

TOPFLEX® Motor 109 low capacitance power supply cable 0,6/1kV, increased ampacity, halogen-free, meter marking



Technical data

- Special motor power supply cable for frequency converters
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +80°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** 2500 V
- **Insulation resistance**
min. 200 MΩm x km
- **Coupling resistance**
acc. to different cross-sections
max. 250 Ωm/km
- **Mutual capacitance**
acc. to different cross-sections
core/core 70 to 250 nF/km
core/screen 110 to 410 nF/km
- **Minimum bending radius**
free-movement for outer Ø:
up to 12 mm: 10x cable Ø
> 12-20 mm: 15x cable Ø
> 20 mm: 20x cable Ø
fixed installation for outer Ø:
up to 12 mm: 5x cable Ø
> 12-20 mm: 7,5x cable Ø
> 20 mm: 10x cable Ø
- **Radiation-resistance**
up to 80x10⁶ 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 special Polymer
- Core identification to DIN VDE 0293-308 - up to 5 cores coloured - from 7 cores, black with continuous white numbering
- GN-YE conductor
- Cores stranded in concentric layers
- 1. Screen with special aluminium film
- 2. Tinned copper braided screen, approx. 80% coverage
- Outer sheath of special PUR
- Sheath colour orange (RAL 2003)
- with meter marking

Properties

- Special polymerinsulation ensures low dielectric losses, a dual voltage resistance, longer service life and low - interference shield, and increased current carrying capacity
- Low coupling resistance for high electromagnetic compatibility
- UV-resistant
- Outdoor application
- This screened motor supply cable with low mutual capacitance of the single cores because of the special Polymer 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
- Design acc. to the requirements of VdS 3501:2006-04
- 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, test acc. to DIN VDE 0472 part 504, test method B
- Meets EMC requirements acc. to EN 55011 and DIN VDE 0875 part 11

Note

- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

This 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. 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.

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.

Part no.	No. cores x cross-sec. mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km	AWG-No.
22724	3 G 1,5	9,4	72,0	200,0	16	22715	5 G 4	15,4	321,0	567,0	12
22707	4 G 1,5	10,4	95,0	230,0	16	22716	7 G 4	18,2	352,0	603,0	12
22708	5 G 1,5	11,2	117,0	258,0	16	22717	4 G 6	15,2	320,0	633,0	10
22709	7 G 1,5	13,2	148,0	281,0	16	22718	5 G 6	16,8	439,0	679,0	10
22710	3 G 2,5	11,2	137,0	270,0	14	22719	7 G 6	20,0	501,0	771,0	10
22711	4 G 2,5	12,5	150,0	300,0	14	22720	4 G 10	19,5	533,0	860,0	8
22712	5 G 2,5	13,5	200,0	352,0	14	22721	5 G 10	21,6	711,0	1029,0	8
22713	7 G 2,5	16,0	230,0	473,0	14	22722	4 G 16	23,1	789,0	1290,0	6
22714	4 G 4	14,2	235,0	485,0	12	22723	4 G 25	27,1	1236,0	1862,0	4

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