



Type MV-105 or MC-HL

Medium Voltage, VFD

5kV 133% / 8kV 100% Insulation Level

UL1072, UL 1569, UL 2225, IEEE 1202, ASTM B-8, AEIC CS8, ICEA S-93-639/NEMA WC74, ICEA S-97-682

Three conductor cable with continuous corrugated aluminum welded armor

CABLE DESIGN:

Three stranded copper conductors, extruded semiconducting shield, EPR insulation, extruded semiconducting insulation shield, phase identification strips, copper tape shield with overlap applied over individual conductors, stranded copper grounding conductors, fillers, binder tape over the core, impervious, continuous corrugated aluminum sheath, PVC jacket.

APPLICATIONS:

- For use in Class I, II and III, Division 1 and 2 and Class I, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505
- For installation in wet and dry locations in both exposed and concealed work, direct burial, or embedment in concrete
- For installation in cable trays, raceways, troughs or on metal racks
- For installation in industrial, utility and other distribution systems
- Suitable for Variable Frequency Drives (VFD) and other AC drive/motor applications



CONSTRUCTION

Conductor	Class B compressed stranded bare copper per ASTM B3 and ASTM B8
Conductor screen	Extruded layer of semi-conducting compound over the conductor per UL 1072
Insulation	Extruded layer of ethylene-propylene rubber (EPR) per UL 1072
Insulation screen	Extruded layer of semi-conducting compound applied by triple extrusion process over the insulation. Meets electrical and physical requirements of UL 1072
Shield	Uncoated 5 mil copper tape helically applied with 20% overlap Phase identification: type id ribbon longitudinally applied under shield
Grounding conductor	Three uncoated copper grounding conductors wires per NEC/UL tables
Assembly	Three power conductors cabled with grounding conductors and fillers in the interstices, binder tape applied overall
Metallic sheath	Continuously corrugated welded aluminum armor
Jacket	Protective sunlight and ozone resistant PVC jacket per UL 1072 Yellow color

Type MV-105 or MC-HL Medium Voltage, VFD 5kV 133% / 8kV 100% Insulation Level

Features

Continuous, corrugated welded aluminum armor (CCW) provides barrier to moisture, gas, liquids and excellent mechanical protection, 105°C continuous normal operating temperature, 140°C emergency overload, 250°C short circuit conditions, -40°C cold bend

Conductor size	No. of Wires	Grounding Conductor	Insulation Thickness	Diameter over Insulation	Overall Diameter Core	Overall Diameter Armor	Jacket Thickness	Approx Overall Diameter Cable	Approx Net. Weight
AWG kcmil		No. x AWG	mils	inches	inches	inches	mils	inches	lbs/1000ft
2	7	3 10	115	0.56	0.65	1.90	50	2.00	2090
1/0	19	3 8		0.64	0.72	2.07		2.20	2600
2/0	19	3 7		0.68	0.77	2.11		2.25	3020
4/0	19	3 7		0.80	0.87	2.30		2.50	4100
250	37	3 6		0.83	0.92	2.45	60	2.60	4660
350	37	3 6		0.95	1.06	2.80		2.96	6020
500	37	3 5		1.08	1.20	3.11		3.28	7930
750	61	3 4		1.26	1.37	3.53	3.71	10840	

Conductor size	Max. Pull Tension	Min. Bending Radius	Ampacities*		
			Isolated in Air	Direct Buried	Underground Duct
AWG kcmil	lbs	Inches	A		
2	1590	14.2	154	190	145
1/0	2540	15.3	205	245	190
2/0	3190	15.7	240	280	220
4/0	5080	17.3	320	360	285
250	6000	18.1	355	395	315
350	8400	20.8	440	475	380
500	10000	22.8	545	570	460
750	10000	26.0	685	700	570

* Ampacities „Underground Duct“ per NEC 2023 Table 310.60 (C) (13). Ampacities „Isolated in Air“ per NEC 2023 Table 310.60 (C) (5). Ampacities „Direct Buried“ per NEC 2023 Table 310.60 (C) (17).

Approvals:

UL E231073

Print Legend:

TF CABLE E231073 (UL) MC-HL OR MV-105 [#AWG or Kcmil] CU 5kV 133% - 8kV 100% INS LEVEL 115 MILS EPR SHLD 3x[#AWG] CU GRD UL 1072 SUN RES DIR BUR FT-4 (-40°C) FOR CT USE IEEE 1202 [YEAR] [SEQUENTIAL FOOTAGE MARKINGS]

All the information in this document – including tables and diagrams – is given in good faith and believed to be correct at the time of publication. The information does not constitute a warranty nor representation for which TELE-FONIKA Kable assumes legal responsibility. TELE-FONIKA Kable reserves rights to introduce changes to the document at any time