

### Product type designation

#### Product description

### PROFIBUS FC Standard Cable IS GP

Standard bus cable for fast installation, sold by the meter, unassembled

SIMATIC NET, PB FC STANDARD CABLE IS GP, BUS CABLE 2-WIRE, SHIELDED, SPECIAL- MOUNT F. FAST MOUNTING, MAXIMAL LENGTH: 1000 M, MINIMAL LENGTH: 20 M SOLD BY THE METER



### Suitability for use

Used for intrinsically safe distributed I/O systems for permanent installation

### Cable designation

02YSY (ST) CY 1x2x0,64/2,55 BL KF40 FR

## Electrical data

### Damping ratio per length

|                         |             |
|-------------------------|-------------|
| • at 9.6 kHz / maximum  | 0.0025 dB/m |
| • at 38.4 kHz / maximum | 0.004 dB/m  |
| • at 4 MHz / maximum    | 0.022 dB/m  |
| • at 16 MHz / maximum   | 0.042 dB/m  |

### Impedance

|                       |              |
|-----------------------|--------------|
| • Rated value         | 150 $\Omega$ |
| • at 9.6 kHz          | 270 $\Omega$ |
| • at 38.4 kHz         | 185 $\Omega$ |
| • at 3 MHz ... 20 MHz | 150 $\Omega$ |

### Relative symmetrical tolerance

|                                              |      |
|----------------------------------------------|------|
| • of the characteristic impedance at 9.6 kHz | 10 % |
|----------------------------------------------|------|

|                                                                                                         |            |
|---------------------------------------------------------------------------------------------------------|------------|
| <ul style="list-style-type: none"> <li>• of the characteristic impedance at 38.4 kHz</li> </ul>         | 10 %       |
| <ul style="list-style-type: none"> <li>• of the characteristic impedance at 3 MHz ... 20 MHz</li> </ul> | 10 %       |
| Loop resistance per length / maximum                                                                    | 110 mΩ/m   |
| Shield resistance per length / maximum                                                                  | 9.5 Ω/km   |
| Insulation resistance coefficient                                                                       | 16000 GΩ·m |
| Capacity per length / at 1 kHz                                                                          | 28.5 pF/m  |
| Operating voltage                                                                                       |            |
| <ul style="list-style-type: none"> <li>• RMS value</li> </ul>                                           | 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                                                                                    |
| Core diameter                                                                                 |                                                                                        |
| <ul style="list-style-type: none"> <li>• of AWG22 core</li> </ul>                             | 0.64 mm                                                                                |
| Outer diameter                                                                                |                                                                                        |
| <ul style="list-style-type: none"> <li>• of inner conductor</li> </ul>                        | 0.64 mm                                                                                |
| <ul style="list-style-type: none"> <li>• of the wire insulation</li> </ul>                    | 2.55 mm                                                                                |
| <ul style="list-style-type: none"> <li>• of the inner sheath of the cable</li> </ul>          | 5.4 mm                                                                                 |
| <ul style="list-style-type: none"> <li>• of cable sheath</li> </ul>                           | 8 mm                                                                                   |
| Symmetrical tolerance of the outer diameter / of cable sheath                                 | 0.4 mm                                                                                 |
| Material                                                                                      |                                                                                        |
| <ul style="list-style-type: none"> <li>• of the wire insulation</li> </ul>                    | PE                                                                                     |
| <ul style="list-style-type: none"> <li>• of the inner sheath of the cable</li> </ul>          | PVC                                                                                    |
| <ul style="list-style-type: none"> <li>• of cable sheath</li> </ul>                           | PVC                                                                                    |
| Color                                                                                         |                                                                                        |
| <ul style="list-style-type: none"> <li>• of the insulation of data wires</li> </ul>           | red/green                                                                              |
| <ul style="list-style-type: none"> <li>• of cable sheath</li> </ul>                           | blue                                                                                   |
| Bending radius                                                                                |                                                                                        |
| <ul style="list-style-type: none"> <li>• with single bend / minimum permissible</li> </ul>    | 37.5 mm                                                                                |
| <ul style="list-style-type: none"> <li>• with multiple bends / minimum permissible</li> </ul> | 75 mm                                                                                  |
| Tensile load / maximum                                                                        | 100 N                                                                                  |
| Weight per length                                                                             | 80 kg/km                                                                               |

## Permitted ambient conditions

|                                                                         |                |
|-------------------------------------------------------------------------|----------------|
| Ambient temperature                                                     |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul>    | -40 ... +75 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>      | -40 ... +75 °C |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul>    | -40 ... +75 °C |
| <ul style="list-style-type: none"> <li>• during installation</li> </ul> | -40 ... +75 °C |

|                                                                                                                                 |                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| • Note                                                                                                                          | Electrical properties measured at 20 °C, tests according to DIN 47250 part 4 respectively DIN VDE 0472    |
| Burning behavior                                                                                                                | flame resistant according to IEC 60332-3-24 (Category C)                                                  |
| Chemical resistance <ul style="list-style-type: none"> <li>• to mineral oil</li> <li>• to grease</li> <li>• to water</li> </ul> | oil resistant according to IEC 60811-2-1 (4 h / 70°C)<br>Conditional resistance<br>conditional resistance |
| Radiological resistance / to UV radiation                                                                                       | resistant                                                                                                 |

#### Product properties, functions, components / general

|                                                                                                          |           |
|----------------------------------------------------------------------------------------------------------|-----------|
| Product feature <ul style="list-style-type: none"> <li>• halogen-free</li> <li>• silicon-free</li> </ul> | No<br>Yes |
|----------------------------------------------------------------------------------------------------------|-----------|

#### Standards, specifications, approvals

|                                                                                                                                                                                                                                                                                                                                                                   |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| UL/ETL listing / 300 V Rating                                                                                                                                                                                                                                                                                                                                     | Yes; CMG / CL3 / Sun Res               |
| UL/ETL style / 600 V Rating                                                                                                                                                                                                                                                                                                                                       | Yes                                    |
| Certificate of suitability <ul style="list-style-type: none"> <li>• CE marking</li> <li>• RoHS conformity</li> </ul>                                                                                                                                                                                                                                              | Yes<br>Yes                             |
| Marine classification association <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• Bureau Veritas (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Germanische Lloyd (GL)</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (NK)</li> <li>• Polski Rejestr Statkow (PRS)</li> </ul> | No<br>No<br>No<br>No<br>No<br>No<br>No |

#### Further Information / Internet Links

|                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Internet-Link <ul style="list-style-type: none"> <li>• to website: Selector SIMATIC NET SELECTION TOOL</li> <li>• to website: Industrial communication</li> <li>• to website: Industry Mall</li> <li>• to website: Information and Download Center</li> <li>• to website: Image database</li> <li>• to website: CAX Download Manager</li> <li>• to website: Industry Online Support</li> </ul> | <a href="http://www.siemens.com/snst">http://www.siemens.com/snst</a><br><br><a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a><br><a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a><br><a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a><br><a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a><br><a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a><br><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a> |
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