



For the most demanding requirements  
**Cable solutions for robotics**



1958 - 2008 | 50 Years



Tradition in Automation



### Advantages at a glance:

- torsion range of  $\pm 360^\circ$  per meter
- industrial grade jacket and conductor insulation
- proven design for long service life
- suitable for OEM and MRO applications

# Cable solutions for robotics

for the most demanding industrial requirements



**Lutze offers a complete robotic cable portfolio  
for most industrial applications.**

- You can get the following robotic cable types from us:
- Control cable
  - Power cable
  - Servo cable
  - Bus cable
  - Encoder cable

# PUR robotic cable

## LÜTZE SUPERFLEX® PLUS ROBOT N PUR LÜTZE SUPERFLEX® PLUS ROBOT N (D) PUR SERVO



### Application

- Industrial robots, mechanical and systems engineering, transport and conveying technology, assembly and welding robots
- Suitable for multi-axis robots and for installations where combined twisting and bending would occur
- Full PUR jacket and TPE wire insulation means they are ideally suited for extremely tough operating conditions and aggressive coolants and lubricants

### Properties

- Flame-resistant, self-extinguishing
- Halogen-free, no corrosive gases
- Very good alternating bending strength
- High mechanical strength
- Low adhesion, abrasion, impact, and tear resistant
- Resistant to hydrolysis, microbes and rotting
- Resistant to weather, ozone and UV (normal lighting conditions)
- Good resistant to waste and salt water
- High resistance to coolant and lubricants
- For the most part resistant to oils, greases, alcohol-free petrols and kerosene
- Free from varnish damaging substances, RoHS-compliant

### Technical data

UL approval	600 V 80°C
Test voltage	6000 V
Insulation resistance	min. 100 MΩ x km
Temperature range	
moving	-25°C to +80°C
fixed	-40°C to +80°C
Minimum bending radius	
moving	Cable diameter x15
fixed	Cable diameter x7
Torsion range	max. ± 360° / m
Burning behavior	Flame-resistant complying with VDE 0482 T 265-2-1; IEC 60332-1,
Halogen-free	complying with DIN EN 50264-1, EN 50267-2-1 and EN 60684-2

### Construction

- E-copper stranded wire, bare, super-fine wire complying with DIN VDE 0295 class 6 or IEC 60228 class 6
- Special TPE wire insulation, UL-approved
- Conductor marking black with white printed numbers complying with DIN EN 50334
- Positive earth green/yellow complying with DIN EN 50334 in outer layer
- Wires twisted without tension, optimised lengths of lay
- Fleece wrap
- Optional spiral shield made tin-plated copper wire, opt. cond. ≥ 98%
- Full polyurethane jacket, matte, adhesion-free surface
- Jacket colour black RAL 9005

CE These products comply with the EC Low-Voltage Directives 73/23/EEC and 93/68/EEC

### Control cable LÜTZE SUPERFLEX® PLUS ROBOT N PUR

Part No.	Number of conductors / cross-section	Outer diameter approx. mm	Weight		CU number	
			kg / 100 m	kg / 100 m	kg / 100 m	kg / 100 m
112955	3x1.0	7.2	5.9		3.2	
112916	4x1.0	7.7	9.5		4.3	
112950	7x1.0	10.1	12.9		7.5	
112917	12x1.0	11.2	22.9		12.8	
112918	18x1.0	13.0	36.0		19.2	
112919	25x1.0	15.6	42.0		26.7	
112954	34x1.0	17.8	59.6		36.2	
112957	18x1.5	15.0	39.8		28.8	
112958	25x1.5	17.8	53.0		40.0	
112959	4x2.5	10.0	15.4		10.7	

### Power cable LÜTZE SUPERFLEX® PLUS ROBOT N PUR

Part No.	Number of conductors / cross-section	Outer diameter approx. mm	Weight		CU number	
			kg / 100 m	kg / 100 m	kg / 100 m	kg / 100 m
112906	1x35	12.7	38.0		34.6	
112911	3x16	19.0	89.0		52.1	
112912	3x25	22.5	115.0		80.0	
112913	3x35	26.5	155.0		114.4	
112914	2x25+1x16	21.0	98.0		71.3	

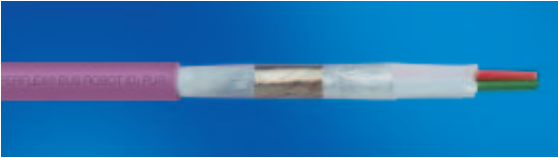
### Servo cable LÜTZE SUPERFLEX® PLUS ROBOT N(D)PUR SERVO

Part No.	Number of conductors / cross-section	Outer diameter approx. mm	Weight		CU number	
			kg / 100 m	kg / 100 m	kg / 100 m	kg / 100 m
112915	(4x1.5+(2x1.0))	12.0	20.5		12.8	
112900	(4x1.5+2x(2x0.5))	12.4	27.0		13.0	
112901	(4x2.5+2x(2x0.5))	12.8	31.5		18.9	



# PUR robotic cable

## LÜTZE SUPERFLEX® PLUS ROBOT (D) PUR bus and servo encoder cables



### Application

- Industrial robots, mechanical and systems engineering, transport and conveying technology
- With stranded wire conductor for moveable deployment in automation engineering, transport and conveying technology, tool and mechanical engineering

### Properties

- High active and passive immunity to interference
- Flame-resistant, self-extinguishing
- Halogen-free, no gases
- Low adhesion, abrasion-proof, impact-resistant, tear-growth-resistant
- Resistant to hydrolysis, microbes and rotting
- Resistant to weather, ozone and UV (normal lighting conditions)
- Good resistant to salt water
- High resistance to coolant and lubricants
- For the most part resistant to oils, greases, alcohol-free petrols and kerosine
- Free from varnish damaging substances, RoHS-compliant

### Technical data

Rated voltage	
BUS	250 V
Encoder	300 V
Test voltage	
BUS	1500 V
Encoder	3000 V
Insulation resistance	min. 100 MΩ x km
Temperature range	
moving	-20°C to +80°C
fixed	-40°C to +80°C
Minimum bending radius	
moving	Cable diameter x 15
fixed	Cable diameter x 7
Torsion range	max. ± 360° / m
Burning behavior	Flame-resistant complying with VDE 0482 T 265-2-1 IEC 60332-1, UL VW-1; CSA FT 1
Halogen-free	complying with VDE DIN EN 20264-1, EN50267-2-1, EN60684-2

### Construction

- E-copper, bare, super-fine wire complying with DIN VDE 0295
- Wire insulation special polyolefins, UL-approved
- Color coded conductors
- Wires twisted without tension, optimised lengths of lay
- Fleece wrap
- Spiral shield made of tin-plated copper wire, opt. cond. ≥ 98%
- Full polyurethane jacket, matt, adhesion-free surface
- Jacket color: bus cable purple RAL 4001  
Servo cable black RAL 9005

### LÜTZE SUPERFLEX® PLUS ROBOT (D) PUR BUS

#### Profibus - impedance 150Ω ±15% UL 30V/80°C

Part No.	Number of conductors / cross-section	Outer diameter approx. mm	Weight kg / 100 m	CU number kg / 100 m
104323	(1x2x0.64/AWG24)StD	8.2	7.5	2.5

#### DeviceNet - impedance 120Ω ±10% UL 30V/80°C

Part No.	Number of conductors / cross-section / conductor colours	Outer diameter approx. mm	Weight kg / 100 m	CU number kg / 100 m
104324	(1x2xAWG24+1x2xAWG22)StD	9.8	8.6	3.8

### LÜTZE SUPERFLEX® PLUS ROBOT (D) PUR Servo/Encoder UL 300 V/80°C

Part No.	Number of conductors / cross-section	Outer diameter approx. mm	Weight kg / 100 m	CU number kg / 100 m
112921	(4x2x0.14)	6.6	4.9	2.2
112922	(12x0.25)	8.0	7.2	4.5
112920	(14x0.5)	8.9	15.5	8.9
112904	(2x0.5+4x2x0.25))	7.4	9.0	4.6

## USA

LUTZE INC.  
13330 South Ridge Drive  
Charlotte, NC 28273  
Tel.: (704) 504-0222  
Fax: (704) 504 -0223  
info@lutze.com

### Lütze systems for highest industrial standards:

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## Germany

Friedrich Lütze GmbH & Co. KG  
Postfach 12 24 (PLZ 71366)  
Bruckwiesenstraße 17-19  
D-71384 Weinstadt  
Tel.: +49 (0)71 51 60 53-0  
Fax: +49 (0)71 51 60 53-277(-288)  
info@luetze.de

## United Kingdom

LÜTZE Ltd.  
Unit 3 Sandy Hill Park  
Sandy Way, Amington  
Tamworth, Staffs, B77 4DU  
Tel.: +44 (0)1827 31333-0  
Fax: +44 (0)1827 31333-2  
sales.gb@lutze.co.uk

## Österreich

LÜTZE Elektrotechnische  
Erzeugnisse Ges.m.b.H.  
Tel.: +43 (0)1 257 52 52-0  
Fax: +43 (0)1 257 52 52-20  
office@luetze.at

## Schweiz

LÜTZE AG  
Tel.: +41 (0)55 450 23 23  
Fax: +41 (0)55 450 23 13  
info@luetze.ch

## France

LÜTZE S.A.  
Tél.: +33 (0)1 34 18 77 00  
Fax: +33 (0)1 34 18 18 44  
lutze@lutze.fr

## España

LUTZE, S.L.  
Tel.: +34 93 285 7480  
Fax: +34 93 285 7481  
info@lutze.es

[www.lutze.com](http://www.lutze.com)