.0837	0.5300
587.2	15x0.1758	4x0.1758	0.4612	0.3641	0.879	0.0303	0.0313	0.0372	720	0.0283	0.0820	0.5180
649.5	18x0.1325	19x0.1325	0.5102	0.2481	0.927	0.0287	0.0296	0.0350	750	0.0302	0.0804	0.5096
653.1	12x0.1854	7x0.1854	0.5129	0.3240	0.927	0.0279	0.0288	0.0342	760	0.0298	0.0807	0.5097
739.8	18x0.1414	19x0.1414	0.5810	0.2827	0.990	0.0252	0.0261	0.0308	815	0.0323	0.0789	0.4994
853.7	30x0.1519	7x0.1519	0.6705	0.5436	1.063	0.0208	0.0217	0.0257	905	0.0344	0.0774	0.4882
853.7	24x0.1519	13x0.1519	0.6705	0.4349	1.063	0.0213	0.0222	0.0263	900	0.0344	0.0774	0.4882
927.2	24x0.1583	13x0.1583	0.7282	0.4724	1.108	0.0196	0.0205	0.0242	945	0.0359	0.0765	0.4817
1024.5	30x0.1664	7x0.1664	0.8046	0.6524	1.165	0.0173	0.0183	0.0216	1015	0.0377	0.0753	0.4739
1024.5	24x0.1664	13x0.1664	0.8046	0.5219	1.165	0.0178	0.0187	0.0220	1005	0.0377	0.0753	0.4739
1080.6	24x0.1709	13x0.1709	0.8487	0.5505	1.196	0.0168	0.0178	0.0209	1035	0.0387	0.0747	0.4697
1080.6	18x0.1709	19x0.1709	0.8487	0.4129	1.196	0.0173	0.0182	0.0213	1025	0.0390	0.0745	0.4697
1109.0	30x0.1731	7x0.1731	0.8707	0.7063	1.212	0.0160	0.0170	0.0200	1065	0.0392	0.0744	0.4677
1109.0	24x0.1731	13x0.1731	0.8707	0.5650	1.212	0.0164	0.0174	0.0204	1055	0.0392	0.0744	0.4677
1172.0	30x0.1780	7x0.1780	0.9207	0.7463	1.246	0.0152	0.0161	0.0190	1100	0.0403	0.0738	0.4634
1172.0	18x0.1780	19x0.1780	0.9207	0.4477	1.246	0.0159	0.0169	0.0198	1080	0.0406	0.0736	0.4634
1198.0	30x0.1799	7x0.1799	0.9410	0.7630	1.260	0.0148	0.0158	0.0186	1115	0.0408	0.0735	0.4617
1198.0	24x0.1799	13x0.1799	0.9410	0.6104	1.260	0.0152	0.0162	0.0190	1105	0.0408	0.0735	0.4617
1277.0	54x0.1447	7x0.1447	1.0031	0.8879	1.302	0.0138	0.0148	0.0174	1165	0.0422	0.0727	0.4565
1277.0	42x0.1447	19x0.1447	1.0031	0.6905	1.302	0.0142	0.0152	0.0178	1150	0.0426	0.0725	0.4565
1361.5	54x0.1494	7x0.1494	1.0693	0.9466	1.345	0.0129	0.0140	0.0164	1210	0.0436	0.0720	0.4514
1534.4	42x0.1586	19x0.1586	1.2051	0.8298	1.427	0.0118	0.0129	0.0150	1280	0.0467	0.0704	0.4421
1703.0	48x0.1671	13x0.1671	1.3377	1.0524	1.504	0.0105	0.0116	0.0136	1370	0.0492	0.0692	0.4339
1798.0	42x0.1717	19x0.1717	1.4124	0.9722	1.545	0.0101	0.0112	0.0131	1405	0.0505	0.0686	0.4297
1933.0	42x0.1780	19x0.1780	1.5180	1.0454	1.602	0.0094	0.0106	0.0123	1465	0.0524	0.0678	0.4240
2338.0	42x0.1958	19x0.1958	1.8367	1.2642	1.762	0.0078	0.0092	0.0105	1620	0.0576	0.0656	0.4091
2338.0	48x0.1958	13x0.1958	1.8367	1.4447	1.762	0.0077	0.0091	0.0104	1630	0.0576	0.0656	0.4091
2493.0	54x0.1655	37x0.1655	1.9576	1.1620	1.821	0.0074	0.0088	0.0101	1670	0.0598	0.0647	0.4040
2493.0	72x0.1655	19x0.1655	1.9577	1.5491	1.821	0.0072	0.0086	0.0099	1685	0.0594	0.0649	0.4040

(3) Based on a conductivity of 61.2% (minimum lot average) IACS at 20°C for aluminum and 52.5% IACS at 20°C for aluminum alloy. To convert to ohms/mile, multiply by 5.28. To convert to ohms/km, multiply by 3.281.

(4) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.5 coefficient of emissivity, 0.5 coefficient of absorbtivity, 30° north-ern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and sky radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.

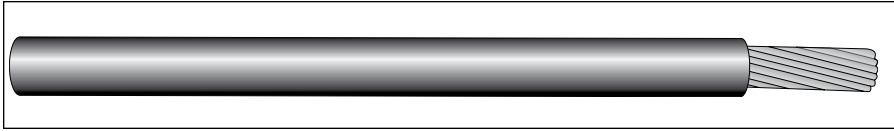
(5) Values for inductive reactance and capacitive reactance are expressed in terms of a 1 ft radius.



Notes

Covered Overhead Conductor — Line Wire

Single Conductor LLDPE or XLPE Covered Line Wire



Product Construction:

Complete Cable:

Weatherproof line wire consists of single conductor covered with either Linear Low-Density Polyethylene (LLDPE) or Cross-linked Polyethylene (XLPE). Conductors may be compressed or concentric strand of ACSR, AAC or solid, compressed or concentric strand copper. Weatherproof line wire meets the requirements of ANSI/ICEA S-70-547.

Conductors:

Different conductor types are available. Solid or stranded MHD copper, compressed or concentric HD aluminum, aluminum alloy, or ACSR are all options that are available.

The conductors meet the requirements of ASTM B3, ASTM B8, ASTM B231, ASTM B232, ASTM B400 or ASTM B496 as applicable. For aluminum and ACSR conductors, the direction of lay of the outer layer of the strand is right-hand. For copper conductors, the direction of lay of the outer layer of the strand is left-hand.

For products manufactured with aluminum conductors, the product is available with conductor corrosion-resistant inhibitor treatment.

Complete Cable (cont'd.):

Covering:

Black, Linear Low-Density Polyethylene (LLDPE) or black extruded Cross-linked Polyethylene (XLPE) coverings are available.

There is no voltage rating.

Features and Benefits:

The covering provides mechanical protection to the conductor and is resistant to weathering and chemicals. If the conductors accidentally come into contact due to high winds, falling tree limbs or other disturbances, the covering resists short circuits and the tendency for conductors to weld together.

Applications:

Weatherproof line wire is used for overhead transmission and distribution lines. Covered line wire is not an electrically insulated cable. Therefore, it should be installed on insulators, and users should treat line wire as bare conductor for personal safety.

Options:

- Medium-Density Polyethylene (MDPE)
- High-Density Cross-linked Polyethylene (HDXLPE)
- Annealed (soft drawn) copper for transformer drop and covered ground wire
- Conductor corrosion-resistant inhibitor treatment
- Sequential print marking

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

Covered Overhead Conductor — Line Wire

Single Conductor LLDPE or XLPE Covered Line Wire

COVERED AAC ALUMINUM CONDUCTOR, CONCENTRIC-LAY-STRANDED

CODE WORD (1)	SIZE AWG OR kcmil	NO. OF WIRES	COVER THKN. INCHES	APPROX. CABLE O.D.	APPROX. WEIGHT LB/1000 FT			RATED STRENGTH LBS	AMPACITY		PACKAGING (4)	
					AL	TOTAL			PE (2)	XLPE (3)	TYPE & SIZE	LENGTH FT
						LLDPE	XLPE					
Apple	6	1	0.030	0.224	24.6	33.4	33.4	440	105	120	NR 30.18 COIL	12300 4000
Plum	6	7	0.030	0.238	24.6	33.8	33.8	505	105	120	NR 30.18 COIL	10100 4000
Pear	4	1	0.030	0.266	39.1	50.3	50.3	710	140	160	NR 30.18 COIL	8600 2400
Apricot	4	7	0.030	0.284	39.1	50.9	50.9	795	140	160	NR 30.18 COIL	7000 250
Cherry	2	1	0.045	0.350	62.2	83.2	83.2	1105	185	210	NR 30.18 COIL	5000 2000
Peach	2	7	0.045	0.372	62.2	83.9	83.9	1215	185	210	NR 32.24 COIL	7500 1500
Nectarine	1	7	0.045	0.407	78.4	104.0	104.0	1475	200	230	NR 32.24 COIL	6000 1200
Quince	1/0	7	0.060	0.476	99.0	133.5	133.5	1790	245	280	NR 32.24 COIL	4700 1000
Orange	2/0	7	0.060	0.521	124.8	163.5	163.5	2260	290	335	NR 32.24	3800
Fig	3/0	7	0.060	0.569	157.3	200.6	200.6	2735	325	375	NR 40.24	4400
Olive	4/0	7	0.060	0.626	198.3	247	247	3445	375	430	NR 40.24	3500
Mulberry	266.8	19	0.060	0.694	250	304	304	4475	430	500	NR 40.24	3000
Silverbelt	266.8	19	0.080	0.733	250	322	322	4475	430	500	NR 40.24	3000
Anona	336.4	19	0.060	0.764	315	375	375	5535	500	580	NR 40.24	2500
Crabapple	336.4	19	0.080	0.804	315	395	395	5535	495	575	NR 40.24	2500
Chinquapin	350.0	19	0.060	0.778	328	389	389	5750	510	595	NR 40.24	2500
Ginkgo	350.0	19	0.080	0.818	328	410	410	5750	510	595	NR 40.24	2400
Molles	397.5	19	0.080	0.860	373	459	459	6400	545	640	NR 40.24	2000
Ash	400.0	19	0.080	0.862	375	462	462	6440	550	640	NR 40.24	2000
Huckleberry	477.0	37	0.080	0.930	447	543	543	7820	610	715	NR 50.32	3300
Paw Paw	556.5	37	0.080	0.991	522	625	625	8950	675	790	NR 50.32	2800
Breadfruit	636.0	61	0.095	1.080	596	724	724	10200	725	850	NR 50.32	2500
Persimmon	795.0	61	0.095	1.185	745	888	888	12900	830	975	NR 50.32	2200
Grapefruit	1033.5	61	0.095	1.325	969	1132	1132	16400	890	1055	NR 50.32	1700
Mango	1590.0	61	0.110	1.629	1490	1726	1726	24300	1240	1470	NR 58.32	1700

(1) Code words shown are for LLDPE products; add the suffix "XLP" to the code word for cross-linked products. Example: Walnut/XLP.

(2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.91 coefficient of emissivity, 0.95 coefficient of absorbtivity, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and sky radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.

(3) Based on a conductor temperature of 90°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.91 coefficient of emissivity, 0.95 coefficient of absorbtivity, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and sky radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.

(4) Normal length and shipping tolerances apply. Reel sizes may vary.

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Covered Overhead Conductor — Line Wire

Single Conductor LLDPE or XLPE Covered Line Wire

COVERED ACSR ALUMINUM CONDUCTOR, STEEL-REINFORCED, CONCENTRIC-LAY-STRANDED												
CODE WORD (1)	SIZE AWG OR kcmil	NO. OF WIRES	COVER THKN. INCHES	APPROX. CABLE O.D.	APPROX. WEIGHT LB/1000 FT			RATED STRENGTH LBS	AMPACITY		PACKAGING (4)	
					AL	LLDPE	XLPE		PE (2)	XLPE (3)	TYPE & SIZE	LENGTH FT
Walnut	6	6/1	0.030	0.252	24.5	46.5	46.5	1130	105	120	NR 27.18 COIL	8800 2700
Butternut	4	6/1	0.030	0.303	38.9	70.7	70.7	1765	140	160	NR 30.18 COIL	6200 2200
Hickory	4	7/1	0.030	0.309	38.9	81.1	81.1	2240	140	160	NR 30.18 COIL	6000 2000
Pignut	2	6/1	0.045	0.396	61.9	116	116	2710	180	210	NR 32.24 COIL	6700 1200
Almond	1/0	6/1	0.060	0.505	98.5	183	183	4160	235	275	NR 32.24 COIL	4000 1000
Pecan	2/0	6/1	0.060	0.553	124.1	225	225	5035	270	315	NR 36.24	3400
Filbert	3/0	6/1	0.060	0.606	156.5	279	279	6290	335	385	NR 40.24	3900
Buckeye	4/0	6/1	0.060	0.665	197.4	345	345	7935	370	440	NR 40.24	3000
Hackberry	266.8	18/1	0.060	0.710	250	344	344	6540	435	505	NR 40.24	2600
Redbud	266.8	18/1	0.080	0.750	250	363	363	6540	435	505	NR 40.24	2600
Mockernut	336.4	18/1	0.060	0.783	315	427	427	8245	505	585	NR 40.24	2500
Aspen	336.4	18/1	0.080	0.823	315	447	447	8245	500	580	NR 40.24	2400

(1) Code words shown are for LLDPE products; add the suffix "XLP" to the code word for cross-linked products. Example: Walnut/XLP.
 (2) Based on a conductor temperature of 75°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.91 coefficient of emissivity, 0.95 coefficient of absorbtivity, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and sky radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (3) Based on a conductor temperature of 90°C at 60 Hz and the following conditions: 25°C ambient temperature, 2 ft/sec crosswind (90° to conductor), 0.91 coefficient of emissivity, 0.95 coefficient of absorbtivity, 30° northern latitude, sea level elevation, 90° azimuth of line (East-West), clear atmosphere, and a date and time of noon on July 1 (resulting in 96.0 W/ft² of solar and sky radiated heat). Actual ampacity will differ based on local conditions. For specific ampacities, please contact your General Cable sales representative.
 (4) Normal length and shipping tolerances apply. Reel sizes may vary.
 Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Covered Overhead Conductor — Tree Wire & Spacer Cable

Single Conductor - Single, Two, or Three Layer Covered Tree Wire/Spacer Cable

Product Construction:

Complete Conductor:

Tree wire consists of a single conductor (AAC, AAAC, or ACSR) covered with either a single layer of thermoset track resistant covering, a two layer thermoset covering with a track resistant outer layer, or a three layer thermoset covering with a track resistant outer layer and a thermoset semi-conductive conductor shield. These designs may be used as spacer cable with the appropriate accessories.

Tree Wire/Spacer Cable is manufactured to ICEA S-121-733 and is available in either black or gray. All designs are rated for 90°C normal service operation, 130°C emergency overload, and 250°C short circuit in accordance with ICEA S-121-733.

Conductors:

- AAC – compact stranding, 1350-H19 aluminum made to ASTM B400
- AAAC – concentric stranding, 6201-81 aluminum alloy made to ASTM B399
- ACSR – concentric stranding, 1350-19 aluminum with GA2 steel core made to ASTM B232

Coverings:

Single Layer:

- TR-HDXLPE – Track Resistant High Density Cross-Linked Polyethylene

Two Layer:

- XLPE/TR-HDXLPE - Cross-Linked Polyethylene/Track Resistant High Density Cross-Linked Polyethylene.

Three Layer:

- SCS/XLPE/TR-HDXLPE - Thermoset Semi-conductive Conductor Shield/Cross-Linked Polyethylene/Track Resistant High Density Cross-Linked Polyethylene.

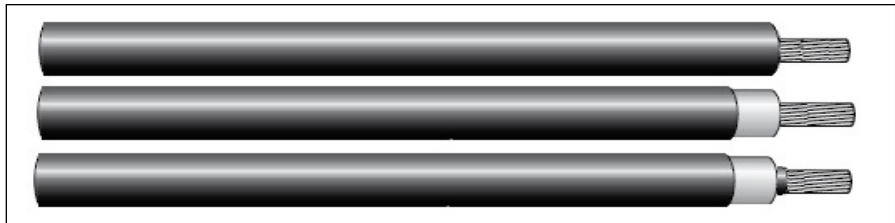
Features and Benefits:

Durable covering helps to protect against electrical faults due to contact.

Applications:

For areas with overhead power lines that have a potential for contact with trees or other debris.

For more information, or information on other conductor sizes, designs or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail us at info@generalcable.com.



AAC - SINGLE & TWO LAYER TREE WIRE FOR 5 kV & 15 kV APPLICATIONS

SIZE (AWG OR kcmil)	CONDUCTOR STRANDING	5 kV APPLICATION ¹ (Single Layer)		15 kV APPLICATION ² (Two Layer)		Conductor Rated Strength (LBS)
		Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	
#4	7	0.373	70	0.533	112	880
#2	7	0.428	99	0.568	144	1350
1/0	7	0.496	144	0.636	194	1990
2/0	7	0.536	174	0.676	228	2510
3/0	7	0.583	212	0.723	270	3040
4/0	7	0.635	259	0.775	322	3830
266.8	7	0.697	318	0.837	386	4830
266.8	19	0.697	318	0.837	386	4970
336.4	19	0.763	391	0.903	465	6150
397.5	19	0.819	454	0.959	534	7110
477	19	0.882	537	1.022	622	8360
477	37	0.882	537	1.022	622	8690
556.5	37	-	-	1.080	708	9940
636	37	-	-	1.135	799	11400

¹ Nominal Covering Thickness for 5 kV is 80 mils single layer.

² Nominal Covering Thickness for 15 kV is 75 mils inner layer and 75 mils outer layer for #2-636 kcmil and 80 mils inner layer and 80 mils outer layer for 795 kcmil

AAC - THREE LAYER WITH SEMI-CONDUCTIVE CONDUCTOR SHIELD TREE WIRE AND SPACER CABLE FOR 15 kV, 25 kV AND 35 kV APPLICATIONS

SIZE (AWG OR kcmil)	CONDUCTOR STRANDING	15 kV APPLICATION ¹		25 kV APPLICATION ²		35 kV APPLICATION ³		Conductor Rated Strength (LBS)
		Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	
#4	7	0.543	121	-	-	-	-	880
#2	7	0.598	156	0.798	247	-	-	1350
1/0	7	0.666	208	0.866	307	0.966	367	1990
2/0	7	0.706	244	0.906	348	1.006	410	2510
3/0	7	0.753	286	0.953	396	1.053	461	3040
4/0	7	0.805	339	1.005	456	1.105	524	3830
266.8	7	0.867	405	1.067	530	1.167	602	4830
266.8	19	0.867	405	1.067	530	1.167	602	4970
336.4	19	0.933	486	1.133	619	1.233	696	6150
397.5	19	0.989	556	1.189	696	1.289	776	7110
477	19	1.052	645	1.252	794	1.352	877	8360
477	37	1.052	645	1.252	794	1.352	877	8690
556.5	37	1.120	742	1.320	899	1.420	988	9940
636	37	1.175	831	1.375	995	1.475	1087	11400

¹ Nominal Covering Thickness for #4 – 477 kcmil 15 kV is 15 mils SCS/75 mils inner layer/75 mils outer layer. for >477 kcmil – 636 kcmil 15 kV is 20 mils SCS/75 mils inner layer/75 mils outer layer. for 795 kcmil 15 kV is 20 mils SCS/80 mils inner layer/80 mils outer layer.

² Nominal Covering Thickness for #4 – 477 kcmil 25 kV is 15 mils SCS/125 mils inner layer/125 mils outer layer. for >477 kcmil – 795 kcmil 25 kV is 20 mils SCS/125 mils inner layer/125 mils outer layer.

³ Nominal Covering Thickness for #4 – 477 kcmil 35 kV is 15 mils SCS/175 mils inner layer/125 mils outer layer. for >477 kcmil – 795 kcmil 35 kV is 20 mils SCS/175 mils inner layer/125 mils outer layer.

Covered Overhead Conductor — Tree Wire & Spacer Cable

Single Conductor Single or Two Layer Covered Tree Wire/Spacer Cable

AAAC - SINGLE & TWO LAYER TREE WIRE FOR 5 kV & 15 kV applications

SIZE (kcmil)	EQUIVALENT SIZE (AWG OR kcmil)	STRANDING	5 kV APPLICATIONS ¹ (Single Layer)		15 kV APPLICATIONS ² (Two Layer)		RATED STRENGTH (LBS)
			Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	
48.69	#4	7	0.410	82.7	0.550	123	1760
77.47	#2	7	0.476	118.1	0.616	166.7	2800
123.3	1/0	7	0.558	168.1	0.698	223.9	4280
155.4	2/0	7	0.607	204	0.747	264.2	5390
195.7	3/0	7	0.662	248.4	0.802	313.4	6790
246.9	4/0	7	0.723	304.1	0.863	374.5	8560
312.8	266.8	19	0.802	373	0.942	450	10500
394.5	336.4	19	0.880	459	1.020	543	13300
465.4	397.5	19	0.943	533	1.083	623	15600
559.5	477	19	1.018	631	1.158	727	18800
652.4	556.5	19	-	-	1.227	825	21900
740.8	636	37	-	-	1.290	922	24400
927.2	795	37	-	-	1.408	1121	30500

⁽¹⁾Nominal Covering Thickness for 5 kV is 80 mils single.

⁽²⁾Nominal Covering Thickness for 15 kV is 75 mils inner layer and 75 mils outer layer for #2 - 740.8 kcmil and 80 mils inner layer and 80 mils outer layer for 927.2 kcmil.

AAAC - THREE LAYER WITH SEMI-CONDUCTIVE CONDUCTOR SHIELD TREE WIRE FOR 15 kV, 25 kV and 35 kV APPLICATIONS

SIZE (kcmil)	EQUIVALENT SIZE (AWG OR kcmil)	STRANDING	15 kV APPLICATIONS ¹		25 kV APPLICATIONS ²		35 kV APPLICATIONS ³		RATED STRENGTH (LBS)
			Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	
48.69	#4	7	0.580	135	-	-	-	-	1760
77.47	#2	7	0.646	171	0.846	273	-	-	2800
123.3	1/0	7	0.728	238	0.928	345	1.028	408	4280
155.4	2/0	7	0.777	279	0.977	392	1.077	458	5390
195.7	3/0	7	0.832	328	1.032	449	1.132	519	6790
246.9	4/0	7	0.893	390	1.093	518	1.193	592	8560
312.8	266.8	19	0.972	471	1.172	609	1.272	688	10500
394.5	336.4	19	1.051	565	1.251	714	1.351	798	13300
465.4	397.5	19	1.113	646	1.313	802	1.413	890	15600
559.5	477	19	1.188	751	1.388	918	1.488	1009	18800
652.4	556.5	19	1.267	864	1.467	1040	1.567	1138	21900
740.8	636	37	1.331	964	1.531	1149	1.631	1251	24400
927.2	795	37	1.448	1168	1.648	1368	1.748	1477	30500

⁽¹⁾Nominal Covering Thickness for #4 - 465.4 kcmil 15 kV is 15 mils SCS/75 mils inner layer/75 mils outer layer. for >465.4 kcmil - 740.8 kcmil 15 kV is 20 mils SCS/75 mils inner layer/75 mils outer layer. for 927.2 kcmil 15 kV is 20 mils SCS/80 mils inner layer/80 mils outer layer.

⁽²⁾Nominal Covering Thickness for #4 - 465.4 kcmil 25kV is 15 mils SCS/125 mils inner layer/125 mils outer layer. for >465.4 kcmil - 927.2 kcmil 25kV is 20 mils SCS/125 mils inner layer/125 mils outer layer.

⁽³⁾Nominal Covering Thickness for #4 - 477 kcmil 35 kV is 15 mils SCS/175 mils inner layer/125 mils outer layer. for >477 kcmil - 795 kcmil 35 kV is 20 mils SCS/175 mils inner layer/125 mils outer layer.

Covered Overhead Conductor — Tree Wire & Spacer Cable

Single Conductor Single or Two Layer Covered Tree Wire/Spacer Cable

ASCR - SINGLE & TWO LAYER TREE WIRE FOR 5 kV & 15 kV APPLICATIONS						
SIZE (AWG OR kcmil)	STRANDING	5 kV APPLICATIONS ¹ (Single Layer)		15 kV APPLICATIONS ² (Two Layer)		RATED STRENGTH (LBS)
		Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	
#2	6/1	0.476	137	0.616	186	2850
1/0	6/1	0.558	198	0.698	254	4161
2/0	6/1	0.607	242	0.747	302	5300
3/0	6/1	0.662	297	0.802	362	6620
4/0	6/1	0.723	365	0.863	435	8350
336.4	18/1	0.844	451	0.982	532	8680
336.4	26/7	0.880	553	1.020	638	14100
397.5	18/1	0.903	525	1.043	611	9940
397.5	26/7	0.943	645	1.083	735	16300
477	18/1	0.974	620	1.114	713	11800
477	24/7	1.006	721	1.146	816	17200
477	26/7	1.018	764	1.158	861	19500
556.5	24/7	-	-	1.214	933	19800
556.5	26/7	-	-	1.227	986	22600
636	24/7	-	-	1.277	1046	22600
636	26/7	-	-	1.290	1105	25200
795	24/7	-	-	1.392	1294	27900
795	26/7	-	-	1.408	1367	31500

¹Nominal Covering Thickness for 5 kV is 80 mils single layer.

²Nominal Covering Thickness for 15 kV is 75 mils inner layer and 75 mils outer layer for #2 - 636.0 kcmil and 80 mils inner layer and 80 mils outer layer for 795 kcmil.

ASCR - THREE LAYER WITH SEMI-CONDUCTIVE CONDUCTOR SHIELD TREE WIRE FOR 15 kV, 25 kV and 35 kV APPLICATIONS								
SIZE (AWG OR kcmil)	CONDUCTOR STRANDING	15 kV APPLICATIONS ¹		25 kV APPLICATIONS ²		35 kV APPLICATIONS ³		RATED STRENGTH (LBS)
		Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	Overall Diameter (inches)	Approx. Cable Weight (LBS/1000 FT)	
#2	6/1	0.646	196	0.846	293	-	-	2850
1/0	6/1	0.728	269	0.928	376	1.028	439	4380
2/0	6/1	0.777	317	0.977	431	1.077	497	5300
3/0	6/1	0.832	378	1.032	498	1.132	568	6620
4/0	6/1	0.893	452	1.093	581	1.193	654	8350
336.4	18/1	1.014	554	1.214	698	1.314	779	8680
336.4	26/7	1.050	659	1.250	808	1.350	892	14100
397.5	18/1	1.073	634	1.273	785	1.373	871	9940
397.5	26/7	1.113	758	1.313	915	1.413	1003	16300
477	18/1	1.144	737	1.344	898	1.444	987	11800
477	24/7	1.176	840	1.376	1005	1.476	1096	17200
477	26/7	1.188	885	1.388	1051	1.488	1143	19500
556.5	24/7	1.254	968	1.454	1143	1.554	1240	19800
556.5	26/7	1.267	1021	1.467	1197	1.567	1295	22600
636	24/7	1.317	1086	1.517	1268	1.617	1369	22600
636	26/7	1.330	1146	1.530	1330	1.630	1432	25200
795	24/7	1.432	1319	1.632	1516	1.732	1625	27900
795	26/7	1.448	1394	1.648	1594	1.748	1703	31500

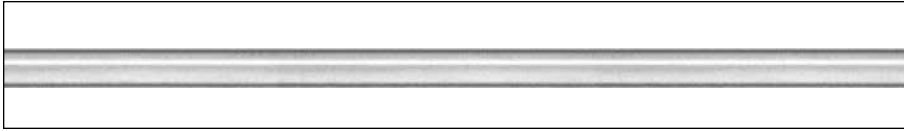
¹Nominal Covering Thickness for #4 - 477 kcmil 15 kV is 15 mils SCS/75 mils inner layer/75 mils outer layer. for >477 kcmil - 636 kcmil 15 kV is 20 mils SCS/75 mils inner layer/75 mils outer layer. for 795 kcmil 15 kV is 20 mils SCS/80 mils inner layer/80 mils outer layer.

²Nominal Covering Thickness for #4 - 477 kcmil 25kV is 15 mils SCS/125 mils inner layer/125 mils outer layer. for >477 kcmil - 795 kcmil 25kV is 20 mils SCS/125 mils inner layer/125 mils outer layer.

³Nominal Covering Thickness for #4 - 477 kcmil 35kV is 15 mils SCS/175 mils inner layer/125 mils outer layer. for >477 kcmil - 795 kcmil 35kV is 20 mils SCS/175 mils inner layer/125 mils outer layer.

Aluminum Tie Wire

Soft Solid 1350 Aluminum Wire



SIZE AWG	DIAMETER OF SOLID WIRE INCHES	APPROX. WEIGHT LB/1000 FT	NOMINAL BREAKING STRENGTH LBS (1)
6	0.162	24.1	175
4	0.204	38.4	280
2	0.258	61.0	440

(1) Based on annealed aluminum having a minimum tensile strength of 8500 psi. Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Conductor:

Aluminum tie wire is a solid annealed (soft) aluminum wire manufactured to ASTM B609 "O" tensile grade and wire diameter dimension.

Applications:

Aluminum tie wire is a soft solid aluminum wire that is used in overhead transmission and distribution line construction to mechanically secure components such as conductors to pin insulators. The wire is also used for above-ground grounding applications in line construction.

Options:

- Black weather-resistant covering with a nominal thickness of 30 mils

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.

Miscellaneous Products

5

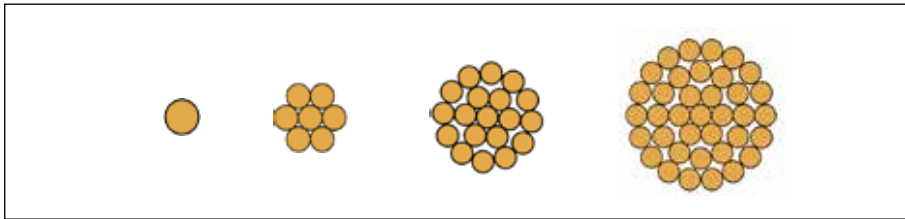
General Cable manufactures a wide range of wire and cable products. The following section provides information on some of the common conductor or cable items that are consumed in the electric utility marketplace. While some of the following catalog pages may be found in other General Cable catalogs or brochures, the information is provided to facilitate easier access to the material.

General Cable provides technical assistance and advice on any challenges associated with conductor or cable design, installation or application. Engineering services are available for specification review, specification development and conductor application inquiries.

For more information, contact a General Cable sales representative or e-mail info@generalcable.com.

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Grounding Conductor	167
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Bare Soft Copper Grounding Conductor



CONCENTRIC-LAY-STRANDED BARE SOFT COPPER GROUNDING CONDUCTORS

SIZE (AWG or kcmil)	NO. OF WIRES	OVERALL DIAMETER (INCHES)	RESISTANCE DC @ 20°C (OHMS/1000 FT)	APPROXIMATE WEIGHT (LBS/1000 FT)	STANDARD PACKAGES		
					WOOD REEL DESIGNATION	WEIGHT (LBS)	LENGTH (FT)
8	1	0.128	0.628	50	NH 30.18.10	650	11,500
6	1	0.162	0.395	79	NH 30.18.10	1,200	14,400
1/0	7	0.368	0.1002	326	NH 50.32.21	4,300	12,600
1/0	19	0.373	0.1003	326	NH 50.32.21	4,000	11,400
2/0	7	0.414	0.0795	411	NH 50.32.21	4,300	10,000
2/0	19	0.418	0.0795	411	NH 50.32.21	3,800	8,800
3/0	7	0.464	0.0630	518	NH 50.32.21	4,300	7,900
3/0	19	0.470	0.0630	518	NH 50.32.21	3,900	7,100
4/0	7	0.522	0.0499	653	NH 50.32.21	4,500	6,200
4/0	19	0.528	0.0500	653	NH 50.32.21	3,900	5,600
250	19	0.574	0.0423	772	NH 50.32.21	3,900	4,800
250	37	0.575	0.0423	772	NH 50.32.21	4,500	5,500
500	37	0.814	0.0212	1544	NH 50.32.21	4,500	2,800

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Product Construction:

Complete Conductor:

Bare soft copper grounding conductors are solid or concentric-lay-stranded, consisting of one or more layers of wire wrapped helically around a straight round central wire. Each successive layer has six wires more than the layer immediately beneath. Greater flexibility is afforded by using Class B stranding. The direction of lay for the outer layer is left-hand lay. In multilayer constructions, the direction of lay for each successive layer is reversed. Copper ground wires are manufactured using annealed soft copper wire and are manufactured in accordance with the requirements of the latest applicable issues of the ASTM specifications B3 and B8.

Features and Benefits:

Solid or stranded bare soft copper grounding conductors are suitable for direct burial and are inherently corrosion-resistant and easy to terminate and join at splices and joints.

Applications:

Solid and stranded bare soft copper grounding conductors are suitable for use as neutrals, as circuit grounding conductors as well as machinery and equipment grounding systems. Soft copper may be used for transformer drop leads or other non-tension hook-up jumpers.

For more information, or information on other conductor sizes, designs or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail us at info@generalcable.com.

Dead Soft Annealed (DSA) Copper Clad Steel (CCS) Grounding Conductor

Product Construction:

Complete Conductor:

Dead Soft Annealed (DSA) Copper Clad Steel (CCS) conductors are concentric-lay-stranded. The CCS strands are a 40% conductivity grade previously referred to as Grade 40A. The wire is manufactured using a low carbon steel core, rendering greater flexibility to enable easier handling during installation. The direction of lay for the outer layer is left-hand. The direction of lay of each successive layer is reversed. DSA CCS grounding conductors are manufactured in accordance with ASTM B910, B258 and B228, as applicable.

Features and Benefits:

Stranded DSA Copper Clad Steel conductors are used for buried ground grid systems where a more economical alternative to copper conductors is desired.

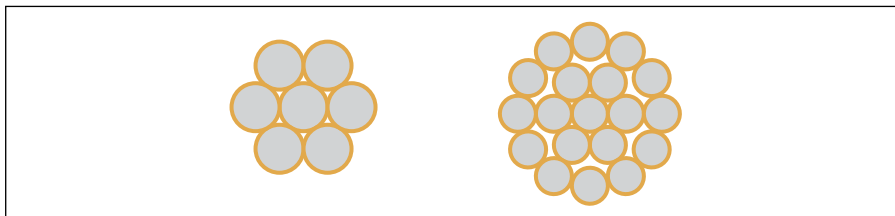
For utility applications, Copper Clad Steel is used in substation and generation plant ground grids; grounding of metal fences; and in building and structure lightning protection systems.

Copper Clad Steel is tough to cut and unlike copper conductors has virtually no scrap recovery value, thus reducing the potential of theft or vandalism of the grounding wire.

Applications:

DSA Copper Clad Steel stranded conductors are used in place of copper conductors in grounding applications and systems. The size and construction of the Copper Clad Steel conductor is generally selected by matching the approximate diameter equivalence to a copper conductor. Please note that the ampacity rating and the dc and ac resistance of the Copper Clad Steel wire conductor is not equivalent to that of the copper conductor.

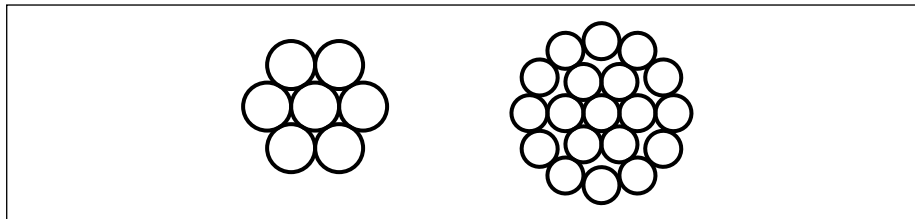
For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail info@generalcable.com.



DSA COPPER CLAD STEEL CONDUCTORS, CONCENTRIC-LAY-STRANDED									
SIZE DESIG.	SIZE NO. X WIRE AWG	NO. X DIA. INCHES	CROSS-SECTION SQ. INCHES	O.D. INCHES	APPROX. WEIGHT LBS/1000 FT	MIN. BREAKING STRENGTH LBS	MAX. DC RESISTANCE @ 20°C OHMS/KFT	STANDARD PACKAGES (1)	
								REEL DESIG.	LENGTH FEET
11/32"	7 x #9 AWG	7 x 0.1144	0.07195	0.343	259	2510	0.2974	W 46X36	15900
3/8"	7 x #8 AWG	7 x 0.1285	0.09078	0.385	327	3170	0.2358	W 46X36	12500
7/16"	7 x #7 AWG	7 x 0.1443	0.1145	0.433	413	4000	0.1870	W 46X37	10000
1/2"	7 x #6 AWG	7 x 0.1620	0.1443	0.486	520	5040	0.1483	W 46X38	7900
9/16"	7 x #5 AWG	7 x 0.1819	0.1819	0.546	656	6300	0.1177	W 46X39	6200
9/16"	19 x #9 AWG	19 x 0.1144	0.1953	0.572	707	6820	0.1100	W 46X40	5700
21/32"	19 x #8 AWG	19 x 0.1285	0.2464	0.642	892	8610	0.0872	W 46X41	4490
23/32"	19 x #7 AWG	19 x 0.1443	0.3107	0.721	1125	10850	0.0691	W 46X42	3600
13/16"	19 x #6 AWG	19 x 0.1620	0.3916	0.810	1418	13680	0.0549	W 46X43	2840
7/8"	19 x #5 AWG	19 x 0.1819	0.4938	0.910	1787	17250	0.0435	W 46X44	2230

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Steel Overhead Ground Wire and Stranded Steel Guy Wire



Steel Overhead Ground Wire (ASTM A363)

Product Construction:

Complete Conductor:

Steel overhead ground wire conductors are a concentric-lay-stranded construction. Steel overhead ground wire conductors are manufactured in accordance with the requirements of ASTM Specification A363.

Features and Benefits:

The steel wires are protected from corrosion by galvanizing. The standard Class A zinc coating is adequate for ordinary environments. ASTM A363 does not permit welds or splices be made in any of the finished steel strand wire.

Applications:

Overhead ground wire or static wire.

Options:

Class A zinc-5% aluminum mischmetal alloy-coated per ASTM A925.

STEEL OVERHEAD GROUND WIRE					
OVERALL DIAMETER (INCHES)	STRANDING (NO. X DIAMETER)	APPROXIMATE WEIGHT (LB/KFT)	MINIMUM BREAKING STRENGTH (POUNDS)		
			UTILITIES GRADE	HIGH-STRENGTH GRADE	EXTRA-HIGH-STRENGTH GRADE
5/16	7 X 0.104	205	---	8000	11200
3/8	7 X 0.120	273	11500	10800	15400
7/16	7 X 0.145	399	---	14500	20800
1/2	7 X 0.165	517	---	18800	26900

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

STRANDED STEEL GUY WIRE							
OVERALL DIAMETER (INCHES)	STRANDING (NO. X DIAMETER)	APPROXIMATE WEIGHT (LB/KFT)	MINIMUM BREAKING STRENGTH (POUNDS)				
			UTILITIES GRADE	COMMON GRADE	SIEMENS-MARTIN GRADE	HIGH-STRENGTH GRADE	EXTRA HIGH-STRENGTH GRADE
1/8	7 X 0.041	32	---	540	910	1330	1830
5/32	7 X 0.052	51	---	870	1470	2140	2940
3/16	7 X 0.062	73	---	1150	1900	2850	3990
3/16	7 X 0.065	80	2400	---	---	---	---
7/32	7 X 0.072	98	---	1540	2560	3850	5400
1/4	7 X 0.080	121	---	1900	3150	4750	6650
9/32	7 X 0.093	164	4600	2570	4250	6400	8950
5/16	7 X 0.104	205	---	3200	5350	8000	11200
5/16	7 X 0.109	225	6000	---	---	---	---
3/8	7 X 0.120	273	11500	4250	6950	10800	15400
7/16	7 X 0.145	399	18000	5700	9350	14500	20800
1/2	7 X 0.165	517	25000	7400	12100	18800	26900
1/2	19 X 0.100	504	---	7620	12700	19100	26700
9/16	7 X 0.188	671	---	9600	15700	24500	35000
9/16	19 X 0.113	637	---	9640	16100	24100	33700
5/8	7 X 0.207	813	---	11600	19100	29600	42400
5/8	19 X 0.125	796	---	11000	18100	28100	40200
3/4	19 X 0.150	1155	---	16000	26200	40800	58300
7/8	19 X 0.177	1581	---	21900	35900	55800	79700
1	19 X 0.200	2073	---	28700	47000	73200	104500

Dimensions and weights not designated minimum or maximum are nominal values and subject to manufacturing tolerances. In this context, weight means mass.

Stranded Steel Guy Wire (ASTM A475)

Product Construction:

Complete Conductor:

Stranded steel guy wire is a concentric-lay-stranded construction. Stranded steel guy wire is manufactured in accordance with the requirements of ASTM Specification A475.

Features and Benefits:

The steel wires are protected from corrosion by galvanizing. The standard Class A zinc coating is adequate for ordinary environments.

Applications:

Shield wire, messengers, span wire, etc.

Options:

Class A zinc-5% aluminum mischmetal alloy-coated per ASTM A855.

For more information, or information on other conductor sizes, designs and/or specific installation requirements not shown in the tables, contact your General Cable sales representative or e-mail at info@generalcable.com.

General Cable Stock Program

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General Cable Electric Utility Stock Program

As a service to our customers, General Cable maintains an inventory of factory stock for frequently purchased items of bare overhead distribution, low-voltage overhead and underground service cable and medium-voltage cable products. These products are manufactured to industry-standard specifications and are available for immediate shipment from our manufacturing facilities across North America.

Terms and Conditions of Sale for Stock Products

Standards:

- Medium-voltage aluminum URD stock is manufactured and tested in accordance with the latest revisions of ANSI/ICEA S-94-649 standard for concentric neutral cables rated 5–46kV and also meets the requirements of the latest revision of the AEIC CS8 specification. The insulation system utilized in our medium-voltage aluminum URD stock is accepted by RUS for specification U-1.
- Low-voltage insulated and bare aluminum stock products are manufactured and tested in accordance with the latest revisions of ASTM and ICEA standards.
- Weights and dimensions shown are nominal and subject to standard industry tolerances.

Order Acceptance:

- All stock orders subject to prior sale.
- Minimum order value is \$1,000.00.
- Order acceptance period is 7 days.

Pricing Policy:

- Firm prices are available for items confirmed in-stock for immediate buy and ship.
- Adjustable prices are available and subject to metals escalation/de-escalation at the time of shipment.
- Backorders or delayed shipments may be subject to price adjustment.
- Stock prices and terms of sale are subject to change without notice.
- Coils are sold in full-pallet quantities.

Shipping Method:

- Shipments will be made via common carrier. Special instructions must be stated at the time of order. Flatbed shipments (truckload quantities only) are subject to availability and extra freight charges, depending upon geographic destinations.
- Freight charges for greater than 5,000 lbs. net weight will be prepaid and allowed.

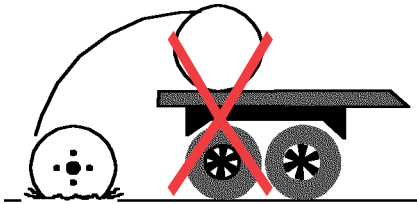
Inventory Holds:

- No inventory holds will be accepted.
- Stock shall be subject to prior sale.

Handling Recommendations and Packaging Information

7

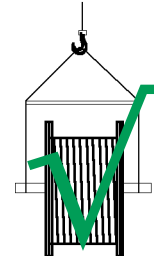
Recommended Reel Handling Procedures



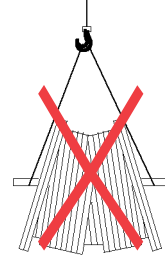
Don't

When off-loading reels from a truck, lower reels carefully using a hydraulic gate, hoist or forklift truck. Never drop reels. If reels must be rolled, roll in opposite direction of the cable wraps to keep cable from loosening on the reel.

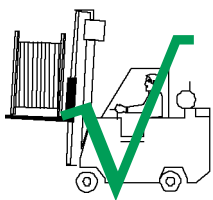
When using a hoist, install a mandrel through the reel arbor holes and attach a sling. Use a spreader bar approximately 6 inches longer than the overall reel width placed between the sling ends just above the reel flanges. This will prevent bending the reel flanges and mashing the cable.



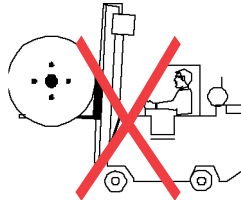
Do



Don't



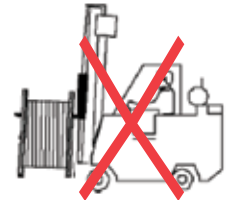
Do



Don't



Don't

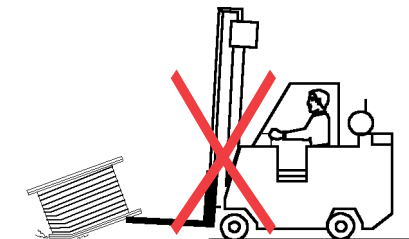


Don't

If a forklift is used, approach the reel from the flange side. Position the forks such that the reel is lifted by both reel flanges. Do not allow the lift forks to contact the cable. Care must be taken by the forklift operator not to make sudden turns or stops.

Cable shipped on pallets should be stored indoors if possible. Cable shipped on wooden or metal reels may be stored outdoors. When selecting a storage site, consideration should be given to:

- Traffic patterns during off-loading
- Grade and condition of the soil or pavement
- Protection from vehicle damage during the time in storage
- Environmental conditions such as exposure to heat, corrosive chemicals, etc.

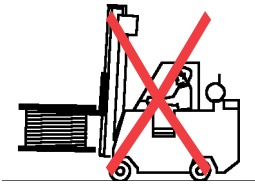


Don't

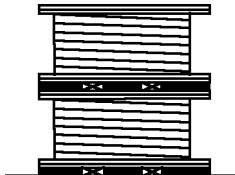
Cable reels should be stored on hard surfaces resting on the flange's edge (flanges vertical). Align reels flange to flange and, if possible, arrange so that first in is first out. Multiple wooden reels stacked on top of each other ("Pancake" storage) or storing reels flat (flanges horizontal) is not recommended for transmission size bare conductor or medium-voltage cable. The weight of the stack can get extremely heavy, creating an enormous load on the bottom reel. Also, damage to the reel and/or cable will likely occur when the reel is flipped for transit. A concentration of stress on the reel flange may cause it to break and subsequently damage the cable.

Handling Recommendations and Packaging Information

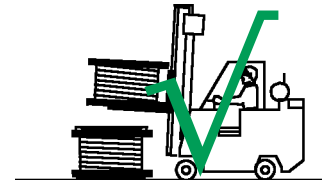
Recommended Reel Handling Procedures



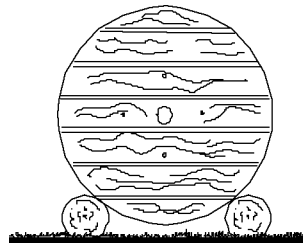
Don't



End View of Spacers



Do



This helps keep the flanges from decaying and prevents the reels from rolling. At temporary storage sites where soil may be soft, preservative-treated plywood sheets may be used to keep reel flanges from sinking into the ground.

Packaging Information

Standard Package and Shipping Information

Shipping Information – Bare Overhead / Individual Package (Reel or Coil)

Unless otherwise agreed upon at time of quotation

- Standard or special lengths are subject to a **manufacturing length tolerance** per shipping reel of plus or minus **5%** from the specified shipping reel length.
- An amount not exceeding 10% of the total quantity of any order may be shipped in random lengths, with no one length shorter than 50% of the specified shipping reel length.
- When required, bare conductor may be furnished in **matched sets**, with the variation in the measured length within each group being no greater than 150 feet for sets of 6 or less, and 200 feet for sets of 9 and 12. In the case where a random length has been produced, the corresponding matched set group will be cut to within a 10 ft. tolerance. For **matched set reel identification**, on both flanges of the reel, a weatherproof tag is attached that has a Number/Letter identifier marked on it. The number is the numerical sequence from 1, 2, 3, 4, etc for the different sets of matched conductor reels, and the letters A, B, C, etc. identify the matched reels in each set.
- For product **shipped in coils**, 90% of an order quantity shall be furnished in exact lengths as specified in General Cable catalog pages. Exact lengths are specified as having a minus 0% tolerance. Up to 10% of an total order quantity may be supplied in random lengths with no one length shorter than 50% of the specified coil length.
- For bare overhead conductor shipped on wood or steel reels, a reel wrap covering is applied over the conductor. The default reel wrap material consists of a NEMA WC26 Level II (Weather Protector). Individual manufacturing plant preferences may utilize heavier grade level of reel wrap material.

Shipping Information – Covered and Insulated Cable (Reel or Coil)

Unless otherwise agreed upon at time of quotation

- Standard or special lengths are subject to a manufacturing **length tolerance** per shipping reel of plus or minus **10%** from the specified shipping reel length.
- An amount not exceeding 10% of the total quantity of any order may be shipped in random lengths, with no one length shorter than 80% nor greater than 120% of the specified shipping reel length.
- For product **shipped in coils**, 90% of an order quantity shall be furnished in exact lengths as specified in General Cable catalog pages. Exact lengths are specified as having a minus 0% tolerance. Up to 10% of a total order quantity may be supplied in random lengths, with no one length shorter than 90% of the specified coil length.
- For multiplex service drop cable shipped in coils on pallets, the quantity of coils must be in full pallet load quantities.
- With the exception of cable sold from stock, in support of the Green Initiative and reducing waste, reels are shipped without a reel wrap covering.

Code Word Classifications

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Application	Type	Code Word
Overhead Bare Conductor	1350 AAC	Flowers
Overhead Bare Conductor, Trapezoidal (TW)	1350 AAC/TW	Flowers, Mountains
Compact Bare Conductor, Smooth Body (SB)	1350 ASC/SB	Reptiles
Overhead Bare Conductor	6201 AAAC	Cities
Overhead Bare Conductor	ACSR	Birds
Overhead Bare Conductor, Trapezoidal (TW)	ACSR/TW	Birds, Rivers
Compact Bare Conductor, Smooth Body (SB)	ACSR/SB	Fish
Overhead Covered Conductor	1350 AAC	Trees
Overhead Covered Conductor	6201AAAC	Trees
Overhead Covered Conductor	ACSS	Birds
Overhead Bare Conductor, Trapezoidal (TW)	ACSS/TW	Birds
Underground Secondary Dist. 600 volt	Single	Colleges
Underground Secondary Dist. 600 volt	Duplex	Colleges
Underground Secondary Dist. 600 volt	Triplex	Colleges
Underground Secondary Dist. 600 volt	Quadruplex	Colleges
Overhead Service Cables 600 volt	Single	Lakes
Overhead Service Cables 600 volt	Duplex	Dogs
Overhead Service Cables 600 volt	Triplex	Shellfish
Overhead Service Cables 600 volt	Quadruplex	Horses
Overhead Service Cables 600 volt	Triplex RTS*	Car Models

*RTS - Reverse Twist Secondary

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