HaloFlex™ CU Compressed 35kV NLEPR Insulation 133% IL Black CPE-TP Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Three Conductor Copper, 420 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Thermoplastic Chlorinated Polyethylene (CPE-TP) Jacket, Halo-Flex™

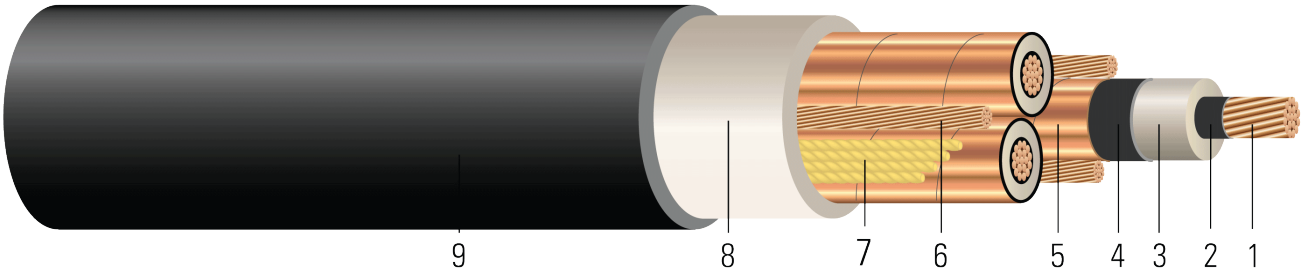

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 420 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
7. **Filler:** Non-Hygroscopic flame retardant fillers
8. **Extruded Polymeric Layer:** Extruded Polymeric Barrier Layer
9. **Overall Jacket:** Low-Friction SIM Technology® -40°C Thermoplastic Chlorinated Polyethylene (CPE-TP)

APPLICATIONS AND FEATURES:

Southwire's 35KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload, and 250°C for short circuit conditions. Rated at -40°C for cold bend. For uses in Class I and II, Division 2 hazardous locations per NEC Article 501 and 502. Rated for 1000 lbs./FT maximum sidewall pressure.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 1072 Medium-Voltage Power Cables
- UL 1685 FT4-Vertical-Tray Fire Propagation and Smoke Release Test (2 AWG and Larger)
- CSA C22.2 No.230 Tray Cables - Rated TC-ER
- CSA C22.2 No. 2556 / UL 2556 Cable Test Methods
- CSA C68.10 Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 5 - 46kV

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- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- MSHA Approved
- MSHA flame test - P07-KA070018-1MSHA
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

SAMPLE PRINT LEGEND:

SQFTG_DUAL} SOUTHWIRE® HALO-FLEX® MV POWER CABLE {UL} 3/C XXX KCMIL CU 420 MILS NL-EPR 35KV 133% INS LEVEL 25%TS GW 3 X 6 AWG CU MV-105 FOR CT USE FT4/IEEE 1202 -40°C OIL RES I & II SUN RES FOR DIRECT BURIAL {NESC} -- {CSA} 3/C XXX KCMIL CU 10.67mm (420 mils) NL-EPR 35KV 133% INS LEVEL 25%TS MV68.10 SR TC-ER OIL RES FT4 -40°C LTGG -- ABS -- 07-KA220001-MSHA

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/ Kcmil	No. of Strands	inch	inch	inch	No. x AWG	mil	inch	lb/1000ft	lb/1000ft	lb	inch
669151	4/0	19	0.512	1.390	1.450	3x6	135	3.665	2571	6871	5078	25.6
669160	350	37	0.661	1.527	1.587	3x6	135	3.961	3897	8779	8400	27.7

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Zero Sequence Impedance	Positive Sequence Impedance	Shield Short Circuit Current 6 Cycles	Allowable Ampacity In Duct 90/105°C	Allowable Ampacity In Air 90/105°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
4/0	0.051	0.065	0.052	0.046	0.388 + j0.237	0.066 + j0.046	4523	285/305	325/360
350	0.031	0.041	0.044	0.042	0.348 + j0.207	0.042 + j0.042	5009	375/400	435/490

* Ampacities are based on:
* For Duct: Table 310.60(C)(79) Detail 1.
* For Free Air: Table 310.60(C)(71).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.
* Capacitive Reactance is between Phase-to-Shield.