



power connection cable series

Type MV-90 / MV-105 Distribution

MV-90/MV-105 Medium-Voltage

UL 1072 / AEIC CS8 5–35 kV TR-XLPE (MV-90) & EPR (MV-105) utility feeder cable



UL 1072 / AEIC CS8 MV-90 / MV-105

5 kV · 15 kV · 25 kV · 35 kV

TR-XLPE or EPR · CuTape/Wire

Application

Type MV-90 / MV-105 Medium-Voltage Distribution Cable (5 kV, 8 kV, 15 kV, 25 kV & 35 kV; 100 % & 133 % insulation levels; 2 AWG to 1000 kcmil) Listed to UL 1072, AEIC CS8, ICEA S-93-639 and ICEA S-97-682—combining Class B compressed.

Typical uses: 15 kV / 25 kV / 34.5 kV Utility & Solar/Wind Collector Lines, Hyperscale Data Centre & Semiconductor Campus MV Rings, Refinery, LNG, Chemical & Pulp/Paper Plant Substations, Hospital, University, Airport & Metro Traction Feeders, Underground Duct Bank & Direct-Buried Primary Loops

Construction



Cross-section, not to scale

- 1 Class B compressed annealed Copper or Aluminum conductor
- 2 True triple-extruded semiconducting conductor & insulation screens
- 3 TR-XLPE (+90 °C MV-90) or Discharge-Free EPR (+105 °C MV-105)
- 4 5 mil overlapped Copper Tape Shield or Concentric Wire Shield
- 5 Sunlight-Resistant PVC, LLDPE or CPE outer jacket

Technical data

Typical values

Voltage classes	5 kV · 8 kV · 15 kV · 25 kV · 35 kV (100 % & 133 % insulation levels)	AC factory test & PD	18 kV (5 kV) · 36 kV (15 kV) · 52 kV (25 kV) · 69 kV (35 kV) + PD ≤ 5 pC
Insulation levels (15 kV)	100 % = 175 mil (4.45 mm) · 133 % = 220 mil (5.59 mm)	Insulation levels (35 kV)	100 % = 345 mil (8.76 mm) · 133 % = 420 mil (10.67 mm)
Continuous conductor temp.	+90 °C (MV-90 TR-XLPE) · +105 °C (MV-105 EPR)	Emergency overload temp.	+130 °C (MV-90) · +140 °C (MV-105)
Short-circuit temperature	+250 °C	Min. bend radius	12 × OD (copper tape shield) · 8 × OD (concentric wire shield)
Max. pulling tension	0.008 lb/cmil (Cu) · 0.006 lb/cmil (Al) with pulling eye	Sidewall bearing pressure	Up to 1,000 lbs/ft (14.6 kN/m) around conduit sweeps
Tray flame qualification	UL 1685 / IEEE 1202 / CSA FT4 vertical tray flame ('FOR CT USE' 1/0+)	Sunlight & Direct Burial	720-hour UV weatherometer & UL Direct Burial qualified
Water-tree resistance	AEIC CS8 accelerated water-treeing test (AWTT) qualified	Standards	UL 1072 · AEIC CS8 · ICEA S-93-639 (WC 74) · ICEA S-97-682 (WC 71)

Sizes

6 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Conductor, dielectric & shield	Nominal Ø mm	Weight ≈ kg/km	Tray/Air A	Duct 20°C A
15 kV (133% · 220 mil EPR) MV-105 Copper Tape Shield 4 sizes					
☐ MV-105 2 AWG Cu 15kV 133%	2 AWG Cl.B Cu · 5.59mm EPR · CuTape	23.6	760	215	165
☐ MV-105 2/0 AWG Cu 15kV 133%	2/0 AWG Cl.B Cu · 5.59mm EPR · CuTape	26.9	1,180	330	245
☐ MV-105 4/0 AWG Cu 15kV 133%	4/0 AWG Cl.B Cu · 5.59mm EPR · CuTape	29.7	1,610	445	320
☐ MV-105 500 kcmil Cu 15kV 133%	500 kcmil Cl.B Cu · 5.59mm EPR · CuTape	37.8	3,210	775	530
35 kV (100% · 345 mil TR-XLPE) MV-90 Aluminum Collector 2 sizes					
☐ MV-90 1/0 AWG Al 35kV 100%	1/0 AWG Al · 8.76mm TR-XLPE · WireSh	33.5	920	200	155
☐ MV-90 750 kcmil Al 35kV 100%	750 kcmil Al · 8.76mm TR-XLPE · WireSh	49.8	2,640	685	475

– All sizes from 2 AWG to 1000 kcmil are available in both Copper and Aluminum across 5 kV, 8 kV, 15 kV, 25 kV and 35 kV.

Standards and approvals

- ✓ UL 1072 Listed MV-90 / MV-105
- ✓ AEIC CS8 Qualified
- ✓ ICEA S-93-639 & S-97-682

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/mv-90-mv-105-medium-voltage-distribution-cable



Typical values for this cable type, based on UL 1072 / AEIC CS8 / ICEA S-93-639 / ICEA S-97-682. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.