

High flexible motor and servo cable for drag chain 0,6/1 kV, for example according to Siemens 6FX8008PLUS, Lenze, Bosch Rexroth



ECOLAB®



HELUKABEL - TOPSERV 109 PUR - 0,6/1 kV UL/CSA DESINA CC

Cable structure

Bare copper - conductor, to
DIN VDE 0295 cl. 6, extra fine-wire,
IEC 60228 cl.6

Core insulation halogen-free PP

Core identification

power supply cores

core 1: black with imprint U/L1/C/L+
core 2: black with imprint V/L2
core 3: black with imprint W/L3 /D/L-

control cores

acc. to Siemens

acc. to Lenze

TOPSERV® 109 PUR without control cores

TOPSERV® 113 PVC with 1 control cores

core 1: black with imprint BR1

core 2: white with imprint BR2

core 1: brown with imprint BR1

core 2: white with imprint BR2

TOPSERV® 121 PUR with 2 control cores

pair 1: black with number no. 5+6

pair 2: black with number no. 7+8

GN-YE conductor

Screening of the control cores in pairs

wrapped with tinned copper braid

Power supply cores laid up with optimal lay

length and stabilising filler

Fleece wrapping facilitates sliding

Overall screening from tinned copper braid,

optimal coverage approx. 85%

Outer sheath of PUR

Sheath colour orange (RAL 2003)

Properties

Low adhesion, flame retardant, extremely abrasion resistant, halogen-free, resistant to UV, oil hydrolysis and microbial attack
PUR sheath

Optimized insulation materials ensure resistance to oils (including mineral oils), greases, coolants, hydraulic fluids as well as many alkalis and solvents.

Optimum compliance with requirements for electromagnetic compatibility (EMC) by approx. 85% coverage from the braided screen

These cables are produced to high quality specifications and conform to the DESINA®-standard

The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Resistant to cleaning and disinfecting agents acc. to ECOLAB®

Tests

PUR outer sheath self-extinguishing and flame retardant to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Technical data

Special PUR drag chain cable acc. to UL AWM Style 21223 or 20234 CSA AWM VDE-recognized

Temperature range

Flexing: - 30° C to + 80° C
Flexed installation: - 40° C to + 90° C

Nominal voltage

VDE U₀/U 600/ 1000 V

UL/CSA 1000 V

A.c. test voltage

50 Hz

4000 V

Insulation resistance

min. 20 MOhm x KM

Coupling resistance

0mas. 250 Ohm/km

Minimum bending radius

Flexing 15x Cable Ø
Fixed installation 5x cable Ø

Note

For a corresponding encoder cables please check chapter **TOPGEBER 512 PUR**

For servo cables with non or only slight drag chain application please check chapter **TOPSERV® PVC**

Brackets () indicate screen

DESINA® explanation see introduction

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Lenze product designations are registered trademarks of Lenze AG and are to be used only for purposes of comparison

Bosch Rexroth product designations INK are registered trademarks of Bosch Rexroth AG and are to be used only for purposes of comparison

Application

The combination of supply 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 by these cables. The cables have an additional overall screen to ensure EMC compatibility, i.e. for protection against electromagnetic interference. Production is based on the specifications of established manufacturers of servo-drives and controls, as well as on various VDE, UL and CSA standards. Applications include machine, plant and robot construction, automation, drive, control and production engineering.

Attractive for export-oriented mechanical and system engineering. Please observe applicable installation regulations for use in energy supply chains.

EMC = Electromagnetic compatibility

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

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



Part No. HELUKABEL	Part No. OEM	Cable Structure / Sheath Colour	Cop. Weight app. kg/km	Weight app. kg/km	Outer Diameter app. mm
Without pair - TOPSERV® 109 PUR					
75943	6FX8008-1BB11	4 G 1.5	90	136	
75944	6FX8008-1BB21	4 G 2.5	132	195	8.9
75945	6FX8008-1BB31	4 G 4	204	273	10.7
75946	6FX8008-1BB41	4 G 6	315	401	12.2
75947	6FX8008-1BB51	4 G 10	488	616	14.5
75948	6FX8008-1BB61	4 G 16	769	948	17.5
75949	6FX-8008-1BB25	4 G 25	1100	1495	21.6
75950	6FX8008-1BB35	4 G 35	1510	1936	25.2
75951	6FX8008-1BB50	4 G 50	2133	2774	28.6
700437	6FX8008-1BB70	4 G 70	3029	3803	33.4
700897	6FX808-1BB95	4 G 95	4606	5102	39.9
With 1 pair - TOPSERV® 113 PUR					
706003*	INK0670	4 G 0.75 + (2 x 0.5) C	77	132	
77376	Li9YC11Y	4 G 1.0 + (2 x 0.75) C	134	163	9.2
707228	LENZE	4 G 1.0 + (2 x 0.5) C	88	155	11.5
707229	LENZE	4 G 1.5 + (2 x 0.5) C	106	195	10.5
74506	Li9YC11Y	4 G 1.5 + (2 x 1.0) C	138	200	11.5
78948	6FX8008-1BA11	4 G 1.5 + (2 x 1.5) C	148	221	11.1
707230	LENZE	4 G 2.5 + (2 x 0.5) C	152	251	11.6
74507	Li9YC11Y	4 G 2.5 + (2 x 1.0) C	177	275	13.2
78949	6FX8008-1BA21	4 G 2.5 + (2 x 1.5) C	187	285	12.5
707231	LENZE	4 G 4 + (2 x 1.0) C	250	375	13.2
74508	Li9YC11Y	4 G 4 + (2 x 1.0) C	258	356	14.6
78950	6FX8008-1BA31	4 G 4 + (2 x 1.5) C	268	381	14.3
707232	LENZE	4 G 6 + (2 x 1.0) C	344	495	14.8
704514	Li9YC11Y	4 G 6 + (2 x 1.0) C	348	492	17.6
78951	6FX8008-1BA41	4 G 6 + (2 x 1.5) C	358	495	16.2
707746	LENZE	4 G 10 + (2 x 1.0) C	508	706	16.8
74509	Li9YC11Y	4 G 10 + (2 x 1.0) C	510	690	20.1
78952	6FX8008-1BA51	4 G 10 + (2 x 1.5) C	584	712	19.0
707747	LENZE	4 G 16 + (2 x 1.0) C	751	1008	19.5
74510	Li9YC11Y	4 G 16 + (2 x 1.0) C	798	981	23.8
75956	6FX8008-1BA61	4 G 16 + (2 x 1.5) C	825	1041	22.2
74511	Li9YC11Y	4 G 25 + (2 x 1.0) C	1273	1436	23.1
75957	6FX8008-1BA25	4 G 25 + (2 x 1.5) C	1283	1476	26.2
74512	Li9YC11Y	4 G 35 + (2 x 1.0) C	1490	1914	26.8
75958	6FX8008-1BA35	4 G 35 + (2 x 1.5) C	1550	1954	29.8
74513	Li9YC11Y	4 G 50 + (2 x 1.0) C	2120	2594	30.9
75959	6FX8008-1BA50	4 G 50 + (2 x 1.5) C	2140	2598	33.7
With 2 pair - TOPSERV® 121 PUR					
708499	Li9YC11Y	4 G 0.75 + 2 x (2 x 0.34) C	103	177	
73774	INK0653	4 G 1.0 + 2 x (2 x 0.75) C	148	208	10.4
17001159	REL0105	4 x 1.0 + 2 x (2 x 0.75) C	148	208	11.2
76103	Li9YC11Y	4 G 1.5 + 2 x (2 x 0.5) C	145	250	11.2
700561	INK0650 / REL0106	4 G 1.5 + 2 x (2 x 0.75) C	170	276	11.6
707775	Schneider Electric	4 G 1.5 + 2 x (2 x 0.75) C	170	276	12.2
73579	Li9YC11Y	4 G 1.5 + 2 x (2 x 1.0) C	182	290	12.2
73580	INK0602 / REL0107	4 G 2.5 + 2 x (2 x 1.0) C	229	346	12.4
703103	Schneider Electric	4 G 2.5 + 2 x (2 x 1.0) C	229	346	14.0
78955	Li9YC11Y	4 G 2.5 + 2 x (2 x 1.5) C	241	350	15.4
74094	Li9YC11Y	4 G 4 + 2 x (2 x 1.0) C	312	475	15.5
700562	INK0603 / rel0108	4 G 4 + (2 x 1.0) C + (2 x 1.5) C	318	473	15.8
78956	Li9YC11Y	4 G 4 + 2 x (2 x 1.5) C	324	490	16.2
74095	Li9YC11Y	4 G 6 + 2 x (2 x 1.0) C	376	606	17.3
700563	INK0604 / REL0109	4 G 6 + (2 x 1.0) C + (2 x 1.5) C	398	609	17.6
78957	Li9YC11Y	4 G 6 + 2 x (2 x 1.5) C	412	621	18.0
700564	INK0605 / REL0110	4 G 10 + (2 x 1.0) C + (2 x 1.5) C	610	852	20.5
74096	-	4 G 10 + 2 x (2 x 1.0) C	609	905	21.5
78958	Li9YC11Y	4 G 10 + 2 x (2 x 1.5) C	625	925	20.9
75978	INK0606 / REL0111	4 G 16 + 2 x (2 x 1.5) C	904	1290	23.6
75979	INK0607 / REL0112	4 G 25 + 2 x (2 x 1.5) C	1323	1700	27.0
75980	INK0667 / REL0113	4 G 35 + 2 x (2 x 1.5) C	1621	2155	30.5
700565	INK0668	4 G 50 + 2 x (2 x 2.5) C	2600	3100	35.5