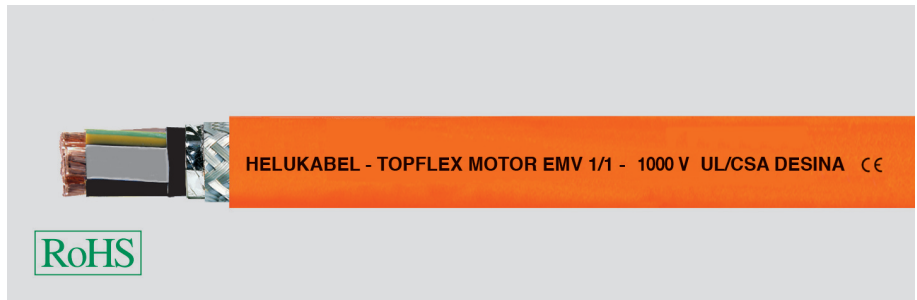
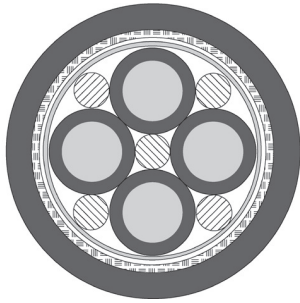


TOPFLEX® MOTOR EMV 1/1 triple-screened, low capacitance, 80°C, 1000 V, high flexible motor supply cable, meter marking



Technical data

- Special PUR motor power supply cable for frequency converter to UL AWM Style 20234 and CSA AWM adapted to DIN VDE 0250
- **Temperature range**
flexing -30°C to +80°C
fixed installation -40°C to +80°C
- Permissible **operating temperature** at conductor +90°C
- **Nominal voltage**
VDE U₀/U 600/1000 V
UL 1000 V
- **Test voltage** 3000 V
- **Mutual capacitance** at 4 kHz
acc. to different cross-section
core/core 70-250 nF/km
core/screen 110-410 nF/km
- **Insulation resistance**
min. 200 MΩm x km
- **Minimum bending radius**
fixed installation, for outside Ø:
up to 12 mm: 5x cable Ø
> 12-20 mm: 7,5x cable Ø
> 20 mm: 10x cable Ø
free-movement, for outside Ø:
up to 12 mm: 10x cable Ø
> 12-20 mm: 15x cable Ø
> 20 mm: 20x cable Ø
- **Coupling resistance**
acc. to different cross-section
max. 250 Ωm/km
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, IEC 60228 cl.5
- Core insulation of special polyethylene (PE)
- Core identification BK, BN, GY
- GN-YE conductor
- Cores stranded in layers
- 1. Screen of semi-conductive fleece
- 2. Aluminium-coated polyester film
- 3. Tinned copper braided screen, coverage approx. 85%
- Outer sheath of PUR
- Sheath colour orange (RAL 2003)
- acc. to DESINA®
- with meter marking

Properties

- PUR outer sheath: low adhesion, flame retardant, extremely abrasion resistant, halogen-free, resistant to UV, oil, hydrolysis and microbial attack
- This screened motor power supply cable, with low mutual capacitance because of the special PE core insulation, enable low-loss transmission of power compared to PVC-sheathed power supply cables
- The optimal triple screening enables interference-free operation of frequency converters
- Optimum compliance with requirements for electromagnetic compatibility (EMC) due to the triple screening
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PUR outer sheath self-extinguishing and flame retardant to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- **) The current carrying capacity for permanent operation at ambient temperature of 30°C. For deviating ambient temperatures the conversion factors should be used and for further see the indication in DIN VDE 0298 part 4.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

This TOPFLEX® MOTOR EMV 1/1 two-approvals, triple-screened motor power supply cable for frequency converters provides outstanding EMC in machines and systems. Suitable as a supply and connecting cable for high mechanical stresses, in fixed installations and occasional free movements in dry, moist and wet environments, as well as outdoors. Areas of application include machine tools, processing and manufacturing machinery, machining centres, industrial robots, transfer lines, handling equipment, etc.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø app. mm	Mutual capacitance		Coupling resistance		Power ratings **) with 3 loaded cores in Amperes	Cop. weight kg / km	Weight app. kg / km	AWG-No.
			Core / Core app.nF / km	Core / Screen app.nF / km	at 1 MHz Ohm/km	at 30 MHz Ohm/km				
78377	4 G 1,5	11,5	70	110			18	95,0	230,0	16
78378	4 G 2,5	13,5	80	130	18	210	26	150,0	300,0	14
78379	4 G 4	15,8	90	150	11	210	34	235,0	485,0	12
78380	4 G 6	17,8	90	150	6	150	44	320,0	630,0	10
708609	4 G 10	21,6	120	200	7	180	61	533,0	860,0	8
708610	4 G 16	25,4	120	210	9	190	82	789,0	1290,0	6
708611	4 G 25	31,0	140	230	4	95	108	1180,0	1800,0	4
708612	4 G 35	33,0	150	260	3	85	135	1662,0	2610,0	2
78384	4 G 50	39,0	190	320	2	40	168	2345,0	2950,0	1
78385	4 G 70	45,0	190	320	2	45	207	3196,0	3950,0	2/0
78386	4 G 95	50,1	250	410	1	50	250	4316,0	5300,0	3/0
78387	4 G 120	54,2					292	5435,0	6600,0	4/0
78388	4 G 150	61,3					335	6394,0	7040,0	300 kcmil
78479	4 G 185	64,2					382	7639,0	8380,0	350 kcmil

Dimensions and specifications may be changed without prior notice.