Data sheet

# SAIP-M12GM12W-4-3.0U

**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com






Sensor/actuator cables are used for wiring sensors and actuators and for transmitting data or power in various applications. The moulded cable offers connected and tested connection of the plug-in connector to the cable ex-works. The cables may be exposed to a wide range of conditions, such as humidity, dust, heat, cold, shock or vibration.
Our developers have focused specifically on this issue and designed a host of different M8 and M12 sensor-actuator cables so you are bound to find the solution you need for your application.
The M8 and M12 sensor-actuator cables are supplied as standard with brass nickel-plated nuts. However if you are looking to use our products in an extremely harsh environment, we can also supply a variant with a plastic nut. This enables use in environments where cables with nickel-plated M8 and M12 nuts would rust.
Is there something you have not managed to find or you feel needs explanation? Talk to us!

## General ordering data

| | |
|---|---|
| Version | Sensor/actuator line, Connecting line, M12 / M12, Number of poles : 4, 3 m, pin, straight - socket, 90°, Shielded: No, LED: No, Sheath material: PUR, Halogen: No |
| Order No. | 1108880300 |
| Type | SAIP-M12GM12W-4-3.0U |
| GTIN (EAN) | 4032248887965 |
| Qty. | 1 items |

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# Technical data

### Approvals

| | |
|---|---|
| Approvals | |
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate no. (cULus) | E307231 |

### Dimensions and weights

| | |
|---|---|
| Net weight | 103.84 g |

### Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant with exemption |
| RoHS Exemption (if applicable/known) | 6c |
| REACH SVHC | Lead 7439-92-1 |
| SCIP | 1c533b66-fcff-4da5-b89f-fd55fbf5cb55 |

### Technical specifications for cable

| | | | |
|---|---|---|---|
| Cable length | 3 m | Sheathing colour | black (similar to RAL 9005) |
| Resistance to oils | Yes | Suitable for cable carriers | Yes |
| Core cross-section | 0.34 mm² | Number of wires | 4 |
| Shielded | No | Halogen | No |
| Insulation | PP | Acceleration | 5 m/s² |
| Bending radius, min., moving | 10 x cable diameter | Bending radius, min., stationary | 5 x cable diameter |
| Bending cycles | 12 Mio | Resistance to spread of flame | In accordance with UL1581 UL / CUL FT2, in accordance with IEC 60332-2-2 |
| Speed | 3.33 m/s | Sheath material | PUR |
| Cable length configurable | No | LABS-free | Yes |
| Hydrolysis and microbe resistant | Yes | Outer cladding in accordance with UL AWM style | 20549 (80 °C / 300 V) |
| Core in accordance with UL AWM style | 10493 (80 °C / 300 V) | Irradiation crosslinked | No |
| Welding spark resistance | No | Colour coding | brown, white, blue, black |
| Torsion resistance | 180 °/m | Temperature range, stationary | -50...80 °C |
| Resistant to welding beads | No | Bending cycles at torsion | > 5 Mio. |
| Temperature range, moving | -25...60 °C | Torsional length | 1 m |
| Number of poles | 4 | Outside diameter | 4.1 mm + 0.15 mm |

### General technical data

| | | | |
|---|---|---|---|
| Coding | A-coded | Connection thread | M12 / M12 |
| Contact surface | Gold-plated | LED | No |
| Version | pin, straight - socket, 90° | Housing main material | PUR |
| Insulation resistance | 108 Ω | Nominal voltage | 250 V |
| Nominal current | 4 A | Protection degree | IP65, IP66, IP67, IP68, when screwed in |
| Plugging cycles | ≥ 100 | Pollution severity | 3 |
| jumpered | No | Threaded ring material | Plastic |
| Temperature range of housing | -25...+85 °C | Tightening torque | M12 (plastic): 0.9 - 1.1 Nm |

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# Technical data

### Electrical properties

| | | | |
|---|---|---|---|
| Insulation resistance | 108 Ω | Nominal voltage | 250 V |

### General standards

| | | | |
|---|---|---|---|
| Connector standard | IEC 61076-2-101 | Certificate no. (cULus) | E307231 |

### Standards

| | |
|---|---|
| Connector standard | IEC 61076-2-101 |

### Plug, left

| | |
|---|---|
| Plug left | M12, A-coded, IP69, male contact, straight, Plastic, unshielded |

### Plug, right

| | |
|---|---|
| Plug right | M12, A-coded, IP69, female contact, angled 90°, Plastic, unshielded |

### Classifications

| | | | |
|---|---|---|---|
| ETIM 8.0 | EC001855 | ETIM 9.0 | EC001855 |
| ETIM 10.0 | EC001855 | ECLASS 14.0 | 27-06-03-11 |
| ECLASS 15.0 | 27-06-03-11 | | |

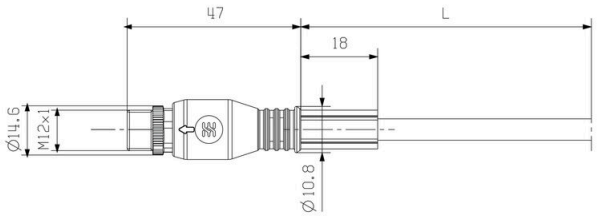
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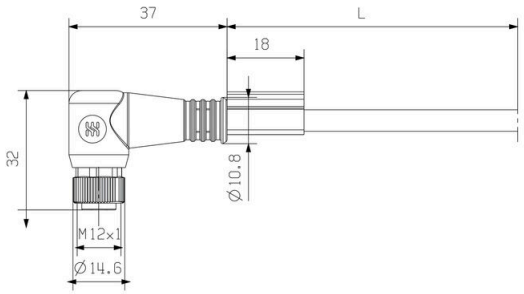
## Drawings

### Dimensioned drawing



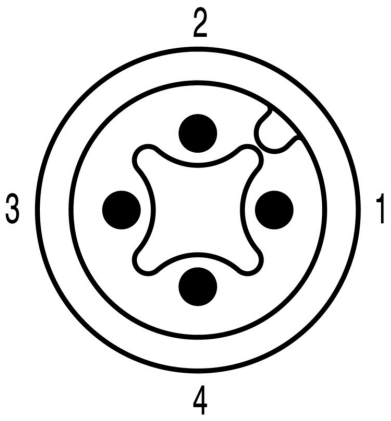

Male, straight

### Dimensioned drawing



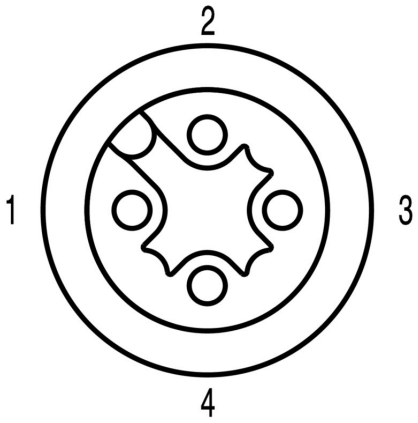

Angled socket

### Pole scheme




Male

### Pole scheme




Socket

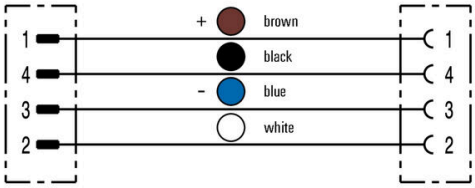
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## Drawings

### Wiring diagram




### The ideal tool: Screwty ® with torque function



Light, securely screwed-in round plug-in connectors. Screwty set DM / VPE: 1 / Order No.: 1920000000 Adapters: M12, M12 F, M8, M8 F

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## Accessories

### Cutting tools



Cutting tools for conductors up to 8 mm, 12 mm, 14 mm and 22 mm outside diameter. The special blade geometry allows pinch-free cutting of copper and aluminium conductors with minimum physical effort. The cutting tools (KT 8 to KT 22) also come with VDE and GS-tested protective insulation up to 1,000 V in accordance with EN/IEC 60900.

#### General ordering data

| | | |
|---|---|---|
| Type | KT 8 | Version |
| Order No. | 9002650000 | Cutting tools, Cutting tool for one-hand operation |
| GTIN (EAN) | 4008190020163 | |
| Qty. | 1 ST | |

### Tools



Sheathing stripper for PVC cables

#### General ordering data

| | | |
|---|---|---|
| Type | AM 12 | Version |
| Order No. | 9030060000 | Tools, Sheathing strippers |
| GTIN (EAN) | 4008190337827 | |
| Qty. | 1 ST | |

### Screwty® cable gland tool with torque function



The ideal tool for any application
Screwty® is the ideal, all-purpose tool for tightening all common sensor and actuator cables. Even difficult-to-reach round plugs are accessible using the Screwty®. A simple turning movement tightens and loosens the connectors without the need for excessive force. The Screwty® is a unique and global solution since it fits with most cables and plugs from other vendors (over 90 %). The Screwty® consists of a handle with a conventional 1/4" adapter. Thus it can be used for all sizes: for M12 and M8 round plug-in connectors, and for M12F and M8F customisable plugs and sockets, as well as for all M23 plugs and sockets.

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## Accessories

### General ordering data

| | | |
|---|---|---|
| Type | SCREWTY-M12-DM | Version |
| Order No. | 1900001000 | Cable gland tool for moulded M12 lines |
| GTIN (EAN) | 4032248436408 | |
| Qty. | 1 ST | |

| | | |
|---|---|---|
| Type | SCREWTY SW12 | Version |
| Order No. | 2598970000 | Interchangeable blade for cable gland tool |
| GTIN (EAN) | 4050118781151 | |
| Qty. | 1 ST | |

| | | |
|---|---|---|
| Type | SAI-SCREWTY BOX | Version |
| Order No. | 1939180000 | Bolting tool |
| GTIN (EAN) | 4032248615506 | |
| Qty. | 1 ST | |

### Tools




- Stripping tools with automatic self-adjustment
- For flexible and solid conductors
- Ideally suitable for mechanical and plant engineering, railway and rail traffic, wind energy, robot technology, explosion protection as well as marine, offshore and ship building sectors
- Stripping length adjustable via end stop
- Automatic opening of clamping jaws after stripping
- No fanning-out of individual conductors
- Adjustable to diverse insulation thicknesses
- Double-insulated cables in two process steps without special adjustment
- No play in self-adjusting cutting unit
- Long service life
- Optimised ergonomic design

### General ordering data

| | | |
|---|---|---|
| Type | STRIPPER 6-16 RED-LINE | Version |
| Order No. | 9203110000 | Stripping and cutting tool |
| GTIN (EAN) | 4032248541423 | |
| Qty. | 1 ST | |

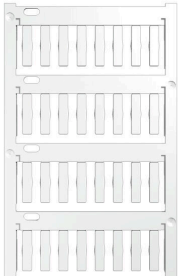
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## Accessories

### Blank



TM-I is an acknowledged and accredited marker type for traffic engineering applications. There are various different tag lengths available for individual labelling with long character strings. Easy handling of separation and installation thanks to the project marker field. Pre-attachment of sleeves and retrofitting of tags offer excellent versatility
The special contour of TM-I allows easy assembly and secures firm positioning. They are compatible with a number of commercially available sleeves. Thanks to the MultiCard format, the tags can be printed quickly and conveniently with the PrintJet CONNECT, plotter or the STI pen.

- Easy handling of separation and installation thanks to the project marker field.
- Acknowledged and accredited marker for traffic engineering applications
- Pre-attachment of sleeves and retrofitting of tags offer excellent versatility
- Not suited for labelling with P-Ink or STI pen in connection with CLI T sleeves

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

### General ordering data

| | | |
|---|---|---|
| Type | TM-I 18 MC NE WS | Version |
| Order No. | 1718431044 | TM-I, Insert markers, 1.5 - 22 mm, 18 x 4 mm, white |
| GTIN (EAN) | 4008190349011 | |
| Qty. | 320 ST | |
| Type | TM-I 18 MC NE GE | Version |
| Order No. | 1718431687 | TM-I, Insert markers, 1.5 - 22 mm, 18 x 4 mm, yellow |
| GTIN (EAN) | 4008190349028 | |
| Qty. | 320 ST | |