

Data sheet

6XV1831-2K

Product type designation

Product description

PROFIBUS FC Flexible Cable

Flexible bus cable (2-core), sold by the meter, unassembled
SIMATIC NET, PB FC FLEXIBLE CABLE GP, 2-WIRE, SHIELDED,
SPEC. DESIGN FOR RAPID INSTALL. MAXIMAL LENGTH: 1000 M
MIN. ORDERING QUANTITY: 20 M SOLD BY THE METER



Suitability for use

For occasionally moved machine parts

Cable designation

02YH (ST) C11Y 1x2x0,65/2,56-150 LI KF40 FRNC FC VI

Electrical data

Damping ratio per length

• at 9.6 kHz / maximum	0.003 dB/m
• at 38.4 kHz / maximum	0.004 dB/m
• at 4 MHz / maximum	0.025 dB/m
• at 16 MHz / maximum	0.049 dB/m

Impedance

• Rated value	150 Ω
• at 9.6 kHz	270 Ω
• at 38.4 kHz	185 Ω
• at 3 MHz ... 20 MHz	150 Ω

Relative symmetrical tolerance

• of the characteristic impedance at 9.6 kHz	10 %
• of the characteristic impedance at 38.4 kHz	10 %

• of the characteristic impedance at 3 MHz ... 20 MHz	10 %
Loop resistance per length / maximum	133 mΩ/m
Shield resistance per length / maximum	15 Ω/km
Insulation resistance coefficient	16000 GΩ·m
Capacity per length / at 1 kHz	28 pF/m
Operating voltage • RMS value	100 V

Mechanical data

Number of electrical cores	2
Design of the shield	Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires
Type of electrical connection / FastConnect	Yes
Outer diameter • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath	0.67 mm 2.56 mm 5.4 mm 8 mm
Symmetrical tolerance of the outer diameter / of cable sheath	0.4 mm
Material • of the wire insulation • of the inner sheath of the cable • of cable sheath	PE FRNC PUR (TPE-U)
Color • of the insulation of data wires • of cable sheath	red/green Violet
Bending radius • with single bend / minimum permissible • with multiple bends / minimum permissible	40 mm 120 mm
Tensile load / maximum	100 N
Weight per length	70 kg/km

Permitted ambient conditions

Ambient temperature • during operation • during storage • during transport • during installation • Note	-20 ... +60 °C -40 ... +60 °C -40 ... +60 °C -40 ... +60 °C Electrical properties measured at 20 °C, tests according to DIN 47250 part 4 respectively DIN VDE 0472
Ambient condition / for operation	Limited segment length (see manual for PROFIBUS networks)
Burning behavior	flame resistant according to IEC 60332-1-2

Chemical resistance	
• to mineral oil • to grease • to water	oil resistant according to IEC 60811-2-1 (7x24h/90°C) resistant conditional resistance
Radiological resistance / to UV radiation	resistant

Product properties, functions, components / general

Product feature	
• halogen-free • silicon-free	Yes Yes

Standards, specifications, approvals

UL/ETL listing / 300 V Rating	Yes; c(UL)us, CMX
UL/ETL style / 600 V Rating	No
Certificate of suitability	
• CE marking • RoHS conformity	Yes Yes
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS) • Bureau Veritas (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS)	No No No No No No No

Further Information / Internet Links

Internet-Link	
• to website: Selector SIMATIC NET SELECTION TOOL • to website: Industrial communication • to website: Industry Mall • to website: Information and Download Center • to website: Image database • to website: CAx Download Manager • to website: Industry Online Support	http://www.siemens.com/snst http://www.siemens.com/simatic-net https://mall.industry.siemens.com http://www.siemens.com/industry/infocenter http://automation.siemens.com/bilddb http://www.siemens.com/cax https://support.industry.siemens.com

last modified: 10/14/2016