

TOPSERV® 650 VFD XLPE insulation, EMC-preferred type, highly 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
permanently flexing 7,5x cable Ø
- **Coupling resistance**
max. 250 Ohm/km

Cable structure

- Finely stranded (Cl. M 18-10AWG; Cl. K 8-2 AWG), 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 wrapped in non-woven separator and braided, tinned copper shield, approx. 85% coverage
- Control conductors stranded in pairs and laid up in layers with the power supply conductors in optimal lay lengths
- Overall non-woven separator
- Braided, tinned copper shield, approx. 85% coverage
- Separator
- Special TPE outer jacket
- Orange (RAL 2003) 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**
- Black (RAL 9005) jacket

Application

Highly 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.

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

Part no.	No. conductor x AWG No.	Cross section mm²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
59846	4x AWG 16 +2x AWG 18	1,31 / 0,824	16,2	105,2	335,0
710015	4x AWG 16 +2x 2x AWG 18	1,31 / 0,824	18,5	127,9	418,0
59847	4x AWG 14 +2x AWG 18	2,08 / 0,824	16,8	136,9	379,0
712804	4x AWG 14 +2x 2x AWG 18	2,08 / 0,824	19,1	159,5	464,0
59848	4x AWG 14 +2x AWG 16	2,08 / 1,31	17,3	147,3	400,0
710017	4x AWG 14 +2x 2x AWG 16	2,08 / 1,31	19,9	180,0	506,0
59849	4x AWG 12 +2x AWG 18	3,31 / 0,824	18,6	188,7	469,0
710018	4x AWG 12 +2x 2x AWG 18	3,31 / 0,824	20,9	229,5	573,0
59850	4x AWG 12 +2x AWG 16	3,31 / 1,31	19,1	199,1	490,0
710019	4x AWG 12 +2x 2x AWG 16	3,31 / 1,31	22,4	249,6	661,0
59851	4x AWG 10 +2x AWG 16	5,26 / 1,31	20,6	292,1	613,0
710020	4x AWG 10 +2x 2x AWG 16	5,26 / 1,31	24,0	326,5	774,0
59852	4x AWG 8 +2x AWG 16	8,37 / 1,31	25,4	451,9	945,0
710021	4x AWG 8 +2x 2x AWG 16	8,37 / 1,31	27,5	487,3	1054,0
59853	4x AWG 6 +2x AWG 16	13,3 / 1,31	26,8	641,5	1168,0
710022	4x AWG 6 +2x 2x AWG 16	13,3 / 1,31	28,8	676,4	1280,0
59854	4x AWG 4 +2x AWG 16	21,2 / 1,31	29,6	954,1	1563,0
710023	4x AWG 4 +2x 2x AWG 16	21,2 / 1,31	31,3	987,8	1667,0

Dimensions and specifications may be changed without prior notice.