

Technical data sheet

PUR feedback cables · C-track compatible · shielded

LÜTZE SUPERFLEX® PLUS (C) PUR FEEDBACK

Encoder cables for Siemens and other systems

For highest requirements in drive technology



Identification

Type	SU+(C) PUR FB (2×0,5+4×0,23+3×(2×0,14)+4×0,14) 30V
Part No.	111457
SIEMENS designation*	1BD51

Product version

Datasheet version	00
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Use/Application/Properties

Application	• Incremental encoder cable, termination cable for tacho sensor, brake sensor, speed sensor • Through full PUR jacket and TPE conductor insulation optimally suited for c-tracks, extremely harsh operating conditions and aggressive coolants and lubricants • Especially for industrial environments in mechanical and system engineering
Properties	• High protection against electromagnetic interferences (EMI) • Braided shield optimised for continuous flexing use • Very good alternating bending strength • Low adhesion, abrasion-resistant, nick-resistant, tear-resistant • Hydrolysis-resistant, microbe-resistant, and rot-resistant • Weathering, ozone and UV resistant (normal lighting conditions) • Industrial and salt water resistant • Excellent coolant and lubricant resistance • Largely resistant to oils, greases, alcohol-free benzines and kerosene • Silicone free

Construction

Description	SUPERFLEX® PLUS (C) PUR FEEDBACK
Number of conductors/cross-section	(2×0.5+4×0.23+3×(2×0.14)+4×0.14)
Number of conductors	16
Cross-section, metric	0.5 mm ²

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Jacket material	PUR
Jacket color	green similar to RAL 6018
Outer Ø	9.8 mm
Outer Ø	0.386 inch
Surface	adhesion-free
Weight	15.3 kg/100 m
Weight	103 Lbs/Mft
Cu-Index	9.3 kg/100 m
Cu-Index	62 Lbs/Mft

Construction Element 1

Element construction	2×0.5
Conductor	CU-wire bare
Conductor category	IEC 60228, Class 6 Superfinely stranded DIN VDE 0295 Class 6
Conductor marking	According to system manufacturer
Conductor insulation	Polyolefin
Stranding	Strands braided together Conductors twisted without mechanical stress Layer pitch optimised

Construction Element 2

Element construction	4×0.23
Conductor	CU-wire bare
Conductor category	IEC 60228, Class 6 Superfinely stranded DIN VDE 0295 Class 6
Conductor marking	According to system manufacturer
Conductor insulation	Polyolefin
Stranding	Conductors stranded in pairs Conductors twisted without mechanical stress Layer pitch optimised

Construction Element 3

Element construction	3×(2×0.14)
Conductor	CU-wire bare
Conductor category	IEC 60228, Class 6 DIN EN 13602 Superfinely stranded DIN VDE 0295
Conductor marking	According to system manufacturer
Conductor insulation	TPE-E
Stranding	Conductors layered construction Conductors twisted without mechanical stress Layer pitch optimised
Element shielding	tinned copper wires Spiral shield optical cover approx. 90%

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Construction Element 4

Element construction	4×0.14
Conductor	CU-wire bare
Conductor category	IEC 60228, Class 6 DIN EN 13602 Superfinely stranded DIN VDE 0295
Conductor marking	According to system manufacturer
Conductor insulation	Polyolefin
Stranding	Conductors layered construction Conductors twisted without mechanical stress Layer pitch optimised

Overall construction

Overall stranding	Elements stranded together
Overall wrapping	Non-woven material
Inner jacket	Special TPE
Overall shield	Braid shield Tinned copper wires Optical cover approx. 85 %
Jacket characteristics	Flame-retardant Oil resistant Grease-resistant Petrol-resistant (alcohol-free) Kerosene-resistant Silicone free Halogen free

Technical data

Rated voltage	30 V
Test voltage type	AC 500 V
Temperature range moving	-25 °C ... +80 °C
Temperature range fixed	-40 °C ... +80 °C
Minimum bending radius moving	7.5×D
Minimum bending radius fixed	5×D
Bending cycles	≥10 Mio
Speed	≤5 m/s
Acceleration	≤50 m/s ²
Torsion	± 30°/m

Technical Data Element 1

Element construction	2×0.5
Insulation resistance at 20 °C	≥200 MΩ×km
Operating capacitance wire-wire	approx.68 pF/m
Operating capacitance wire-shield	approx.122 pF/m

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Technical Data Element 2

Element construction	4×0.23
Operating capacitance wire-wire	approx.57 pF/m
Operating capacitance wire-shield	approx.103 pF/m

Technical Data Element 3

Element construction	3×(2×0.14)
Operating capacitance wire-wire	approx.147 pF/m
Operating capacitance wire-shield	approx.270 pF/m

Technical Data Element 4

Element construction	4×0.14
Operating capacitance wire-wire	approx.53 pF/m
Operating capacitance wire-shield	approx.96 pF/m

Certifications/Standards

Certifications	cURus AWM II A/B
UL style	AWM 20236
Conformity	CE RoHS REACH
Burning behavior according to	IEC 60332-1 DIN EN 60332-1-2 VDE 0482 322-1-2 UL 1581 part 1080 VW-1 UL FT1
Oil resistant according to	UL 1581 HD 22.10
Halogen free according to	DIN EN 60754-1 IEC 60754-1

General

Note	CE These products are in conformity with the EU Low Voltage Directive 2014/35/EU * SIEMENS and DRIVE-CLiQ are registered trademarks
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