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:

- \cdot 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 sunlightresistant 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 I 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 bend and cold impact at -40C

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:

- · IEEE 383 (70,000 BTU/hr)
- · CSA FT4
- · IEEE 1202 (70,000 BTU/hr)

Compliances:

- $\dot{\cdot}$ 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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	COND.		INSULATION THICKNESS		INNER JACKET THICKNESS		NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		OVERALL JACKET THICKNESS		NOMINAL OVERALL O.D.		CROSS- SECTIONAL AREA ¹	APPROXIMATE NET WEIGHT	
CATALOG NUMBER	SIZE (AWG)	NO. OF PAIRS	mils	mm	mils	mm	IN	mm	IN	mm	mils	mm	IN	mm	SQ. IN.	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	0.44	11.1	0.65	16.4	50	1.27	0.75	19.1	0.44	250	373
9350.18040001	18	4	19	0.48	40	1.02	0.51	12.8	0.73	18.4	50	1.27	0.83	21.1	0.54	314	467
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	0.66	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	0.95	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	1.19	760	1131
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	1.74	1050	1563
16 AWG 7W (1.31 mm²) INDIVIDUAL AND OVERALL SHIELDED PAIRS																	
9350.16020001	16	2	19	0.48	40	1.02	0.48	12.2	0.70	17.7	50	1.27	0.80	20.3	0.50	292	435
9350.16040001	16	4	19	0.48	50	1.27	0.58	14.6	0.81	20.7	50	1.27	0.92	23.3	0.66	390	581
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	0.79	429	638
9350.16080001	16	8	19	0.48	50	1.27	0.76	19.3	1.00	25.5	50	1.27	1.11	28.1	0.96	615	915
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	1.08	613	912
9350.16120001	16	12	19	0.48	50	1.27	0.92	23.2	1.16	29.4	50	1.27	1.26	32.1	1.25	787	1172
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	1.54	859	1278
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	1.65	997	1484
9350.16240001	16	24	19	0.48	50	1.27	1.25	31.8	1.55	39.4	60	1.52	1.68	42.6	2.21	1383	2058
9350.16360001	16	36	19	0.48	50	1.27	1.42	36.1	1.72	43.6	60	1.52	1.84	46.8	2.67	1815	2700
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	3.30	2166	3223

COND.			INSULATION THICKNESS		INNER JACKET THICKNESS		NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		OVERALL JACKET THICKNESS		NOMINAL OVERALL O.D.		CROSS- SECTIONAL AREA ¹	APPROXIMATE NET WEIGHT	
CATALOG NUMBER	SIZE (AWG)	NO. OF PAIRS	mils	mm	mils	mm	IN	mm	IN	mm	mils	mm	IN	mm	SQ. IN.	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	0.63	15.9	0.87	22.0	50	1.27	0.97	24.6	0.74	440	654
9350.16080002	16	8	19	0.48	50	1.27	0.85	21.5	1.09	27.7	50	1.27	1.20	30.4	1.12	751	1118
9350.16120002	16	12	19	0.48	50	1.27	1.00	25.5	1.26	32.1	50	1.27	1.37	34.7	1.47	979	1457
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	1.72	1079	1606
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	2.49	1515	2255
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	3.43	2184	3250

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.







