

# TOPSERV® 110 / 120 / Feedback-Cable

drag chain cable, 0,6/1kV EMC-preferred type, servo/feedback cable, high flexible



HELUKABEL TOPSERV 120

CE

RoHS

## Technical data

- Spezial-PUR drag chain cable based on DIN VDE 0295, 0250, 0281
- **Temperature range**  
flexing -40°C to +90°C  
fixed installation -40°C to +90°C
- **Nominal voltage**  
power supply cores U<sub>0</sub>/U 600/1000 V  
control cores U<sub>0</sub>/U 300/500 V
- **Test voltage**  
power supply cores 4000 V  
control cores 1000 V
- **Power rating**  
to DIN VDE 0298 part 4
- **Insulation resistance**  
min. 20 MΩm x km
- **Minimum bending radius**  
approx. 7,5x cable Ø
- **Coupling resistance**  
max. 250 Ωm/km

## Cable construction

- Plain copper conductor, ultra-fine wire for TOPSERV® 110:  
1 mm<sup>2</sup> = 19x0,25 mm
- TPE-E core insulation, halogen-free
- Core identification:  
Power supply cores black with imprint U1, V2, W3 and earth core green-yellow,  
Control cores black with imprint BR1, BR2 or nos. 5-6 and 7-8 for the 2-pair-version
- Screening of the control cores in pairs with Al film, tinned drain wire and tinned Cu braid; single pair with tinned Cu braid only
- Control cores stranded in pairs and laid up in layers together with the power supply cores
- Fleece wrapping
- Overall screening of tinned cu braid, visible coverage min. 80%
- Fleece wrapping
- PUR-outer sheath, flame-resistant
- Colour petrol (RAL 5018)

## Properties

- PUR-outer sheath flame retardant, low adhesion, resistant to hydrolysis and microbial attack, halogen-free
- These highly flexible cables are fitted with an additional overall screen to assure EMC compatibility, i.e. the protection against electromagnetic interference
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

## Note

- For extreme applications extending beyond standard solutions we recommend that you request our questionnaire, which has been especially designed for energy supply systems.
- Please observe applicable installation regulations for use in energy supply chains.

## Application

The combination of feeder cores with the control cores for the braking function and the thermal protection in these cables is ideal. Precision servomotors, as used today in many areas of highly-automated manufacturing processes, call for high-quality, reliable and long-lasting cables. These requirements are met to a high degree as is the electromagnetic compatibility (EMC). These cables can also be used as drag chain cables.

Manufacturing is based on specifications from renowned manufacturers of servo-actuators and servo-controls as well as in accordance with diverse VDE standards. Application for system SIMODRIVE.

**EMC** = Electromagnetic compatibility

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

**CE** = The product is conformed with the EC Low-Voltage Directive 73/23/EEC and 93/68/EEC.

### TOPSERV 110

#### (1 pair screened and overall screening)

Part No.	No. cores x cross-sec. mm <sup>2</sup>	Outer ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-No.
71491	(4 x 1,5 + (2 x 1,0))	11,1	139,0	211,0	16
71493	(4 x 2,5 + (2 x 1,0))	13,6	188,0	273,0	14
71705	(4 x 4,0 + (2 x 1,0))	14,2	260,0	352,0	12
71706	(4 x 6,0 + (2 x 1,0))	16,5	360,0	500,0	10
71707	(4 x 10,0 + (2 x 1,0))	22,4	590,0	753,0	8
71708	(4 x 16,0 + (2 x 1,0))	23,8	845,0	1061,0	6
71709	(4 x 25,0 + (2 x 1,0))	28,0	1320,0	1499,0	4
71710	(4 x 35,0 + (2 x 1,0))	30,4	1840,0	1992,0	2
71711	(4 x 50,0 + (2 x 1,0))	35,1	2530,0	2880,0	1

### TOPSERV® 120

#### (2 pairs individually screened and overall screening)

Part No.	No. cores x cross-sec. mm <sup>2</sup>	Outer ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-No.
71990	(4 x 1,5 + 2 x (2 x 1,0))	12,6	186,0	242,0	16
71991	(4 x 2,5 + 2 x (2 x 1,0))	14,6	231,0	316,0	14
71992	(4 x 4,0 + 2 x (2 x 1,0))	16,0	308,0	415,0	12
71993	(4 x 6,0 + 2 x (2 x 1,0))	19,2	420,0	574,0	10
71994	(4 x 10,0 + 2 x (2 x 1,0))	22,8	647,0	805,0	8
71995	(4 x 16,0 + 2 x (2 x 1,0))	25,9	918,0	1122,0	6
71996	(4 x 25,0 + 2 x (2 x 1,0))	29,8	1400,0	1584,0	4
72106	(4 x 35,0 + 2 x (2 x 1,0))	30,1	1882,0	2185,0	2
71997	(4 x 50,0 + 2 x (2 x 1,0))	36,0	2574,0	2977,0	1

### TOPSERV® Feedback-Cable (overall braid-screened)

Part No.	No. cores x cross-sec. mm <sup>2</sup>	Outer ø ca. mm	Cop. weight kg / km	Weight ca. kg / km	AWG-No.	Cable structure (deviation from TOPSERV®)
72042	(12 x 0,25)	7,5	65,0	90,0	24	PVC-core insulation, cores colour coded, foil taped, PUR-jacket
71492	(3 x 2 x 0,14 + 4 x 0,14 + 4 x 0,25 + 2 x 0,5)	10,7	92,0	145,0	26	TPE-core insulation, cores colour coded, fleece wrapping, PUR-jacket
72043	(4 x 2 x 0,34 + 4 x 0,5)	9,5	77,0	144,0	22	PVC-core insulation, cores colour coded, foil taped, PUR-jacket

Dimensions and specifications may be changed without prior notice.