

### product type designation

### product description

### PROFIBUS M12-Cable

Flexible plug-in cable (2-core), preferred length, preassembled with two 5-pole M12 male/female connectors (B-coded)

PROFIBUS M12 plug-in cable (ET 200) Pre-assembled PB FC Trailing Cable with 2 M12 connectors, B-coded, 5-pole; 0.5 m.



### product brand name

### Technical Product Detail Page

### suitability for use

### cable designation

### wire length

SIMATIC NET

<https://i.siemens.com/1P6XV1830-3DE50>

Cable for connecting PROFIBUS stations (e.g. SIMATIC ET 200) to IP 65 degree of protection

02YY (ST) C11Y 1x2x0,65/2,56-150 LI KF 40 FR petrol

0.5 m

### electrical data

### number of electrical connections

### attenuation factor per length

- at 9.6 kHz / maximum
- at 38.4 kHz / maximum
- at 4 MHz / maximum
- at 16 MHz / maximum

2

0.003 dB/m  
0.004 dB/m  
0.025 dB/m  
0.049 dB/m

### impedance

- rated value
- at 9.6 kHz
- at 38.4 kHz
- at 3 MHz ... 20 MHz

150 Ω  
270 Ω  
185 Ω  
150 Ω

### relative symmetrical tolerance

- of the characteristic impedance at 9.6 kHz
- of the characteristic impedance at 38.4 kHz
- of the characteristic impedance at 3 MHz ... 20 MHz

10 %  
10 %  
10 %

### loop resistance per length / maximum

### shield resistance per length / maximum

### capacity per length / at 1 kHz

### operating voltage

- RMS value

133 mΩ/m  
14 Ω/km  
28 pF/m  
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 the inner sheath of the cable
- of cable sheath

2

Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires

Yes

0.67 mm  
2.56 mm  
5.4 mm  
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> <li>• of the inner sheath of the cable</li> <li>• of cable sheath</li> </ul>                                                                                                                                                                                                                              | polyethylene (PE)<br>PVC<br>PUR (TPE-U)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| color <ul style="list-style-type: none"> <li>• of the insulation of data wires</li> <li>• of cable sheath</li> </ul>                                                                                                                                                                                                                                                                    | red/green<br>petrol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| bending radius <ul style="list-style-type: none"> <li>• with single bend / minimum permissible</li> <li>• with continuous bending</li> </ul>                                                                                                                                                                                                                                            | 40 mm<br>120 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| number of bending cycles                                                                                                                                                                                                                                                                                                                                                                | 3000000; Drag chain suitable for 3 million bending cycles at a bending radius of 120 mm (15x D) and an acceleration of 4 m/s <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| tensile load / maximum                                                                                                                                                                                                                                                                                                                                                                  | 100 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| weight per length                                                                                                                                                                                                                                                                                                                                                                       | 77 kg/km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> <li>• during installation</li> <li>• note</li> </ul>                                                                                                                                                                                           | -40 ... +60 °C<br>-40 ... +60 °C<br>-40 ... +60 °C<br>-40 ... +60 °C<br>electrical properties measured at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| ambient condition / for operation                                                                                                                                                                                                                                                                                                                                                       | Limited segment length (see manual for PROFIBUS networks)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| fire behavior                                                                                                                                                                                                                                                                                                                                                                           | flame resistant according to IEC 60332-1-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 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 (7x24h/90°C)<br>resistant<br>conditional resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| radiological resistance / to UV radiation                                                                                                                                                                                                                                                                                                                                               | resistant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| protection class IP                                                                                                                                                                                                                                                                                                                                                                     | IP65, IP67                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>product features, product functions, product components / general</b>                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| product feature <ul style="list-style-type: none"> <li>• halogen-free</li> <li>• silicon-free</li> </ul>                                                                                                                                                                                                                                                                                | No<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>standards, specifications, approvals</b>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| UL/ETL listing / 300 V Rating                                                                                                                                                                                                                                                                                                                                                           | Yes; CMX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| UL/ETL style / 600 V Rating                                                                                                                                                                                                                                                                                                                                                             | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| certificate of suitability <ul style="list-style-type: none"> <li>• EAC approval</li> <li>• CE marking</li> <li>• RoHS conformity</li> </ul>                                                                                                                                                                                                                                            | UL2238 E300110<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Marine classification association <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>further information / internet links</b>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| internet link <ul style="list-style-type: none"> <li>• to website: Selection guide for cables and connectors</li> <li>• to web page: selection aid TIA Selection Tool</li> <li>• to web page: SiePortal</li> <li>• to website: Image database</li> <li>• to website: CAX-Download-Manager</li> <li>• to website: Industry Online Support</li> </ul>                                     | <a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a><br><a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a><br><a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a><br><a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a><br><a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a><br><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a> |
| <b>security information</b>                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| security information                                                                                                                                                                                                                                                                                                                                                                    | Siemens provides products and solutions with industrial cybersecurity functions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement - and continuously maintain - a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit [www.siemens.com/cybersecurity-industry](https://www.siemens.com/cybersecurity-industry). Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under <https://www.siemens.com/cert>. (V4.7)

## Approvals / Certificates

### General Product Approval



[Declaration of Conformity](#)



[Manufacturer Declaration](#)

[China RoHS](#)

### General Product Approval



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