

# TOPFLEX® -EMV-UV-2YSLCYK-J for power supply connections to frequency converters, double screened, 0,6/1kV, meter marking



## Technical data

- Special motor power supply cable for frequency converters adapted to DIN VDE 0250
- **Temperature range**  
flexing -5 °C to +70 °C  
fixed installation -40 °C to +70 °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** 2500 V
- **Insulation resistance**  
min. 200 MOhm x km
- **Coupling resistance**  
according to different cross-sections  
max. 250 Ohm/km
- **Mutual capacitance**  
according to different cross-sections  
core/core 70 to 250 nF/km  
core/screen 110 to 410 nF/km
- **Minimum bending radius**  
fixed installation for outer  $\varnothing$ :  
up to 12 mm: approx. 5x cable  $\varnothing$   
>12 to 20 mm: approx. 7,5x cable  $\varnothing$   
>20 mm: approx. 10x cable  $\varnothing$   
free-movement for outer  $\varnothing$ :  
up to 12 mm: approx. 10x cable  $\varnothing$   
>12 to 20 mm: approx. 15x cable  $\varnothing$   
>20 mm: approx. 20x cable  $\varnothing$
- **Radiation-resistance**  
up to  $80 \times 10^6$  cJ/kg (up to 80 Mrad)

## Cable structure

- Bare copper, fine wire conductor to DIN VDE 0295 cl. 5, BS 6360 cl. 5 or IEC 60228 cl. 5
- Polyethylene (PE) core insulation
- Core colours: green-yellow, brown, black, grey
- Cores stranded in concentric layers
- 1. screening with special aluminium film
- 2. screening with copper braiding, tinned copper, coverage approx. 80%
- Special PVC outer sheath, black (RAL 9005)
- with meter marking, change-over in 2011

## 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

## Properties

- Behavior in fire: Test according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Low mutual capacitance, to DIN VDE 0472 part 504, test method B
- Features PE-insulation secures a lower dielectric loss, double potential strength, high longevity and low screen-interference currents
- Low mutual capacitance
- Meets EMC requirements according to EN 55011 and DIN VDE 0875 part 11
- Low coupling resistance for high electromagnetic compatibility
- UV-resistant
- Outdoor application, possible for installation in underground at 4G16mm<sup>2</sup>
- This screened motor supply cable with low mutual capacitance of the single cores because of the special PE core insulation and low screen capacitance enable a low-loss transmission of the power compared to PVC-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

## Application

This TOPFLEX®-EMV-2YSLCYK-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. As a supply and connecting cable for medium mechanical stresses in fixed installations and forced movements in dry, moist and wet environments and for outdoor applications, possible for installation in underground at 4G16 mm<sup>2</sup>. 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 lare-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/EG.

Part no.	No. cores x cross-sec. mm <sup>2</sup>	Outer $\varnothing$ 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				
22234	4 G 1,5	10,3	70	110			18	95,0	230,0	16
22235	4 G 2,5	12,3	80	130	18	210	26	150,0	300,0	14
22236	4 G 4	13,9	90	150	11	210	34	235,0	485,0	12
22237	4 G 6	15,3	90	150	6	150	44	320,0	630,0	10
22238	4 G 10	19,5	120	200	7	180	61	533,0	860,0	8
22239	4 G 16	23,3	140	230	9	190	82	789,0	1290,0	6

Continuation ▶

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			Core / Core approx. nF / km	Core / Screen approx. nF / km	at 1 MHz Ohm/km	at 30 MHz Ohm/km				
22240	4 G 25	27,4	120	210	4	95	108	1236,0	1860,0	4
22241	4 G 35	30,3	150	260	3	85	135	1662,0	2610,0	2
22242	4 G 50	35,5	190	320	2	40	168	2345,0	2950,0	1
22243	4 G 70	40,2	190	320	2	45	207	3196,0	3950,0	2/0
22244	4 G 95	44,5	250	410	1	50	250	4316,0	5300,0	3/0
22245	4 G 120	50,3					292	5435,0	6600,0	4/0
22246	4 G 150	56,1					335	6394,0	7040,0	300 kcmil
22247	4 G 185	58,0					382	7639,0	8380,0	350 kcmil

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

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## Tools

- Cable shears
- Box spanners
- Strippers
- Crimping tools
- Pliers
- Skinning knife



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