



For the most demanding requirements
**Components and system
solutions for robotics**



1958 - 2008 | 50 Years



Tradition in Automation

for robotics

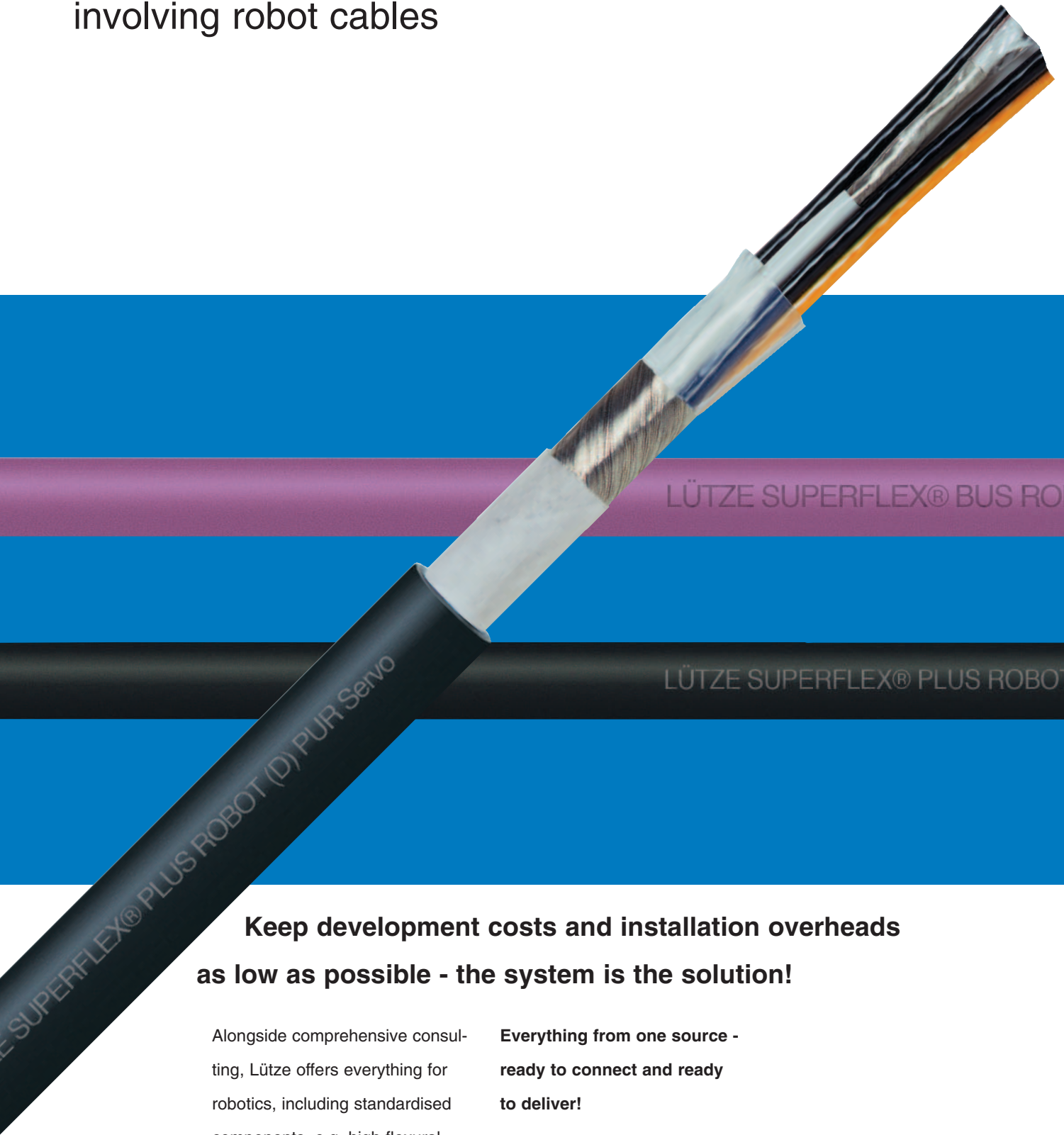


All advantages at a glance:

- Consulting, project planning and development
- Customisation according to your specifications
- Safe processes thanks to 100% electrical testing
- Quality production thanks to decades of experience
- Order fulfilment also using KANBAN production control
- Just-in-Time delivery

Components and solutions

Consulting, project planning, customisation
involving robot cables



**Keep development costs and installation overheads
as low as possible - the system is the solution!**

Alongside comprehensive consulting, Lütze offers everything for robotics, including standardised components, e.g. high flexural strength special cables and sheaths in standard or tailor-made versions.

**Everything from one source -
ready to connect and ready
to deliver!**

PUR robot cable • for the most demanding requirements

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



Area of application

- Industrial robots, mechanical and systems engineering, transport and conveying technology, assembly and welding robots
- Full PUR jacket and TPE wire insulation means they are ideally suited for extremely tough operating conditions and aggressive coolants and lubricants
- Everywhere torsional strain is to be found

Properties

- Flame-resistant, self-extinguishing
- Halogen-free, no corrosive gases
- Very good reverse flexural strength
- Good resistance to pressure and contortion
- 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 resilience and resistance to salt water
- Best resistance to coolant and lubricants
- For the most part resistant to oils, greases, alcohol-free petrols and kerosene
- Free of substances that disrupt spray-painting (LABS-free), complying with RoHS

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 behaviour	Flame-resistant complying with VDE 0482 T 265-2-1; IEC 60332-1, complying with
Halogen-free	DIN EN 50264-1, EN 50267-2-1 and EN 60684-2

Structure

- 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
- Wire 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 twist
- Fleece armouring via strand binding
- Optional twisting shield made of tin-plated copper wire, opt. cond. ≥ 98%
- Full polyurethane jacket, matt, adhesion-free surface
- Jacket colour black RAL 9005

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 robot cable • for the most demanding requirements

LÜTZE SUPERFLEX® PLUS ROBOT (D) PUR bus lines, servo encoder lines



Area of 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
- Everywhere torsional strain is to be found

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 resilience and resistance to salt water
- Best resistance to coolant and lubricants
- For the most part resistant to oils, greases, alcohol-free petrols and kerosine
- Free of substances that disrupt spray-painting (LABS-free), complying with RoHS

Technical data

UL approval	
Bus lines	30 V 80°C
Encoder line	300 V 80°C
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 behaviour	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

Structure

- E-copper, bare, super-fine wire complying with DIN VDE 0295
- Wire insulation special polyolefins, UL-approved
- Wires are colour-coded
- Wires twisted without tension, optimised lengths of twist
- Fleece armouring via strand binding
- Twisting shield made of tin-plated copper wire, opt. cond. ≥ 98%
- Full polyurethane jacket, matt, adhesion-free surface
- Jacket colour: bus lines violet RAL 4001
Servo lines 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

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

**Lütze systems
for highest
industrial standards:**

- ▶ Prepopulated
C-track systems
- ▶ Lütze-LSC-wiring
systems for all
standard control
panels
- ▶ Powerful module and
interface technology
- ▶ Reliable suppression
technology
- ▶ Efficient power
supplies
- ▶ Automation systems
for harsh environments

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

USA

LUTZE INC.
13330 South Ridge Drive
Charlotte, NC 28273
Tel.: +1 (704) 504-0222
Fax: +1 (704) 504 -0223
info@lutze.com

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.luetze.com