

## Data sheet

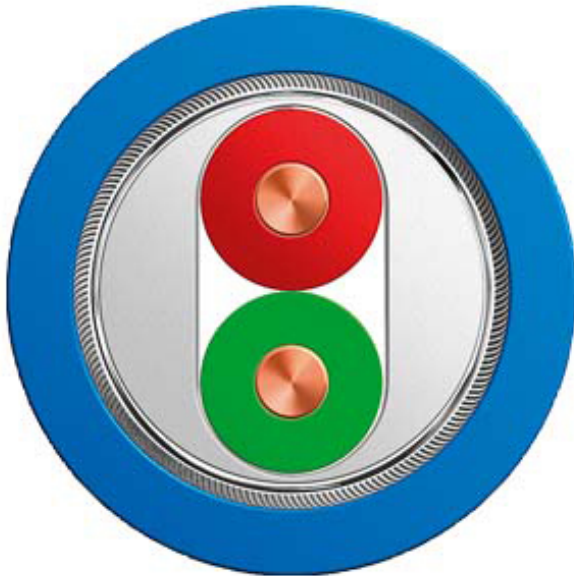
6XV1830-5EH10

### Product type designation

Product description

### PROFIBUS FC Process Cable GP

Bus cable (2-core), sold by the meter, unassembled  
SIMATIC NET, PB FC PROCESS CABLE BUS CABLE FOR IEC  
61158-2 BLUE SHEATH FOR EX APPLICATIONS 2-WIRE  
SHIELDED, SOLD BY METER MAX. CONSIGNMENT: 1000 M MIN.  
ORDERING QUANTITY: 20 M



|                     |                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------|
| Suitability for use | For use in fieldbus systems according to IEC 61158-2 (e.g. PROFIBUS PA), suitable for Ex applications |
| Cable designation   | 02YSY (ST) CY 1x2x1,0/2,55-100 BL OE FR                                                               |

### Electrical data

|                                                |                  |
|------------------------------------------------|------------------|
| Damping ratio per length                       |                  |
| • at 38.4 kHz / maximum                        | 0.003 dB/m       |
| Impedance                                      |                  |
| • Rated value                                  | 100 $\Omega$     |
| • at 31.25 kHz                                 | 100 $\Omega$     |
| Relative symmetrical tolerance                 |                  |
| • of the characteristic impedance at 31.25 kHz | 20 %             |
| Loop resistance per length / maximum           | 44 m $\Omega$ /m |
| Shield resistance per length / maximum         | 6.5 $\Omega$ /km |
| Capacity per length / at 1 kHz                 | 92 pF/m          |
| Inductance per length                          | 0.65 $\mu$ H/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                                          | 1.05 mm                                                                                |
| • of the wire insulation                                      | 2.55 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                                      | PE                                                                                     |
| • of the inner sheath of the cable                            | PVC                                                                                    |
| • of cable sheath                                             | PVC                                                                                    |
| Color                                                         |                                                                                        |
| • 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                                                                              |

| Permitted 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                                                                   |
| Burning behavior                          | flame resistant according to IEC 60332-3-24 (Category C)                                               |
| Chemical resistance                       |                                                                                                        |
| • to mineral oil                          | conditional resistance                                                                                 |
| • to grease                               | Conditional resistance                                                                                 |
| • to water                                | conditional resistance                                                                                 |
| Radiological resistance / to UV radiation | resistant                                                                                              |

| Product properties, functions, 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                      |                                   |
| • CE marking                                    | Yes                               |
| • RoHS conformity                               | Yes                               |
| Marine classification association               |                                   |
| • American Bureau of Shipping Europe Ltd. (ABS) | No                                |
| • Bureau Veritas (BV)                           | No                                |
| • Det Norske Veritas (DNV)                      | No                                |
| • Germanische Lloyd (GL)                        | No                                |
| • Lloyds Register of Shipping (LRS)             | No                                |
| • Nippon Kaiji Kyokai (NK)                      | No                                |
| • Polski Rejestr Statkow (PRS)                  | No                                |

## Further Information / Internet Links

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

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