

CCW® Armored Instrumentation, Pairs/Triads, Individual and Overall Shield

UL Type MC-HL, PVC/Nylon, 600 V, 90°C, Cable Tray Use, Sunlight-Resistant, Direct Burial
UL Marine Shipboard Cable, ABS CWCMC



Product Construction:

Conductor:

- Bare annealed copper per ASTM B3
- Class B stranding per ASTM B8

Insulation:

- Flame-retardant Polyvinyl Chloride (PVC) insulation and nylon covering, rated 90°C per UL Standard 83
- Color-coded per ICEA Method 1: pairs – black and white; triads – black, white and red. Each conductor in each pair or triad is printed alphanumerically for easy identification

Shielded Pairs/Triads:

- Isolated and individually twisted pairs or triads with a Flexfoil® aluminum/polyester tape shield providing 100% coverage
- Stranded tinned copper drain wire, two sizes smaller than insulated conductors

Cable Assembly:

- Individually shielded pairs or triads are cabled together with a left-hand lay

Overall Shield:

- Flexfoil® aluminum/polyester tape shield providing 100% coverage
- Stranded tinned copper drain wire, same size as insulated conductors

Inner Jacket:

- Flame-retardant Polyvinyl Chloride (PVC) per UL Standard 1569, black
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C
- Nylon rip cord to facilitate jacket removal

CCW Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath per UL Standards 1569 and 2225
- CCW armor conductivity meets the grounding requirements of NEC Article 250

Overall Jacket:

- Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC) per UL Standard 1569, black
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C

Applications:

- CCW armored 600 volt instrumentation cables with individually shielded pairs or triads and an overall shield provide superior protection and reliability against physical damage for use in instrumentation and process control applications where shielding against both external EMI and EMI between groups is required
- For use in Class 1 remote-control and signal circuits in accordance with NEC Article 725
- Recognized for use in Class I, II and III, Divisions 1 and 2; or Class I, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505
- Installed indoors or outdoors, in wet or dry locations, in a raceway, as aerial cable on a messenger, in cable trays, or for direct burial
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by the American Petroleum Institute

Features:

- CCW armor provides superior mechanical protection and an impervious barrier to moisture, gas and liquids
- CCW armor provides EMI shielding performance
- Meets cold impact at -40°C

Specifications:

Design Adherence:

- UL 83 Thermoplastic Insulated Wire and Cables
- UL 1569 Metal Clad Cables
- UL 2225 Cables and Cable Fittings for Use in Hazardous Locations
- UL 1309/CSA C22.2 No. 245 Marine Shipboard Cable

Flame Tests:

- ICEA T-29-520 (210,000 BTU/hr)
- IEEE 383 (70,000 BTU/hr)
- CSA FT4
- IEEE 1202 (70,000 BTU/hr)
- UL 1581 (70,000 BTU/hr)
- IEC 60332-3 Cat. A

Compliances:

- UL Type MC-HL, CT USE, SUN RES, DIR BUR, -40°C, UL File # E90496
- UL Listed Marine Shipboard, UL File # E85994
- American Bureau of Shipping (ABS) Listed for CWCMC
- RoHS Compliant

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CATALOG NUMBER	COND. SIZE (AWG)	NO. OF PAIRS	INSULATION THICKNESS		INNER JACKET THICKNESS		NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		OVERALL JACKET THICKNESS		NOMINAL OVERALL O.D.		CROSS-SECTIONAL AREA ¹ SQ. IN.	APPROXIMATE NET WEIGHT	
			mils	mm	mils	mm	INCHES	mm	INCHES	mm	mils	mm	INCHES	mm		LBS/1000 FT	kg/1000 m

18 AWG 7W (0.82 mm²) INDIVIDUAL AND OVERALL SHIELDED PAIRS

9350.18020001	18	2	19	0.48	40	1.02	0.41	10.4	0.59	15.0	50	1.27	0.70	17.8	0.39	225	335
9350.18040001	18	4	19	0.48	40	1.02	0.48	12.2	0.65	16.5	50	1.27	0.75	19.1	0.45	300	446
9350.18080001	18	8	19	0.48	50	1.27	0.60	15.2	0.82	20.8	50	1.27	0.92	23.4	0.67	450	670
9350.18120001	18	12	19	0.48	50	1.27	0.78	19.8	1.00	25.4	50	1.27	1.10	27.9	0.96	580	863
9350.18160001	18	16	19	0.48	50	1.27	0.81	20.6	1.12	28.4	50	1.27	1.23	31.2	1.20	760	1,131
9350.18240001	18	24	19	0.48	50	1.27	1.08	27.4	1.39	35.3	50	1.27	1.49	37.8	1.77	1,050	1,563

16 AWG 7W (1.31 mm²) INDIVIDUAL AND OVERALL SHIELDED PAIRS

9350.16020001	16	2	19	0.48	40	1.02	0.45	11.4	0.67	17.0	50	1.27	0.78	19.8	0.48	239	355
9350.16040001	16	4	19	0.48	50	1.27	0.56	14.2	0.80	20.3	50	1.27	0.91	23.1	0.66	342	509
9350.16060001	16	6	19	0.48	50	1.27	0.66	16.8	0.89	22.6	50	1.27	1.00	25.4	0.80	429	639
9350.16080001	16	8	19	0.48	50	1.27	0.70	17.8	0.93	23.6	50	1.27	1.04	26.4	0.86	502	747
9350.16100001	16	10	19	0.48	50	1.27	0.79	20.1	1.06	26.9	50	1.27	1.17	29.7	1.09	613	912
9350.16120001	16	12	19	0.48	50	1.27	0.85	21.6	1.11	28.2	50	1.27	1.22	31.0	1.18	687	1,023
9350.16160001	16	16	19	0.48	50	1.27	0.98	24.9	1.29	32.8	50	1.27	1.40	35.6	1.56	859	1,278
9350.16200001	16	20	19	0.48	50	1.27	1.06	26.9	1.34	34.0	50	1.27	1.45	36.8	1.67	997	1,483
9350.16240001	16	24	19	0.48	50	1.27	1.12	28.4	1.42	36.1	50	1.27	1.53	38.9	1.86	1,140	1,697
9350.16360001	16	36	19	0.48	50	1.27	1.37	34.8	1.69	42.9	60	1.52	1.82	46.2	2.64	1,618	2,407
9350.16500001	16	50	19	0.48	50	1.27	1.57	39.9	1.92	48.8	60	1.52	2.05	52.1	3.34	2,166	3,224

CATALOG NUMBER	COND. SIZE (AWG)	NO. OF TRIADS	INSULATION THICKNESS		INNER JACKET THICKNESS		NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		OVERALL JACKET THICKNESS		NOMINAL OVERALL O.D.		CROSS-SECTIONAL AREA ¹ SQ. IN.	APPROXIMATE NET WEIGHT	
			mils	mm	mils	mm	INCHES	mm	INCHES	mm	mils	mm	INCHES	mm		LBS/1000 FT	kg/1000 m

16 AWG 7W (1.31 mm²) INDIVIDUAL AND OVERALL SHIELDED TRIADS

9350.16040002	16	4	19	0.48	50	1.27	0.61	15.5	0.84	21.3	50	1.27	0.95	24.1	0.72	403	600
9350.16080002	16	8	19	0.48	50	1.27	0.82	20.8	1.06	26.9	50	1.27	1.17	29.7	1.09	650	967
9350.16120002	16	12	19	0.48	50	1.27	0.98	24.9	1.24	31.5	50	1.27	1.35	34.3	1.45	853	1,269
9350.16160002	16	16	19	0.48	50	1.27	1.10	27.9	1.37	34.8	50	1.27	1.48	37.6	1.74	1,079	1,606
9350.16240002	16	24	19	0.48	50	1.27	1.33	33.8	1.64	41.7	60	1.52	1.78	45.2	2.52	1,515	2,254
9350.16360002	16	36	19	0.48	50	1.27	1.58	40.1	1.96	49.8	60	1.52	2.09	53.1	3.48	2,184	3,250

Dimensions and weights are nominal; subject to industry tolerances.

¹ Cross-sectional area for cable tray fill is in accordance with NEC[®] Section 392.22.

