

Data sheet

6XV1830-7BH50

|                          |                                                                                                                                                                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product type designation | PROFIBUS ECOFAST Hybrid Cable                                                                                                                                                                                                                                         |
| Product description      | ECOFAST Hybrid cable (data and energy wires), preferred length, assembled with ECOFAST connector and socket<br>PROFIBUS ECOFAST Hybrid Cable, 2x Cu 0.64 mm, 4x Cu 1.5 mm <sup>2</sup> , Cable pre-assembled with ECOFAST connector and socket, trailable, Length 5 m |



|                     |                                                                    |
|---------------------|--------------------------------------------------------------------|
| Suitability for use | Hybrid cable for connection of ECOFAST stations                    |
| Cable designation   | 02Y (ST)C 1 x 2 x 0.65/2.56 - 150 LI LIH-Z 11Y 4 x 1 x 1.5 VI FRNC |
| Wire length         | 5 m                                                                |

| 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 |            |

|                                                                                                                                                                                                                      |          |
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| <ul style="list-style-type: none"> <li>• of the characteristic impedance at 9.6 kHz</li> <li>• of the characteristic impedance at 38.4 kHz</li> <li>• of the characteristic impedance at 3 MHz ... 20 MHz</li> </ul> | 10 %     |
| Loop resistance per length / maximum                                                                                                                                                                                 | 138 Ω/km |
| Shield resistance per length / maximum                                                                                                                                                                               | 15 Ω/km  |
| Insulation resistance coefficient                                                                                                                                                                                    | 20 GΩ·m  |
| Operating voltage / maximum                                                                                                                                                                                          | 80 V     |
| Capacity per length / at 1 kHz                                                                                                                                                                                       | 30 pF/m  |
| Operating voltage / RMS value                                                                                                                                                                                        | 100 V    |
| Conductor cross section / of the power wire                                                                                                                                                                          | 1.5 mm²  |
| Continuous current / of the power wires                                                                                                                                                                              | 12 A     |

#### Mechanical data

|                                                                                                                                                              |                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Design of the shield                                                                                                                                         | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires                                                     |
| Number of electrical cores                                                                                                                                   | 6                                                                                                                                          |
| Type of electrical connection / FastConnect                                                                                                                  | No                                                                                                                                         |
| Outer diameter <ul style="list-style-type: none"> <li>• of inner conductor</li> <li>• of the wire insulation</li> <li>• of cable sheath</li> </ul>           | 0.67 mm<br>2.56 mm<br>11 mm                                                                                                                |
| Symmetrical tolerance of the outer diameter / of cable sheath                                                                                                | 0.3 mm                                                                                                                                     |
| Material <ul style="list-style-type: none"> <li>• of the wire insulation</li> <li>• of cable sheath</li> </ul>                                               | polyethylene (PE)<br>PUR                                                                                                                   |
| Color <ul style="list-style-type: none"> <li>• of the insulation of data wires</li> <li>• of the power wire insulation</li> <li>• of cable sheath</li> </ul> | red / green<br>Black<br>Violet                                                                                                             |
| Bending radius <ul style="list-style-type: none"> <li>• with multiple bends / minimum permissible</li> </ul>                                                 | 82.5 mm                                                                                                                                    |
| Number of bending cycles                                                                                                                                     | 5000000; For use in cable carriers, for 5 million bending cycles with a bending radius of 82.5 mm (7.5x D) and an acceleration of 2.5 m/s² |
| Tensile load / maximum                                                                                                                                       | 300 N                                                                                                                                      |
| Weight per length                                                                                                                                            | 150 kg/km                                                                                                                                  |

#### Ambient conditions

|                                                                                                                                                |                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul> | -40 ... +60 °C<br>-40 ... +60 °C<br>-40 ... +60 °C |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|

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|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• during installation</li> <li>• Note</li> </ul>                     | -40 ... +60 °C<br>Electrical properties measured at 20 Cel, verification according to DIN 47250 part 4 respectively DIN VDE 0472 |
| Burning behavior                                                                                            | flame-retardant according to IEC 60332-1                                                                                         |
| Chemical resistance <ul style="list-style-type: none"> <li>• to mineral oil</li> <li>• to grease</li> </ul> | Conditional resistance<br>Conditional resistance                                                                                 |
| Radiological resistance / to UV radiation                                                                   | resistant                                                                                                                        |
| Protection class IP                                                                                         | IP65                                                                                                                             |

#### Product features, product functions, product components / general

|                                                                                                          |            |
|----------------------------------------------------------------------------------------------------------|------------|
| Product feature <ul style="list-style-type: none"> <li>• halogen-free</li> <li>• silicon-free</li> </ul> | Yes<br>Yes |
|----------------------------------------------------------------------------------------------------------|------------|

#### Standards, specifications, approvals

|                                                                                                |     |
|------------------------------------------------------------------------------------------------|-----|
| UL/ETL listing / 300 V Rating                                                                  | No  |
| UL/ETL style / 600 V Rating                                                                    | No  |
| Certificate of suitability <ul style="list-style-type: none"> <li>• RoHS conformity</li> </ul> | Yes |

#### 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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