

TOPFLEX®-EMV-UV-2XSLCH-J for power supply connections to frequency converters, halogen-free, double screened, higher current carrying capacity, 0,6/1kV, meter marking



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Technical data

- Special motor power supply cable for frequency converters adapted to DIN VDE 0250
- **Temperature range**
flexing -5°C to +90°C
fixed installation -40°C to +90°C
- Permissible **operating temperature** at conductor +90°C
- **Nominal voltage** U_0/U 600/1000 V
- **Max. operating voltage**
A.C. and 3-phase 700/1200 V
DC operation 900/1800 V
- **Test voltage** 4000 V
- **Insulation resistance**
min. 200 MOhm x km
- **Coupling resistance**
acc. to different cross-sections
max. 250 Ohm/km
- **Minimum bending radius**
free-movement for outer \varnothing :
up to 12 mm: 10x cable \varnothing
> 12-20 mm: 15x cable \varnothing
> 20 mm: 20x cable \varnothing
fixed installation for outer \varnothing :
up to 12 mm: 5x cable \varnothing
> 12-20 mm: 7,5x cable \varnothing
> 20 mm: 10x cable \varnothing
- **Radiation-resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Application

This TOPFLEX®-EMV-UV-2XSLCH-J motor power supply cable for the frequency converters assures electromagnetic compatibility in plants and buildings, facilities with units and operating equipment where the fields of electromagnetic interference might cause adverse effects on the surroundings. Respecting the permissible operating temperature at the conductor of +90 °C permits a higher current carrying capacity than PE insulated power distribution cables. As a supply and connecting cable for medium mechanical stresses in fixed installations and forced movements in dry, moist and wet environments. These cables are suitable for outdoor applications and in underground by using in conduits or tubes. For the installation in conduit all precautions must be taken that no accumulation of water can occur in the pipes. Used in the automotive and food industries, environmental technology, packaging industry, machine tools. Handling equipment, for SIMOVERT drives, they are particularly suitable for use with industrial pumps, ventilators, conveyor belts and air-conditioning installations and similar applications. Installation in hazardous areas.

EMC = Electromagnetic compatibility

The screen must be connected at both ends and ensure large-area contact over the entire cable circumference for compliance with the functional interference requirements of EN 55011.

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

Cable structure

- Bare copper, fine wire conductor to DIN VDE 0295 cl.5, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of cross-linked polyethylene (XLPE)
- Core identification: BN, BL, GY
- GN-YE conductor
- Cores stranded in concentric layers
- 1. Screen with special aluminium film
- 2. Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special polyolefin compound
- Sheath colour black (RAL 9005)
- with meter marking

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.

Properties

- halogen-free
- Low mutual capacitance
- Low coupling resistance for high electromagnetic compatibility
- This screened motor supply cable with low mutual capacitance of the single cores because of the special XLPE core insulation and low screen capacitance enable a low-loss transmission of the power compared to PE-sheathed connecting cables
- Due to the optimal screening an interference-free operation of frequency converters is obtained
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Meets EMC requirements acc. to EN 55011 and DIN VDE 0875 part 11

Continuation ▶

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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				
24522	4 G 1,5	10,1	70	110			23	95,0	230,0	16
24523	4 G 2,5	11,2	80	130	18	210	32	150,0	300,0	14
24524	4 G 4	12,8	90	150	11	210	42	235,0	485,0	12
24525	4 G 6	14,9	90	150	6	150	54	320,0	630,0	10
24526	4 G 10	17,7	120	200	7	180	75	533,0	860,0	8
24527	4 G 16	20,9	140	230	9	190	100	789,0	1290,0	6
24528	4 G 25	25,3	120	210	4	95	127	1236,0	1860,0	4
24529	4 G 35	28,0	150	260	3	85	168	1662,0	2610,0	2
24530	4 G 50	32,3	190	320	2	40	192	2345,0	2950,0	1
24531	4 G 70	37,6	190	320	2	45	246	3196,0	3950,0	2/0
24532	4 G 95	41,6	250	410	1	50	298	4316,0	5300,0	3/0
24533	4 G 120	44,8					346	5435,0	6600,0	4/0
24534	4 G 150	52,3					399	6394,0	7040,0	300 kcmil
24535	4 G 185	58,7					456	7639,0	8380,0	350 kcmil

Dimensions and specifications may be changed without prior notice. (RD01)



Suitable accessories can be found in Chapter X.

- Cable Gland - HELUTOP® HT-MS-EP4