SIEMENS

## Data sheet 6XV1870-8GN10

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| **product type designation** | **IE Connecting Cable M12-90/M12-90** |
| product description | Flexible plug-in cable (4-wire), preferred length, prefabricated with two 4-pin M12 connectors (D-coded, 90° cable outlet) |
| | IE Connecting Cable M12-90/M12-90, pre-assembled IE FC Trailing Cable GP, with 2 M12 connectors (D-coded) Length 10.0 m. |



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| product brand name | SIMATIC NET |
| Technical Product Detail Page | https://i.siemens.com/1P6XV1870-8GN10 |
| suitability for use | For connecting Industrial Ethernet stations (e.g. SIMATIC ET200 and SCALANCE XP-200) in IP 65/67 degree of protection |
| cable designation | SF/UTP, 2YY (ST) CY 2x2x0,75/1,5-100 LI GN |
| wire length | 10 m |
| **electrical data** | |
| number of electrical connections | 2 |
| attenuation factor per length | |
| ● at 10 MHz / maximum | 0.063 dB/m |
| ● at 100 MHz / maximum | 0.213 dB/m |
| impedance | |
| ● at 1 MHz ... 100 MHz | 100 Ω |
| relative symmetrical tolerance | |
| ● of the characteristic impedance at 1 MHz … 100 MHz | 5 % |
| near-end crosstalk per length | |
| ● at 1 MHz ... 100 MHz | 0.5 dB/m |
| transfer impedance per length / at 10 MHz | 20 mΩ/m |
| loop resistance per length / maximum | 120 mΩ/m |
| operating voltage | |
| ● RMS value | 80 V |
| NVP value in percent | 66 % |
| **mechanical data** | |
| number of electrical cores | 4 |
| design of the shield | SF/UTP, overlapped aluminum-clad foil, sheathed in a protective braided shield of tinned copper wires |
| core diameter | |
| ● of AWG22 insulated conductor | 0.75 mm |
| outer diameter | |
| ● of inner conductor | 0.75 mm |
| ● of the wire insulation | 1.5 mm |
| ● of the inner sheath of the cable | 3.9 mm |
| ● of cable sheath | 6.5 mm |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.2 mm |
| material | |
| ● of the wire insulation | polyethylene (PE) |
| ● of the inner sheath of the cable | PVC |


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| ● of cable sheath | PVC |
| color | |
| ● of the insulation of data wires | white/yellow/blue/orange |
| ● of cable sheath | green |
| bending radius | |
| ● with single bend / minimum permissible | 32.5 mm |
| ● with multiple bends / minimum permissible | 49 mm |
| ● with continuous bending | 100 mm |
| number of bending cycles | 3000000; Drag chain suitable for 3 million bending cycles at a bending radius of 100 mm, a speed of 4 m/s and an acceleration of 4 m/s² |
| tensile load / maximum | 150 N |
| weight per length | 68 kg/km |
| **plug** | |
| type of plug interlock | screwed |
| design of plug-in connection | M12-90 |
| tightening torque / for M12 round connector / maximum | 0.6 N·m |
| connector coding | M12 |
| ● of the M12 circular connector | D-coded |
| **ambient conditions** | |
| ambient temperature | |
| ● during operation | -25 ... +75 °C |
| ● during storage | -25 ... +75 °C |
| ● during transport | -25 ... +75 °C |
| ● during installation | -10 ... +60 °C |
| ● note | electrical properties measured at 20 °C |
| fire behavior | flame resistant according to UL 1685 (CSA FT 4) |
| chemical resistance | |
| ● to mineral oil | conditional resistance |
| ● to grease | Conditional resistance |
| radiological resistance / to UV radiation | resistant |
| protection class IP | IP65, IP67 |
| **product features, product functions, product components / general** | |
| product feature | |
| ● halogen-free | No |
| ● PoE capability | Yes |
| ● PoE+ capability | Yes |
| ● silicon-free | Yes |
| **standards, specifications, approvals** | |
| UL/ETL listing / 300 V Rating | Yes; c(ETL)us, CMG FT4 / (ETL)us PLTC / Sun Res / OIL RES |
| UL/ETL style / 600 V Rating | Yes; cRUus AWM 21694 AWM I A/B 60°C 600V FT2 |
| certificate of suitability | UL 2238 |
| ● EAC approval | Yes |
| ● CE marking | Yes |
| ● RoHS conformity | Yes |
| standard for structured cabling | Cat5e |
| 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 |
| ● Lloyds Register of Shipping (LRS) | No |
| ● Nippon Kaiji Kyokai (NK) | No |
| ● Polski Rejestr Statkow (PRS) | No |
| **further information / internet links** | |
| internet link | |
| ● to website: Selection guide for cables and connectors | https://support.industry.siemens.com/cs/ww/en/view/109766358 |
| ● to web page: selection aid TIA Selection Tool | https://www.siemens.com/tstcloud |
| ● to web page: SiePortal | https://sieportal.siemens.com/ |
| ● to website: Image database | https://www.automation.siemens.com/bilddb |


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| ● to website: CAx-Download-Manager | https://www.siemens.com/cax |
| ● to website: Industry Online Support | https://support.industry.siemens.com |

## security information

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| 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. 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

CE EG-Konf. | UKCA | Declaration of Conformity | Manufacturer Declaration | UL | CE EG-Konf.

### Industrial Communication

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