

TOPFLEX® 650 VFD

EMC-preferred type, flexible motor power supply cable with control cores, oil resistant, NFPA 79



Technical data

- TPE motor supply cable acc. to UL Std. 1277 and UL Std. 2277
- **Temperature range**
flexing -25°C to +105°C
- **Nominal voltage**
TC 600 V
WTTC 1000 V
- **Test voltage**
power supply cores 4000 V
control cores 2000 V
- **Minimum bending radius**
flexing 6x cable Ø
- **Coupling resistance**
max. 250 Ohm/km

Cable structure

- Tinned copper conductor, fine wire with AWG dimensions
- Special PVC core insulation with transparent nylon skin
- Black supply cores with continuous white numbering
- 2 black control cores numbered 5+6
- GN-YE conductor in the outer layer
- Control cores screened in pairs with plastic-coated aluminium foil, tinned drain wire
- Control cores stranded in pairs and laid up in layers with optimal lay length with the power supply cores
- 1. Screening with plastic-coated aluminium foil
- 2. Screening from tinned copper braid, optimal coverage approx. 85%
- Separator
- Special TPE outer sheath
- Sheath colour: black (RAL 9005) or orange (RAL 2003)
- With length marking in feet

Properties

- 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

Tests

- Self-extinguishing and flame retardant acc. to CSA FT4
- **UL:**
TC-ER, WTTC 1000 V, MTW, NFPA 79, PLTC-ER (AWG 18 - AWG 12), ITC-ER (AWG 18 - AWG 12) OIL RES I & II, 90°C dry / 75°C wet, -40°C Cold Bend Test, Class 1 Div. 2 per NEC Art. 336, 392, 501
- **CSA:**
c (UL) CIC-TC FT4, AWM I/II A/B FT4

Note

- VFD = Variable Frequency Drive

Application

Flexible, extremely oil resistant motor supply cable for modern servomotors; the double screening with special aluminium foil (100% coverage) and tinned copper braid (approx. 85% coverage) provides effective protection against electrical disturbance and the resultant failures. NFPA 79 approved for open, unprotected installation on cable trays and from cable trays to the machine. The special TPE sheath is extremely resistant to oil, coolants and solvents and hence the perfect solution for industrial applications with open installation, installation in pipes and in the ground.

EMC = Electromagnetic compatibility

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

CE = Product conforms with Low-Voltage Directive 2014/35/EU.

Sheath colour: black

Part no.	No. cores x AWG-No.	Cross-section mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
63156	4x AWG 16 +2x AWG 18	1,31 / 0,963	13,0	88,0	259,0
63157	4x AWG 14 +2x AWG 18	2,08 / 0,963	14,0	133,0	370,0
63138	4x AWG 14 +2x AWG 14	2,08 / 2,08	14,0	159,0	399,0
63158	4x AWG 12 +2x AWG 18	3,31 / 0,963	15,3	197,0	435,0
63159	4x AWG 12 +2x AWG 14	3,31 / 2,08	15,7	224,0	466,0
63160	4x AWG 10 +2x AWG 14	5,26 / 2,08	18,2	301,0	703,0
63161	4x AWG 8 +2x AWG 14	8,37 / 2,08	24,1	457,0	901,0
63162	4x AWG 6 +2x AWG 14	13,31 / 2,08	27,4	615,0	1275,0
63163	4x AWG 4 +2x AWG 14	21,21 / 2,08	33,4	1450,0	1861,0

Sheath colour: orange

Part no.	No. cores x AWG-No.	Cross-section mm ²	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
62876	4x AWG 16 +2x AWG 18	1,31 / 0,963	13,0	88,0	259,0
62877	4x AWG 14 +2x AWG 18	2,08 / 0,963	14,0	133,0	370,0
62878	4x AWG 14 +2x AWG 14	2,08 / 2,08	14,0	159,0	399,0
62879	4x AWG 12 +2x AWG 18	3,31 / 0,963	15,3	197,0	435,0
62880	4x AWG 12 +2x AWG 14	3,31 / 2,08	15,7	224,0	466,0
62881	4x AWG 10 +2x AWG 14	5,26 / 2,08	18,2	301,0	703,0
62882	4x AWG 8 +2x AWG 14	8,37 / 2,08	24,1	457,0	901,0
62883	4x AWG 6 +2x AWG 14	13,31 / 2,08	27,4	615,0	1275,0
62884	4x AWG 4 +2x AWG 14	21,21 / 2,08	33,4	1450,0	1861,0

Dimensions and specifications may be changed without prior notice. (RN07)