

UniShield®

EPR/Copper Wire Shield/CPE, Medium-Voltage Power, Shielded
15 kV, UL Type MV-105, 133% Ins. Level, 220 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
- 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

Features (cont'd.):

- 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

NOTE: Due to the semi-conducting properties of the cable jacket, multi-point grounding is recommended for all UniShield® installations.

CATALOG NUMBER	COND. SIZE (AWG/ kcmil)	NOMINAL CONDUCTOR DIAMETER	INSULATION DIAMETER INCHES		DRAIN WIRE SIZE (AWG)	NOMINAL CABLE				COPPER WEIGHT		AMPACITY			CONDUIT SIZING (4) (INCHES)
		INCHES	INCHES	MIN.		MAX.	DIAMETER		WEIGHT			CONDUIT IN AIR (1)	UNDERGROUND DUCT (2)	TRAY (3)	
							mm	LBS/1000 FT	kg/km	LBS/1000 FT	kg/km				
15 kV [¥] , UL TYPE MV-105, 133% INS. LEVEL, 220 MILS															
19161.660200	2	0.27	0.710	0.800	19	0.93	23.88	555	835	230	342	165	165	-	3
19161.675100	1/0	0.34	0.780	0.865	18	1.01	25.91	734	1102	358	533	215	215	220	3.5
19161.675200	2/0	0.38	0.820	0.905	18	1.05	27.18	844	1259	443	659	255	245	250	3.5
19161.665300*	3/0	0.43	0.865	0.955	18	1.10	28.45	978	1458	550	818	290	275	290	3.5
19161.675400	4/0	0.48	0.920	1.005	18	1.16	29.72	1151	1716	685	1019	330	315	335	4
19161.686000	250	0.53	0.970	1.060	17	1.23	31.50	1325	1984	813	1210	365	345	370	4
19161.686200	350	0.62	1.070	1.155	17	1.33	33.78	1691	2530	1122	1669	440	415	460	5
19161.686500	500	0.74	1.190	1.275	17	1.46	37.08	2238	3344	1585	2358	535	500	575	5
19161.697000	750	0.91	1.370	1.460	16	1.67	42.42	3174	4739	2368	3523	655	610	745	6
19161.307500*	1000	1.06	1.520	1.610	16	1.86	47.24	4122	6133	3138	4669	755	690	890	6

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) Ampacities are based on single conductor Type MV-105 sizes #1/0 AWG and larger in an uncovered tray in accordance with Section 392.80(B)(2) of the NEC at an ambient air temperature of 40°C (104°F); the ampacities are based on 75% of the values per Table 310.60(C)(69). For cable trays with unventilated covers for more than 6 feet, the ampacities shall not exceed 70% of the values shown above.

(4) 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.

¥100% insulation level is available upon request

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.

