TOPFLEX®-EMV-UV-2XSLCHK-J

EMC-preferred type, double screened, enhanced current carrying capacity

TECHNICAL DATA

Motor connection cable for frequency converters in alignment with DIN VDE 0250

Temperature range	flexible -15°C to +90°C fixed -40°C to +90°C
Permissible operating temperature of the conductor	+90°C
Nominal voltage	AC U_0/U 600/1000 V
Max. permissible operating voltage	alternating current (AC) conductor/earth 700 V three-phase alternating current (AC) conductor/conductor 1200 V direct current (DC) conductor/earth 900 V direct current (DC) conductor/conductor 1800 V
Test voltage core/core	4000 V
Mutual capacitance	see table
Coupling resistance	see table
Minimum bending radius	flexible <12 mm: 10x Outer-ø 12-20 mm: 15x Outer-ø >20 mm: 20x Outer-ø fixed <12 mm: 5x Outer-ø 12-20 mm: 7,5x Outer-ø >20 mm: 10x Outer-ø

CABLE STRUCTURE

- Copper wire bare, finely stranded acc. to DIN VDE 0295 Class 5 / IEC 60228 Class 5
- Core insulation: XLPE
- Core identification: brown, black, grey, green-yellow
- G = with protective conductor GN-YE
- Cores stranded with optimal lay lengths
- 1. Screen: plastic-coated aluminium foil (St)
  2. Screen: braided screen of tinned copper wires, approx. coverage 85%
- Outer sheath: Special-Polyolefin
- Sheath colour: black (RAL 9005)
- Length marking: in metres

PROPERTIES

- resistant to: UV radiation, weathering effects
- for outdoor use
- halogen-free
- the materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers
- optimal screening enables interference-free operation of frequency converters
- low coupling resistance ensures good electromagnetic compatibility
- low mutual capacitance of the individual cores due to XLPE core insulation and low screen capacity, enable low-loss power transmission

TESTS

- corrosiveness of combustion gases acc. to DIN VDE 0482-754-2 / DIN EN 60754-2 / IEC 60754-2
- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2
- bundle fire test acc. to DIN VDE 0482-332-3-24 / DIN EN 60332-3-24 / IEC 60332-3-24
- smoke density acc. to DIN VDE 0482-1034-1+2 / DIN EN 61034-1+2 / IEC 61034-1+2
- UV-resistant acc. to DIN EN ISO 4892-2
- weather-resistant acc. to DIN EN ISO 4892-2
- electromagnetic compatibility acc. to DIN VDE 0875-11 / DIN EN 55011

APPLICATION

This TOPFLEX®-EMV-UV-2XSLCHK-J motor connection cable for frequency converters ensures EMC in systems and buildings, facilities with devices and equipment from which electromagnetic interference fields can have an inadmissible influence on the environment. As a result of the permissible operating temperature of +90°C at the conductor, an enhanced current carrying capacity compared to PE insulated motor connection cables is permissible. Used as a connecting cable for medium mechanical stress with fixed installation and occasional free movement in dry, damp or wet rooms, as well as outdoors. Used in the automotive industry, food industry, environmental technology sector, packaging industry and in machine tools. Utilised as handling equipment for SIMOVERT drives in the industrial sector for pumps, fans, conveyor belts and air conditioning systems etc. EMC= Electromagnetic Compatibility; in order to optimise EMC properties, we recommend a double-sided and all-round large contact area of the copper braiding.

NOTES

- the conductor is metrically (mm²) constructed, AWG numbers are approximated, and are for reference only

Part no.	No. cores x cross-sec. mm²	AWG, approx.	Outer Ø mm, approx.	Mutual capacitance core/core in pF/m approx.	Mutual capacitance core/screen in pF/m approx.	Coupling resistance at 30 MHz in Ohm/km	Current carrying capacity*	Cu factor per km	Weight kg/km, approx.
24522	4 G 1.5	16	10.1	70	110		23	95.0	164.0
24523	4 G 2.5	14	11.2	80	130	210	32	150.0	211.0
24524	4 G 4	12	12.8	90	150	210	42	235.0	303.0
24525	4 G 6	10	14.9	90	150	150	54	320.0	428.0

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24526	4 G 10	8	17.7	120	200	180	75	533.0	673.0
24527	4 G 16	6	20.9	120	210	190	100	789.0	1000.0
24528	4 G 25	4	25.3	140	230	95	127	1236.0	1505.0
24529	4 G 35	2	28.0	150	260	85	168	1662.0	1934.0
24530	4 G 50	1	32.3	190	320	40	192	2345.0	2724.0
24531	4 G 70	2/0	37.6	190	320	45	246	3196.0	3674.0
24532	4 G 95	3/0	41.6	250	410	50	298	4316.0	4583.0
24533	4 G 120	4/0	44.8	270	430		346	5435.0	6061.0
24534	4 G 150	300 kcmil	52.3	280	450		399	6394.0	7443.0
24535	4 G 185	350 kcmil	58.7	290	470		456	7639.0	8727.0

*) Current carrying capacity with 3 loaded cores in amperes for permanent operation up to 30°C ambient temperature. For deviating ambient temperatures, the conversion factors and specifications from DIN VDE 0298-4 apply.