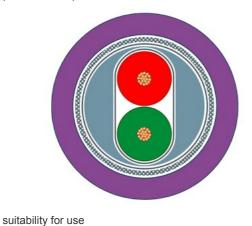
SIEMENS

Data sheet 6XV1831-2K

product type designation

product description



PROFIBUS FC Flexible Cable

For occasionally moved machine parts

Flexible bus cable (2-core), sold by the meter, unassembled

PROFIBUS FC flexible Cable GP, 2-wire, shielded, special configuration for quick assembly delivery unit max. 1000 m minimum order 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	
attenuation factor 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	80 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 	0.67 mm
 of the wire insulation 	2.56 mm
 of the inner sheath of the cable 	5.4 mm
of cable sheath	8 mm
symmetrical tolerance of the outer diameter / of cable sheath	0.4 mm
material	
 of the wire insulation 	polyethylene (PE)
 of the inner sheath of the cable 	FRNC

of cable sheath	PUR (TPE-U)
color	
of the insulation of data wires	red/green
of cable sheath	Violet
bending radius	VIOIGE
with single bend / minimum permissible	40 mm
with multiple bends / minimum permissible	120 mm
tensile load / maximum	100 N
weight per length	70 kg/km
ambient conditions	
ambient temperature	
during operation	-20 +60 °C
during storage	-40 +60 °C
during transport	-40 +60 °C
 during installation 	-40 +60 °C
• note	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)
fire behavior	flame resistant according to IEC 60332-1-2
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
• to mineral oil	oil resistant according to IEC 60811-2-1 (7x24h/90°C)
• to grease	resistant
• to water	conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components	
	7 general
product feature	Voc
• halogen-free	Yes
• silicon-free	Yes
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(UL)us, CMX
UL/ETL style / 600 V Rating	Yes; c(UL)us, CMX No
UL/ETL style / 600 V Rating certificate of suitability	No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval	No Yes
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking	No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity	No Yes
UL/ETL style / 600 V Rating certificate of suitability	Yes Yes
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS)	Yes Yes
UL/ETL style / 600 V Rating certificate of suitability	Yes Yes Yes
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS)	Yes Yes Yes No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV)	No Yes Yes Yes No No
UL/ETL style / 600 V Rating certificate of suitability	No Yes Yes Yes No No No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL)	No Yes Yes Yes No No No No No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS)	Yes Yes Yes No No No No No No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK)	Yes Yes Yes No No No No No No No No No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS)	Yes Yes Yes No No No No No No No No No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code	Yes Yes Yes Yes No
UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2	Yes Yes Yes Yes No
UL/ETL style / 600 V Rating certificate of suitability EAC approval CE marking RoHS conformity Marine classification association American Bureau of Shipping Europe Ltd. (ABS) French marine classification society (BV) Det Norske Veritas (DNV) Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) reference code according to IEC 81346-2 according to IEC 81346-2:2019	Yes Yes Yes Yes No
UL/ETL style / 600 V Rating certificate of suitability	Yes Yes Yes Yes No
UL/ETL style / 600 V Rating certificate of suitability EAC approval CE marking RoHS conformity Marine classification association American Bureau of Shipping Europe Ltd. (ABS) French marine classification society (BV) Det Norske Veritas (DNV) Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) reference code according to IEC 81346-2 according to IEC 81346-2:2019 further information / internet-Links Internet-Link	Yes Yes Yes Yes No No No No No No No Wo Wo Wo Wo Wo No
certificate of suitability	Yes Yes Yes Yes No No No No No No No No WG WGB http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net
UL/ETL style / 600 V Rating certificate of suitability	Yes Yes Yes No No No No No No No No No WG WGB http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net https://mall.industry.siemens.com
UL/ETL style / 600 V Rating certificate of suitability	Yes Yes Yes Yes No No No No No No No No WG WGB http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net
UL/ETL style / 600 V Rating certificate of suitability	Yes Yes Yes Yes No No No No No No No No No WG WGB http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net https://mall.industry.siemens.com http://www.siemens.com/industry/infocenter https://sie.ag/2QdlxcP
certificate of suitability	Yes Yes Yes Yes No WG WGB http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net https://mall.industry.siemens.com http://www.siemens.com/industry/infocenter https://sie.ag/2QdlxcP http://automation.siemens.com/bilddb
UL/ETL style / 600 V Rating certificate of suitability	Yes Yes Yes No
certificate of suitability	Yes Yes Yes Yes No WG WGB http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net https://mall.industry.siemens.com http://www.siemens.com/industry/infocenter https://sie.ag/2QdlxcP http://automation.siemens.com/bilddb