

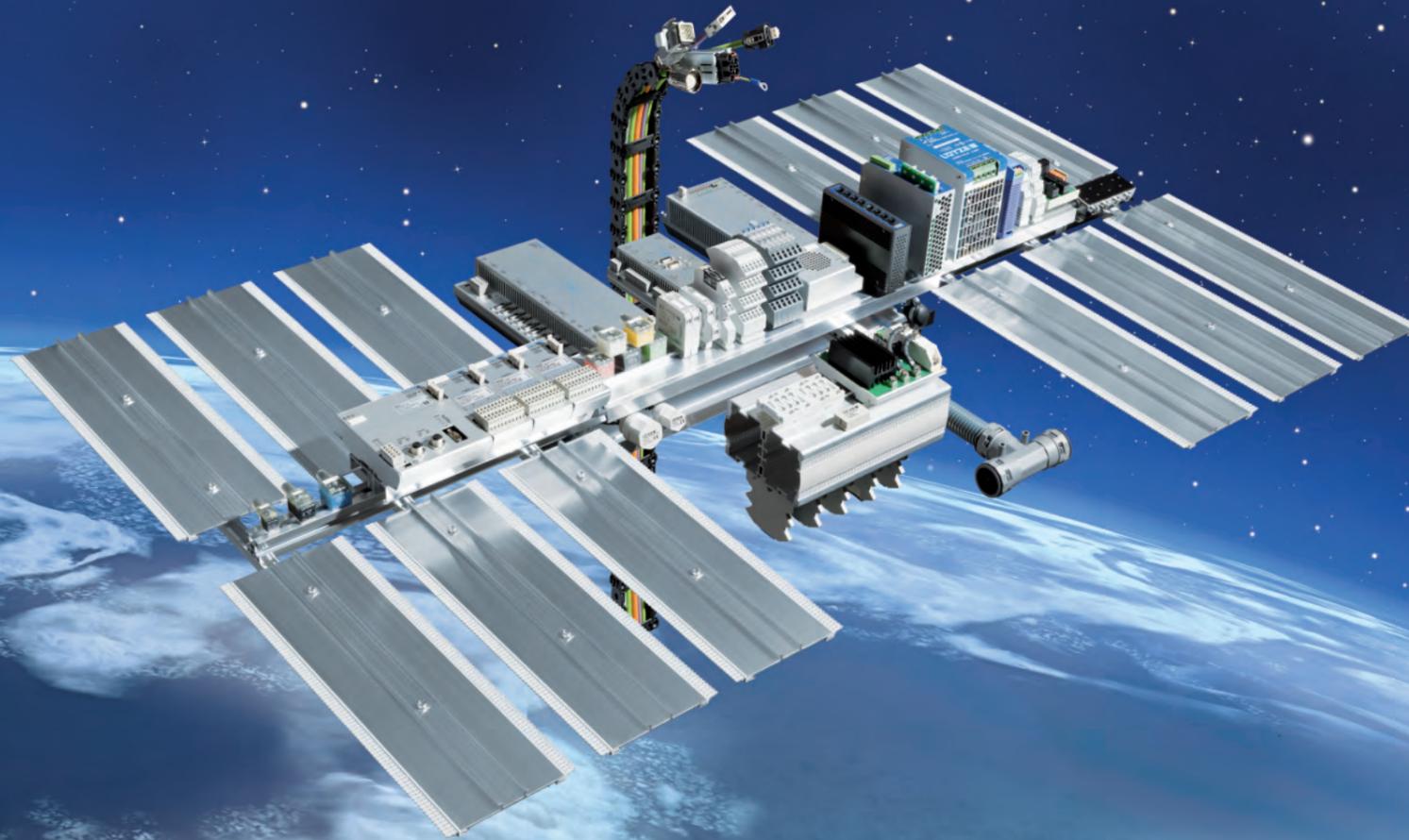


■ Connectivity Solutions

# Cable Assemblies according to Bosch Rexroth Standard

# Efficiency in Automation

Cable • Connectivity • Cabinet • Control



## Welcome to LÜTZE

### Cable Solutions



LÜTZE has been developing and manufacturing electronic and electrical engineering solutions for controls and installations for more than 50 years. Our basic concept as a system supplier for factory automation is to provide a comprehensive and wellmatched product range.

### Connectivity Solutions



#### LÜTZE Servo cable assemblies according to BOSCH REXROTH®.

LÜTZE has a long standing reputation as a manufacturer of factory automation cables. These high performance cables are now available preassembled to connect your BOSCH REXROTH® servo drive systems.

### Cabinet Solutions



LÜTZE servo cable assemblies are fully suitable with BOSCH REXROTH® drive systems. As a special service LÜTZE offers each cable assembly in custom lengths of 0.5 m increments.

The product offering includes all power and feedback sizes. In addition, raw cable is available for field assembly. There is no minimum order amount, delivery times are short and there is a cost-effective price/performance ratio.

### Control Solutions



LÜTZE systems comply with the highest industrial standards, LÜTZE solutions mean improvement and innovation. Our solutions include components and concepts suitable for almost any automation application.

### Transportation Solutions





# Motor and servo feed back: Best possible efficiency by means of maximum power transmission

Full power in all drive situations - the low-capacity cables from LÜTZE have the lowest losses which means that the maximum output can be transferred as a ratio to the cross-section. The special LÜTZE cable design therefore offers a maximum of efficiency and also helps to save energy.



## Your efficient connection to the drive

Are you looking for the right connection between the control cabinet and the drive? LÜTZE can offer you a complete solution from one source. 100% compatible to standard servo systems: Quality is LÜTZE's top priority.

LÜTZE cables are specially designed for rough industrial environments which exceed some standard requirements.

Or are you looking for a very individual solution? We adapt cable assemblies to meet your requirements. Just ask us! We have a wide range of cables, connectors, protective hoses and openings to choose from - all readily available!

The LÜTZE cable specialists are familiar with all applications and technologies in the broad field of automation solutions. Ultimately,

LÜTZE and its product ranges Cable, Connectivity, Cabinet and Control are a part of the industrial automation field!

## Assemblies for the following standards

Allen-Bradley  
 Bosch Rexroth  
 Lenze  
 SEW  
 Siemens 6FX



# Always connected properly Cable assemblies by LÜTZE

**Helical cables** - Manufactured to meet your specifications, our helical cables are suitable for high mechanical loads such as high-performance machines, lifting



platforms and lots of other moving applications. Also highly suited for use outside for millions of load changes without failure!



## Moulded closed

LÜTZE Tamper-proof connector plastic moulded round plug connectors M23 for industrial use offer the user an economical and, at the same time, safe solution for the electrical connection of machines and systems.

The LÜTZE program contains various termination numbers and cable lengths. This means terminations of 6 - 28 and transfer outputs of up to 30 A

at 630 V, and therefore robust, safe cabling is available for numerous signal and power applications.

The integrated protection against kinking and the inner metal housing with 360° EMC shielding ensure the cable assemblies meet the requirements for the industrial sector - **they really are sealed shut**

### Other benefits:

- Tamper-proof: To prevent the connector casing from being opened or wrong connections within the connector
- Integrated anti-kink device
- 100 % compatible with BOSCH REXROTH®, SIEMENS®, Allen-Bradley®...
- Production of single unit available
- Available at short notice
- Protection class IP66/67

## Customer-specific solutions

Each installation is different. Therefore, make use of our cable assembly expertise; experts will plan your project and document your application making use of a

product range containing more than 1700 cables, connectors, strain relief elements and protective hoses.



# Servomotor cables for C-tracks

According to Bosch Rexroth RKL standard



## Application

- Motor cable for Bosch Rexroth SERVO drives
- Full PUR jacket and TPE conductor insulation optimally suited for c-tracks, extremely rough operating conditions, aggressive coolants and lubricants

## Properties

- Silicone free
- RoHS-compliant

## Technical data

UL approval	cURus
Nominal voltage	1000 V 80 °C
Voltage	
U <sub>0</sub> /U	0.6/1 kV
Insulation resistance	min. 500 MΩ × km
Temperature range	
moving	-25 °C to +80 °C
fixed	-40 °C to +80 °C
Minimum bending radius	
moving	D × 10
fixed	D × 6
Burning behavior	Flame-retardant according to VDE 0482 T 265-2, DIN EN 50265/2, IEC 60332-1, UL 1581 section 1080 VW-1 CSA FT 1
Halogen free	according to DIN EN 50267-2-1
Product photo	The product photos are not to scale and do not represent detailed images of the respective products.

## Construction

- Jacket color orange RAL 2003

Part-No.	BOSCH REXROTH designation*	Length m	Number of conductors/ cross-section	Outer Ø ca. mm
<b>Base cable</b>				
193262.1000	RKL0014	10.0	(4G1.0+2×(2×0.75))	12.5
193089.1000	RKL0015	10.0	(4G1.5+2×(2×0.75))	12.9
193090.1000	RKL0016	10.0	(4G1.5+2×(2×0.75))	12.9
193091.1000	RKL0017	10.0	(4G1.5+2×(2×0.75))	12.9
193092.1000	RKL0018	10.0	(4G2.5+2×(2×1.0))	14.2
193093.1000	RKL0019	10.0	(4G1.0+2×(2×0.75))	12.5
193095.1000	RKL0046	10.0	(4G2.5+2×(2×1.0))	14.2
193097.1000	RKL4349	10.0	(4G6+(2×1.0)+(2×1.5))	18.4
193098.1000	RKL0050	10.0	(4G1.5+2×(2×0.75))	12.9
193100.1000	RKL0052	10.0	(4G2.5+2×(2×1.0))	14.2
193101.1000	RKL0053	10.0	(4G1.0+2×(2×0.75))	12.5
193105.1000	RKL0057	10.0	(4G2.5+2×(2×1.0))	14.2
193106.1000	RKL0058	10.0	(4G4+(2×1.0)+(2×1.5))	16.3
193125.1000	RKL4300	10.0	(4G1.5+2×(2×0.75))	12.9
193107.1000	RKL4301	10.0	(4G1.5+2×(2×0.75))	12.9
193240.1000	RKL4302	10.0	(4G1.0+2×(2×0.75))	12.5
193258.1000	RKL4303	10.0	(4G1.0+2×(2×0.75))	12.5
193241.1000	RKL4306	10.0	(4G1.5+2×(2×0.75))	12.9
193273.1000	RKL4307	10.0	(4G1.5+2×(2×0.75))	12.9
193242.1000	RKL4308	10.0	(4G2.5+2×(2×1.0))	14.2
193243.1000	RKL4309	10.0	(4G2.5+2×(2×1.0))	14.2
193244.1000	RKL4310	10.0	(4G2.5+2×(2×1.0))	14.2
193108.1000	RKL4313	10.0	(4G4+(2×1.0)+(2×1.5))	16.3
193257.1000	RKL4314	10.0	(4G4+(2×1.0)+(2×1.5))	16.3
193109.1000	RKL4315	10.0	(4G4+(2×1.0)+(2×1.5))	16.3
193246.1000	RKL4317	10.0	(4G6+(2×1.0)+(2×1.5))	18.4
193247.1000	RKL4318	10.0	(4G6+(2×1.0)+(2×1.5))	18.4
193276.1000	RKL4345	10.0	(4G2.5+2×(2×1.0))	14.2
193119.1000	RKL4346	10.0	(4G2.5+2×(2×1.0))	14.2
<b>Extension</b>				
193278.1000	RKL4304	10.0	(4G1.5+2×(2×0.75))	12.9
193616.1000	RKL4305	10.0	(4G1.0+2×(2×0.75))	12.5
193263.1000	RKL4311	10.0	(4G1.5+2×(2×0.75))	12.9
193245.1000	RKL4312	10.0	(4G2.5+2×(2×1.0))	14.2
193110.1000	RKL4316	10.0	(4G4+(2×1.0)+(2×1.5))	16.3
193279.1000	RKL4319	10.0	(4G6+(2×1.0)+(2×1.5))	18.4
193120.1000	RKL4347	10.0	(4G2.5+2×(2×1.0))	14.2

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# Servomotor cables for C-tracks

According to Bosch Rexroth RKL standard



## Application

- Motor cable for Bosch Rexroth SERVO drives
- Full PUR jacket and TPE conductor insulation optimally suited for c-tracks, extremely rough operating conditions, aggressive coolants and lubricants

## Properties

- Silicone free
- RoHS-compliant

## Technical data

UL approval	cURus
Nominal voltage	1000 V 80 °C
Voltage $U_0/U$	0.6/1 kV
Insulation resistance	min. 500 M $\Omega$ × km
Temperature range	
moving	-25 °C to +80 °C
fixed	-40 °C to +80 °C
Minimum bending radius	
moving	D × 10
fixed	D × 6
Burning behavior	Flame-retardant according to VDE 0482 T 265-2, DIN EN 50265/2, IEC 60332-1, UL 1581 section 1080 VW-1 CSA FT 1
Halogen free	according to DIN EN 50267-2-1
Product photo	The product photos are not to scale and do not represent detailed images of the respective products.

## Construction

- Jacket color orange RAL 2003

Part-No.	BOSCH REXROTH designation*	Length m	Number of conductors/ cross-section	Outer $\varnothing$ ca. mm
<b>Base cable</b>				
193094.1000	RKL0045	10.0	(4G1,5+2×(2×0,75))	12.9
193099.1000	RKL0051	10.0	(4G2,5+2×(2×1,0))	14.2
193102.1000	RKL4354	10.0	(4G1,5+2×(2×0,75))	12.9
193103.1000	RKL0055	10.0	(4G6+(2×1,0)+(2×1,5))	18.4
193104.1000	RKL0056	10.0	(4G4+(2×1,0)+(2×1,5))	16.3
193259.1000	RKL4320	10.0	(4G1,5+2×(2×0,75))	12.9
193252.1000	RKL4321	10.0	(4G2,5+2×(2×1,0))	14.2
193282.1000	RKL4322	10.0	(4G4+(2×1,0)+(2×1,5))	16.3
193248.1000	RKL4323	10.0	(4G6+(2×1,0)+(2×1,5))	18.4
193249.1000	RKL4324	10.0	(4G10+(2×1,0)+(2×1,5))	22.3
193272.1000	RKL4325	10.0	(4G1,5+2×(2×0,75))	12.9
193111.1000	RKL4326	10.0	(4G2,5+2×(2×1,0))	14.2
193112.1000	RKL4327	10.0	(4G4+(2×1,0)+(2×1,5))	16.3
193250.1000	RKL4328	10.0	(4G6+(2×1,0)+(2×1,5))	18.4
193251.1000	RKL4329	10.0	(4G10+(2×1,0)+(2×1,5))	22.3
193254.1000	RKL4331	10.0	(4G25+2×(2×1,5))	29.3
193113.1000	RKL4332	10.0	(4G35+2×(2×1,5))	32.5
193114.1000	RKL4333	10.0	(4G25+2×(2×1,5))	29.3
193115.1000	RKL4334	10.0	(4G35+2×(2×1,5))	32.5
193260.1000	RKL4343	10.0	(4G2,5+2×(2×1,0))	14.2
193118.1000	RKL4344	10.0	(4G16+2×(2×1,5))	26.8
193121.1000	RKL4349	10.0	(4G16+2×(2×1,5))	26.8
193122.1000	RKL4387	10.0	(4G35+2×(2×1,5))	32.5
193123.1000	RKL4778	10.0	(4G35+2×(2×1,5))	32.5
193124.1000	RKL4785	10.0	(4G25+2×(2×1,5))	29.3
<b>Extension</b>				
193116.1000	RKL4335	10.0	(4G1,5+2×(2×0,75))	12.9
193004.1000	RKL4336	10.0	(4G2,5+2×(2×1,0))	14.2
193255.1000	RKL4337	10.0	(4G4+(2×1,0)+(2×1,5))	16.3
193256.1000	RKL4338	10.0	(4G6+(2×1,0)+(2×1,5))	18.4
193270.1000	RKL4339	10.0	(4G10+(2×1,0)+(2×1,5))	22.3
193271.1000	RKL4340	10.0	(4G16+2×(2×1,5))	26.8
193264.1000	RKL4341	10.0	(4G25+2×(2×1,5))	29.3
193117.1000	RKL4342	10.0	(4G35+2×(2×1,5))	32.5

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# Servomotor cables for C-tracks

According to Bosch Rexroth IKG standard



## Application

- Motor cable for Bosch Rexroth SERVO drives
- Full PUR jacket and TPE conductor insulation optimally suited for c-tracks, extremely rough operating conditions, aggressive coolants and lubricants

## Properties

- Silicone free
- RoHS-compliant

## Technical data

Nominal voltage	1000 V 80 °C
Voltage	
$U_0/U$	0.6/1 kV
Insulation resistance	min. 500 M $\Omega$ × km
Minimum bending radius	
moving	D × 10
fixed	D × 6
Burning behavior	Flame-retardant according to VDE 0482 T 265-2, DIN EN 50265/2, IEC 60332-1, UL 1581 section 1080 VW-1 CSA FT 1
Halogen free	nach DIN EN 50267-2-1
Product photo	The product photos are not to scale and do not represent detailed images of the respective products.

Part-No.	BOSCH REXROTH designation*	Length m	Number of conductors/ cross-section	Outer Ø ca. mm
<b>Base cable</b>				
193028.1000	IKG4115	10.0	(4G1,5+2×(2×0,75))	12.9
193029.1000	IKG4116	10.0	(4G2,5+2×(2×1,0))	14.2
193054.1000	IKG4117	10.0	(4G4+2×(1,0)+(2×1,5))	16.3
193055.1000	IKG4118	10.0	(4G6+2×(1,0)+(2×1,5))	18.4
193037.1000	IKG4175	10.0	(4G10+2×(1,0)+(2×1,5))	22.3
193030.1000	IKG4136	10.0	(4G6+2×(1,0)+(2×1,5))	18.4
193062.1000	IKG4176	10.0	(4G10+2×(1,0)+(2×1,5))	22.3
193031.1000	IKG4140	10.0	(4G1,5+2×(2×0,75))	12.9
193060.1000	IKG4139	10.0	(4G2,5+2×(2×1,0))	14.2
193038.1000	IKG4177	10.0	(4G4+2×(1,0)+(2×1,5))	16.3
193039.1000	IKG4215	10.0	(4G6+2×(1,0)+(2×1,5))	18.4
193077.1000	IKG4169	10.0	(4G10+2×(1,0)+(2×1,5))	22.3
193032.1000	IKG4155	10.0	(4G6+2×(1,0)+(2×1,5))	18.4
193078.1000	IKG4168	10.0	(4G10+2×(1,0)+(2×1,5))	22.3
193061.1000	IKG4172	10.0	(4G16+2×(2×1,5))	26.8
193035.1000	IKG4173	10.0	(4G25+2×(2×1,5))	29.3
193036.1000	IKG4174	10.0	(4G35+2×(2×1,5))	32.5
193033.1000	IKG4620	10.0	(4G25+2×(2×1,5))	29.3
193079.1000	IKG4621	10.0	(4G35+2×(2×1,5))	32.5

## Construction

- Jacket color orange RAL 2003

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# Signal cables for C-tracks

According to Bosch Rexroth IKS standard



Part-No.	BOSCH REXROTH designation*	Length m	Number of conductors/ cross-section	Outer Ø ca. mm
<b>Base cable</b>				
193126.1000	RKG0030	10.0	(2×1,0+4×2×0,25)	8.9
193034.1000	RKG4200	10.0	(2×0,5+4×2×0,25)	8.7
193088.1000	RKG4202	10.0	(2×0,5+4×2×0,25)	8.7
193164.1000	IKS4038	10.0	(2×(0,5)+3×(2×0,14))	8.7
<b>Extension</b>				
193001.1000	RKG4201	10.0	(2×0,5+4×2×0,25)	8.7

## Application

- Signal cables
- Due to full PUR jacket and TPE conductor insulation optimally suited for c-track, extremely rough operating conditions, aggressive coolants and lubricants

## Properties

- Silicone free
- RoHS-compliant

## Technical data

UL approval	cURus
Nominal voltage	300 V 80 °C
Voltage $U_0/U$	0.6/1 kV
Insulation resistance	min. 200 MΩ × km
Temperature range	
moving	-25 °C to +80 °C
fixed	-40 °C to +80 °C
Minimum bending radius	
moving	D × 12
fixed	D × 6
Burning behavior	Flame-retardant according to VDE 0482 T 265-2, DIN EN 50265/2, IEC 60332-1, UL 1581 section 1080 VW-1 CSA FT 1
Halogen free	according to DIN EN 50267-2-1
Product photo	The product photos are not to scale and do not represent detailed images of the respective products.

## Construction

- Jacket color orange RAL 2003

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# PVC servo cables · C-track compatible · shielded

## LÜTZE SUPERFLEX® PLUS M (C) PUR SERVO 0.6/1 kV Supply line for Bosch Rexroth and other systems For highest requirements



### Application

- For Indramat\* system (and similar)
- Connection cable motor/brake especially for frequency converters and SERVO drives in machine and plant construction, transport and conveyor technology
- Due to Full PUR jacket and TPE / HGI conductor insulation optimally suited for c-tracks, extremely rough operating conditions and aggressive coolants and lubricants
- Especially for industrial environments in mechanical and system engineering

### Properties

- High active and passive interference resistance (EMC)
- Braided shield optimised for continuous flexible use
- Very good alternating bending strength
- Low adhesion, abrasion-resistant, nick-resistant, tear-propagation-resistant
- Hydrolysis-resistant, microbe-resistant, and rot-resistant
- Weatherproof, ozone and UV resistant (normal lighting conditions)
- Good ruggedness and salt water resistance
- Excellent coolant and lubricant resistance
- Resistant to most oils, greases, alcohol-free benzines and kerosene
- Silicone free
- RoHS compliant

### Technical data

UL approval	AWM 21223
Nominal voltage	1000 V 80 °C
Voltage $U_0/U$	0.6/1 kV
Test voltage	4000 V
Insulation resistance	min. 500 MΩ × km
Temperature range	
moving	-25 °C to +80 °C
fixed	-40 °C to +80 °C
Minimum bending radius	
moving	D × 10
fixed	D × 6
Burning behavior	Flame-retardant according to IEC 60332-1-2, EN 50265-1-2, UL 1581, CSA C22.2 No. 210.2 Flame Rating FT1
Halogen free	according IEC 60754-1, EN 50267-2-1

### Construction

- Bare copper wire, super finely stranded according to DIN VDE 0295 class 6, IEC 60228 class 6
- Conductor insulation Special TPE, high glide
- Power conductors black with number print (1, 2, 3)
- Ground conductor green/yellow according to DIN EN 50334  
G = with green/yellow ground conductor, × = without ground conductor
- Control pairs digits printing (5, 6) (7, 8)
- Control pair with braided shield and foil tape
- Conductors cabled in layers without mechanical stress, layer pitch optimised
- Fleece wrap over cable core
- Braid from tinned copper wire, optical coverage ≥ 85 %
- Jacket special-PUR, matte, adhesion-free surface
- Jacket color orange RAL 2003

Part-No.	Number of conductors/cross-section	INK* Description	Outer Ø ca. mm	Weight kg/100 m	Cu-Index kg/100 m
<b>Construction with two control pairs</b>					
111719	(4G0,75+2×(2×0,34))	-----	11.2	17.7	9.5
111270	(4G1.0+2×(2×0.75))	INK 0653	12.5	23.2	13.8
111271	(4G1.5+2×(2×0.75))	INK 0650	12.9	25.5	16.2
111279	(4G2.5+2×(2×1.0))	INK 0602	14.2	33.0	22.6
111388	(4G4+(2×1.0)+(2×1.5))	INK 0603	16.3	38.0	32.9
111998	(4G6+(2×1.0)+(2×1.5))	INK 0604	18.4	53.0	38.5
111762	(4G10+(2×1.0)+(2×1.5))	INK 0605	22.3	76.5	57.0
111276	(4G16+2×(2×1.5))	INK 0606	26.8	106.4	89.1
111277	(4G25+2×(2×1.5))	INK 0607	29.3	171.4	126.0
111278	(4G35+2×(2×1.5))	INK 0667	32.5	217.6	164.0

CE These products are in conformity with the EU Low Voltage Directive 2006/95/EC

\*Indramat article designations are registered trademarks

# PUR feedback cables · C-track compatible

## LÜTZE SUPERFLEX® PLUS (C) PUR FEEDBACK Feedback cables for Bosch-Rexroth and other systems For highest requirements in drive technology



### Application

- Incremental encoder cable, connection cable for tacho sensor, brake sensor, speed sensor
- Due to Full PUR jacket and TPE conductor insulation optimally suited for c-tracks, extremely rough operating conditions and aggressive coolants and lubricants
- Especially for industrial environments in mechanical and system engineering

### Properties

- High active and passive interference resistance (EMC)
- Braided shield optimised for continuous flexible use
- Very good alternating bending strength
- Low adhesion, abrasion-resistant, nick-resistant, tear-propagation-resistant
- Hydrolysis-resistant, microbe-resistant, and rot-resistant
- Weatherproof, ozone and UV resistant (normal lighting conditions)
- Good ruggedness and salt water resistance
- Excellent coolant and lubricant resistance
- Resistant to most oils, greases, alcohol-free benzenes and kerosene
- Silicone free
- RoHS compliant

### Technical data

UL approval	AWM 20233
Nominal voltage	300 V 80 °C
Test voltage	2000 V
Insulation resistance	min. 200 MΩ × km
Temperature range	
moving	-25 °C to +80 °C
fixed	-40 °C to +80 °C
Minimum bending radius	
moving	D × 12
fixed	D × 6
Burning behavior	Flame-retardant according to VDE 0482 part 265-2, DIN EN 50265-2, IEC 60332-1, UL 1581 section 1080 VW-1, CSA FT 1
Halogen free	according to EN 50267-2-1

### Construction

- Bare copper wire, super finely stranded according to DIN VDE 0295 class 6, IEC 60228 class 6
- Conductor insulation Special-TPE
- Conductors color-coded for specific system
- Conductors cabled in layers without mechanical stress, layer pitch optimised
- Fleece wrap over cable core
- Braid from tinned copper wire, optical coverage ≥ 85 %
- Jacket special-PUR, matte, adhesion-free surface
- Jacket color orange RAL 2003

Part-No.	Number of strands/cross-section/ strand colors	INK* De- scription	Outer Ø ca. mm	Weight kg/100 m	Cu-Index kg/100 m
<b>For Bosch-Rexroth system (and similar)</b>					
110941	(2×1.0+4×2×0.25) 1.0: white, brown 0.25: brown/green, grey/pink, blue/violet, red/black	INK-0209*	8.9	12.0	6.4
111780	(2×0.5+4×2×0.25) 0.5: white, brown 0.25: brown/green, grey/pink, blue/violet, red/black	INK-0448*	8.7	10.0	5.9
110940	(9×0.5) Strand color according to DIN 47100	INK-0208*	8.8	12.5	7.5
111495	(4×1.0+4×2×0.14+(4×0.14)) 1.0: blue, whitegreen, browngreen, white 0.14: grey/pink, yellow/violet, green/brown, red/black (0.14): greenblack, blueblack, yellowblack, redblack	INK-0532*	9.5	13.7	9.6
111781	(2×2×0.25+2×0.5) 0.5: white, brown 0.25: red/black, gray, pink	INK-0750*	7.6	9.0	4.2

CE These products are in conformity with the EU Low Voltage Directive 2006/95/EC

\*Indramat article designations are registered trademarks

# Handling and Installation LÜTZE SUPERFLEX® – Quick Overview

## 1. Selecting Cables for Continuous Motion Applications – C-Tracks

We recommend special high flexing cables such as LÜTZE SUPERFLEX® cables, for use in C-tracks to ensure long life times:

- LÜTZE SUPERFLEX® cable is proven to be compatible with all major brands of C-tracks.
- LÜTZE SUPERFLEX® N is designed for moderate flexing in short to medium length C-tracks.
- LÜTZE SUPERFLEX® Plus PUR is designed for high performance flexing or longer C-tracks.

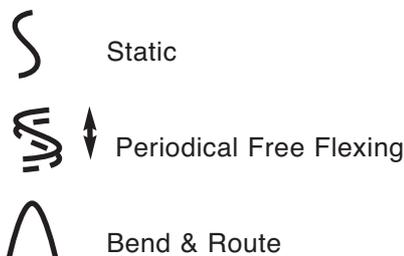
High Flexing Cables such as LÜTZE SUPERFLEX® cables are different from standard flexible cables:

### Standard Flexible Cables – LÜTZE SILFLEX®



*long pitch*

- Low number of strands per conductor
- longer pitch layering
- designed as a pliable cable for easy routing and installation

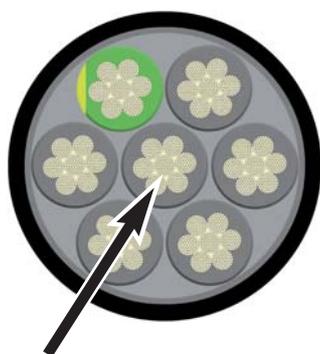


### High Flexing Cables – LÜTZE SUPERFLEX®

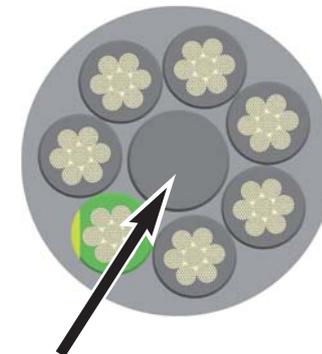


*short pitch, layered design with control core*

- high number of super fine strands per conductor
- short pitch layering
- conductors are cabled without mechanical back twist
- higher quality of materials
- slower and more complex manufacturing process on high-end equipment
- designed for linear constant flexing



- no central core
- mostly PVC as insulation material
- foil shield or braid shield
- jacket material depends on application

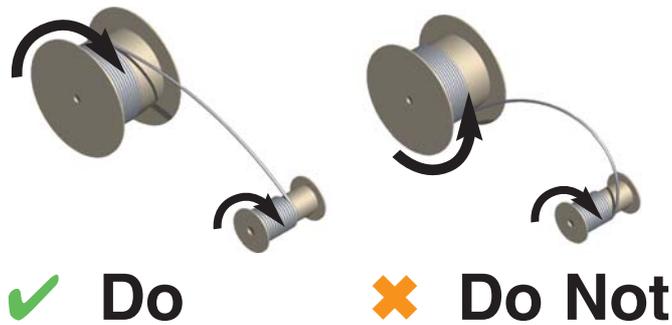


- central core for single layer construction
- special PVC or TPE as insulation material
- tinned copper braid shield
- high abrasion resistant jacket material such as PUR

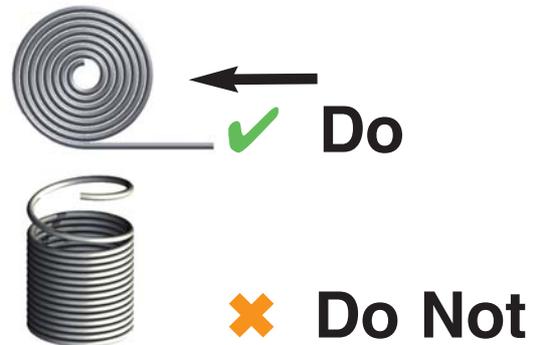
# Handling and Installation LÜTZE SUPERFLEX® – Quick Overview

## 2. Correct Handling of LÜTZE SUPERFLEX® Cables

When unreeling the cable, do not change the bend direction. The cable has to go on the new reel in the same direction it came off the reel. Low and equal tensile force during spooling!



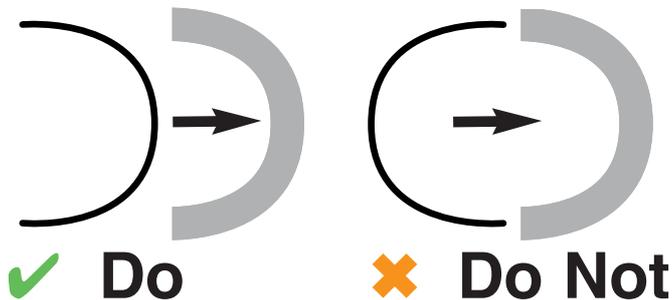
Ring put ups require careful uncoiling by rolling the ring upright over the floor



Do not twist the cable when unwinding. always unwind straight from spool.

## 3. Correct Installation of LÜTZE SUPERFLEX® Cables

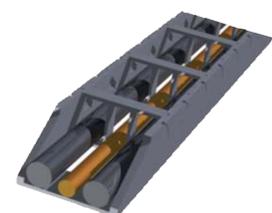
Cable retains bend from reel. Do not flex against original bend or relax cable for 24 hrs by laying it flat.



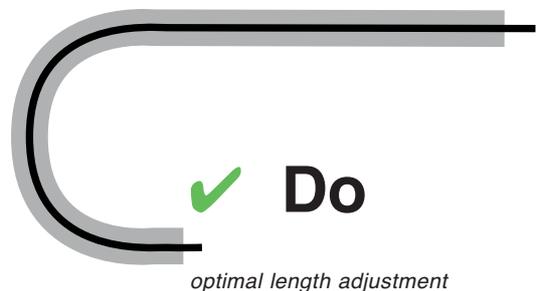
Use dividers horizontally and vertically to separate the track into separate cavities. Install just one cable per separated cavity. If absolutely necessary, two small or a small and a big cable can share a cavity.



Try to ensure balanced weight distribution. If you have more than one heavy cable, we recommend installing the heavy cables evenly to each side of the track.



Observe the minimum bending radius for optimum performance. Make sure that all cables are length-adjusted and run in the neutral zone.



# Customer questionnaire Connectivity

Company: \_\_\_\_\_

Contact person: \_\_\_\_\_

Department: \_\_\_\_\_

Street: \_\_\_\_\_

ZIP / City: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_



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 Fax: +44 1827 31333-2  
 sales.gb@lutze.co.uk

**Ready-made**

Name: \_\_\_\_\_

Lot sizes / Scale quantities: \_\_\_\_\_

Annual requirement: \_\_\_\_\_

Delivery time / -deadline: \_\_\_\_\_

**Line**

Name / Description: \_\_\_\_\_

Jacket material: \_\_\_\_\_

Jacket colour: \_\_\_\_\_

Licences: \_\_\_\_\_

Operating conditions: \_\_\_\_\_

Length(s): \_\_\_\_\_

**Side A**

**Connector**

Name / Description: \_\_\_\_\_

Supplier: \_\_\_\_\_

Supplier item number: \_\_\_\_\_

**Machined open end**

Name / Description: \_\_\_\_\_

Stepped dimensions / Wire lengths: \_\_\_\_\_

Contacts / Connector: \_\_\_\_\_

Supplier item number: \_\_\_\_\_

**Cut off smoothly**

**Labelled**     **Not labelled**

**Side B**

**Connector**

Name / Description: \_\_\_\_\_

Supplier: \_\_\_\_\_

Supplier item number: \_\_\_\_\_

**Machined open end**

Name / Description: \_\_\_\_\_

Stepped dimensions / Wire lengths: \_\_\_\_\_

Contacts / Connector: \_\_\_\_\_

Supplier item number: \_\_\_\_\_

**Cut off smoothly**

**labelled**     **Not labelled**

**Special features**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Construction questionnaire for LÜTZE Tamper-proof connector

Company: \_\_\_\_\_  
 Contact person: \_\_\_\_\_  
 Department: \_\_\_\_\_  
 Street: \_\_\_\_\_  
 ZIP / City: \_\_\_\_\_  
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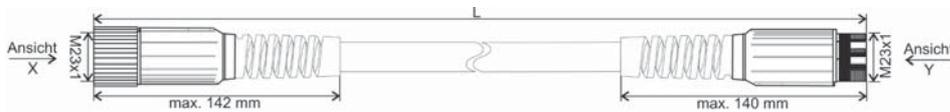
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 Fax: +44 1827 31333-2  
 sales.gb@luetze.co.uk

**Please tell us your requirements by filling in this construction questionnaire:**

**Batch size:** \_\_\_\_\_ pieces

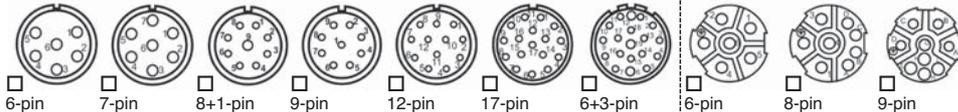
**Page 1** **Page**



**Page 1 / View X**

clockwise  
 anti-clockwise

**Signal** **Pin layouts (more on request)** **Output**



**Type page 1**

Connector – inner thread M23 x 1  
 Connector – speedtec quick release fastener  
 Coupling – outer thread M23 x 1  
 Coupling – speedtec quick release fastener  
 Socket contacts     pin contacts  
 Signal coding:  0°    80°    120°    20°

**Line**

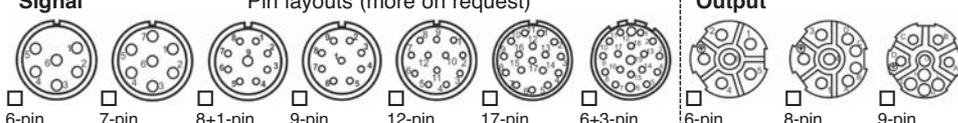
Assembly length L: \_\_\_\_\_ mm

LÜTZE cable part number: \_\_\_\_\_  
 Description / Requirement / Purpose / Specification: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Page 2 / View Y**

clockwise  
 anti-clockwise

**Signal** **Pin layouts (more on request)** **Output**



**Type page 2**

Connector – inner thread M23 x 1  
 Connector – speedtec quick release fastener  
 Coupling – outer thread M23 x 1  
 Coupling – speedtec quick release fastener  
 Socket contacts     pin contacts  
 Signal coding:  0°    80°    120°    20°  
 Other connectors type/variant: \_\_\_\_\_  
 Manufacturer: \_\_\_\_\_  
 Manufacturer part number: \_\_\_\_\_

Finishing of cable end (remove jacket, strip, machine screen, shrink tubing, copper tape etc.)

Description: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Cable end cut smoothly

**Identification marking**

Wrap-round label printing text: \_\_\_\_\_  
 Cable printing text: \_\_\_\_\_  
 Other labelling – Description: \_\_\_\_\_  
 No labelling

**Note: Please indicate pin assignment!**

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- Cables**
- Cable assemblies**
- Cable fittings**
- LSC Wiring System**
- Module and Interface Technology**
- Ethernet Connectivity**
- Suppression Technology**
- Power Supplies**
- Railway Technology**

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