

5. Robotic cables



PUR Robot cables · For highest requirements

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



Application

- Industrial robots, machine and device construction, transport and conveyor technology, assembly and welding robots
- Through full PUR jacket and TPE conductor insulation optimally suited, extremely harsh operating conditions, aggressive coolants and lubricants
- Anywhere where a torsional strain is present

Properties

- Flame-retardant, self-extinguishing
- halogen-free, no corrosive gases
- Low adhesion, abrasion-resistant, nick-resistant, tear-propagation-resistant
- Hydrolysis-resistant, microbe-resistant, and rot-resistant
- Weathering, ozone, UV resistant (normal lighting conditions)
- Good resistance to use and salt water
- Excellent coolant and lubricant resistance
- Largely resistant to oils, greases, alcohol-free benzines and kerosene
- Free from paint wetting impairment substances (LABS-free), RoHS-compliant

Technical data

UL approval	600 V 80 °C
Voltage	
U ₀ /U	300/500 V
Test voltage	6000
Insulation resistance	min. 100 MΩ × km
Temperature range	
moving	-25 °C to +80 °C
run	-40 °C to +80 °C
Minimum bending radius	
moving	Cable diameter × 15
fixed	Cable diameter × 7
Torsion area	max. ± 360° / m
Burning behaviour	Flame-retardant according to VDE 0482 part 265-2; DIN EN 50265-2; IEC 60332-1; UL 1581 section VV-1 Flame-Test; CSA FT 1
Halogen-free	according to DIN EN 50264-1, EN 50267-2-1 ad EN 60684-2

Design

- Bare copper wire, finest multi-strand according to DIN VDE 0295 class 5/6, IEC 60228 class 5/6
- Special TPE conductor insulation, UL qualified
- Conductors black with white number print according to DIN EN 50334
- Ground conductor green/yellow according to DIN EN 50334 in the top layer
G = with green/yellow ground conductor; × = without ground conductor
- Conductors twisted without mechanical stress, layer pitch optimised
- Non-woven material over stranded cable
- Optional twisted shield of tin-plated Cu wires, visual coverage ≥ 98%
- Full polyurethane jacket, matt, adhesion-free surface
- Jacket colour black RAL 9005

Part-No.	Number of strands/cross-section	Outer-Ø approx. mm	Weight kg/100 m	Cu-Index kg/100 m
Control cable LÜTZE SUPERFLEX® PLUS ROBOT N PUR				
112955	3G1.0	7.2	5.9	3.2
112916	4G1.0	7.7	9.5	4.3
112950	7G1.0	9.6	12.9	7.5
112917	12G1.0	11.2	22.9	12.8
112918	18G1.0	13.0	36.0	19.2
112919	25G1.0	15.6	42.0	26.7
112954	34G1.0	17.8	59.6	36.2
112957	18G1.5	15.0	39.8	28.8
112958	25G1.5	17.8	53.0	40.0
112959	4G2.5	10.0	15.4	10.7
Power cable LÜTZE SUPERFLEX® PLUS ROBOT N PUR				
112906	1×35	12.7	38.0	34.6
112911	3G16	19.0	89.0	52.1
112912	3G25	22.5	115.0	80.0
112913	3G35	26.5	155.0	114.4
112914	2G25+1×16	21.0	98.0	71.3
Servo cable LÜTZE SUPERFLEX® PLUS ROBOT N (D) PUR				
112900	(4G1.5+2×(2×0.5))	12.4	27.0	13.0
112915	(4G1.5+(2×1.0))	12.0	20.5	12.8
112901	(4G2.5+2×(2×0.5))	12.8	31.5	18.9

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

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LÜTZE SUPERFLEX® PLUS ROBOT (D) PUR BUS cables, servo encoder cables



Application

- Industrial robots, machine and device construction, transport and conveyor technology
- With stranded wire for moving use in automation technology, transport and conveyor technology, tool and machine construction
- Anywhere where a torsional strain is present

Properties

- High active and passive interference resistance
- Flame-retardant, self-extinguishing
- halogen-free, no corrosive gases
- Low adhesion, abrasion-resistant, nick-resistant, tear-propagation-resistant
- Hydrolysis-resistant, microbe-resistant, and rot-resistant
- Weathering, ozone and UV resistant (normal lighting conditions)
- Good resistance to use and salt water
- Excellent coolant and lubricant resistance
- Largely resistant to oils, greases, alcohol-free benzines and kerosene
- Free from paint wetting impairment substances (LABS-free), RoHS-compliant

Technical data

UL approval	BUS cables 30 V 80 °C Encoder cables 300 V 80 °C
Voltage	
BUS	250 V
Encoder	300 V
Test voltage	
BUS	1500 V
Encoder	3000 V
Insulation resistance	min. 100 MΩ × km
Temperature range	
moving	-20 °C to +80 °C
run	-40 °C to +80 °C
Minimum bending radius	
moving	Cable diameter × 15
fixed	Cable diameter × 7
Torsion area	max. ± 360° / m
Burning behaviour	Flame-retardant according to VDE 0482 part 265-2; DIN EN 50265-2; IEC 60332-1; UL 1581 section VW-1 Flame-Test; CSA FT 1
Halogen-free	according to DIN EN 50264-1, EN 50267-2-1 and EN 60684-2

Design

- Bare copper wire, finest multi-strand according to DIN VDE 0295
- Special polyolefines, UL approved
- Colour coded wires
- Conductors twisted without mechanical stress, layer pitch optimised
- Non-woven material over stranded cable
- Twisted shield of tin-plated Cu wires, visual coverage ≥ 98%
- Full polyurethane jacket, matt, adhesion-free surface
- Jacket colour Bus cables violet RAL 4001
Servo cables black RAL 9005

Part-No.	Number of strands/cross-section	Outer-Ø approx. mm	Weight kg/100 m	Cu-Index kg/100 m
LÜTZE SUPERFLEX® PLUS ROBOT N (D) PUR - BUS				
Profibus – characteristic impedance 150 Ω ± 15 %				
104323	(1×2×0.64/AWG24)StD	8.2	7.5	2.5
DeviceNet – characteristic impedance 120 Ω ± 10 %				
104324	(1×2×AWG24+1×2×AWG22)StD	9.8	8.6	3.8
LÜTZE SUPERFLEX® PLUS ROBOT (D) PUR – SERVO/encoder				
112921	(4×2×0.14)	6.6	4.9	2.2
112922	(12×0.25)	7.3	7.2	4.2
112920	(14×0.5)	8.9	15.5	8.9
112904	(2×0.5+4×2×0.25)	7.4	9.0	4.6

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