

PowrServ® XL Underground Secondary Cable Type USEI-90

600 V, Aluminum Conductor, XLPE Insulation, PVC Jacket

Product Construction:

Complete Cable:

USEI-90 Underground Service Entrance Cable consists of two, three, or four compact aluminum conductors individually insulated with black RW90 XLPE insulation, a coloured PVC jacket, and twisted together. The neutral conductor will be white. The product is CSA Certified and meets the USEI-90 cable requirements of CSA C22.2 No. 52.

Conductors:

The aluminum stranded conductors are Class B compact 1350 aluminum.

Insulation:

The insulation is a sunlight-resistant, black Linear Low Density Polyethylene (LLDPE) meeting the requirements of CSA C22.2 No. 38 for Type RW90 insulation.

Jacket:

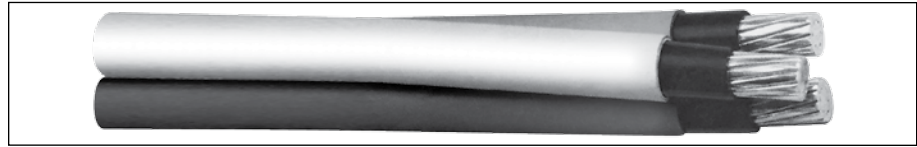
A continuous layer of PVC is extruded over the insulation. The jacket is a weather- and sunlight-resistant, non-sulphide-staining, cut-through-resistant, 90°C/-40°C FT1-rated material.

Neutral Conductor:

One of the insulated conductors is identified as a neutral conductor by the use of a white coloured PVC jacket. The neutral conductor may be the same size as the power conductor, or it may be reduced.

Phase Identification:

Phase identification is provided by means of jacket colour coding. Three conductor cable consists of a red and a black coloured power conductor and a white coloured neutral. Four conductor cable consists of a red, black, and blue coloured phase conductor and a white coloured neutral. All cables provided with sequential print marking.



THREE CONDUCTOR TYPE USEI-90 - XLPE/PVC - 600 VOLTS

PHASE CONDUCTORS				FULL NEUTRAL CONDUCTOR				OVERALL		
SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	EFFECTIVE DIAMETER (mm)	APPROX. WEIGHT (kg/km)	AMPACITY (2)
4	7	1.14	0.76	4	7	1.14	0.76	20	324	75
2	7	1.14	0.76	2	7	1.14	0.76	23	458	100
1	19	1.40	1.14	1	19	1.40	1.14	27	628	115
1/0	19	1.40	1.14	1/0	19	1.40	1.14	29	746	135
2/0	19	1.40	1.14	2/0	19	1.40	1.14	32	891	150
3/0	19	1.40	1.14	3/0	19	1.40	1.14	34	1068	175
4/0	19	1.40	1.14	4/0	19	1.40	1.14	37	1290	205
250	37	1.65	1.65	250	37	1.65	1.65	43	1628	230
350	37	1.65	1.65	350	37	1.65	1.65	48	2135	280
500	37	1.65	1.65	500	37	1.65	1.65	55	2871	350

REDUCED NEUTRAL CONDUCTOR

PHASE CONDUCTORS				REDUCED NEUTRAL CONDUCTOR				OVERALL		
SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	EFFECTIVE DIAMETER (mm)	APPROX. WEIGHT (kg/km)	AMPACITY (2)
4	7	1.14	0.76	6	7	1.14	0.76	19	295	75
2	7	1.14	0.76	4	7	1.14	0.76	22	413	100
1	19	1.40	1.14	3	7	1.14	0.76	27	560	115
1/0	19	1.40	1.14	2	7	1.14	0.76	28	650	135
2/0	19	1.40	1.14	1	19	1.40	1.14	31	803	150
3/0	19	1.40	1.14	1/0	19	1.40	1.14	33	961	175
4/0	19	1.40	1.14	2/0	19	1.40	1.14	36	1157	205
250	37	1.65	1.65	3/0	19	1.40	1.14	41	1450	230
350	37	1.65	1.65	250	37	1.65	1.65	47	1966	280
500	37	1.65	1.65	350	37	1.65	1.65	53	2626	350

(1) Actual number of wires may differ for compact round stranded aluminum conductors using single input wire (SIW) or compact round concentric-lay-stranded aluminum conductors.

(2) The ampacity ratings are based on Table 4 of the 2015 Canadian Electric Code (C22.1) (90°C conductor temperature, 30°C ambient). Ampacity ratings may be used for single circuit applications of cables directly buried, in buried duct, in duct bank, or in conduit.

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 Secondary Cable Type USEI-90

600 V, Aluminum Conductor, XLPE Insulation, PVC Jacket

FOUR CONDUCTOR TYPE USEI-90 – XLPE/PVC – 600 VOLTS

PHASE CONDUCTORS				FULL NEUTRAL CONDUCTOR				OVERALL		
SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	EFFECTIVE DIAMETER (mm)	APPROX. WEIGHT (kg/km)	AMPACITY (2)
4	7	1.14	0.76	4	7	1.14	0.76	22	432	75
2	7	1.14	0.76	2	7	1.14	0.76	26	611	100
1	19	1.40	1.14	1	19	1.40	1.14	31	837	115
1/0	19	1.40	1.14	1/0	19	1.40	1.14	33	995	135
2/0	19	1.40	1.14	2/0	19	1.40	1.14	35	1188	150
3/0	19	1.40	1.14	3/0	19	1.40	1.14	38	1425	175
4/0	19	1.40	1.14	4/0	19	1.40	1.14	42	1720	205
250	37	1.65	1.65	250	37	1.65	1.65	48	2170	230
350	37	1.65	1.65	350	37	1.65	1.65	54	2847	280
500	37	1.65	1.65	500	37	1.65	1.65	61	3828	350

PHASE CONDUCTORS				REDUCED NEUTRAL CONDUCTOR				OVERALL		
SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	SIZE (AWG OR kcmil)	NO. OF WIRES (1)	INS. THKN. (mm)	JACKET THKN. (mm)	EFFECTIVE DIAMETER (mm)	APPROX. WEIGHT (kg/km)	AMPACITY (2)
4	7	1.14	0.76	6	7	1.14	0.76	22	403	75
2	7	1.14	0.76	4	7	1.14	0.76	25	566	100
1	19	1.40	1.14	3	7	1.14	0.76	31	770	115
1/0	19	1.40	1.14	2	7	1.14	0.76	31	899	135
2/0	19	1.40	1.14	1	19	1.40	1.14	34	1100	150
3/0	19	1.40	1.14	1/0	19	1.40	1.14	37	1317	175
4/0	19	1.40	1.14	2/0	19	1.40	1.14	40	1587	205
250	37	1.65	1.65	3/0	19	1.40	1.14	46	1984	230
350	37	1.65	1.65	250	37	1.65	1.65	52	2678	280
500	37	1.65	1.65	350	37	1.65	1.65	59	3582	350

(1) Actual number of wires may differ for compact round stranded aluminum conductors using single input wire (SIW) or compact round concentric-lay-stranded aluminum conductors.

(2) The ampacity ratings are based on Table 4 of the 2015 Canadian Electric Code (C22.1) (90°C conductor temperature, 30°C ambient). Ampacity ratings may be used for single circuit applications of cables directly buried, in buried duct, in duct bank, or in conduit.

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

Features and Benefits:

The USEI-90 cables are suitable for direct burial or installed in ducts and are resistant to cut-through and sunlight. The cable is rated 600 V phase to phase, with a maximum conductor operating temperature of 90°C in wet or dry locations.

Applications:

CSA USEI-90 cable is intended for use in underground systems operating at 600 V or less. The cables are intended for underground installation, either directly buried or in duct systems, in accordance with the CEC (CSA C22.1) and CSA C22.3 No. 7 Underground Systems. Portions of the cable may be exposed to sunlight on termination poles and during storage.

Options:

- Class B stranded H16 compact ACM (series 8000) type aluminum alloy conductors
- Class B stranded compact copper conductors
- Two conductor USEI-90 cables
- CSA C68.7 for distribution utilities

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

