

# Product **FOCUS**

Efficiency in Automation

Cable • Connectivity • Cabinet • Control

## 90 °C servo cables by LÜTZE

according to SIEMENS®  
and Bosch Rexroth®

NOW  
with  
90 °C



## The LÜTZE servo cables for the highest requirements with a temperature range of up to 90 °C

The new LÜTZE servo cables can be used up to an operating temperature of 90 °C  
and offer many highlights for your applications.



### Highlights:

- Higher current range
- Improved reliability
- Improved temperature range of up to 90 °C, thanks to improved insulation and jacket mix
- Corresponding labeling in UL Style
- Adapted outer diameter acc. to the SIEMENS® and Bosch Rexroth® Standard
- Adjusted to the new Bosch Rexroth® wire dimensioning specifications
- Exceeds the SIEMENS® and Bosch Rexroth® specification

## LÜTZE SUPERFLEX® PLUS M (C) PUR SERVO 0.6/1 kV according to SIEMENS®

Motor cables with and without control pair specially designed for industrial environments in the machine and plant construction sector.



Part Number	Number of conductors / cross-section	SIEMENS® Description	Outer diameter mm	Torsion
111460.1000	(4G1.5)	1BB11	8.7	± 30°/m
111461.1000	(4G2.5)	1BB21	10.8	± 30°/m
111462.1000	(4G4)	1BB31	12.2	± 30°/m
111463.1000	(4G6)	1BB41	14.2	± 30°/m
111464.1000	(4G10)	1BB51	17.6	± 30°/m
111465.1000	(4G16)	1BB61	21.2	± 30°/m
111420.1000	(4G1,5+(2×1.5))	1BA11	11.6	± 30°/m
111421.1000	(4G2,5+(2×1.5))	1BA21	13.0	± 30°/m
111422.1000	(4G4+(2×1.5))	1BA31	14.7	± 30°/m
111423.1000	(4G6+(2×1.5))	1BA41	16.2	± 30°/m
111424.1000	(4G10+(2×1.5))	1BA51	19.7	± 30°/m
111425.1000	(4G16+(2×1.5))	1BA61	23.2	± 30°/m
111426.1000	(4G25+(2×1.5))	1BA25	27.4	± 30°/m
111427.1000	(4G35+(2×1.5))	1BA35	31.0	± 30°/m
111428.1000	(4G50+(2×1.5))	1BA50	34.5	± 30°/m

## LÜTZE SUPERFLEX® PLUS M (C) PUR SERVO Ethernet according to SIEMENS®

LÜTZE SUPERFLEX® one cable solutions with an integrated Ethernet element are optimized for use in the drag chain. These combi-cables enable power supply, data transfer and brake control in one cable.



Part Number	Number of conductors / cross-section	SIEMENS® Description	Outer diameter mm	Torsion
111736	(4G0.38+(2×0.38)+(4×0.2))	1BE04	9.7	± 30°/m
111737	(4G0.75+(2×0.5)+(4×0.2))	1BE08	10.5	± 30°/m
111791	(4G1.5+(2×1.5)+(4×0.2))	1BE11	12.7	± 30°/m
111792	(4G2.5+(2×1.5)+(4×0.2))	1BE21	13.7	± 30°/m



# LÜTZE SUPERFLEX® PLUS M (C) PUR SERVO 0.6/1 kV according to Bosch Rexroth®

Motor cables with and without control pair specially designed for industrial environments in the machine and plant construction sector.



Part Number	Number of conductors / cross-section	Bosch Rexroth® Description	Outer diameter mm	Torsion
111270.1000	(4G1.0+2x(2x0.75))	REL0105	12.0	± 30°/m
111271.1000	(4G1.5+2x(2x0.75))	REL0106 (INK0650*)	12.2	± 30°/m
111279.1000	(4G2.5+2x(2x1.0))	REL0107 (INK0602*)	14.8	± 30°/m
111388.1000	(4G4+2x(2x1.0))	REL0108	17.0	± 30°/m
111998.1000	(4G6+(2x1.0)+(2x1.5))	REL0109 (INK0604*)	18.2	± 30°/m
111762.1000	(4G10+(2x1.0)+(2x1.5))	REL0110 (INK0605*)	22.2	± 30°/m
111276.1000	(4G16+2x(2x1.5))	REL0111 (INK0606*)	25.5	± 30°/m
111277.1000	(4G25+2x(2x1.5))	REL0112 (INK0607*)	29.8	± 30°/m

# LÜTZE SUPERFLEX® PLUS M (C) PUR SERVO Ethernet according to Bosch Rexroth®

The LÜTZE OCT Ethernet hybrid cables are designed for operation in challenging industrial environments, for example when using aggressive cooling and lubrication agents. LÜTZE SUPERFLEX® one cable solutions with an integrated Ethernet element are optimized for use in the drag chain.



Part Number	Number of conductors / cross-section	Bosch Rexroth® Description	Outer diameter mm	Torsion
111738	(4G1.5+(2x0.75)+(4xAWG24))	REH0804	13.0	± 30°/m
111739	(4G2.5+(2x1.0)+(4xAWG24))	REH0805	15.8	± 30°/m

\*Indramat compatible



# Sustainable answers and solutions!

As part of the *SkyBLUE* sustainability initiative, LÜTZE develops and markets highly sustainable and innovative solutions.



Sustainability at LÜTZE:  
<http://www.luetze.de/skyblue>

Specifically, the new **LÜTZE SUPERFLEX® cables** offer benefits that make a positive contribution to sustainability. On the one hand, the use of **qualitatively improved materials** with the same cable cross-section allows a higher current carrying capacity, and on the other hand, these cables can be used thanks to the **updated UL approvals** for 90 °C application according to US standards of NEC and NFPA. **NFPA 79** stands for 'National Fire Protection Association' and is the equivalent to the European Norm EN 60204-1.

The new **LÜTZE SUPERFLEX® cables** also offer economic benefits. Depending on the specified current range, customers now have the option to use **cables with smaller cross-section** their applications. This reduces material input costs and also **saves space** in the drag chain or allows the use of a smaller drag chain.

## Ampacity per NFPA 79 (2018 Edition)

Conductor Size (AWG)	Ampacity			Percent (%)
	60 °C (140 °F)	75 °C (167 °F)	90 °C (194 °F)	
30	—	0.5	0.5	
28	—	0.8	0.8	
26	—	1	1	
24	2	2	2	
22	3	3	3	
20	5	5	5	
18	7	7	14	100
16	10	10	18	80
14	20	20	25	25
12	25	25	30	20
10	30	35	40	14.2
8	40	50	55	10
6	55	65	75	15.4
4	70	85	95	11.7
3	85	100	110	15
2	95	115	130	13
1	110	130	150	
1/0	125	150	170	
2/0	145	175	195	

As shown in the **example**, the effect is particularly noticeable between 1 and 2.5 mm<sup>2</sup> that corresponds to the AWG equivalents AWG18 - AWG14.

As the material now allows 90 °C instead of the 75 °C defined in the NFPA 79, it is possible to increase the **power load capacity by 100 %** from 7 to 14 A, e.g. when using AWG18 conductor size. This example clearly shows that the higher temperature range allows higher currents to be transmitted.

# Suitable accessories for your customized servo cables

Connectivity for Industry 4.0

SIEMENS®



Bosch Rexroth®



Allen-Bradley®



Beckhoff®



We will be happy to deliver **customized models** - just contact our LÜTZE team of experts!

## Connectivity catalogues



For more information,  
please see our  
**Online catalogue**



Catalogue  
**Connectivity Solutions**



Catalogue  
**Ethernet Connectivity**

# Other products by LÜTZE

**Control cables**



**NOW**  
with  
90 °C

**Bus and network cables**



**Patch cables**



**Cable entry systems, fittings and accessories**



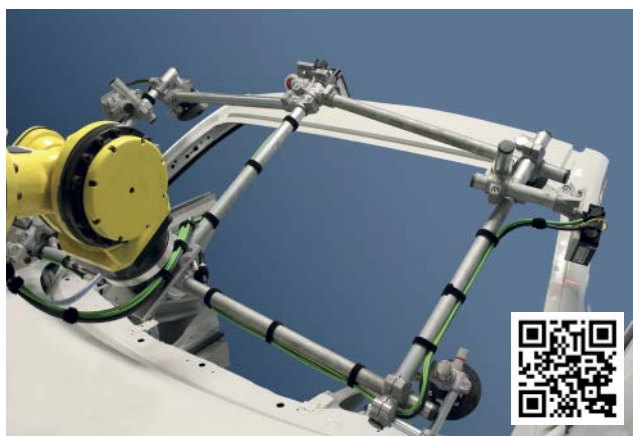
**EMC safety inside the control cabinet**



**E-CO Switches**



# LÜTZE solutions in the **cable field**



## Robotics and vision - a combination that sets high standards for cables

Visually-guided robots used in production work very precisely. Demands are also made on their 'optical nerves' - namely the data cables. VMT Bildverarbeitungssysteme GmbH - the leading supplier of robot vision systems - relies on the M12 X-coded customized model, a torsion-compatible solution by LÜTZE.

## Competence for Single Pair Ethernet technology

LÜTZE joined the SPE Industrial Partner Network to promote the distribution of the new Single Pair Ethernet Standard. With its LÜTZE SUPERFLEX® SINGLE PAIR ETHERNET (C) PUR cable (SPE), LÜTZE services the growing demand from industrial users for standardized and cost-effective network connections in line with the new SPE standard.



## High-speed transmission unit for fast installation

The new LÜTZE Cat. 6<sub>A</sub> module carriers allow data transmission points between the field and control cabinet to be performed even faster and more safely. Core benefits include the greatly simplified wiring process that does not require special tools. The module carrier therefore allows uncomplicated, secure and fast installation compared to conventional models.

In case of special application requirements, e.g. c-track suitable cables, torsion capable designs and overmolded connectors, please contact us. The LÜTZE Cable and Connectivity expert team will be happy to help!

### Cable Solutions

High flexing cables for industrial applications

### Connectivity Solutions

Industrial Ethernet, assembled cables, Actuator Sensor Interface, connectors and suppression technology

### Cabinet Solutions

*AirSTREAM* complete system for thermally optimized and space-saving cabinet wiring

### Control Solutions

Industrial Power Supplies and electronic current control for Industrial Internet of Things. Infrastructure for industrial networks, signal converter, relays and modular electronics housing

### Transportation Solutions

Solutions for the demanding Railway Sector, for example control technology, Interface solutions and signalling and passenger information systems

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RoHS

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