

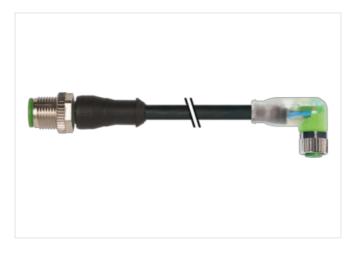
## M12 male 0° / M8 female 90° A-cod. LED

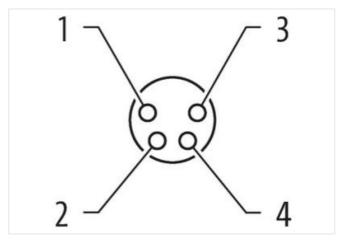
PUR 4x0.25 bk UL/CSA+robot+drag ch. 1m

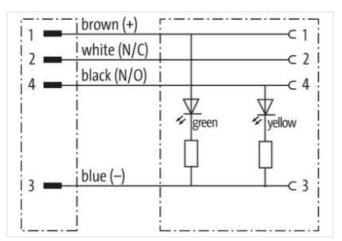
Male straight – female 90° M12 – M8, 4-pole 2× LED (PNP), (NPN) on request Art-No. 7005 - M12 Lite - (plastic hexagonal screw) on request Plastic housings with good resistance against chemicals and oils. The resistance to aggressive media should be individually tested for your application. Further details on request. Further cable lengths on request.

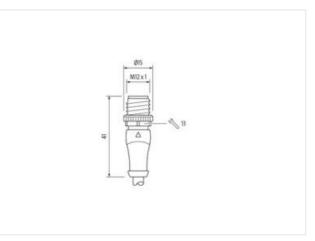
## Link to Product

Illustration



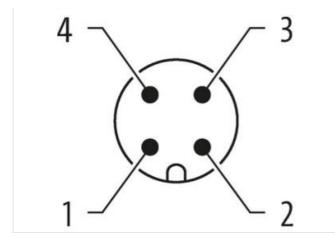


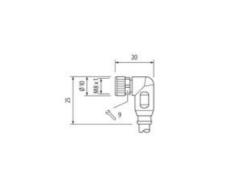




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Product may differ from Image



| Cable length   | 1 m               |
|--|-------------------|
| Side 1   |                   |
| Tightening torque                                    | 0,6 Nm            |
| Mounting method                                      | inserted, screwed |
| Family construction form                             | M12               |
| Thread   | M12 x 1           |
| suitable for corrugated tube (internal Ø)            | 10 mm             |
| Coding   | A                 |
| Material   | PUR               |
| Width across flats                                   | SW13              |
| Degree of protection (EN IEC 60529)                  | IP66K, IP67       |
| Side 2   |                   |
| Tightening torque                                    | 0,4 Nm            |
| Mounting method                                      | inserted, screwed |
| Family construction form                             | M8                |
| Thread   | M8 x 1            |
| suitable for corrugated tube (internal $\emptyset$ ) | 6,5 mm            |
| Coding   | A                 |
| Material   | PUR               |
| Width across flats                                   | SW9               |
| Degree of protection (EN IEC 60529)                  | IP66K, IP67       |
| Commercial data                                      |                   |
| ECLASS-6.0   | 27279218          |
| ECLASS-7.0   | 27279218          |
| ECLASS-8.0   | 27279218          |
| ECLASS-9.0   | 27060311          |
| ECLASS-10.1  | 27060311          |
| ECLASS-11.1  | 27060311          |
| ECLASS-12.0  | 27060311          |
| ETIM-5.0   | EC001855          |
| customs tariff number                                | 85444290          |
| GTIN   | 4048879711708     |
| Packaging unit                                       | 1                 |

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## Electrical data | Supply

| Electrical data   Supply  |   |
|---|---|
| Operating voltage DC  | 24 V  |
| Operating voltage DC min.   | 18 V  |
| Operating voltage DC max.   | 30 V  |
| Operating voltage DC max. (UL-listed)   | 30 V  |
| Current operating per contact max.  | 4 A   |
| Diagnostics   |   |
| Status indication LED   | green, yellow   |
| Device protection   Electrical  |   |
| Additional condition protection degree  | inserted, screwed   |
| Pollution Degree  | 3   |
| Rated surge voltage   | 0,8 kV  |
| Material group (IEC 60664-1)  |   |
| Mechanical data   Material data   |   |
| Coating locking   | safe-cover coated   |
| Coating of fitting  | nickel plated   |
| Locking material  | Zinc die-casting  |
| Material screw connection   | Zinc die-casting  |
| Mechanical data   Mounting data   | •   |
| Mounting method   | inserted, screwed, Shaking protection   |
| Environmental characteristics   Climatic  |   |
| Operating temperature min.  | -25 °C  |
| Operating temperature max.  | 80 °C   |
| Additional condition temperature range  | depending on cable quality  |
| Important installation notes  |   |
|   | Distant the composition by withhe measures from machanical leads on a by the years of cable time  |
| Note on strain relief   | Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.           Attention:         Observe the permissible bending radii when laying cables, as the IP protection class can be  |
| Note on bending radius  |   |
| -   | endangered by excessive bending forces.   |
| Conformity  | endangered by excessive bending forces.   |
| Conformity<br>Product standard  |   |
| Conformity<br>Product standard<br>Installation   Cable  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)  |
| Conformity<br>Product standard<br>Installation   Cable<br>Cable identification  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651   |
| Conformity<br>Product standard<br>Installation   Cable  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)  |
| Conformity<br>Product standard<br>Installation   Cable<br>Cable identification<br>Cable Type<br>Jacket Color  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651   |
| Conformity<br>Product standard<br>Installation   Cable<br>Cable identification<br>Cable Type  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5  |
| Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1   |
| Conformity<br>Product standard<br>Installation   Cable<br>Cable identification<br>Cable Type<br>Jacket Color<br>Type of Certificate<br>Amount stranding<br>Stranding  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus  |
| Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement   | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white   |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)   | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted  |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m   |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m<br>PUR  |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m   |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m<br>PUR  |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket  | endangered by excessive bending forces.         DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)         651         5         black         cURus         1         4 wires twisted         brown, black, blue, white         5 m @ 25 °C   horizontal         31,9 g/m         PUR         58 ± 3 Shore D  |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket         Freedom from ingredients (jacket)  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m<br>PUR<br>58 ± 3 Shore D<br>lead-free, cadmium-free, CFC-free, halogen-free, silicone-free  |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket         Freedom from ingredients (jacket)         Outer-diameter (jacket)  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m<br>PUR<br>58 ± 3 Shore D<br>lead-free, cadmium-free, CFC-free, halogen-free, silicone-free<br>4,7 mm   |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket         Freedom from ingredients (jacket)         Outer-diameter (jacket)         Tolerance outer diameter (sheath)  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m<br>PUR<br>58 ± 3 Shore D<br>lead-free, cadmium-free, CFC-free, halogen-free, silicone-free<br>4,7 mm<br>± 5 %   |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket         Freedom from ingredients (jacket)         Outer-diameter (jacket)         Tolerance outer diameter (sheath)         Material wire insulation   | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31,9 g/m<br>PUR<br>58 ± 3 Shore D<br>lead-free, cadmium-free, CFC-free, halogen-free, silicone-free<br>4,7 mm<br>± 5 %<br>PP   |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket         Freedom from ingredients (jacket)         Outer-diameter (jacket)         Tolerance outer diameter (sheath)         Material wire insulation         Amount wires  | endangered by excessive bending forces.         DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)         651         5         black         cURus         1         4 wires twisted         brown, black, blue, white         5 m @ 25 °C   horizontal         31,9 g/m         PUR         58 ± 3 Shore D         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free         4,7 mm         ± 5 %         PP         4                               |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket         Freedom from ingredients (jacket)         Outer-diameter (jacket)         Tolerance outer diameter (sheath)         Material wire insulation         Amount wires         Outer diameter insulation  | endangered by excessive bending forces.<br>DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)<br>651<br>5<br>black<br>cURus<br>1<br>4 wires twisted<br>brown, black, blue, white<br>5 m @ 25 °C   horizontal<br>31.9 g/m<br>PUR<br>58 ± 3 Shore D<br>lead-free, cadmium-free, CFC-free, halogen-free, silicone-free<br>4.7 mm<br>± 5 %<br>PP<br>4<br>1,25 mm   |
| Conformity         Product standard         Installation   Cable         Cable identification         Cable Type         Jacket Color         Type of Certificate         Amount stranding         Stranding         wire arrangement         Traversing distance (C-track)         Cable weigth         Material jacket         Shore hardness jacket         Freedom from ingredients (jacket)         Outer-diameter (jacket)         Tolerance outer diameter (sheath)         Material wire insulation         Amount wires         Outer diameter insulation         Outer diameter tolerance core insulation | endangered by excessive bending forces.         DIN EN 61076-2-101 (M12), DIN EN 61076-2-114 (M8)         651         5         black         cURus         1         4 wires twisted         brown, black, blue, white         5 m @ 25 °C   horizontal         31,9 g/m         PUR         58 ± 3 Shore D         lead-free, cadmium-free, CFC-free, halogen-free, silicone-free         4,7 mm         ± 5 %         PP         4         1,25 mm         ± 5 % |

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| Amount strands (wire)                             | 32   |
|---|--|
| Diameter of single wires                          | 0,1 mm   |
| Conductor crosssection (wire)                     | 0,25 mm <sup>2</sup>                                 |
| Material conductor wire                           | Stranded copper wire, bare                           |
| Conductor type (wire)                             | strand class 6                                       |
| Nominal voltage AC max.                           | 300 V  |
| Current load capacity (standard)                  | to DIN VDE 0298-4                                    |
| Current load capacity min. wire                   | 3,6 A  |
| Electrical resistance line constant wire          | 79 Ω/km @ 20 °C                                      |
| AC withstand voltage (wire - wire)                | 2,5 kV @ 60 s  |
| Power frequency withstand voltage (wire - jacket) | 2,5 kV @ 60 s  |
| Min. operating temperature (static)               | -40 °C   |
| Max. operating temperature (fixed)                | 80 °C / 90 °C @ 10000 h Operation                    |
| Operating temperature min. (dynamic)              | -25 °C   |
| Operating temperature max. (dynamic)              | 80 °C / 90 °C @ 10000 h Operation                    |
| UV resistance                                     | DIN EN ISO 4892-2 A                                  |
| Flame resistance                                  | IEC 60332-2-2   UL 1581 § 1090   UL 1581 § 1100 FT2  |
| chemical resistance                               | Good, application-related testing                    |
| Gasoline resistance                               | Good, application-related testing                    |
| Oil resistance                                    | DIN EN 60811-404   Good, application-related testing |
| Bending radius (fixed)                            | 5 x Outer diameter                                   |
| Bending radius (dynamic)                          | 10 x Outer diameter                                  |
| Travel speed (C-track)                            | 10 Mio. @ 25 °C                                      |
| No. of torsion cycles                             | 1 Mio.   |
| Torsion stress                                    | ± 360 °/m  |
| Torsion speed                                     | 35 cycles/min  |

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