

### product type designation

### product description

### Robust Power Connecting Cable M12-180/M12-180, IP69, 3 m

Rugged, flexible plug-in cable (4-core), preferred length, preassembled with two 4-pole M12 plugs (L-coded)

robust power connecting cable M12-180/M12-180; IP69; 4x1.5 sq. mm for power supply of end devices/network components, preassembled cable with M12 plug and M12 socket, L-coded, 4-pole, 3 m



### suitability for use

For connecting Industrial Ethernet stations with degree of protection IP65/67/69. Cable with FEP jacket (fluorinated plastic, perfluoroethylene propylene) for use in the food, beverage and tobacco industry (IP69 resistant). Cable is water-repellent, weather-proof, resistant to microbes, and extremely resistant to many cleaning agents and disinfectants (such as hypochlorite, chlorine dioxide, peroxyacetic acid, and quaternary ammonium cations).

### cable designation

LI9YY6Y 4X1X1.5 VZN GY

### wire length

3 m

### electrical data

#### insulation resistance coefficient

20000 MΩ·m

#### operating voltage / RMS value

300 V

#### conductor cross section / of the power line

1.5 mm<sup>2</sup>

#### continuous current / of the power lines

12.5 A

### mechanical data

#### number of electrical cores

4

#### outer diameter

- of inner conductor
- of the wire insulation
- of cable sheath

1.5 mm  
2.4 mm  
7.6 mm

#### symmetrical tolerance of the outer diameter / of cable sheath

0.2 mm

#### conductor class

5

#### material

- of the conductor
- of the wire insulation
- of cable sheath

CU, tin-coated  
PP  
PVC/FEP; FEP transparent

#### property of the cable sheath / oil-resistant

Yes

#### product component / PE connection

No

#### marking / of cores

Color

#### color

- of the power line insulation
- of cable sheath

brown / blue, white / black  
gray

#### bending radius

- with single bend / minimum permissible
- with multiple bends / minimum permissible
- with continuous bending

30 mm  
61 mm  
100 mm

#### number of bending cycles

500000; acceleration 4 m/s<sup>2</sup>

#### number of torsion cycles / with torsion by ± 180° on 1 m cable length

1000000

#### tensile load / maximum

150 N

|                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| weight per length                                                                                                                                                                                                                                                                                                                                                                     | 107 kg/km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>plug</b>                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| type of plug interlock                                                                                                                                                                                                                                                                                                                                                                | screwed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| design of plug-in connection                                                                                                                                                                                                                                                                                                                                                          | M12-180                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| connector coding                                                                                                                                                                                                                                                                                                                                                                      | M12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| connector coding / of the M12 circular connector                                                                                                                                                                                                                                                                                                                                      | L-coded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <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> </ul>                                                                                                                                                                                                                 | -40 ... +90 °C<br>-40 ... +90 °C<br>-40 ... +90 °C<br>-40 ... +90 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| fire behavior                                                                                                                                                                                                                                                                                                                                                                         | Flame-resistant acc. 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 DIN EN 60811-404 (7x24h/90°C)<br>resistant<br>resistant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| radiological resistance / to UV radiation                                                                                                                                                                                                                                                                                                                                             | resistant according to UL 2556 Sec. 4.2.8.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| protection class IP                                                                                                                                                                                                                                                                                                                                                                   | IP67/IP69                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| certificate of suitability <ul style="list-style-type: none"> <li>EAC approval</li> <li>RoHS conformity</li> <li>for hygienic design</li> </ul>                                                                                                                                                                                                                                       | CMG FT4 75°C or (ETL)us PLTC-ER SUN RES OIL RES I or E502506-LFR AWM 22165 AWM I A/B 90°C 300V FT2<br>Yes<br>Yes<br>EHEDG (cable material)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| reference code <ul style="list-style-type: none"> <li>according to IEC 81346-2:2019</li> </ul>                                                                                                                                                                                                                                                                                        | WDB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <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 website: Industrial communication</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://www.siemens.com/simatic-net">https://www.siemens.com/simatic-net</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                                                                                                                                                                                                                                                                                                                                                                  | <p>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 <a href="https://www.siemens.com/cybersecurity-industry">www.siemens.com/cybersecurity-industry</a>. 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 <a href="https://www.siemens.com/cert">https://www.siemens.com/cert</a>. (V4.7)</p> |
| <b>Approvals / Certificates</b>                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                              | Food, Pharmaceutical, Medical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |



[Manufacturer Declaration](#)



[EHEDG](#)

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