

# TOPSERV® 650 VFD EMC-preferred type, flexible motor power

supply cable with control cores, oil-resistant, NFPA 79 Edition 2007



new

## Technical data

- TPE motor supply cable according to UL 1277
- **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 5x cable ø  
Permanently flexing 7,5 cable ø
- **Coupling resistance**  
Max. 250 Ohm/km

## Cable structure

- Tinned copper conductor, fine wire stranded, with AWG measures
- Special PVC core insulation with transparent nylon skin
- Black supply cores with continuous white numbering
- Green-yellow earth core in the outer layer
- 2 black control cores with marking 5 and 6
- 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 Cu-braid, optimal coverage approx. 85%
- Separator
- Special TPE outer jacket
- Sheath colour - black (RAL 9005) or orange (RAL 2003)

## Properties

- Self-extinguishing and flame retardant in accordance with CSA FT4
- The materials used in manufacture are free of silicone, cadmium and substances that impair paint wetting
- UV-resistant

### Tests

#### UL:

TC-ER, WTTC 1000 V, MTW, NFPA 79 2007, UL 1277, PLTC-ER (AWG 18 - AWG 12), ITC-ER (AWG 18 - AWG 12) OIL RES I & II, 90° C dry / 75° C wet  
Class 1 Div. 2 per NEC Art. 336, 392, 501  
Cold Bend Test -40°C

#### CSA:

c (UL) CIC-TC FT4  
AWM I/II A/B FT4

## Note

- VFD = Variable Frequency Drive
- with meter marking in feet

## Application

Highly-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. Approved to NFPA 79 2007 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 earth.

## EMC = Electromagnetic compatibility

To optimise EMC characteristics, we recommend a large contact area for the copper braiding around the entire circumference on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

### Sheath colour black

Part No.	Number of cores	Outer Ø approx. mm	Cop.Weight kg / km	Weight approx. kg / km
16 AWG / 1,50 mm² (26/30)				
59837	4c/16 + 2c/18	13,0	88,0	259,0
14 AWG / 2,50 mm² (41/30)				
59838	4c/14 + 2c/18	14,0	133,0	370,0
59839	4c/14 + 2c/14	14,6	159,0	399,0
12 AWG / 4 mm² (65/30)				
59840	4c/12 + 2c/18	15,3	197,0	435,0
59841	4c/12 + 2c/14	15,7	224,0	466,0
10 AWG / 6 mm² (105/30)				
59842	4c/10 + 2c/14	18,2	301,0	703,0
8 AWG / 10 mm² (168/30)				
59843	4c/8 + 2c/14	24,1	457,0	901,0
6 AWG / 16 mm² (266/30)				
59844	4c/6 + 2c/14	27,4	615,0	1275,0
4 AWG / 25 mm² (413/30)				
59845	4c/4 + 2c/14	33,4	1450,0	1861,0

### Sheath colour orange, Desina

Part No.	Number of cores	Outer Ø approx. mm	Cop.Weight kg / km	Weight approx. kg / km
16 AWG / 1,50 mm² (26/30)				
59846	4c/16 + 2c/18	13,0	88,0	259,0
14 AWG / 2,50 mm² (41/30)				
59847	4c/14 + 2c/18	14,0	133,0	370,0
59848	4c/14 + 2c/14	14,6	159,0	399,0
12 AWG / 4 mm² (65/30)				
59849	4c/12 + 2c/18	15,3	197,0	435,0
59850	4c/12 + 2c/14	15,7	224,0	466,0
10 AWG / 6 mm² (105/30)				
59851	4c/10 + 2c/14	18,2	301,0	703,0
8 AWG / 10 mm² (168/30)				
59852	4c/8 + 2c/14	24,1	457,0	901,0
6 AWG / 16 mm² (266/30)				
59853	4c/6 + 2c/14	27,4	615,0	1275,0
4 AWG / 25 mm² (413/30)				
59854	4c/4 + 2c/14	33,4	1450,0	1861,0

Dimensions and specifications may be changed without prior notice. (RN01)