TOPFLEX®-EMC*-3 PLUS 2YSLCY-J Motor power supply cable 0,6/1 kV

for power supply connections to frequency converters, double screened

CE

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
- **Peak value Û** 1700 V
- **Test voltage** 2500 V
- **Insulation resistance**
  min. 200 MOhm x km
- **Coupling resistance** according to different cross-sections
  max. 250 Ohm/km
- **Minimum bending radius**
  - **fixed installation** for outer∅:
    up to 12 mm : approx. 5 x cable∅
    >12 to 20 mm : approx. 7,5 x cable∅
    >20 mm : approx. 10 x cable∅
  - **free-movement** for outer∅:
    up to 12 mm : approx. 10 x cable∅
    >12 to 20 mm : approx. 15 x cable∅
    >20 mm : approx. 20 x cable∅
- **Radiation-resistance**
  up to 80 x 10^6 cJ/kg (up to 80 Mrad)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note 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

Cable structure

- Plain copper, fine wire conductor according to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and/or IEC 60228 cl. 5
- Polyethylene (PE) core insulation
- Core colours: black, brown, blue, green-yellow (earth core divided into 3)
- 3+3-core structure
- Cores stranded in concentric layers
- 1. screening with special aluminium film
- 2. screening with copper braiding, tinned copper, coverage approx. 80%
- Transparent orange special PVC outer sheath

Test

- Test to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/IEC 60332-1 (equivalent to DIN VDE 0472 part 804, test type 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
- Installation in hazardous areas
- Low mutual capacitance
- Meets EMC requirements according to EN 55011 and DIN VDE 0875 part 11
- Low coupling resistance for high electromagnetic compatibility

* **EMC** = Electromagnetic compatibility

Application

This TOPFLEX®-EMC-3 PLUS 2YSLCY-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.
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.
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 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 mm² meets the requirements of DIN EN 60204 part 1.

CE = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

Part No.	No. of cores x cross section mm²	Outer ∅ ca.mm	Mutual capacitance at 1 MHz Ohm/km	at 30 MHz Ohm/km	Coupling resistance**) with 3 loaded cores in Ampere	Cop. weight kg/km	Weight ca.kg/km
22368	3x1,5+3G0,25	10,2	–	–	18	86	140
22369	3x2,5+3G0,5	11,4	18	210	26	144	220
22370	3x4+3G0,75	13,0	11	210	34	224	323
22371	3x6+3G1	15,0	6	150	44	298	420
22372	3x10+3G1,5	18,4	7	180	61	491	615
22373	3x16+3G2,5	21,6	9	190	82	723	819
22374	3x25+3G4	25,3	4	95	108	1138	1325
22375	3x35+3G6	27,8	3	85	135	1535	1718
22376	3x50+3G10	32,6	2	40	168	2208	2399
22377	3x70+3G10	39,0	2	45	207	2871	3056
22378	3x95+3G16	44,3	1	50	250	3953	4162
22379	3x120+3G16	46,8	–	–	292	4836	5074
22380	3x150+3G25*	53,5	–	–	335	5412	6128
22381	3x185+3G35	59,5	–	–	382	6969	7189
22382	3x240+3G42,5	65,2	–	–	–	8540	9540

Note:
Design and structure: Siemens PROTOFLEX-EMC-3 PLUS 2YSLCY-J 600/1000 V
**) 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.

* Capacitance core/core 270 nF/km
Core/screen 520 nF/km

G = with green-yellow earth core
X = without earth core

Q