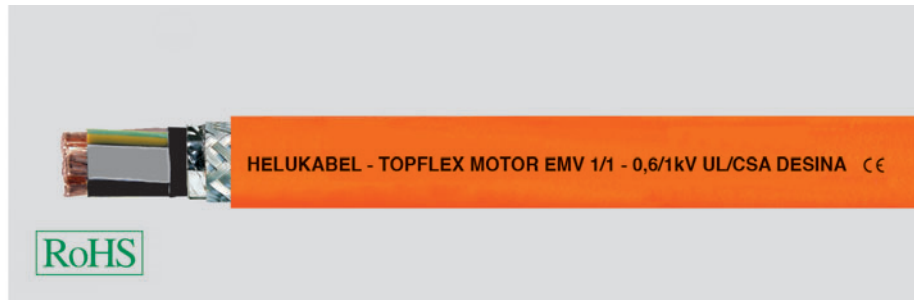


TOPFLEX® MOTOR EMV 1/1 triple-screened, low capacitance, 80°C 600V high flexible motor supply cable, meter marking



Technical data

- Special PUR motor power supply cable for frequency converter to UL AWM Style 20234 and CSA AWM based on DIN VDE 0250
- **Temperature range**
flexing -30 °C to +80 °C
fixed installation -40 °C to +80 °C
- **Nominal voltage**
acc. to UL 1000 V
acc. to VDE U₀/U 0,6/1 kV
- **A.c. test voltage**, 50 Hz
3000 V
- **Mutual capacitance** at 4 kHz,
depending on conductor 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 to 12 mm = 5x cable Ø
12 to 20 mm = 7,5x cable Ø
> 20 mm = 10x cable Ø
free-movement,
for outside Ø to 12 mm = 10x cable Ø
12 to 20 mm = 15x cable Ø
> 20 mm = 20x cable Ø
- **Coupling resistance**
max. 250 Ωm/km
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper, fine wire in acc. with DIN VDE 0295 cl. 5 and IEC 60228 cl. 5
- Special polyethylene (PE) core insulation
- Core colours black, brown, grey
- Green-yellow earth core
- Cores stranded in layers
- Screen of semi-conductive fleece, aluminium-coated polyester film and tinned copper braiding, coverage approx. 85%
- PUR outer sheath
- Sheath colour orange (RAL 2003) according to DESINA®
- with meter marking, change-over in 2011

Properties

- PUR outer sheath: low adhesion, flame retardant, extremely abrasion resistant, halogen-free, resistant to UV, oil, hydrolysis and microbial attack
- PUR sheath: self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- This screened motor power supply cable, with low mutual capacitance because of the special PE core insulation, enables 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

- Low mutual capacitance: tested acc. to DIN VDE 0472 part 504, test method B

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 optimise 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/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Mutual capacitance		Coupling resistance		Power ratings **) with 3 loaded cores in Amperes	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
			Core / Core approx. nF / km	Core / Screen approx. 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
78381	4 G 10	21,6	120	200	7	180	61	533,0	860,0	8
78382	4 G 16	25,4	120	210	9	190	82	789,0	1290,0	6
701308	4 G 25	31,0	140	230	4	95	108	1180,0	1800,0	4
78383	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.