

TOPFLEX® 650 VFD

XLPE insulation, EMC-preferred type,
flexible motor power supply w/ control conductors, oil-resistant, NFPA 79 Ch. 4



Technical data

- XLPE-insulated motor supply cable acc. to UL Std. 1277 and 2277
- **Temperature range**
UL/CSA TC -40°C to +90°C
flexing +5°C to +50°C
static -40°C to +105°C
- **Nominal voltage**
UL/CSA TC 600 V
UL WTTC/Flexible Motor Supply 1000 V
- **Test voltage**
power supply conductors 4000 V
control conductors 2000 V
- **Minimum bending radius**
flexing 10x cable Ø
- **Coupling resistance**
max. 250 Ohm/km

Cable structure

- Finely stranded (Cl. K), tinned copper acc. to AWG standards
- Special XLPE conductor insulation
- Black supply conductors with continuous white numbering
- 1 or 2 black control conductors with numbers 5+6 (1 pair), 7+8 (2 pair)
- GN-YE conductor in the outer layer
- Control conductors shielded in pairs with special aluminum foil, tinned drain wire
- Control conductors stranded in pairs and laid up in layers with optimal lay length with the power supply conductors
- Overall non-woven separator
- 1. Special aluminum foil shield
2. Braided, tinned copper shield, approx. 85% coverage
- Tinned drain wire between foil and braid shields
- Separator
- Special TPE outer jacket
- Black (RAL 9005) jacket
- With length marking in feet

Properties

- Self-extinguishing and flame retardant acc. to CSA FT4
- The materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers
- UV-resistant
- Direct burial rated
- Resistant to cleaning and disinfecting agents acc. to ECOLAB®

Tests

- **UL:**
TC-ER (1277), WTTC (2277), ITC-ER & PLTC-ER (18-12 AWG), 44 (14-2 AWG), NFPA 79 Ch. 4, Class I Div. 2 per NEC Art. 501, NEC Art. 336 & 392, Oil Res I/II, 90°C Dry/Wet, -40°C Cold Bend
- **CSA:**
C22.2 No. 230 & 239 - c(UL) CIC-TC FT4
C22.2 No. 210 - AWM I/II A/B FT4

Note

- VFD = Variable Frequency Drive
- Available on request**
Orange (RAL 2003) jacket

Application

Flexible, extremely oil-resistant, thermoset-insulated motor supply cable for modern servomotors; the double-shielding with special aluminum foil (100% coverage) and tinned copper braid (approx. 85% coverage) provides effective protection against electrical disturbances and the resultant failures. XLPE insulation makes this compliant with the requirements outlined in the current edition of NFPA 79 Chapter 4. The special TPE jacket is extremely resistant to oil, coolants and solvents making it the perfect solution for industrial applications. Open, unprotected installation in cable trays and from cable trays to the machine, as well as in pipes and direct burial are approved.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC.

Part no.	No. conductor x AWG No.	Cross section mm ²	Outer Ø app. mm	Cu factor per km	Weight app. kg / km
63156	4x AWG 16 + 2x AWG 18	1,31 / 0,963	15,6	117,6	320,0
11018367	4x AWG 16 + 2x 2x AWG 18	1,31 / 0,963	17,5	166,7	385,0
63157	4x AWG 14 + 2x AWG 18	2,08 / 0,963	16,7	154,8	379,0
11018368	4x AWG 14 + 2x 2x AWG 18	2,08 / 0,963	18,5	183,0	446,0
63138	4x AWG 14 + 2x AWG 16	2,08 / 1,31	17,0	165,2	394,0
11018369	4x AWG 14 + 2x 2x AWG 16	2,08 / 1,31	19,0	230,7	472,0
63158	4x AWG 12 + 2x AWG 18	3,31 / 0,963	17,7	206,9	454,0
11018370	4x AWG 12 + 2x 2x AWG 18	3,31 / 0,963	19,6	253,0	536,0
63159	4x AWG 12 + 2x AWG 16	3,31 / 1,31	18,0	217,3	469,0
11018371	4x AWG 12 + 2x 2x AWG 16	3,31 / 1,31	20,1	294,7	549,0
63160	4x AWG 10 + 2x AWG 16	5,26 / 1,31	19,7	318,5	603,0
11018372	4x AWG 10 + 2x 2x AWG 16	5,26 / 1,31	22,6	395,9	735,0
63161	4x AWG 8 + 2x AWG 16	8,37 / 1,31	24,8	486,6	945,0
11018373	4x AWG 8 + 2x 2x AWG 16	8,37 / 1,31	26,4	564,0	1027,0
63162	4x AWG 6 + 2x AWG 16	13,3 / 1,31	26,2	695,0	1190,0
11018374	4x AWG 6 + 2x 2x AWG 16	13,3 / 1,31	27,7	770,9	1271,0
63163	4x AWG 4 + 2x AWG 16	21,2 / 1,31	29,0	1007,5	1579,0
11018375	4x AWG 4 + 2x 2x AWG 16	21,2 / 1,31	30,3	1083,4	1655,0

Dimensions and specifications may be changed without prior notice.