

# Technical data sheet · LÜTZE SUPERFLEX® PLUS (C) PUR FEEDBACK

## Encoder cables for Siemens and other systems

### For highest requirements in drive technology



PUR feedback cables · C-track compatible

<b>Identification</b>	Type	SU+(C)P SE(2×0,5+4×0,23+3×(2×0,14)+4×0,14)UL 30V GN
	Part-No.	111457
SIEMENS designation*	1BD51	

#### Use/Application/Characteristics

Application	<ul style="list-style-type: none"> <li>• Incremental encoder cable, connection cable for tachometer sensor, brake sensor, speed sensor</li> <li>• Due to Full PUR jacket and TPE conductor insulation optimally suited for c-tracks, extremely rough operating conditions and aggressive coolants and lubricants</li> <li>• Especially for industrial environments in mechanical and system engineering</li> </ul>
Characteristics	<ul style="list-style-type: none"> <li>• High active and passive interference resistance (EMC)</li> <li>• Braided shield optimised for continuous flexible use</li> <li>• Very good alternating bending strength</li> <li>• Low adhesion, abrasion-resistant, nick-resistant, tear-propagation-resistant</li> <li>• Hydrolysis-resistant, microbe-resistant, and rot-resistant</li> <li>• Weatherproof, ozone and UV resistant (normal lighting conditions)</li> <li>• Good ruggedness and salt water resistance</li> <li>• Excellent coolant and lubricant resistance</li> <li>• Resistant to most oils, greases, alcohol-free benzines and kerosene</li> <li>• Silicone free</li> <li>• RoHS compliant</li> </ul>

28.04.2017 – Subject to technical modification

Part-No. 111457

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#### Construction

Description	SUPERFLEX (C) PUR FEEDBACK SIEMENS
Number of conductors/cross-section	(2×0.5+3×(2×0.14)+4×0.23+4×0.14)
Jacket material	PUR
Jacket color	green RAL 6018
Outer Ø	9.8 mm
Outer Ø	0.386 inches
Surface	adhesion-free matt
Weight	15.3 kg/100 m
Weight	103 Lbs/Mft
Cu-Index	9.3 kg/100 m
Cu-Index	62 Lbs/Mft

#### 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	brown/blue brown/red
Conductor insulation	Polyolefin
Stranding	Conductors twisted without mechanical stress layer pitch optimised

#### 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	black brown red orange yellow green
Conductor insulation	TPE-E

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SYSTEMATIC TECHNOLOGY

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Stranding Conductors stranded in pairs  
 Conductors twisted without mechanical stress  
 layer pitch optimised

#### 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 green/red  
 green/black  
 brown/yellow  
 brown/grey

Conductor insulation Polyolefin

Stranding Conductors twisted without mechanical stress  
 layer pitch optimised

Element shielding Tinned copper wires  
 Spiral shield  
 optical cover approx. 90%

#### 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 blue  
 grey  
 white/yellow  
 white/black

Conductor insulation Polyolefin

Stranding 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%

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Jacket characteristics	Flame-retardant Oil resistant grease-resistant petrol-resistant (alcohol-free) kerosene-resistant Silicone-free Halogen free
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#### Technical data

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Test voltage type	AC 1000 V
Temperature range moving	-25 °C ... +80 °C
Temperature range fixed	-40 °C ... +80 °C
Minimum bending radius moving	12×D
Minimum bending radius fixed	6×D
Travel distance	≤15 m
Speed	5 m/s
Acceleration	50 m/s <sup>2</sup>

#### Element 1

Element construction	2×0.5
Insulation resistance at 20°C	200 MΩ×km

#### Element 2

Element construction	4×0.23
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#### Element 3

Element construction	3×(2×0.14)
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#### Element 4

Element construction	4×0.14
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#### Approvals/Standards

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Approvals	cURus AWM II A/B
UL style	AWM 20236
Conformity	CE RoHS REACH

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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

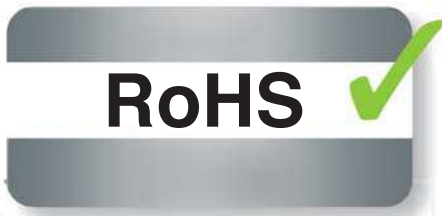
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#### General

Note CE These products are in conformity with the EU Low Voltage Directive 2014/35/EU

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#### Symbols



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