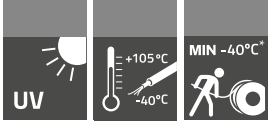

MV-105 5kV/8kV

UL 1072, IEEE 1202, ASTM B-496, AEIC CS8, ICEA S-93-639/NEMA WC 74, ICEA S-97-682

Three Conductor, Medium Voltage 5kV 133% Copper Conductor, Copper Tape Shielded Power Cable

APPLICATIONS

INDUSTRIAL AND COMMERCIAL
- Chemical Plants
- Petrochemical Plants
- Electrical Utility Plants
- Water Treatment Facilities
- Textile Mills
- Steel Mills
- Paper Mills
- Airports
- Shopping Malls
- Military Bases
- Medical Facilities
- Sports Stadiums

INSTALLATIONS
- In Cable Tray
- Conduit in Air
- Aerial with Messenger Supported
- Direct Buried
- Underground Duct
- Wet and Dry Locations

For uses in Class I, Division 2 hazardous locations per NEC Article 501

CONSTRUCTION

Conductor	Class B compacted stranded bare copper per ASTM B496
Conductor shield	Extruded layer of semi-conducting compound over the conductor per UL 1072
Insulation	Extruded layer of ethylene-propylene rubber (EPR) per UL 1072
Insulation shield	Extruded layer of semi-conducting compound applied by triple extrusion process over the insulation. Meets electrical and physical requirements of UL 1072
Metallic shield	5 mil bare copper tape applied helically with a 25% overlap
Grounding conductor	One uncoated copper grounding conductor per NEC/UL tables
Assembly	Three circuit conductors cabled with grounding conductor and fillers in the interstices, binder tape applied overall
Jacket	Extruded layer of black sunlight resistant Polyvinyl Chloride (PVC)

MV-105 5kV/8kV

Characteristic

Maximum conductor operating temperature:	+105°C
Maximum emergency overload temperature:	+140°C
Maximum short-circuit conductor temperature:	+250°C
Maximum sidewall pressure:	1000lbs/ft
Lowest installation temperature:	-40°C*
Minimum bending radius:	7xD (D-overall diameter of cable)

**At temperatures near or below 32°F (0°C), additional precautions must be taken to avoid cable damage - see our Guidelines Cable Installation for further information.*

Approvals

(UL) E231073

5kV 133% / 8kV 100% Insulation Level

Conductor Size		Diameter Over Conductor	Grounding Conductor		Insulation Thickness	Diameter over Insulation	Min. Point Jacket Thickness	Approx. Overall Diameter Cable	Approx Net. Weight
AWG/ kcmil	**mm²**	**inches**	**No. X**	**AWG**	**mils**	**inches**	**mils**	**inches**	**lbs/1000ft**
2	33.6	0.27	1	6		0.55	70	1.57	1710
1/0	53.5	0.34	1	4		0.62		1.78	2330
2/0	67.4	0.38	1	4		0.66		1.86	2690
4/0	107	0.48	1	3	115	0.76	100	2.08	3620
250	127	0.52	1	2		0.82		2.21	4190
350	177	0.62	1	2		0.92		2.43	5360
500	253	0.73	1	1		1.03		2.66	7040

MV-105 5kV/8kV

5kV 133% / 8kV 100% Insulation Level

Conductor Size		Max. Pull Tension	Min. Bending Radius	Ampacities**		
				Isolated in Air	Direct Buried	Underground Duct
AWG/MCM	**mm²**	**lbs**	**inches**		**A**	
2	33.6	1590	11.0	154	190	145
1/0	53.5	2530	12.4	205	245	190
2/0	67.4	3190	13.0	240	280	220
4/0	107	5080	14.6	320	360	285
250	127	6000	15.5	355	395	315
350	177	8400	17.0	440	475	380
500	253	10000	18.7	545	570	460

*** Ampacities „Underground Duct" per NEC 2023 Table 315.60 (C) (13). Ampacities „Isolated in Air" per NEC 2023 Table 315.60 (C) (5). Ampacities „Direct Buried" per NEC 2023 Table 315.60 (C) (17)*

Sample print legend:

TF CABLE (VOLTAGE) 3C (SIZE) COMPACT CU TYPE MV-105 SHIELDED COPPER EPR 133% INS LEVEL 1x[#AWG] CU GRD SUN RES FOR CT USE DIRECT BURIAL (UL) E231073 [YEAR] [SEQUENTIAL FOOTAGE MARKINGS]