

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)+3×(2×0,14) 30V
Part No.	111459
SIEMENS designation*	1BD31

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)+3×(2×0.14))
Number of conductors	8
Cross-section, metric	0.5 mm ²

United Kingdom: LÜTZE Ltd.

Unit 3, Sandy Hill Park
Sandy Way, Amington • GB-Tamworth, Staffs B77 4DU
Tel. +44 (0)1827 31333-0
www.lutze.com • sales.gb@lutze.co.uk

Germany: Friedrich Lütze GmbH

Postfach 12 24 (PLZ 71366) • Bruckwiesenstraße 17-19 • D-71384 Weinstadt
Tel. +49 (0)7151 6053-0
www.luetze.de • info@luetze.de

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Part No. [111459](#) • Datasheet version: 00

page 1 of 4

Technical data sheet

PUR feedback cables · C-track compatible · shielded

Jacket material	PUR
Jacket color	green similar to RAL 6018
Outer Ø	8.7 mm
Outer Ø	0.343 inch
Surface	adhesion-free
Weight	12.8 kg/100 m
Weight	86 Lbs/Mft
Cu-Index	6.9 kg/100 m
Cu-Index	46 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	TPE-E
Stranding	Conductors twisted without mechanical stress Layer pitch optimised
Element shielding	Spiral shield optical cover approx. 90% Tinned copper wires

Construction Element 2

Element construction	3×(2×0.14)
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	TPE-E
Stranding	Conductors stranded in pairs Conductors twisted without mechanical stress Layer pitch optimised
Element shielding	Spiral shield optical cover approx. 90% tinned copper wires

Overall construction

Overall stranding	Elements stranded together
Overall wrapping	Non-woven material
Inner jacket	Polyolefin
Overall shield	Braid shield Tinned copper wires Optical cover approx. 85 %

Technical data sheet

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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

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-shield	approx.530 pF/m

Technical Data Element 2

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

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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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