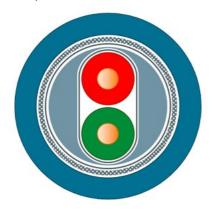
SIEMENS

Data sheet 6XV1830-5EH10

product type designation

product description



PROFIBUS FC Process Cable GP

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

PROFIBUS FC Process Cable Bus cable for IEC 61158-2 Sheath color blue for Ex applications 2-core shielded Sold by the meter Delivery length max. 1000 m Minimum order 20 m

cable designation 02YSY (ST) CY 1x2x1,0/2,55-100 BL OE FR olectrical data attenuation factor per length at 38.4 kHz / maximum 0.003 dB/m impedance rated value at 31.25 kHz 100 Ω relative symmetrical tolerance of the characteristic impedance at 31.25 kHz 20 % loop resistance per length / maximum 44 mΩ/m shield resistance per length / maximum 6.5 Ω/km capacity per length / at 1 kHz 92 pF/m inductance per length 0.65 μH/m operating voltage 80 V e RMS value 80 V mechanical data 1 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 0 finner conductor 1.05 mm of the wire insulation 2.55 mm of the inner sheath of the cable 5.4 mm <	suitability for use	For use in fieldbus systems according to IEC 61158-2 (e.g. PROFIBUS PA), suitable for Ex applications
attenuation factor per length ■ at 38.4 kHz / maximum impedance ■ rated value ■ at 31.25 kHz 100 Ω relative symmetrical tolerance ■ of the characteristic impedance at 31.25 kHz loop resistance per length / maximum shield resistance per length / maximum shield resistance per length / maximum capacity per length / j at 1 kHz gp pF/m inductance per length onesting voltage ■ RMS value mumber of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect outer diameter ● of inner conductor ● of the wire insulation e of the wire insulation ■ of the wire insulation ● of the wire insulation ● of the inner sheath of the cable ● of cable sheath PVC color ● of the insulation of data wires red/green	cable designation	02YSY (ST) CY 1x2x1,0/2,55-100 BL OE FR
at 38.4 kHz / maximum impedance • rated value • at 31.25 kHz relative symmetrical tolerance • of the characteristic impedance at 31.25 kHz loop resistance per length / maximum shield resistance per length / maximum capacity per length / at 1 kHz g2 pF/m inductance per length operating voltage • RMS value number of electrical cores design of the shield lotter diameter of the wire insulation of the wire insulation material of the wire insulation of the wire insulation of the sheath material of the inner sheath of the cable of cable sheath material of the inner sheath of the cable of cable sheath pVC color of the inner sheath of the cable of cable sheath pVC color of the insulation of data wires red/green	electrical data	
impedance • rated value • at 31.25 kHz relative symmetrical tolerance • of the characteristic impedance at 31.25 kHz loop resistance per length / maximum shield resistance per length / maximum 6.5 Ω/km capacity per length / at 1 kHz 292 pF/m inductance per length operating voltage • RMS value 80 V mechanical data number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect ves outer diameter • of inner conductor • of the wire insulation • of the wire insulation • of the wire insulation symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of the wire insulation • of the inner sheath of the cable • of cable sheath polyethylene (PE) • of cable sheath pVC color • of the insulation of data wires red/green	attenuation factor per length	
• rated value • at 31.25 kHz relative symmetrical tolerance • of the characteristic impedance at 31.25 kHz loop resistance per length / maximum shield resistance per length / maximum capacity per length / at 1 kHz inductance per length operating voltage • RMS value number of electrical cores design of the shield very electrical cores type of electrical connection / FastConnect outer diameter of the wire insulation of the wire insulation soft the wire insulation of the inner sheath of the cable of cable sheath pvC color of the insulation of data wires red/green	• at 38.4 kHz / maximum	0.003 dB/m
at 31.25 kHz relative symmetrical tolerance of the characteristic impedance at 31.25 kHz loop resistance per length / maximum shield resistance per length / maximum capacity per length / at 1 kHz inductance per length operating voltage RMS value mechanical data number of electrical cores design of the shield volter diameter of the wire insulation of the wire insulation of the wire insulation symmetrical tolerance of the cable sheath material of the wire insulation of the wire insulation of data wires red/green	impedance	
relative symmetrical tolerance	rated value	100 Ω
of the characteristic impedance at 31.25 kHz loop resistance per length / maximum shield resistance per length / maximum capacity per length / at 1 kHz inductance per length o.65 μH/m operating voltage RMS value RMS value rumber of electrical cores design of the shield voerlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect outer diameter of inner conductor of the wire insulation of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of the wire insulation of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of the wire insulation of the wire insulation of the inner sheath of the cable polyethylene (PE) pvC of cable sheath red/green	● at 31.25 kHz	100 Ω
loop resistance per length / maximum 44 mΩ/m shield resistance per length / maximum 6.5 Ω/km capacity per length / at 1 kHz 92 pF/m inductance per length 0.65 μH/m operating voltage 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 1.05 mm of the wire insulation 2.55 mm of the inner sheath of the cable 5.4 mm symmetrical tolerance of the outer diameter / of cable sheath 8 mm symmetrical tolerance of the outer diameter / of cable sheath polyethylene (PE) of the wire insulation polyethylene (PE) of cable sheath PVC of the insulation of data wires red/green	relative symmetrical tolerance	
shield resistance per length / maximum capacity per length / at 1 kHz inductance per length operating voltage • RMS value **mechanical data** number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tinplated copper wires type of electrical connection / FastConnect ves outer diameter • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath material • of the wire insulation • of the wire insulation • of the inner sheath of the cable sheath material • of the wire insulation • of the inner sheath of the cable • of cable sheath PVC olor • of the insulation of data wires red/green	 of the characteristic impedance at 31.25 kHz 	20 %
capacity per length / at 1 kHz inductance per length operating voltage • RMS value **RMS value** **mechanical data** number of electrical cores design of the shield **Overlapped aluminum-clad foil, sheathed in a braided screen of tinplated copper wires type of electrical connection / FastConnect **outer diameter** • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of the inner sheath of the cable • of cable sheath polyethylene (PE) • of cable sheath color • of the insulation of data wires red/green	loop resistance per length / maximum	44 mΩ/m
inductance per length operating voltage ● RMS value 80 V mechanical data number of electrical cores design of the shield type of electrical connection / FastConnect outer diameter ● of inner conductor ● of the wire insulation ● of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material ● of the wire insulation ● of the wire insulation symmetrical tolerance of the cable e of the wire insulation polyethylene (PE) PVC color ● of the insulation of data wires o.65 μH/m 80 V 80 V Ves Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes otherwises 1.05 mm 2.55 mm 9.4 mm 9.4 mm	shield resistance per length / maximum	6.5 Ω/km
operating voltage • RMS value mechanical data number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wires type of electrical connection / FastConnect outer diameter • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of the wire insulation of the inner sheath of the cable • of cable sheath polyethylene (PE) • of the inner sheath of the cable • of cable sheath PVC color • of the insulation of data wires red/green	capacity per length / at 1 kHz	92 pF/m
RMS value mechanical data number of electrical cores design of the shield	inductance per length	0.65 μH/m
number of electrical cores design of the shield Description of the shield Description of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect outer diameter of inner conductor of the wire insulation of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation of the inner sheath of the cable of the inner sheath of the cable of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires red/green	operating voltage	
number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin- plated copper wires Yes outer diameter of inner conductor of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation polyethylene (PE) of cable sheath polyethylene (PE) of cable sheath polyethylene (PE) of cable sheath color of the insulation of data wires red/green	 RMS value 	80 V
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 wire insulation of cable sheath of the cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath PVC of cable sheath red/green	mechanical data	
type of electrical connection / FastConnect type of electrical connection / FastConnect outer diameter of inner conductor of the wire insulation of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath PVC of cable sheath red/green	number of electrical cores	2
outer diameter • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of the wire insulation • of the inner sheath of the cable • of cable sheath PVC of cable sheath color • of the insulation of data wires 1.05 mm 2.55 mm 8 mm 0.4 mm polyethylene (PE) PVC PVC red/green	design of the shield	
 of inner conductor of the wire insulation of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath PVC of cable sheath of the insulation of data wires red/green 	type of electrical connection / FastConnect	Yes
of the wire insulation of the inner sheath of the cable of cable sheath of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath polyethylene (PE) of cable sheath pvc of cable sheath red/green	outer diameter	
 of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath PVC of the insulation of data wires red/green 	 of inner conductor 	1.05 mm
of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath color of the insulation of data wires 8 mm 0.4 mm PVC polyethylene (PE) PVC PVC red/green	 of the wire insulation 	2.55 mm
symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires red/green	 of the inner sheath of the cable 	5.4 mm
sheath material of the wire insulation polyethylene (PE) to f the inner sheath of the cable of cable sheath PVC color of the insulation of data wires red/green	of cable sheath	8 mm
 of the wire insulation of the inner sheath of the cable of cable sheath color of the insulation of data wires red/green		0.4 mm
 of the inner sheath of the cable of cable sheath color of the insulation of data wires PVC red/green	material	
● of cable sheath Color ● of the insulation of data wires PVC red/green	 of the wire insulation 	polyethylene (PE)
color ● of the insulation of data wires red/green	 of the inner sheath of the cable 	PVC
• of the insulation of data wires red/green	of cable sheath	PVC
	color	
• of cable sheath blue	 of the insulation of data wires 	red/green
	 of cable sheath 	blue

bending radius	
with single bend / minimum permissible	40 mm
with multiple bends / minimum permissible	80 mm
tensile load / maximum	150 N
weight per length	103 kg/km
ambient conditions	
ambient temperature	
during operation	-40 +80 °C
during storage	-40 +80 °C
during transport	-40 +80 °C
during installation	-20 +80 °C
note	Electrical properties measured at 20 °C, tests according to DIN 47250 part 4 respectively DIN VDE 0472
ambient condition / for operation	Transfer rate of cable: 31.25 Kbit/s
fire behavior	flame resistant according to IEC 60332-3-24 (Category C)
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
to mineral oil	conditional resistance
• to grease	Conditional resistance
to water	conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components	/ general
product feature	
halogen-free	No
• silicon-free	Yes
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(UL)us, CMG / CL3 / Sun Res
UL/ETL style / 600 V Rating	Yes
certificate of suitability	
 EAC approval 	Yes
CE marking	Yes
RoHS conformity	Yes
Marine classification association	
 American Bureau of Shipping Europe Ltd. (ABS) 	No
 French marine classification society (BV) 	No
 Det Norske Veritas (DNV) 	
` ,	No
Germanische Lloyd (GL)	No No
Germanische Lloyd (GL)Lloyds Register of Shipping (LRS)	
Germanische Lloyd (GL)Lloyds Register of Shipping (LRS)Nippon Kaiji Kyokai (NK)	No
 Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) 	No No
 Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) 	No No
Germanische Lloyd (GL)Lloyds Register of Shipping (LRS)Nippon Kaiji Kyokai (NK)	No No
Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) further information / internet-Links	No No
Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) further information / internet-Links Internet-Link	No No No
Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) further information / internet-Links Internet-Link to web page: selection aid TIA Selection Tool	No No No No http://www.siemens.com/tia-selection-tool
Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) further information / internet-Links Internet-Link to web page: selection aid TIA Selection Tool to website: Industrial communication	No No No No http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net
Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) further information / internet-Links Internet-Link to web page: selection aid TIA Selection Tool to website: Industrial communication to website: Industry Mall	No No No No http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net https://mall.industry.siemens.com
Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) further information / internet-Links Internet-Link to web page: selection aid TIA Selection Tool to website: Industrial communication to website: Industry Mall to website: Information and Download Center to website: Selection guide for cables and	No No No No http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net https://mall.industry.siemens.com http://www.siemens.com/industry/infocenter
Germanische Lloyd (GL) Lloyds Register of Shipping (LRS) Nippon Kaiji Kyokai (NK) Polski Rejestr Statkow (PRS) further information / internet-Links Internet-Link to web page: selection aid TIA Selection Tool to website: Industrial communication to website: Industry Mall to website: Information and Download Center to website: Selection guide for cables and connectors	No No No No 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

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