UniShield®

EPR/Copper Wire Shield/CPE, Medium-Voltage Power, Shielded 5 kV and 8 kV, UL Type MV-105, 133%/100% Ins. Levels, 115 Mils

Product Construction:

Conductor:
- 2 AWG thru 1000 kcmil annealed bare copper compact Class B strand

Extruded Strand Shield (ESS):
- Extruded thermoset semi-conducting stress-control layer over conductor

Insulation:
- Ethylene Propylene Rubber (EPR) insulation, colored to contrast with black conducting shield layers

Composite Insulation Shield and Jacket:
- Six corrugated copper drain wires embedded in composite layers of semi-conducting thermoset copolymer and semi-conducting black flame-retardant Chlorinated Polyethylene (CPE)

Print:
- GENERAL CABLE® (PLANT OF MFG) (MO/YR OF MANUFACTURE) LIGHTNING BOLT SYMBOL 1/C SIZE (AWG OR KCMIL) COMPACT CU UNISHIELD® (INSULATION THICKNESS) EPR DRTP SEMI-CON CPE JKT TYPE MV-105 (VOLTAGE) KV% INSULATION LEVEL SUN RES FOR CT USE (UL) SEQUENTIAL FOOTAGE MARK

* Sizes smaller than 1/0 AWG do not include "FOR CT USE".

Applications:
- Installed in a broad range of commercial, industrial and utility projects such as pulp and paper mills, petrochemical plants, steel mills, textile mills, water and sewage treatment facilities, environmental protection systems, railroads, mines and fossil fuel utility generating stations
- Suitable for use in wet or dry locations when installed in accordance with NEC

Applications (cont'd.):
- For use in aerial, conduit, open tray and underground duct installations
- For use in direct burial if installed in a system with a ground conductor that is in close proximity, and conforms with NEC 250.4(A)(5)

Features:
- Rated at 105°C
- Reduced conductor size and shield system provides the smallest premium medium-voltage shielded power cable with full insulation
- Smaller outside dimensions reduce the size of duct needed or increase the ampacity per duct
- All features contribute to faster and easier installation
- Superior cold bend and cold impact performance
- Stable and constant shield short circuit performance
- Excellent heat and moisture resistance
- Outstanding corona resistance
- Flexibility for easy handling
- High dielectric strength
- Low dielectric loss
- Low moisture absorption
- Electrical stability under stress
- Chemical-resistant
- Sunlight-resistant
- Meets cold bend test at -55°C

Compliances:
- National Electrical Code (NEC)
- UL 1072
- ICEA S-93-639/NEMA WC74
- ICEA S-97-682
- AEIC CS8
- UL listed as Type MV-105 for use in accordance with NEC, UL File # E90501
- UL 1685 (Sizes 1/0 AWG and larger) UL Flame Exposure Test
- Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC
- IEEE 1202 (70,000 BTU/hr)/CSA FT4
- EPA 40 CFR, Part 261 for leachable lead content per TCLP method
- OSHA Acceptable

Optional Flame Tests:
- ICEA T-29-520 (210,000 BTU/hr)

Packaging:
- Material cut to length and shipped on non-returnable wood reels. Lengths in excess of 10,000 lbs. are provided on returnable steel reels that require a deposit
- Extra charges apply for cuts less than 1000 ft., lagging, pulling eyes, paralleling and triplexing

CATALOG NUMBER	COND. SIZE (AWG/ kcmil)	NOMINAL CONDUCTOR DIAMETER	INSULATION DIAMETER INCHES		DRAIN WIRE SIZE (AWG)	NOMINAL CABLE				COPPER WEIGHT		AMPACITY		CONDUIT SIZING (3) (INCHES)
						DIAMETER		WEIGHT				CONDUIT IN AIR (1)	UNDERGROUND DUCT (2)	
		INCHES	MIN.	MAX.		INCHES	mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km			
5 kV AND 8 kV, UL TYPE MV-105, 133%/100% INS. LEVELS, 115 MILS														
19101.650200	2	0.27	0.510	0.590	20	0.71	18.03	404	601	225	335	165	165	2.5
19101.655100	1/0	0.34	0.580	0.655	20	0.78	19.81	555	825	346	515	215	215	2.5
19101.665200	2/0	0.38	0.620	0.695	19	0.83	21.08	666	990	436	649	255	245	3
19101.665300*	3/0	0.43	0.665	0.745	19	0.88	22.35	791	1177	562	808	290	275	3
19101.665400	4/0	0.48	0.720	0.795	19	0.93	23.62	951	1415	678	1010	330	315	3
19101.676000	250	0.53	0.770	0.850	18	1.01	25.65	1112	1655	804	1196	365	345	3.5
19101.676200	350	0.62	0.870	0.945	18	1.11	28.19	1463	2176	1113	1656	440	415	3.5
19101.686500	500	0.74	0.990	1.065	17	1.24	31.50	2003	2980	1585	2358	535	500	4
19101.687000	750	0.91	1.170	1.250	17	1.44	36.57	2875	4278	2357	3507	655	610	5
19101.667500*	1000	1.06	1.320	1.400	16	1.61	40.89	3746	5574	3138	4669	755	690	5

Dimensions and weights are nominal; subject to industry tolerances.

* Non-stock item; minimum runs apply. Please consult Customer Service for price and delivery.

(1) Ampacities are in accordance with Table 310.60(C)(73) of the NEC for triplexed or three single conductor copper cable in isolated conduit in air, based on a conductor temperature of 105°C (221°F) and an ambient air temperature of 40°C (104°F).

(2) Ampacities are in accordance with Table 310.60(C)(77) of the NEC for triplexed or three single conductor copper cable in underground ducts (three conductors per duct), based on a conductor temperature of 105°C (221°F) and an ambient earth temperature of 20°C (68°F), electrical duct arrangement per Figure 310.60 Detail 1, 100% load factor, and earth thermal resistance (rho) of 90.

(3) Based on nominal cable diameters, three single cables in the duct (PVC Schedule 40) with no ground wire and a maximum of 40% fill. Jam ratio has been considered, but it should be checked for individual installations.

Note: a) Sizes smaller than 1/0 AWG do not include "FOR CT USE".
b) The NESC Lightning bolt symbol is on all UniShield® constructions.

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