

# TOPFLEX®-EMV-UV-3 PLUS 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  $80 \times 10^6$  cJ/kg (up to 80 Mrad)

## Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of cross-linked polyethylene (XLPE)
- Core identification BK, BN, GY
- GN-YE conductor (divided into 3)
- 3+3 core design
- Cores stranded in concentric layers
- 1. Screen with special aluminium film
- 2. Tinned copper braided screen, approx. 85% coverage
- Outer sheath 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 mm<sup>2</sup>.

## Properties

- halogen-free
- Low mutual capacitance
- Low coupling resistance for high electromagnetic compatibility
- Due to the optimal screening an interference-free operation of frequency converters is obtained
- The 3 PLUS-construction of motor power supply cables features a symmetrical 3-core design, improved in terms of EMC characteristics comparing favorably with a 4-core version. The protective conductor PE, divided into 3 is uniformly stranded in the interstices. This enables an extremely concentric structure
- The minimum cross-section of 0,75 mm<sup>2</sup> meets the requirements of DIN EN 60204 part 1
- 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
- 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

## Application

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. Respecting the permissible operating temperature at the conductor of +90 °C permits a higher current carrying capacity than PE insulated power distribution cables. Used in the automobile industry, food industry, environmental engineering, packaging industry, toolmaking machinery, handling equipment, for SIMOVERT drivers, 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.

Continuation ▶

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to frequency converters, halogen-free, double screened, higher current carrying capacity, 0,6/1kV, meter marking

Part no.	No. cores x cross-sec. mm <sup>2</sup>	Outer Ø approx. mm	Coupling resistance		Power ratings **) with 3 loaded cores in Amperes	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
			at 1 MHz Ohm/km	at 30 MHz Ohm/km				
24536	3 x 1,5 + 3 G 0,25	9,2			23	86,0	140,0	16
24537	3 x 2,5 + 3 G 0,5	10,8	18	210	32	144,0	220,0	14
24538	3 x 4 + 3 G 0,75	12,3	11	210	42	224,0	323,0	10
24539	3 x 6 + 3 G 1,0	14,0	6	150	54	298,0	420,0	10
24540	3 x 10 + 3 G 1,5	17,6	7	180	75	491,0	615,0	10
24541	3 x 16 + 3 G 2,5	20,4	9	190	100	723,0	819,0	6
24542	3 x 25 + 3 G 4,0	23,2	4	95	127	1138,0	1325,0	10
24543	3 x 35 + 3 G 6,0	26,1	3	85	158	1535,0	1718,0	2
24544	3 x 50 + 3 G 10,0	30,8	2	40	192	2208,0	2399,0	2
24545	3 x 70 + 3 G 10,0	34,2	2	45	246	2871,0	3056,0	2/0
24546	3 x 95 + 3 G 16,0	37,8	1	50	298	3953,0	4162,0	3/0
24583	3 x 120 + 3 G 16,0	42,6			346	4836,0	5075,0	4/0
24584	3 x 150 + 3 G 25,0	47,5			399	5412,0	6128,0	300 kcmil
24585	3 x 185 + 3 G 35,0	53,4			456	6969,0	7189,0	350 kcmil
24586	3 x 240 + 3 G 42,5	58,7			538	8540,0	9540,0	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