



power connection cable series

Type MV-105 Flexible Single-Conductor

UL 1072 +105 °C Class I / Class K extra-flexible tinned copper EPR/CPE MV cable



UL 1072 Type MV-105 Flexible

5 kV · 15 kV · 25 kV · 35 kV

Class I / K Tinned Cu + EPR

Application

Type MV-105 Flexible Single-Conductor Medium-Voltage Cable (2.4 kV, 5 kV, 8 kV, 15 kV, 25 kV & 35 kV; 100 % & 133 % insulation levels; 6 AWG to 1000 kcmil) Listed to UL 1072 and ICEA S-93-639—combining rope-lay Class I (24 AWG) or.

Typical uses: Hyperscale Data Centre 13.8 kV / 34.5 kV Generator Drops, 4.16 kV & 13.8 kV Medium-Voltage VFD & Motor Terminal Boxes, Mobile Utility Substation Trailers & Emergency Bypass, Wind Turbine Tower & BESS Inverter MV Skid Interconnects, Petrochemical, Marine & Shipyard Shore-Power Jumpers

Construction



Cross-section, not to scale

- 1 Class I (24 AWG) or Class K (30 AWG) rope-lay tinned copper
- 2 Triple-extruded semiconducting conductor & insulation screens
- 3 +105 °C Discharge-Free EPR (Ethylene Propylene Rubber) dielectric
- 4 Flexible tinned copper braid shield (or 5 mil Cu tape + drain)
- 5 Sunlight- & Oil-Resistant Black CPE (or Halogen-Free LSZH) jacket

Technical data

Typical values

Voltage classes	2.4 kV · 5 kV · 8 kV · 15 kV · 25 kV · 35 kV (100 % & 133 % levels)	AC factory test voltage	18 kV (5 kV) · 36 kV (15 kV) · 52 kV (25 kV) · 69 kV (35 kV) + PD ≤ 5 pC
Max. DC resistance @ 20 °C	0.348 Ω/km (1/0) · 0.138 Ω/km (4/0) · 0.058 Ω/km (500) · 0.039 Ω/km (750)	Shield fault capacity	Tinned copper braid (~10–25 mm² eq.) carries ground fault & charging current
Continuous conductor temp.	+105 °C Wet or Dry (UL 1072 Type MV-105)	Emergency overload temp.	+140 °C (up to 100 hours/year)
Short-circuit & cold bend	+250 °C short-circuit · -40 °C cold bend per UL 1072	15 kV EPR wall thickness	4.45 mm / 175 mil (100 % level) · 5.59 mm / 220 mil (133 % level)
Min. bend radius	6 × OD to 8 × OD (braid-shielded flexible) · 12 × OD (tape-shielded)	Stranding flexibility	Class I (24 AWG / 0.51 mm) or Class K (30 AWG / 0.254 mm) rope lay
Tray flame & fire rating	UL 1685 / IEEE 1202 / CSA FT4 vertical tray flame ('FOR CT USE')	Oil, UV & Direct Burial	UL Oil Res I & II, 720-hour Sunlight Resistant & Direct Burial
LSZH jacket option	Halogen-free low-smoke zero-halogen jacket available for tunnels/data halls	Standards	UL 1072 · ICEA S-93-639 / NEMA WC 74 · CSA C68.5 · NEC Art. 328

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 size & Class I strands	Nominal Ø mm	Weight ≈ kg/km	Air 40°C A	Duct 20°C A
15 kV (133 % Level · 5.59 mm EPR) Flexible Class I Tinned Cu 6 sizes					
☐ MV-105 Flex 2 AWG 15kV	2 AWG (33.6 mm²) · 161×24 AWG	24.9	820	215	165
☐ MV-105 Flex 1/0 AWG 15kV	1/0 AWG (53.5 mm²) · 259×24 AWG	27.2	1,060	290	215
☐ MV-105 Flex 4/0 AWG 15kV	4/0 AWG (107 mm²) · 532×24 AWG	31.8	1,680	445	320
☐ MV-105 Flex 350 kcmil 15kV	350 kcmil (177 mm²) · 882×24 AWG	36.6	2,490	615	430
☐ MV-105 Flex 500 kcmil 15kV	500 kcmil (253 mm²) · 1225×24 AWG	40.6	3,340	775	530
☐ MV-105 Flex 750 kcmil 15kV	750 kcmil (380 mm²) · 1850×24 AWG	46.5	4,780	1,000	665

– Also available in 5 kV (90/115 mil EPR), 8 kV, 15 kV 100 % (175 mil EPR), 25 kV (260/320 mil EPR) and 35 kV (345/420 mil EPR).

Standards and approvals

- ✓ UL 1072 Listed Type MV-105
- ✓ ICEA S-93-639 / NEMA WC 74
- ✓ IEEE 1202 / CSA FT4 Tray Rated

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-105-flexible-single-conductor-medium-voltage-cable



Typical values for this cable type, based on UL 1072 / ICEA S-93-639 (NEMA WC 74) / CSA C68.5. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.