

# M5 to M12 circular plug-in connectors

## Sensor/actuator device plug-in connectors

A comprehensive range of M5, M8, and M12 flush-type plug-in connectors and panel feed-throughs has emerged as a result of the various requirements for sensor/actuator device connection technology in industrial environments. Customer-specific developments enable optimum adaptation to individual device concepts.

## Sensor/actuator plug-in connectors for assembly

Safe and efficient assembly is of utmost importance in field wiring. The 5 selection options of the connection technology enable precise adaptation to the respective application or requirements in the field. The plug-in connectors for assembly are available in various versions, unshielded and EMC-compliant.

## Sensor/actuator device plug-in connectors

|                                    |     |
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## Sensor/actuator plug-in connectors for assembly

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|                                                          |     |
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## Accessories

|                 |     |
|-----------------|-----|
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|-----------------|-----|

## M5 to M12 circular plug-in connectors

### M5/M8 sensor/actuator device plug-in connectors

#### M5, front/rear mounting

##### Notes:

Flat nut recommended for housing wall thicknesses < 2.5 mm.



Front mounting,  
with 0.5 m long litz wires



Rear mounting, one-piece, straight,  
for wave soldering processes



##### Technical data

| General data                                |                  |
|---------------------------------------------|------------------|
| M5 circular plug-in connector according to: |                  |
| Pollution degree                            | 3                |
| Degree of protection                        | IP67             |
| Connection method                           | Individual wires |
| Electrical data                             |                  |
| Rated voltage                               | 60 V             |
| Rated current                               | 1 A              |
| Volume resistance                           | ≤ 3 mΩ           |
| Material data                               |                  |
| Material contact / contact surface          | CuSn / Au        |
| Contact carrier material                    | PA 66            |
| Inflammability class according to UL 94     | HB               |
| Cable type                                  | TPE litz wire    |
| Temperature data                            |                  |
| Plug / socket                               | [-25 ... 85] °C  |

| 3-pos.           |  | 4-pos.           |  |
|------------------|--|------------------|--|
| IEC 61076-2-105  |  | IEC 61076-2-105  |  |
| 3                |  | 3                |  |
| IP67             |  | IP67             |  |
| Individual wires |  | Individual wires |  |
| 60 V             |  | 60 V             |  |
| 1 A              |  | 1 A              |  |
| ≤ 3 mΩ           |  | ≤ 3 mΩ           |  |
| CuSn / Au        |  | CuSn / Au        |  |
| PA 66            |  | PA 66            |  |
| HB               |  | HB               |  |
| TPE litz wire    |  | TPE litz wire    |  |
| -25 ... 85       |  | -25 ... 85       |  |

##### Ordering data

| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 3-pos.    |             | 4-pos.    |             |
| 1530605   | 1           | 1530618   | 1           |
| 1530582   | 1           | 1530595   | 1           |

##### Accessories

|                 |
|-----------------|
| Flat nut, with: |
| M5 thread       |

|               |         |     |
|---------------|---------|-----|
| SACC-E-MU-M 5 | 1535901 | 100 |
|---------------|---------|-----|



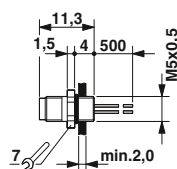
##### Technical data

| 3-pos.          |  | 4-pos.          |  |
|-----------------|--|-----------------|--|
| IEC 61076-2-105 |  | IEC 61076-2-105 |  |
| 3               |  | 3               |  |
| IP67            |  | IP67            |  |
| Solder pins     |  | Solder pins     |  |
| 60 V            |  | 60 V            |  |
| 1 A             |  | 1 A             |  |
| ≤ 3 mΩ          |  | ≤ 3 mΩ          |  |
| CuSn / Au       |  | CuSn / Au       |  |
| PA 66           |  | PA 66           |  |
| HB              |  | HB              |  |
| -               |  | -               |  |
| -25 ... 80      |  | -25 ... 85      |  |

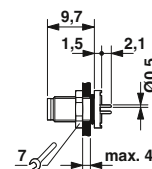
##### Ordering data

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 3-pos.    |             | 4-pos.    |             |
| 1530647   | 20          | 1530650   | 20          |
| 1530621   | 20          | 1530634   | 20          |

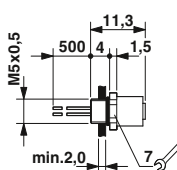
##### Accessories



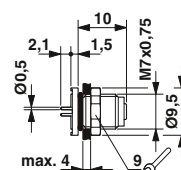
M5 flush-type plug



M5 flush-type plug, one-piece



M5 flush-type socket



M5 flush-type socket, one-piece

# M5 to M12 circular plug-in connectors

## M5/M8 sensor/actuator device plug-in connectors

**M8, front mounting,  
with 0.5 m long litz wires**



M8, 3, 4, 5-pos.



M8, 6, 8-pos.



| Technical data                              |                  |                  |                  |
|---------------------------------------------|------------------|------------------|------------------|
| 3-pos.                                      | 4-pos.           | 5-pos.           |                  |
| General data                                |                  |                  |                  |
| M8 circular plug-in connector according to: | IEC 61076-2-104  | IEC 61076-2-104  | IEC 61076-2-104  |
| Pollution degree                            | 3                | 3                | 3                |
| Degree of protection                        | IP67             | IP67             | IP67             |
| Connection method                           | Individual wires | Individual wires | Individual wires |
| Electrical data                             |                  |                  |                  |
| Rated voltage                               | 60 V             | 30 V             | 30 V             |
| Rated current                               | 4 A              | 4 A              | 3 A              |
| Volume resistance                           | ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                               |                  |                  |                  |
| Material contact / contact surface          | Cu alloy / Au    | Cu alloy / Au    | Cu alloy / Au    |
| Contact carrier material                    | PA 66            | PA 66            | PA 66            |
| Inflammability class according to UL 94     | HB               | HB               | HB               |
| Cable type                                  | TPE litz wire    | TPE litz wire    | PVC litz wire    |
| Temperature data                            |                  |                  |                  |
| Plug / socket                               | -25 ... 85       | -25 ... 85       | -25 ... 85       |



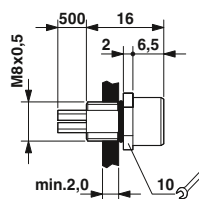
| Technical data                              |                  |                  |       |
|---------------------------------------------|------------------|------------------|-------|
| 6-pos.                                      | 8-pos.           |                  |       |
| General data                                |                  |                  |       |
| M8 circular plug-in connector according to: | IEC 61076-2-104  | IEC 61076-2-104  | -     |
| Pollution degree                            | 3                | 3                | -     |
| Degree of protection                        | IP67             | IP67             | -     |
| Connection method                           | Individual wires | Individual wires | -     |
| Electrical data                             |                  |                  |       |
| Rated voltage                               | 30 V             | 30 V             | -     |
| Rated current                               | 2 A              | 1.5 A            | -     |
| Volume resistance                           | ≤ 3 mΩ           | ≤ 3 mΩ           | -     |
| Material data                               |                  |                  |       |
| Material contact / contact surface          | Cu alloy / Au    | Cu alloy / Au    | - / - |
| Contact carrier material                    | PA 66            | PA 66            | -     |
| Inflammability class according to UL 94     | HB               | HB               | -     |
| Cable type                                  | TPE litz wire    | PVC litz wire    | -     |
| Temperature data                            |                  |                  |       |
| Plug / socket                               | -25 ... 85       | -25 ... 85       | -     |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 3-pos.        |             | 4-pos.    |             | 5-pos.    |             |
| 1500350       | 1           | 1500363   | 1           |           |             |
| 1500334       | 1           | 1500347   | 1           |           |             |
|               |             |           |             | 1424233   | 1           |
|               |             |           |             | 1424234   | 1           |

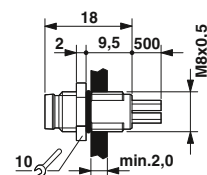
| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 6-pos.        |             | 8-pos.    |             |           |             |
| 1542677       | 1           | 1424231   | 1           |           |             |
| 1542664       | 1           | 1424232   | 1           |           |             |

| Accessories   |         |     |  |
|---------------|---------|-----|--|
| SACC-E-MU-M 8 | 1504071 | 100 |  |

| Accessories   |         |     |  |
|---------------|---------|-----|--|
| SACC-E-MU-M 8 | 1504071 | 100 |  |



M8 flush-type socket



M8 flush-type plug

M5 to M12 circular plug-in connectors

M5/M8 sensor/actuator device plug-in connectors

M8, rear mounting, one-piece, straight, for wave soldering processes



M8, 3, 4-pos.



M8, 6, 8-pos.



| General data                                |             |
|---------------------------------------------|-------------|
| M8 circular plug-in connector according to: |             |
| Pollution degree                            | 3           |
| Degree of protection                        | IP67        |
| Connection method                           | Solder pins |
| Electrical data                             |             |
| Rated voltage                               | 60 V        |
| Rated current                               | 4 A         |
| Volume resistance                           | ≤ 3 mΩ      |
| Material data                               |             |
| Material contact / contact surface          | CuSn / Au   |
| Contact carrier material                    | PA 66       |
| Inflammability class according to UL 94     | HB          |
| Temperature data                            |             |
| Plug / socket                               | [°C]        |

| Technical data  |  |                 |  |
|-----------------|--|-----------------|--|
| 3-pos.          |  | 4-pos.          |  |
| IEC 61076-2-104 |  | IEC 61076-2-104 |  |
| 3               |  | 3               |  |
| IP67            |  | IP67            |  |
| Solder pins     |  | Solder pins     |  |
| 60 V            |  | 30 V            |  |
| 4 A             |  | 4 A             |  |
| ≤ 3 mΩ          |  | ≤ 3 mΩ          |  |
| CuSn / Au       |  | CuSn / Au       |  |
| PA 66           |  | PA 66           |  |
| HB              |  | HB              |  |
| -25 ... 85      |  | -25 ... 85      |  |

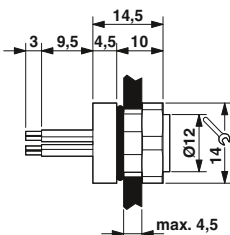


| Technical data  |  |                 |  |
|-----------------|--|-----------------|--|
| 6-pos.          |  | 8-pos.          |  |
| IEC 61076-2-104 |  | IEC 61076-2-104 |  |
| 3               |  | 3               |  |
| IP67            |  | IP67            |  |
| Solder pins     |  | Solder pins     |  |
| 30 V            |  | 30 V            |  |
| 1.5 A           |  | 1.5 A           |  |
| ≤ 3 mΩ          |  | ≤ 3 mΩ          |  |
| CuSn / Au       |  | CuSn / Au       |  |
| PA 66           |  | PA 66           |  |
| HB              |  | HB              |  |
| -25 ... 85      |  | -25 ... 85      |  |

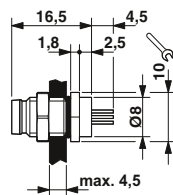
| Ordering data             |              |
|---------------------------|--------------|
| Description               | Coding       |
| Device plug-in connectors |              |
| Socket                    | A - standard |
| Plug                      | A - standard |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| 3-pos.        |             | 4-pos.    |             |
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 1694363       | 20          | 1694376   | 20          |
| 1694334       | 20          | 1694347   | 20          |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| 6-pos.        |             | 8-pos.    |             |
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 1436534       | 20          | 1424237   | 20          |
| 1436521       | 20          | 1424238   | 20          |



M8 flush-type socket



M8 flush-type plug

# M5 to M12 circular plug-in connectors

## M5/M8 sensor/actuator device plug-in connectors

**M8, rear mounting,  
with 0.5 m long litz wires**



3, 4-pos.



6, 8-pos.



| Technical data                              |                  |                  |
|---------------------------------------------|------------------|------------------|
|                                             | 3-pos.           | 4-pos.           |
| General data                                |                  |                  |
| M8 circular plug-in connector according to: | IEC 61076-2-104  | IEC 61076-2-104  |
| Pollution degree                            | 3                | 3                |
| Degree of protection                        | IP67             | IP67             |
| Connection method                           | Individual wires | Individual wires |
| Electrical data                             |                  |                  |
| Rated voltage                               | 60 V             | 30 V             |
| Rated current                               | 4 A              | 4 A              |
| Volume resistance                           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                               |                  |                  |
| Material contact / contact surface          | Cu alloy / Au    | Cu alloy / Au    |
| Contact carrier material                    | PUR / PA66       | PUR / PA66       |
| Inflammability class according to UL 94     | HB               | HB               |
| Cable type                                  | TPE litz wire    | TPE litz wire    |
| Temperature data                            |                  |                  |
| Plug / socket                               | [-25 ... 85 °C]  | [-25 ... 85 °C]  |
| Cable, fixed installation                   | [-25 ... 90 °C]  | [-25 ... 90 °C]  |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 3-pos.        |             | 4-pos.    |             |
| 1453478       | 1           | 1453481   | 1           |
| 1456080       | 1           | 1456093   | 1           |
| 1453449       | 1           | 1453452   | 1           |

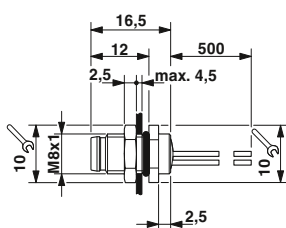
| Accessories                  |               |             |
|------------------------------|---------------|-------------|
| Flat nut, with:<br>M8 thread | SACC-E-MU-M 8 | 1504071 100 |



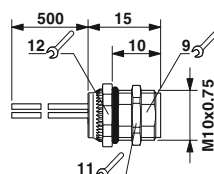
| Technical data                              |                  |                  |
|---------------------------------------------|------------------|------------------|
|                                             | 6-pos.           | 8-pos.           |
| General data                                |                  |                  |
| M8 circular plug-in connector according to: | IEC 61076-2-104  | IEC 61076-2-104  |
| Pollution degree                            | 3                | 3                |
| Degree of protection                        | IP67             | IP67             |
| Connection method                           | Individual wires | Individual wires |
| Electrical data                             |                  |                  |
| Rated voltage                               | 30 V             | 30 V             |
| Rated current                               | 2 A              | 1.5 A            |
| Volume resistance                           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                               |                  |                  |
| Material contact / contact surface          | Cu alloy / Au    | Cu alloy / Au    |
| Contact carrier material                    | PUR / PA66       | PUR / PA66       |
| Inflammability class according to UL 94     | HB               | HB               |
| Cable type                                  | TPE litz wire    | PVC litz wire    |
| Temperature data                            |                  |                  |
| Plug / socket                               | [-25 ... 85 °C]  | [-25 ... 85 °C]  |
| Cable, fixed installation                   | [-25 ... 90 °C]  | [-25 ... 85 °C]  |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 6-pos.        |             | 8-pos.    |             |
| 1453494       | 1           | 1424230   | 1           |
| 1456103       | 1           | 1424229   | 1           |
| 1453465       | 1           |           |             |

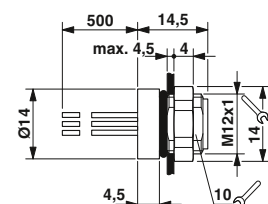
| Accessories                  |               |             |
|------------------------------|---------------|-------------|
| Flat nut, with:<br>M8 thread | SACC-E-MU-M 8 | 1504071 100 |



M8 flush-type plug, M8 fastening thread



M8 flush-type socket, M10 fastening thread



M8 flush-type socket, M12 fastening thread

## M5 to M12 circular plug-in connectors

### M5/M8 sensor/actuator device plug-in connectors

**M8, rear mounting, two-piece,  
for wave soldering processes, shielded**

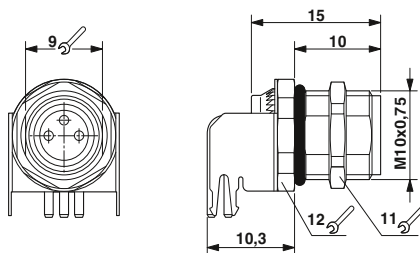


Angled, 3, 4-pos.

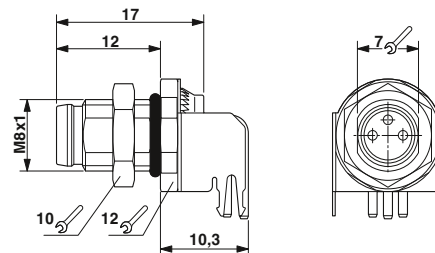


Angled, 5, 6-pos.

|                                             |              | Technical data  |                 | Technical data  |                 |    |
|---------------------------------------------|--------------|-----------------|-----------------|-----------------|-----------------|----|
|                                             |              | 3-pos.          | 4-pos.          | 5-pos.          | 6-pos.          |    |
| General data                                |              |                 |                 |                 |                 |    |
| M8 circular plug-in connector according to: |              | IEC 61076-2-104 | IEC 61076-2-104 | IEC 61076-2-104 | IEC 61076-2-104 |    |
| Pollution degree                            |              | 3               | 3               | 3               | 3               |    |
| Degree of protection                        |              | IP67            | IP67            | IP67            | IP67            |    |
| Connection method                           |              | Solder pins     | Solder pins     | Solder pins     | Solder pins     |    |
| Electrical data                             |              |                 |                 |                 |                 |    |
| Rated voltage                               |              | 30 V            | 30 V            | 30 V            | 30 V            |    |
| Rated current                               |              | 4 A             | 4 A             | 3 A             | 1.5 A           |    |
| Volume resistance                           |              | ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |    |
| Material data                               |              |                 |                 |                 |                 |    |
| Material contact / contact surface          |              | Cu alloy / Au   | Cu alloy / Au   | Cu alloy / Au   | Cu alloy / Au   |    |
| Contact carrier material                    |              | PA 66           | PA 66           | PA 66           | PA 66           |    |
| Inflammability class according to UL 94     |              | HB              | HB              | HB              | HB              |    |
| Temperature data                            |              |                 |                 |                 |                 |    |
| Plug / socket                               |              | [°C]            |                 |                 |                 |    |
|                                             |              | -25 ... 85      | -25 ... 85      | -25 ... 85      | -25 ... 85      |    |
|                                             |              | Ordering data   |                 | Ordering data   |                 |    |
|                                             |              | Order No.       | Pcs. / Pkt.     | Order No.       | Pcs. / Pkt.     |    |
|                                             |              | Order No.       | Pcs. / Pkt.     | Order No.       | Pcs. / Pkt.     |    |
|                                             |              | 3-pos.          | 4-pos.          | 5-pos.          | 6-pos.          |    |
| Device plug-in connectors                   |              |                 |                 |                 |                 |    |
| Socket                                      | A - standard | 1456145         | 20              |                 | 1424243         | 20 |
| Plug                                        | A - standard | 1456035         | 20              |                 | 1424244         | 20 |
| Socket                                      | B - inverse  |                 |                 | 1424239         | 20              |    |
| Plug                                        | B - inverse  |                 |                 | 1424240         | 20              |    |



M8 flush-type socket, angled



M8 flush-type plug, angled

## M5 to M12 circular plug-in connectors

### M5/M8 sensor/actuator device plug-in connectors

**M8, rear mounting, two-piece,  
for wave soldering processes, shielded**



Straight, 3, 4, 5-pos.



Straight, 6, 8-pos.



| Technical data                              |                          |                          |                          |
|---------------------------------------------|--------------------------|--------------------------|--------------------------|
| 3-pos.                                      | 4-pos.                   | 5-pos.                   |                          |
| General data                                |                          |                          |                          |
| M8 circular plug-in connector according to: | IEC 61076-2-104          | IEC 61076-2-104          | IEC 61076-2-104          |
| Pollution degree                            | 3                        | 3                        | 3                        |
| Degree of protection                        | IP67                     | IP67                     | IP67                     |
| Connection method                           | Solder pins              | Solder pins              | Solder pins              |
| Electrical data                             |                          |                          |                          |
| Rated voltage                               | 60 V                     | 30 V                     | 30 V                     |
| Rated current                               | 4 A                      | 4 A                      | 3 A                      |
| Volume resistance                           | $\leq 3 \text{ m}\Omega$ | $\leq 3 \text{ m}\Omega$ | $\leq 3 \text{ m}\Omega$ |
| Material data                               |                          |                          |                          |
| Material contact / contact surface          | Cu alloy / Au            | Cu alloy / Au            | Cu alloy / Au            |
| Contact carrier material                    | PA 66                    | PA 66                    | PA 66                    |
| Inflammability class according to UL 94     | HB                       | HB                       | HB                       |
| Temperature data                            |                          |                          |                          |
| Plug / socket                               | -25 ... 85               | -25 ... 85               | -25 ... 85               |

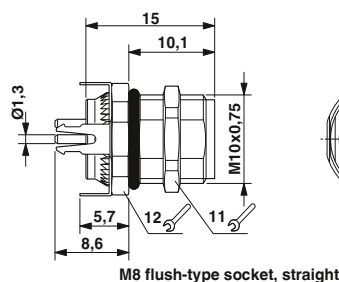
| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 3-pos.        |             | 4-pos.    |             | 5-pos.    |             |
| 1456116       | 20          | 1456129   | 20          |           |             |
| 1455997       | 20          | 1456019   | 20          |           |             |
|               |             |           |             | 1424241   | 20          |
|               |             |           |             | 1424242   | 20          |



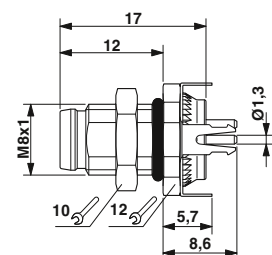
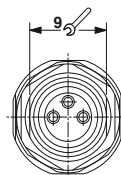
| Technical data           |                          |       |   |
|--------------------------|--------------------------|-------|---|
| 6-pos.                   | 8-pos.                   |       |   |
| General data             |                          |       |   |
| IEC 61076-2-104          | IEC 61076-2-104          | -     | - |
| 3                        | 3                        | -     | - |
| IP67                     | IP67                     | -     | - |
| Solder pins              | Solder pins              | -     | - |
| Electrical data          |                          |       |   |
| 30 V                     | 30 V                     | -     | - |
| 1.5 A                    | 1.5 A                    | -     | - |
| $\leq 3 \text{ m}\Omega$ | $\leq 3 \text{ m}\Omega$ | -     | - |
| Material data            |                          |       |   |
| Cu alloy / Au            | Cu alloy / Au            | - / - | - |
| PA 66                    | PA 66                    | -     | - |
| HB                       | HB                       | -     | - |
| Temperature data         |                          |       |   |
| -25 ... 85               | -25 ... 85               | -     | - |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 6-pos.        |             | 8-pos.    |             |           |             |
| 1456132       | 20          | 1424235   | 20          |           |             |
| 1456022       | 20          | 1424236   | 20          |           |             |

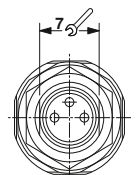
| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |
| Socket                           | B - inverse  |
| Plug                             | B - inverse  |



M8 flush-type socket, straight



M8 flush-type plug, straight,







## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

**Pg9 fastening thread,  
with 0.5 m long litz wires**



4, 5, 8-pos.



Can be positioned, 4, 5, 8-pos.



#### Technical data

|                                              |                  |
|----------------------------------------------|------------------|
| General data                                 |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  |
| Pollution degree                             | 3                |
| Degree of protection                         | IP67             |
| Connection method                            | Individual wires |
| Electrical data                              |                  |
| Rated voltage                                | 250 V            |
| Rated current                                | 4 A              |
| Volume resistance                            | ≤ 3 mΩ           |
| Material data                                |                  |
| Material contact / contact surface           | CuZn / Ni/Au     |
| Contact carrier material                     | PA66             |
| Inflammability class according to UL 94      | V0               |
| Cable type                                   | TPE litz wire    |
| Temperature data                             |                  |
| Plug / socket                                | [-25 ... 85 °C]  |

| 4-pos.           | 5-pos.           | 8-pos.           |
|------------------|------------------|------------------|
| IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| 3                | 3                | 3                |
| IP67             | IP67             | IP67             |
| Individual wires | Individual wires | Individual wires |
| 250 V            | 60 V             | 30 V             |
| 4 A              | 4 A              | 2 A              |
| ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| CuZn / Ni/Au     | CuZn / Ni/Au     | CuZn / Ni/Au     |
| PA66             | PA66             | PA66             |
| V0               | V0               | V0               |
| TPE litz wire    | TPE litz wire    | TPE litz wire    |
| -25 ... 85       | -25 ... 85       | -25 ... 85       |



#### Technical data

| 4-pos.           | 5-pos.           | 8-pos.           |
|------------------|------------------|------------------|
| IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| 3                | 3                | 3                |
| IP67             | IP67             | IP67             |
| Individual wires | Individual wires | Individual wires |
| 250 V            | 60 V             | 30 V             |
| 4 A              | 4 A              | 2 A              |
| ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| CuZn / Ni/Au     | CuZn / Ni/Au     | CuZn / Ni/Au     |
| PA66             | PA66             | PA66             |
| V0               | V0               | V0               |
| TPE litz wire    | TPE litz wire    | TPE litz wire    |
| -25 ... 85       | -25 ... 85       | -25 ... 85       |

#### Ordering data

| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |
| Socket                           | B - inverse  |
| Plug                             | B - inverse  |

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 4-pos.    |             | 5-pos.    |             | 8-pos.    |             |
| 1693788   | 1           | 1671098   | 1           | 1513758   | 1           |
| 1693762   | 1           | 1671111   | 1           | 1513774   | 1           |

#### Ordering data

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 4-pos.    |             | 5-pos.    |             | 8-pos.    |             |
| 1693791   | 1           | 1671108   | 1           | 1513761   | 1           |
| 1693775   | 1           | 1671124   | 1           | 1513787   | 1           |
|           |             | 1515044   | 1           |           |             |
|           |             | 1515057   | 1           |           |             |

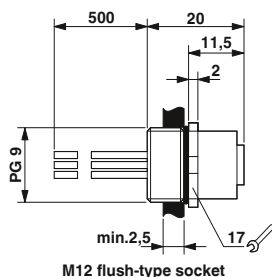
#### Accessories

|                        |
|------------------------|
| <b>Flat nut, with:</b> |
| Pg9 thread             |

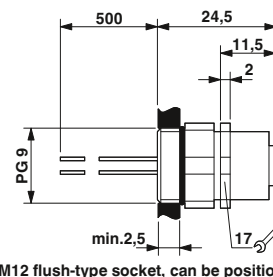
|                      |                |            |
|----------------------|----------------|------------|
| <b>SACC-E-MU-PG9</b> | <b>1504084</b> | <b>100</b> |
|----------------------|----------------|------------|

#### Accessories

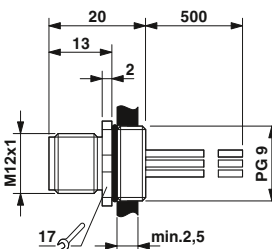
|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|



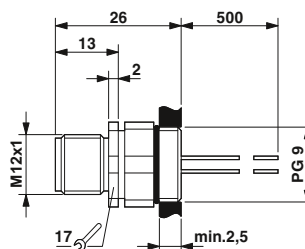
M12 flush-type socket



M12 flush-type socket, can be positioned



M12 flush-type plug



M12 flush-type plug, can be positioned

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

**M16 fastening thread,  
with 0.5 m long litz wires**



4, 5, 8-pos.



12, 17-pos.



| Technical data                               |                  |                  |
|----------------------------------------------|------------------|------------------|
| 4-pos.                                       | 5-pos.           | 8-pos.           |
| General data                                 |                  |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                |
| Degree of protection                         | IP67             | IP67             |
| Connection method                            | Individual wires | Individual wires |
| Electrical data                              |                  |                  |
| Rated voltage                                | 250 V            | 60 V             |
| Rated current                                | 4 A              | 4 A              |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |
| Material contact / contact surface           | CuZn / Ni/Au     | CuZn / Ni/Au     |
| Contact carrier material                     | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |
| Plug / socket                                | -25 ... 85       | -25 ... 85       |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |
| 1523434       | 1           | 1520039   |
| 1523450       | 1           | 1520055   |
| 1535202       | 1           | 1523492   |
| 1551558       | 1           |           |
|               |             | 1520000   |
|               |             | 1520013   |

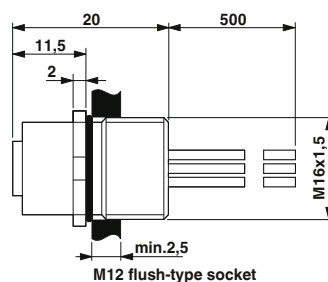
| Accessories   |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| SACC-E-MU-M16 | 1504097     | 100       |



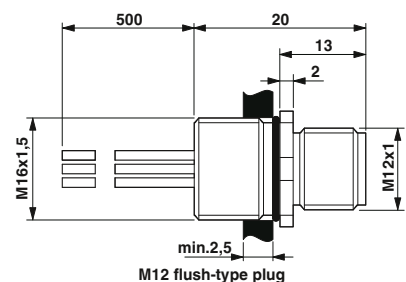
| Technical data                               |                  |                  |
|----------------------------------------------|------------------|------------------|
| 12-pos.                                      | 17-pos.          |                  |
| General data                                 |                  |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                |
| Degree of protection                         | IP67             | IP67             |
| Connection method                            | Individual wires | Individual wires |
| Electrical data                              |                  |                  |
| Rated voltage                                | 30 V             | 30 V             |
| Rated current                                | 1.5 A            | 1.5 A            |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |
| Material contact / contact surface           | CuZn / Ni/Au     | CuZn / Ni/Au     |
| Contact carrier material                     | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |
| Plug / socket                                | -25 ... 85       | -25 ... 85       |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 12-pos.       | 17-pos.     |           |
| 1556252       | 1           | 1556294   |
| 1556265       | 1           | 1556304   |

| Accessories   |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| SACC-E-MU-M16 | 1504097     | 100       |



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

M16 fastening thread,  
with 0.5 m long litz wires,  
can be positioned



Can be positioned, 4, 5-pos.



Can be positioned, 8-pos.

9A

#### Technical data

| General data                                 |                  |
|----------------------------------------------|------------------|
| M12 circular plug-in connector according to: |                  |
| Pollution degree                             | 3                |
| Degree of protection                         | IP67             |
| Connection method                            | Individual wires |
| Electrical data                              |                  |
| Rated voltage                                | 250 V            |
| Rated current                                | 4 A              |
| Volume resistance                            | ≤ 3 mΩ           |
| Material data                                |                  |
| Material contact / contact surface           | CuZn / Ni/Au     |
| Contact carrier material                     | PA 66            |
| Inflammability class according to UL 94      | V0               |
| Cable type                                   | TPE litz wire    |
| Temperature data                             |                  |
| Plug / socket                                | [-25 ... 85] °C  |

4-pos.

IEC 61076-2-101  
3  
IP67  
Individual wires

250 V  
4 A  
≤ 3 mΩ

CuZn / Ni/Au  
PA 66  
V0  
TPE litz wire

-25 ... 85

5-pos.

IEC 61076-2-101  
3  
IP67  
Individual wires

60 V  
4 A  
≤ 3 mΩ

CuZn / Ni/Au  
PA 66  
V0  
TPE litz wire

-25 ... 85

9A

#### Technical data

| General data                                 |                  |
|----------------------------------------------|------------------|
| M12 circular plug-in connector according to: |                  |
| Pollution degree                             | 3                |
| Degree of protection                         | IP67             |
| Connection method                            | Individual wires |
| Electrical data                              |                  |
| Rated voltage                                | 30 V             |
| Rated current                                | 2 A              |
| Volume resistance                            | ≤ 3 mΩ           |
| Material data                                |                  |
| Material contact / contact surface           | CuZn / Ni/Au     |
| Contact carrier material                     | PA 66            |
| Inflammability class according to UL 94      | V0               |
| Cable type                                   | TPE litz wire    |
| Temperature data                             |                  |
| Plug / socket                                | [-25 ... 85] °C  |

8-pos.

IEC 61076-2-101  
3  
IP67  
Individual wires

30 V  
2 A  
≤ 3 mΩ

CuZn / Ni/Au  
PA 66  
V0  
TPE litz wire

-25 ... 85

#### Ordering data

| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |
| Socket                           | D - data     |
| Plug                             | D - data     |
| Socket                           | B - inverse  |
| Plug                             | B - inverse  |

Order No. Pcs. / Pkt.  
4-pos.

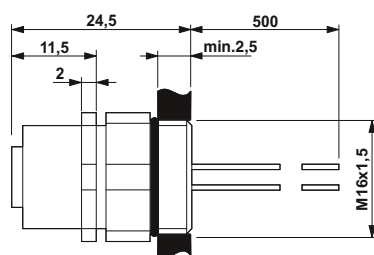
Order No. Pcs. / Pkt.  
5-pos.

1523447 1  
1523463 1  
1535215 1  
1552256 1

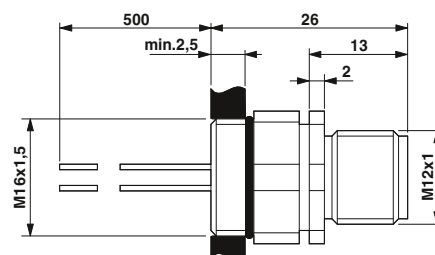
1520042 1  
1520068 1  
  
1519998 1  
1520026 1

#### Ordering data

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 8-pos.    |             |           |             |
| 1523489   | 1           |           |             |
| 1523502   | 1           |           |             |



M12 flush-type socket, can be positioned



M12 flush-type plug, can be positioned

**M20 fastening thread,  
with 0.5 m long litz wires**

– Housing material: brass, nickel-plated

**N**



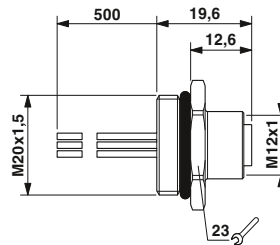
4, 5, 8-pos.

#### Technical data

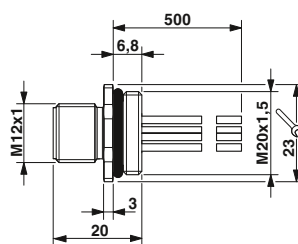
|                                              | 4-pos.           | 5-pos.           | 8-pos.           |
|----------------------------------------------|------------------|------------------|------------------|
| General data                                 |                  |                  |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                | 3                |
| Degree of protection                         | IP67/IP69K       | IP67/IP69K       | IP67/IP69K       |
| Connection method                            | Individual wires | Individual wires | Individual wires |
| Electrical data                              |                  |                  |                  |
| Rated voltage                                | 250 V            | 60 V             | 30 V             |
| Rated current                                | 4 A              | 4 A              | 2 A              |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |                  |
| Material contact / contact surface           | CuZn / Au        | CuZn / Au        | CuZn / Au        |
| Contact carrier material                     | PA 66            | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |                  |
| Plug / socket                                | [°C]             | [°C]             | [°C]             |
| Cable, fixed installation                    | -25 ... 85       | -25 ... 85       | -25 ... 85       |
|                                              | -25 ... 90       | -25 ... 90       | -25 ... 90       |

#### Ordering data

| Description                      | Coding       | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|----------------------------------|--------------|-----------|-------------|-----------|-------------|-----------|-------------|
|                                  |              | 4-pos.    |             | 5-pos.    |             | 8-pos.    |             |
| <b>Device plug-in connectors</b> |              |           |             |           |             |           |             |
| Socket                           | A - standard | 1408436   | 1           | 1408454   | 1           | 1408453   | 1           |
| Plug                             | A - standard | 1408451   | 1           | 1408446   | 1           | 1408442   | 1           |



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

One-piece, 20 mm square flange,  
with 0.5 m long litz wires

- 4 x fixing hole, 3.2 mm
- With form seal for M3 screws



4, 5, 8-pos.



12, 17-pos.



#### Technical data

| 4-pos.           | 5-pos.           | 8-pos.           |
|------------------|------------------|------------------|
| IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| 3                | 3                | 3                |
| IP67             | IP67             | IP67             |
| Individual wires | Individual wires | Individual wires |
| 250 V            | 60 V             | 30 V             |
| 4 A              | 4 A              | 2 A              |
| ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| CuZn / Ni/Au     | CuZn / Ni/Au     | CuZn / Ni/Au     |
| PA 66            | PA 66            | PA 66            |
| V0               | V0               | V0               |
| TPE litz wire    | TPE litz wire    | TPE litz wire    |
| -25 ... 85       | -25 ... 85       | -25 ... 85       |

#### Ordering data

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 4-pos.    |             | 5-pos.    |             | 8-pos.    |             |
| 1419797   | 1           | 1441655   | 1           | 1441697   | 1           |
| 1419784   | 1           | 1441642   | 1           | 1441684   | 1           |
| 1441639   | 1           |           |             |           |             |
| 1441626   | 1           |           |             |           |             |
|           |             | 1441671   | 1           |           |             |
|           |             | 1441668   | 1           |           |             |

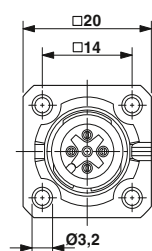
#### Technical data

| 12-pos.          | 17-pos.          |       |
|------------------|------------------|-------|
| IEC 61076-2-101  | IEC 61076-2-101  | -     |
| 3                | 3                | -     |
| IP67             | IP67             | -     |
| Individual wires | Individual wires | -     |
| 30 V             | 30 V             | -     |
| 1.5 A            | 1.5 A            | -     |
| ≤ 3 mΩ           | ≤ 3 mΩ           | -     |
| CuZn / Ni/Au     | CuZn / Ni/Au     | - / - |
| PA 66            | PA 66            | -     |
| V0               | V0               | -     |
| TPE litz wire    | TPE litz wire    | -     |
| -25 ... 85       | -25 ... 85       | -     |

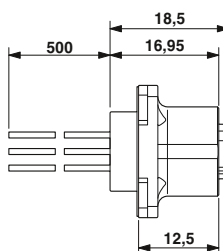
#### Ordering data

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 12-pos.   |             | 17-pos.   |             |           |             |
| 1441710   | 1           | 1441736   | 1           |           |             |
| 1441707   | 1           | 1441723   | 1           |           |             |

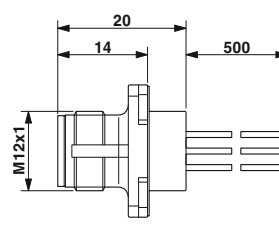
| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |
| Socket                           | D - data     |
| Plug                             | D - data     |
| Socket                           | B - inverse  |
| Plug                             | B - inverse  |



M12 flush-type socket, square flange



M12 flush-type plug, square flange

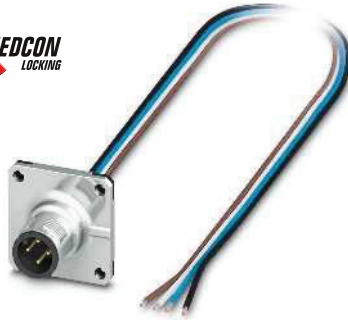


## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

One-piece, 25 mm square flange,  
with 0.5 m long litz wires

- 4 x fixing hole, 2.7 mm
- With form seal for M2.5 screws



4, 5, 8-pos.



12, 17-pos.



| Technical data                               |                  |                  |
|----------------------------------------------|------------------|------------------|
| 4-pos.                                       | 5-pos.           | 8-pos.           |
| General data                                 |                  |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                |
| Degree of protection                         | IP67             | IP67             |
| Connection method                            | Individual wires | Individual wires |
| Electrical data                              |                  |                  |
| Rated voltage                                | 250 V            | 60 V             |
| Rated current                                | 4 A              | 4 A              |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |
| Material contact / contact surface           | CuZn / Ni/Au     | CuZn / Ni/Au     |
| Contact carrier material                     | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |
| Plug / socket                                | -25 ... 85       | -25 ... 85       |

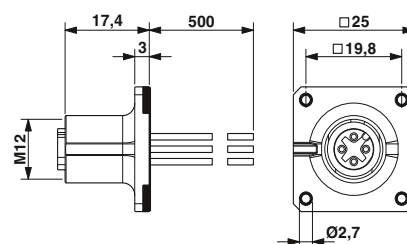


| Technical data                               |                  |                  |
|----------------------------------------------|------------------|------------------|
| 12-pos.                                      | 17-pos.          |                  |
| General data                                 |                  |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                |
| Degree of protection                         | IP67             | IP67             |
| Connection method                            | Individual wires | Individual wires |
| Electrical data                              |                  |                  |
| Rated voltage                                | 30 V             | 30 V             |
| Rated current                                | 1.5 A            | 1.5 A            |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |
| Material contact / contact surface           | CuZn / Ni/Au     | CuZn / Ni/Au     |
| Contact carrier material                     | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |
| Plug / socket                                | -25 ... 85       | -25 ... 85       |

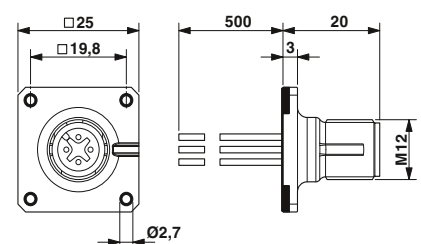
| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             | 8-pos.    |             |
| 1420003       | 1           | 1440986   | 1           | 1441574   | 1           |
| 1419991       | 1           | 1440973   | 1           | 1441561   | 1           |
| 1440960       | 1           |           |             |           |             |
| 1440957       | 1           |           |             |           |             |
|               |             | 1441558   | 1           |           |             |
|               |             | 1440999   | 1           |           |             |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |           |             |
| 1441590       | 1           | 1441613   | 1           |           |             |
| 1441587       | 1           | 1441600   | 1           |           |             |

| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |
| Socket                           | D - data     |
| Plug                             | D - data     |
| Socket                           | B - inverse  |
| Plug                             | B - inverse  |



M12 flush-type socket, square flange



M12 flush-type plug, square flange

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

**Modular, 25 mm square flange,  
pre-assembled**



**Flange housing,  
housing bore holes 3.2 mm**



#### Technical data

| General data                                 |                                 |       |       |
|----------------------------------------------|---------------------------------|-------|-------|
| M12 circular plug-in connector according to: | IEC 61076-2-101                 | -     | -     |
| Pollution degree                             | -                               | -     | -     |
| Degree of protection                         | -                               | -     | -     |
| Connection method                            | -                               | -     | -     |
| Electrical data                              |                                 |       |       |
| Rated voltage                                | -                               | -     | -     |
| Rated current                                | -                               | -     | -     |
| Volume resistance                            | -                               | -     | -     |
| Material data                                |                                 |       |       |
| Material contact / contact surface           | - / -                           | - / - | - / - |
| Contact carrier material                     | -                               | -     | -     |
| Cable gland material                         | Zinc die-cast,<br>nickel-plated | -     | -     |
| Inflammability class according to UL 94      | -                               | -     | -     |
| Cable type                                   | -                               | -     | -     |
| Temperature data                             |                                 |       |       |
| Plug / socket                                | [-25 ... 85                     | -     | -     |
| Cable, fixed installation                    | [-25 ... 85                     | -     | -     |

#### Ordering data

| Description                                                                                    | Coding       | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|------------------------------------------------------------------------------------------------|--------------|-----------|-------------|-----------|-------------|-----------|-------------|
| <b>Square flange housing, with O-ring</b>                                                      |              | 1419959   | 10          |           |             |           |             |
| <b>Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts</b> |              |           |             |           |             |           |             |
| Plug                                                                                           | A - standard |           |             |           |             |           |             |
| Plug                                                                                           | D - data     |           |             |           |             |           |             |
| Plug                                                                                           | B - inverse  |           |             |           |             |           |             |



**With 0.5 m long litz wires,  
assembled contact carrier  
and insulating body**

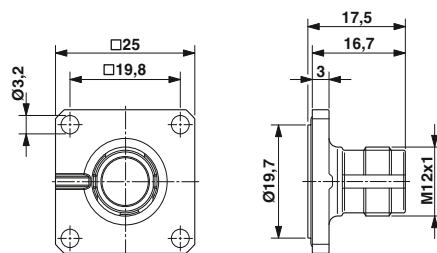


#### Technical data

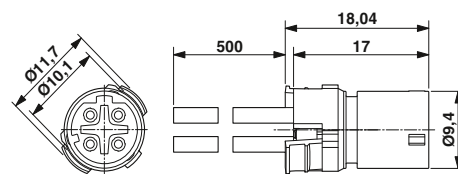
| 4-pos.          | 5-pos.          | 8-pos.          |
|-----------------|-----------------|-----------------|
| IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| 3               | 3               | 3               |
| IP67            | IP67            | IP67            |
| Crimp contacts  | Crimp contacts  | Crimp contacts  |
| 250 V           | 60 V            | 30 V            |
| 4 A             | 4 A             | 2 A             |
| ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |
| CuZn / Au       | CuZn / Au       | CuZn / Au       |
| PA 66           | PA 66           | PA 66           |
| -               | -               | -               |
| V0              | V0              | V0              |
| TPE litz wire   | TPE litz wire   | TPE litz wire   |
| -25 ... 85      | -25 ... 85      | -25 ... 85      |
| -25 ... 85      | -25 ... 85      | -25 ... 85      |

#### Ordering data

| Order No.     | Pcs. / Pkt. | Order No.     | Pcs. / Pkt. | Order No.     | Pcs. / Pkt. |
|---------------|-------------|---------------|-------------|---------------|-------------|
| <b>4-pos.</b> |             | <b>5-pos.</b> |             | <b>8-pos.</b> |             |
| 1440805       | 1           | 1440818       | 1           | 1457827       | 1           |
| 1440821       | 1           | 1440759       | 1           |               |             |



**M12 square flange housing**

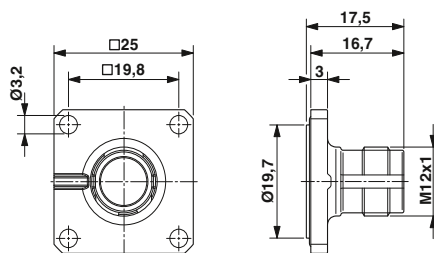


**M12 contact carrier, with litz wires**

### M12 sensor/actuator device plug-in connectors, front mounting



|                |         |   |
|----------------|---------|---|
| CRIMPFOX-TC MP | 1212510 | 1 |
|----------------|---------|---|



The technical drawing shows two views of the ball bearing:

- Front View (Left):** A circular cross-section showing four balls arranged in a square pattern. The outer diameter is labeled as  $\varnothing 17$ . The inner hole has a diameter of  $\varnothing 10,1$ .
- Side View (Right):** A longitudinal section showing the internal structure and the balls. The total width of the bearing is labeled as 18,04. The distance between the two main rings (the space where the balls sit) is labeled as 17. The height of the bearing from the base to the top of the rings is labeled as  $\varnothing 9,4$ .

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## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

One-piece, 20 mm square flange,  
for wave soldering processes

- M12 PCB connector for direct soldering  
with integrated torsion protection and  
shield connection

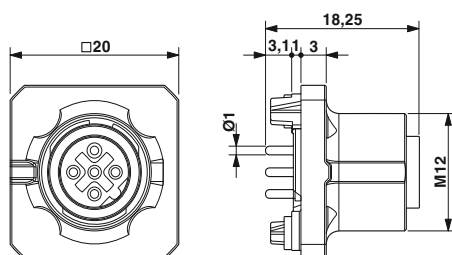


4, 5-pos.

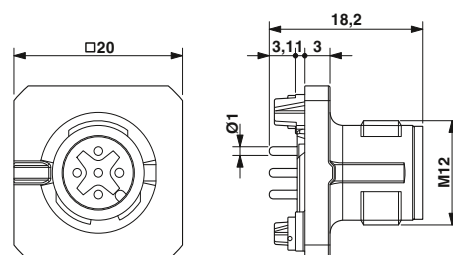


8-pos.

|                                              |              | Technical data           |                          | Technical data           |             |
|----------------------------------------------|--------------|--------------------------|--------------------------|--------------------------|-------------|
|                                              |              | 4-pos.                   | 5-pos.                   | 8-pos.                   |             |
| General data                                 |              |                          |                          |                          |             |
| M12 circular plug-in connector according to: |              | IEC 61076-2-101          | IEC 61076-2-101          | IEC 61076-2-101          | -           |
| Pollution degree                             |              | 3                        | 3                        | 3                        | -           |
| Degree of protection                         |              | IP67                     | IP67                     | IP67                     | -           |
| Connection method                            |              | Solder pins              | Solder pins              | Solder pins              | -           |
| Electrical data                              |              |                          |                          |                          |             |
| Rated voltage                                |              | 250 V                    | 60 V                     | 30 V                     | -           |
| Rated current                                |              | 4 A                      | 4 A                      | 2 A                      | -           |
| Volume resistance                            |              | $\leq 3 \text{ m}\Omega$ | $\leq 3 \text{ m}\Omega$ | $\leq 3 \text{ m}\Omega$ | -           |
| Material data                                |              |                          |                          |                          |             |
| Material contact / contact surface           |              | CuZn / Au                | CuZn / Au                | CuZn / Au                | - / -       |
| Contact carrier material                     |              | PA 66                    | PA 66                    | PA 66                    | -           |
| Inflammability class according to UL 94      |              | V0                       | V0                       | V0                       | -           |
| Temperature data                             |              |                          |                          |                          |             |
| Plug / socket                                |              | -25 ... 85               | -25 ... 85               | -25 ... 85               | -           |
|                                              |              | [°C]                     |                          |                          |             |
|                                              |              | Ordering data            |                          | Ordering data            |             |
|                                              |              | Order No.                | Pcs. / Pkt.              | Order No.                | Pcs. / Pkt. |
|                                              |              | 4-pos.                   | 5-pos.                   | 8-pos.                   |             |
| Device plug-in connectors                    |              |                          |                          |                          |             |
| Socket                                       | A - standard | 1456420                  | 10                       | 1456446                  | 10          |
| Plug                                         | A - standard | 1456417                  | 10                       | 1456433                  | 10          |
| Socket                                       | D - data     | 1456404                  | 10                       |                          |             |
| Plug                                         | D - data     | 1456394                  | 10                       |                          |             |
| Socket                                       | B - inverse  |                          | 1456462                  |                          | 10          |
| Plug                                         | B - inverse  |                          | 1456459                  |                          | 10          |



M12 flush-type socket, square flange (4/5-pos. version)



M12 flush-type plug, square flange (4/5-pos. version)

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, front mounting

Contact carrier, plastic,  
with solder cups or with litz wires



Solder connection, 5, 8-pos.



With 0.5 m long litz wires, 5, 8-pos.



| Technical data                               |  |                 |  |
|----------------------------------------------|--|-----------------|--|
| 5-pos.                                       |  | 8-pos.          |  |
| General data                                 |  |                 |  |
| M12 circular plug-in connector according to: |  | IEC 61076-2-101 |  |
| Pollution degree                             |  | 3               |  |
| Degree of protection                         |  | IP67            |  |
| Connection method                            |  | Solder cup      |  |
| Electrical data                              |  |                 |  |
| Rated voltage                                |  | 60 V            |  |
| Rated current                                |  | 4 A             |  |
| Volume resistance                            |  | ≤ 3 mΩ          |  |
| Material data                                |  |                 |  |
| Material contact / contact surface           |  | CuZn / Au       |  |
| Contact carrier material                     |  | PA 66           |  |
| Inflammability class according to UL 94      |  | HB              |  |
| Cable type                                   |  | -               |  |
| Temperature data                             |  |                 |  |
| Plug / socket                                |  | -25 ... 85      |  |
| Cable, fixed installation                    |  | -               |  |

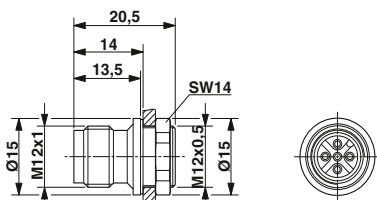
| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 5-pos.        |             | 8-pos.    |             |
| 1436398       | 20          | 1436408   | 20          |
| 1436437       | 20          | 1436440   | 20          |



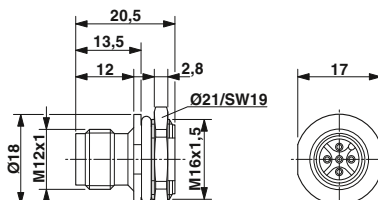
| Technical data                               |  |                  |  |
|----------------------------------------------|--|------------------|--|
| 5-pos.                                       |  | 8-pos.           |  |
| General data                                 |  |                  |  |
| M12 circular plug-in connector according to: |  | IEC 61076-2-101  |  |
| Pollution degree                             |  | 3                |  |
| Degree of protection                         |  | IP67             |  |
| Connection method                            |  | Individual wires |  |
| Electrical data                              |  |                  |  |
| Rated voltage                                |  | 60 V             |  |
| Rated current                                |  | 4 A              |  |
| Volume resistance                            |  | ≤ 3 mΩ           |  |
| Material data                                |  |                  |  |
| Material contact / contact surface           |  | CuZn / Au        |  |
| Contact carrier material                     |  | PA 66            |  |
| Inflammability class according to UL 94      |  | HB               |  |
| Cable type                                   |  | TPE litz wire    |  |
| Temperature data                             |  |                  |  |
| Plug / socket                                |  | -25 ... 85       |  |
| Cable, fixed installation                    |  | -25 ... 90       |  |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 5-pos.        |             | 8-pos.    |             |
| 1436411       | 1           | 1436424   | 1           |

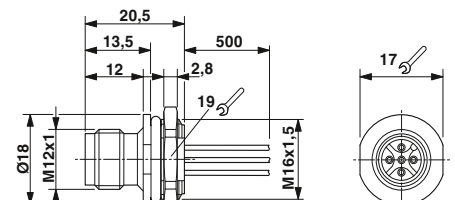
| Description                                        | Coding       |
|----------------------------------------------------|--------------|
| Flush-type plug-in connector, M16 fastening thread |              |
| Plug                                               | A - standard |
| Flush-type plug-in connector, M12 fastening thread |              |
| Plug                                               | A - standard |



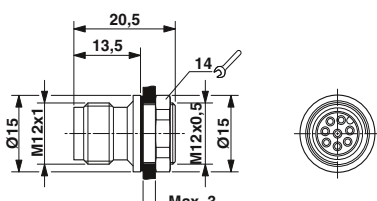
M12 pin, M12 fastening thread, solder cups



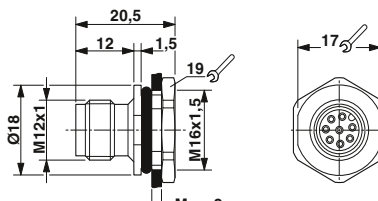
M12 pin, M16 fastening thread, solder cups



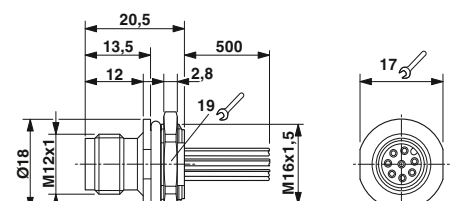
M12 pin, M16 fastening thread



M12 pin, M12 fastening thread, solder cups



M12 pin, M16 fastening thread, solder cups



M12 pin, M16 fastening thread

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Pg9 fastening thread,  
with 0.5 m long litz wires



4, 5, 8-pos.



12, 17-pos.



| Technical data                               |                  |                  |                  |
|----------------------------------------------|------------------|------------------|------------------|
|                                              | 4-pos.           | 5-pos.           | 8-pos.           |
| General data                                 |                  |                  |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                | 3                |
| Degree of protection                         | IP67             | IP67             | IP67             |
| Connection method                            | Individual wires | Individual wires | Individual wires |
| Electrical data                              |                  |                  |                  |
| Rated voltage                                | 250 V            | 60 V             | 30 V             |
| Rated current                                | 4 A              | 4 A              | 2 A              |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |                  |
| Material contact / contact surface           | CuZn / Au        | CuZn / Au        | CuZn / Au        |
| Contact carrier material                     | PA 66            | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |                  |
| Plug / socket [°C]                           | -25 ... 85       | -25 ... 85       | -25 ... 85       |
| Cable, fixed installation [°C]               | -25 ... 85       | -25 ... 85       | -25 ... 85       |

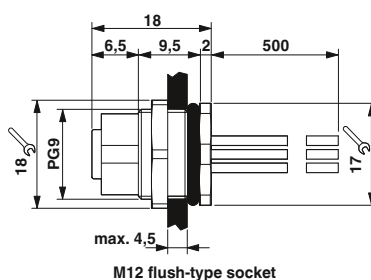


| Technical data                               |                  |                  |       |
|----------------------------------------------|------------------|------------------|-------|
|                                              | 12-pos.          | 17-pos.          |       |
| General data                                 |                  |                  |       |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  | -     |
| Pollution degree                             | 3                | 3                | -     |
| Degree of protection                         | IP67             | IP67             | -     |
| Connection method                            | Individual wires | Individual wires | -     |
| Electrical data                              |                  |                  |       |
| Rated voltage                                | 30 V             | 30 V             | -     |
| Rated current                                | 1.5 A            | 1.5 A            | -     |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           | -     |
| Material data                                |                  |                  |       |
| Material contact / contact surface           | CuZn / Au        | CuZn / Au        | - / - |
| Contact carrier material                     | PA 66            | PA 66            | -     |
| Inflammability class according to UL 94      | V0               | V0               | -     |
| Cable type                                   | TPE litz wire    | TPE litz wire    | -     |
| Temperature data                             |                  |                  |       |
| Plug / socket [°C]                           | -25 ... 85       | -25 ... 85       | -     |
| Cable, fixed installation [°C]               | -25 ... 85       | -25 ... 85       | -     |

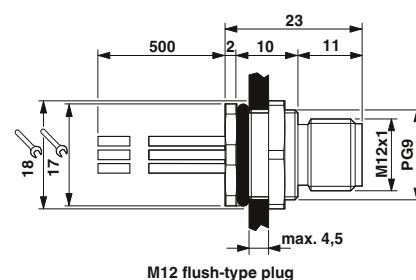
| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             |
| 1556621       | 1           | 1542729   | 1           |
| 1556618       | 1           | 1542703   | 1           |
| 1551529       | 1           |           |             |
| 1551532       | 1           |           |             |
|               |             | 1543676   | 1           |
|               |             | 1543663   | 1           |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |
| 1430446       | 1           | 1430462   | 1           |
| 1430459       | 1           | 1430475   | 1           |

| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |
| Socket                           | D - data     |
| Plug                             | D - data     |
| Socket                           | B - inverse  |
| Plug                             | B - inverse  |



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

**M12 fastening thread,  
with 0.5 m long litz wires**



4, 5, 8-pos.



12, 17-pos.



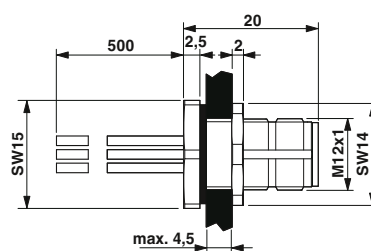
| Technical data                               |                  |                  |                  |
|----------------------------------------------|------------------|------------------|------------------|
| 4-pos.                                       | 5-pos.           | 8-pos.           |                  |
| General data                                 |                  |                  |                  |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                | 3                |
| Degree of protection                         | IP67             | IP67             | IP67             |
| Connection method                            | Individual wires | Individual wires | Individual wires |
| Electrical data                              |                  |                  |                  |
| Rated voltage                                | 250 V            | 60 V             | 30 V             |
| Rated current                                | 4 A              | 4 A              | 2 A              |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |                  |
| Material contact / contact surface           | CuZn / Au        | CuZn / Au        | CuZn / Au        |
| Contact carrier material                     | PA 66            | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |                  |
| Plug / socket                                | [-25 ... 85 °C]  | [-25 ... 85 °C]  | [-25 ... 85 °C]  |
| Cable, fixed installation                    | [-25 ... 85 °C]  | [-25 ... 85 °C]  | [-25 ... 85 °C]  |



| Technical data                               |                  |                  |       |
|----------------------------------------------|------------------|------------------|-------|
| 12-pos.                                      | 17-pos.          |                  |       |
| General data                                 |                  |                  |       |
| M12 circular plug-in connector according to: | IEC 61076-2-101  | IEC 61076-2-101  | -     |
| Pollution degree                             | 3                | 3                | -     |
| Degree of protection                         | IP67             | IP67             | -     |
| Connection method                            | Individual wires | Individual wires | -     |
| Electrical data                              |                  |                  |       |
| Rated voltage                                | 30 V             | 30 V             | -     |
| Rated current                                | 1.5 A            | 1.5 A            | -     |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           | -     |
| Material data                                |                  |                  |       |
| Material contact / contact surface           | CuZn / Au        | CuZn / Au        | - / - |
| Contact carrier material                     | PA 66            | PA 66            | -     |
| Inflammability class according to UL 94      | V0               | V0               | -     |
| Cable type                                   | TPE litz wire    | TPE litz wire    | -     |
| Temperature data                             |                  |                  |       |
| Plug / socket                                | [-25 ... 85 °C]  | [-25 ... 85 °C]  | -     |
| Cable, fixed installation                    | [-25 ... 85 °C]  | [-25 ... 85 °C]  | -     |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             | 8-pos.    |             |
| 1551875       | 1           | 1551888   | 1           | 1551914   | 1           |
| 1551901       | 1           |           |             |           |             |
|               |             | 1551891   | 1           |           |             |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |           |             |
| 1437122       | 1           | 1437135   | 1           |           |             |



M12 flush-type plug, M12 fastening thread

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

**M16 fastening thread,  
with 0.5 m long litz wires**



4, 5, 8-pos.



12, 17-pos.



| Technical data                               |                  |                  |                  |
|----------------------------------------------|------------------|------------------|------------------|
|                                              | 4-pos.           | 5-pos.           | 8-pos.           |
| General data                                 |                  |                  |                  |
| M12 circular plug-in connector According to: | IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| Pollution degree                             | 3                | 3                | 3                |
| Degree of protection                         | IP67             | IP67             | IP67             |
| Connection method                            | Individual wires | Individual wires | Individual wires |
| Electrical data                              |                  |                  |                  |
| Rated voltage                                | 250 V            | 60 V             | 30 V             |
| Rated current                                | 4 A              | 4 A              | 2 A              |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| Material data                                |                  |                  |                  |
| Material contact / contact surface           | CuZn / Au        | CuZn / Au        | CuZn / Au        |
| Contact carrier material                     | PA 66            | PA 66            | PA 66            |
| Inflammability class according to UL 94      | V0               | V0               | V0               |
| Cable type                                   | TPE litz wire    | TPE litz wire    | TPE litz wire    |
| Temperature data                             |                  |                  |                  |
| Plug / socket [°C]                           | -25 ... 85       | -25 ... 85       | -25 ... 85       |
| Cable, fixed installation [°C]               | -25 ... 85       | -25 ... 85       | -25 ... 85       |

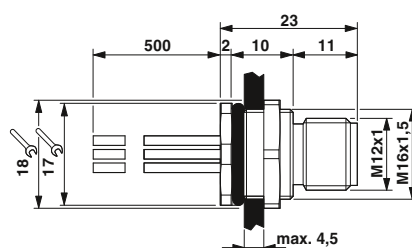


| Technical data                               |                  |                  |       |
|----------------------------------------------|------------------|------------------|-------|
|                                              | 12-pos.          | 17-pos.          |       |
| General data                                 |                  |                  |       |
| M12 circular plug-in connector According to: | IEC 61076-2-101  | IEC 61076-2-101  | -     |
| Pollution degree                             | 3                | 3                | -     |
| Degree of protection                         | IP67             | IP67             | -     |
| Connection method                            | Individual wires | Individual wires | -     |
| Electrical data                              |                  |                  |       |
| Rated voltage                                | 30 V             | 30 V             | -     |
| Rated current                                | 1.5 A            | 1.5 A            | -     |
| Volume resistance                            | ≤ 3 mΩ           | ≤ 3 mΩ           | -     |
| Material data                                |                  |                  |       |
| Material contact / contact surface           | CuZn / Au        | CuZn / Au        | - / - |
| Contact carrier material                     | PA 66            | PA 66            | -     |
| Inflammability class according to UL 94      | V0               | V0               | -     |
| Cable type                                   | TPE litz wire    | TPE litz wire    | -     |
| Temperature data                             |                  |                  |       |
| Plug / socket [°C]                           | -25 ... 85       | -25 ... 85       | -     |
| Cable, fixed installation [°C]               | -25 ... 85       | -25 ... 85       | -     |

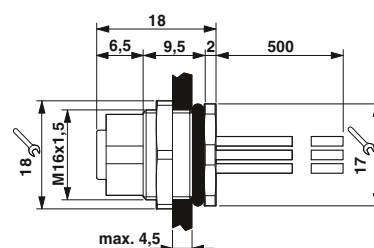
| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             |
| 1419632       | 1           | 1419658   | 1           |
| 1419629       | 1           | 1419645   | 1           |
| 1419616       | 1           |           |             |
| 1419603       | 1           |           |             |
|               |             | 1419674   | 1           |
|               |             | 1419661   | 1           |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |
| 1419713       | 1           | 1419739   | 1           |
| 1419700       | 1           | 1419726   | 1           |

| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |
| Socket                           | D - data     |
| Plug                             | D - data     |
| Socket                           | B - inverse  |
| Plug                             | B - inverse  |



M12 flush-type plug



M12 flush-type socket

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

**M16 fastening thread,  
with assembled cable, shielded**

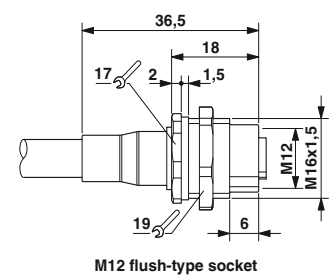
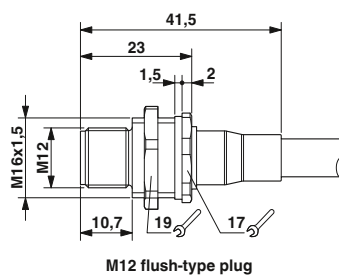


**PUR cable, 4, 5, 8-pos., shielded**



**PVC cable, 12, 17-pos., shielded**

|                                              | Technical data         |                        |                        | Technical data  |                 |             |
|----------------------------------------------|------------------------|------------------------|------------------------|-----------------|-----------------|-------------|
|                                              | 4-pos.                 | 5-pos.                 | 8-pos.                 | 12-pos.         | 17-pos.         |             |
| General data                                 |                        |                        |                        |                 |                 |             |
| M12 circular plug-in connector according to: | IEC 61076-2-101        | IEC 61076-2-101        | IEC 61076-2-101        | IEC 61076-2-101 | IEC 61076-2-101 | -           |
| Pollution degree                             | 3                      | 3                      | 3                      | 3               | 3               | -           |
| Degree of protection                         | IP67                   | IP67                   | IP67                   | IP67            | IP67            | -           |
| Connection method                            | Free cable end         | Free cable end         | Free cable end         | Free cable end  | Free cable end  | -           |
| Electrical data                              |                        |                        |                        |                 |                 |             |
| Rated voltage                                | 60 V                   | 60 V                   | 30 V                   | 30 V            | 30 V            | -           |
| Rated current                                | 4 A                    | 4 A                    | 2 A                    | 1.5 A           | 1.5 A           | -           |
| Volume resistance                            | ≤ 3 mΩ                 | ≤ 3 mΩ                 | ≤ 3 mΩ                 | ≤ 3 mΩ          | ≤ 3 mΩ          | -           |
| Material data                                |                        |                        |                        |                 |                 |             |
| Material contact / contact surface           | CuZn / Au              | CuZn / Au              | CuZn / Au              | CuZn / Au       | CuZn / Au       | - / -       |
| Contact carrier material                     | PA 66                  | PA 66                  | PA 66                  | PA 66           | PA 66           | -           |
| Inflammability class according to UL 94      | V0                     | V0                     | V0                     | V0              | V0              | -           |
| Cable type                                   | PUR halogen-free black | PUR halogen-free black | PUR halogen-free black | PVC black       | PVC black       | -           |
| Temperature data                             |                        |                        |                        |                 |                 |             |
| Plug / socket                                | [-25 ... 85 °C]        | [-25 ... 85 °C]        | [-25 ... 85 °C]        | [-25 ... 85 °C] | [-25 ... 85 °C] | -           |
| Cable, fixed installation                    | [-30 ... 85 °C]        | [-30 ... 85 °C]        | [-30 ... 85 °C]        | [-30 ... 85 °C] | [-30 ... 85 °C] | -           |
|                                              | Ordering data          |                        |                        | Ordering data   |                 |             |
|                                              | Order No.              | Pcs. / Pkt.            | Order No.              | Pcs. / Pkt.     | Order No.       | Pcs. / Pkt. |
|                                              | 4-pos.                 |                        | 5-pos.                 |                 | 12-pos.         | 17-pos.     |
| <b>Flush-type plug-in connector, A-coded</b> |                        |                        |                        |                 |                 |             |
| Socket                                       | 1 m                    | 1419302 1              | 1419328 1              | 1419357 1       | 1442188 1       | 1442269 1   |
| Plug                                         | 1 m                    | 1419399 1              | 1419409 1              | 1419425 1       | 1442227 1       | 1442308 1   |
| Socket                                       | 2 m                    | 1419315 1              | 1419331 1              | 1419344 1       | 1442191 1       | 1442272 1   |
| Plug                                         | 2 m                    | 1419386 1              | 1419412 1              | 1419438 1       | 1442230 1       | 1442311 1   |



## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

**Pg9 fastening thread, one-piece, for wave soldering processes**



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



| Technical data  |                 |                 |
|-----------------|-----------------|-----------------|
| 4-pos.          | 5-pos.          | 8-pos.          |
| IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| 3               | 3               | 3               |
| IP67            | IP67            | IP67            |
| Solder pins     | Solder pins     | Solder pins     |
| 250 V           | 60 V            | 30 V            |
| 4 A             | 4 A             | 2 A             |
| ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |
| CuZn / Au       | CuZn / Au       | CuZn / Au       |
| PA 66           | PA 66           | PA 66           |
| V0              | V0              | V0              |
| -25 ... 85      | -25 ... 85      | -25 ... 85      |

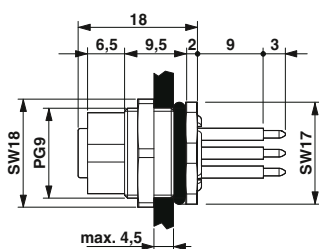
| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |
| 1553462       | 20          | 1542761   |
| 1553459       | 20          | 1542745   |
| 1551503       | 20          | 1542758   |
| 1551516       | 20          |           |
|               | 1543650     | 20        |
|               | 1543647     | 20        |
|               | 1552285     | 20        |
|               | 1552311     | 20        |
| 1552272       | 20          | 1408770   |
| 1552308       | 20          |           |
|               | 1552298     | 20        |
|               | 1552324     | 20        |



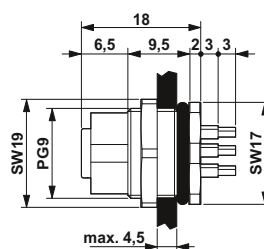
| Technical data  |                 |       |
|-----------------|-----------------|-------|
| 12-pos.         | 17-pos.         |       |
| IEC 61076-2-101 | IEC 61076-2-101 | -     |
| 3               | 3               | -     |
| IP67            | IP67            | -     |
| Solder pins     | Solder pins     | -     |
| 30 V            | 30 V            | -     |
| 1.5 A           | 1.5 A           | -     |
| ≤ 3 mΩ          | ≤ 3 mΩ          | -     |
| CuZn / Au       | CuZn / Au       | - / - |
| PA 66           | PA 66           | -     |
| V0              | V0              | -     |
| -25 ... 85      | -25 ... 85      | -     |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 12-pos.       | 17-pos.     |           |
| 1559929       | 20          | 1559958   |
| 1559932       | 20          | 1559961   |
|               |             |           |
|               |             |           |
|               |             |           |
|               |             |           |
|               |             |           |
|               |             |           |
|               |             |           |
|               |             |           |

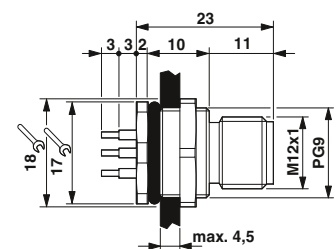
| Description                                               | Coding       |
|-----------------------------------------------------------|--------------|
| <b>Device plug-in connector, solder pin length: 6 mm</b>  |              |
| Socket                                                    | A - standard |
| Plug                                                      | A - standard |
| Socket                                                    | D - data     |
| Plug                                                      | D - data     |
| Socket                                                    | B - inverse  |
| Plug                                                      | B - inverse  |
| <b>Device plug-in connector, solder pin length: 12 mm</b> |              |
| Socket                                                    | A - standard |
| Plug                                                      | A - standard |
| Socket                                                    | D - data     |
| Plug                                                      | D - data     |
| Socket                                                    | B - inverse  |
| Plug                                                      | B - inverse  |



M12 flush-type socket, contact length: 12 mm



M12 flush-type socket, contact length: 6 mm



M12 flush-type plug, contact length: 6 mm

**Pg9 fastening thread, one-piece, for wave soldering processes, shielded**



**Ethernet**



**Straight, 4, 5, 8-pos.**



**Straight, 12, 17-pos.**



| Technical data                               |                 |                 |                 |
|----------------------------------------------|-----------------|-----------------|-----------------|
| 4-pos.                                       | 5-pos.          | 8-pos.          |                 |
| General data                                 |                 |                 |                 |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| Pollution degree                             | 3               | 3               | 3               |
| Degree of protection                         | IP67            | IP67            | IP67            |
| Connection method                            | Solder pins     | Solder pins     | Solder pins     |
| Electrical data                              |                 |                 |                 |
| Rated voltage                                | 250 V           | 60 V            | 30 V            |
| Rated current                                | 4 A             | 4 A             | 2 A             |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |
| Material data                                |                 |                 |                 |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       | CuZn / Au       |
| Contact carrier material                     | PA 66           | PA 66           | PA 66           |
| Inflammability class according to UL 94      | V0              | V0              | V0              |
| Temperature data                             |                 |                 |                 |
| Plug / socket                                | -25 ... 85      | -25 ... 85      | -25 ... 85      |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             |

|           |             |           |             |           |             |
|-----------|-------------|-----------|-------------|-----------|-------------|
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 1556841   | 20          | 1553019   | 20          | 1553860   | 20          |
|           |             | 1553048   | 20          | 1553873   | 20          |
| 1553006   | 20          |           |             |           |             |
| 1553035   | 20          |           |             |           |             |
|           |             | 1553022   | 20          |           |             |
|           |             | 1553051   | 20          |           |             |
| 1558522   | 20          | 1558548   | 20          | 1408771   | 20          |
| 1558535   | 20          | 1558551   | 20          |           |             |
| 1558506   | 20          |           |             |           |             |
| 1558519   | 20          |           |             |           |             |
|           |             | 1558564   | 20          |           |             |
|           |             | 1558577   | 20          |           |             |



| Technical data                               |                 |                 |       |
|----------------------------------------------|-----------------|-----------------|-------|
| 12-pos.                                      | 17-pos.         |                 |       |
| General data                                 |                 |                 |       |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 | -     |
| Pollution degree                             | 3               | 3               | -     |
| Degree of protection                         | IP67            | IP67            | -     |
| Connection method                            | Solder pins     | Solder pins     | -     |
| Electrical data                              |                 |                 |       |
| Rated voltage                                | 30 V            | 30 V            | -     |
| Rated current                                | 1.5 A           | 1.5 A           | -     |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          | -     |
| Material data                                |                 |                 |       |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       | - / - |
| Contact carrier material                     | PA 66           | PA 66           | -     |
| Inflammability class according to UL 94      | V0              | V0              | -     |
| Temperature data                             |                 |                 |       |
| Plug / socket                                | -25 ... 85      | -25 ... 85      | -     |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |

|           |             |           |             |           |             |
|-----------|-------------|-----------|-------------|-----------|-------------|
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 1436770   | 20          | 1436806   | 20          |           |             |
| 1436783   | 20          | 1436819   | 20          |           |             |

| Description | Coding |
|-------------|--------|
|-------------|--------|

**Device plug-in connector, solder pin length: 6 mm**

|        |              |
|--------|--------------|
| Socket | A - standard |
| Plug   | A - standard |
| Socket | D - data     |
| Plug   | D - data     |
| Socket | B - inverse  |
| Plug   | B - inverse  |

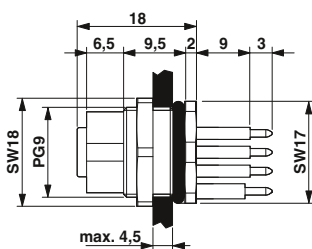
**Device plug-in connector, solder pin length: 12 mm**

|        |              |
|--------|--------------|
| Socket | A - standard |
| Plug   | A - standard |
| Socket | D - data     |
| Plug   | D - data     |
| Socket | B - inverse  |
| Plug   | B - inverse  |

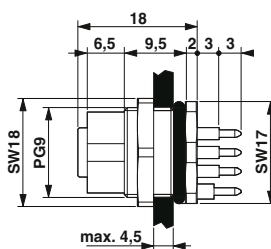
**EMC hexagonal nuts with fine toothing, for all flush-type plug-in connectors with:**  
**Pg9 fastening thread**

| Accessories        |         |    |
|--------------------|---------|----|
| SACC-PG9-KD-NUT-SH | 1440177 | 10 |

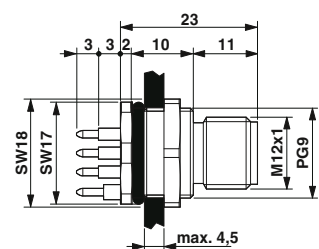
| Accessories        |         |    |
|--------------------|---------|----|
| SACC-PG9-KD-NUT-SH | 1440177 | 10 |



**M12 flush-type socket, contact length: 12 mm**



**M12 flush-type socket, contact length: 6 mm**



**M12 flush-type plug, contact length: 6 mm**

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

M12 fastening thread, one-piece,  
for wave soldering processes



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



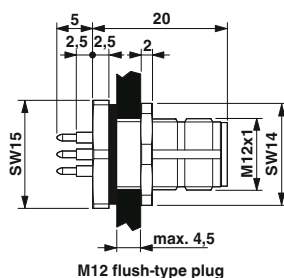
| Technical data                               |                 |                 |
|----------------------------------------------|-----------------|-----------------|
| 4-pos.                                       | 5-pos.          | 8-pos.          |
| General data                                 |                 |                 |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 |
| Pollution degree                             | 3               | 3               |
| Degree of protection                         | IP67            | IP67            |
| Connection method                            | Solder pins     | Solder pins     |
| Electrical data                              |                 |                 |
| Rated voltage                                | 250 V           | 60 V            |
| Rated current                                | 4 A             | 4 A             |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          |
| Material data                                |                 |                 |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       |
| Contact carrier material                     | PA 66           | PA 66           |
| Inflammability class according to UL 94      | V0              | V0              |
| Temperature data                             |                 |                 |
| Plug / socket                                | -25 ... 85      | -25 ... 85      |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |
| 1551820       | 20          | 1551833   |
| 1551859       | 20          | 1551862   |
|               |             | 1551846   |



| Technical data                               |                 |                 |
|----------------------------------------------|-----------------|-----------------|
| 12-pos.                                      | 17-pos.         |                 |
| General data                                 |                 |                 |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 |
| Pollution degree                             | 3               | 3               |
| Degree of protection                         | IP67            | IP67            |
| Connection method                            | Solder pins     | Solder pins     |
| Electrical data                              |                 |                 |
| Rated voltage                                | 30 V            | 30 V            |
| Rated current                                | 1.5 A           | 1.5 A           |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          |
| Material data                                |                 |                 |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       |
| Contact carrier material                     | PA 66           | PA 66           |
| Inflammability class according to UL 94      | V0              | V0              |
| Temperature data                             |                 |                 |
| Plug / socket                                | -25 ... 85      | -25 ... 85      |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 12-pos.       | 17-pos.     |           |
| 1559945       | 20          | 1559974   |



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

M12 fastening thread, one-piece,  
for wave soldering processes, shielded



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



| Technical data                               |                          |                          |
|----------------------------------------------|--------------------------|--------------------------|
| 4-pos.                                       | 5-pos.                   | 8-pos.                   |
| General data                                 |                          |                          |
| M12 circular plug-in connector according to: | IEC 61076-2-101          | IEC 61076-2-101          |
| Pollution degree                             | 3                        | 3                        |
| Degree of protection                         | IP67                     | IP67                     |
| Connection method                            | Solder pins              | Solder pins              |
| Electrical data                              |                          |                          |
| Rated voltage                                | 250 V                    | 60 V                     |
| Rated current                                | 4 A                      | 4 A                      |
| Volume resistance                            | $\leq 3 \text{ m}\Omega$ | $\leq 3 \text{ m}\Omega$ |
| Material data                                |                          |                          |
| Material contact / contact surface           | CuZn / Au                | CuZn / Au                |
| Contact carrier material                     | PA 66                    | PA 66                    |
| Inflammability class according to UL 94      | V0                       | V0                       |
| Temperature data                             |                          |                          |
| Plug / socket                                | -25 ... 85               | -25 ... 85               |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |
| 1552955       | 20          | 1552968   |
| 1552984       | 20          | 1552997   |
|               |             | 1552971   |

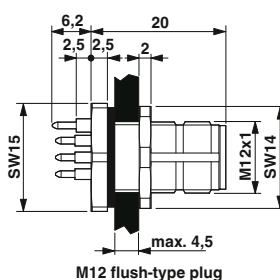
| Accessories        |         |    |
|--------------------|---------|----|
| SACC-M12-KD-NUT-SH | 1440151 | 10 |



| Technical data                               |                          |                          |
|----------------------------------------------|--------------------------|--------------------------|
| 12-pos.                                      | 17-pos.                  |                          |
| General data                                 |                          |                          |
| M12 circular plug-in connector according to: | IEC 61076-2-101          | IEC 61076-2-101          |
| Pollution degree                             | 3                        | 3                        |
| Degree of protection                         | IP67                     | IP67                     |
| Connection method                            | Solder pins              | Solder pins              |
| Electrical data                              |                          |                          |
| Rated voltage                                | 30 V                     | 30 V                     |
| Rated current                                | 1.5 A                    | 1.5 A                    |
| Volume resistance                            | $\leq 3 \text{ m}\Omega$ | $\leq 3 \text{ m}\Omega$ |
| Material data                                |                          |                          |
| Material contact / contact surface           | CuZn / Au                | CuZn / Au                |
| Contact carrier material                     | PA 66                    | PA 66                    |
| Inflammability class according to UL 94      | V0                       | V0                       |
| Temperature data                             |                          |                          |
| Plug / socket                                | -25 ... 85               | -25 ... 85               |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 12-pos.       | 17-pos.     |           |
| 1437106       | 20          | 1437119   |

| Accessories        |         |    |
|--------------------|---------|----|
| SACC-M12-KD-NUT-SH | 1440151 | 10 |



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

M16 fastening thread, one-piece,  
for wave soldering processes



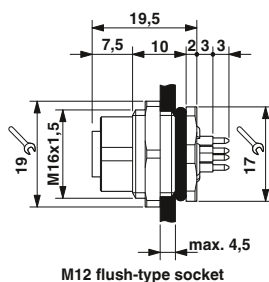
Straight, 4, 5, 8-pos.



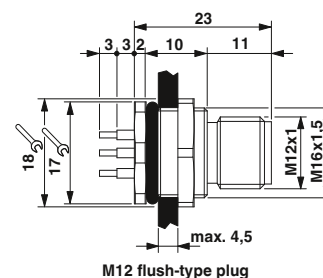
Straight, 12, 17-pos.



| Technical data                               |                 |                 | Technical data  |                 |             |
|----------------------------------------------|-----------------|-----------------|-----------------|-----------------|-------------|
| 4-pos.                                       | 5-pos.          | 8-pos.          | 12-pos.         | 17-pos.         |             |
| General data                                 |                 |                 |                 |                 |             |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 | -           |
| Pollution degree                             | 3               | 3               | 3               | 3               | -           |
| Degree of protection                         | IP67            | IP67            | IP67            | IP67            | -           |
| Connection method                            | Solder pins     | Solder pins     | Solder pins     | Solder pins     | -           |
| Electrical data                              |                 |                 |                 |                 |             |
| Rated voltage                                | 250 V           | 60 V            | 30 V            | 30 V            | -           |
| Rated current                                | 4 A             | 4 A             | 2 A             | 1.5 A           | -           |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          | -           |
| Material data                                |                 |                 |                 |                 |             |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       | CuZn / Au       | CuZn / Au       | - / -       |
| Contact carrier material                     | PA 66           | PA 66           | PA 66           | PA 66           | -           |
| Inflammability class according to UL 94      | V0              | V0              | V0              | V0              | -           |
| Temperature data                             |                 |                 |                 |                 |             |
| Plug / socket                                | -25 ... 85      | -25 ... 85      | -25 ... 85      | -25 ... 85      | -           |
|                                              | [°C]            |                 |                 |                 |             |
| Ordering data                                |                 |                 | Ordering data   |                 |             |
| Order No.                                    | Pcs. / Pkt.     | Order No.       | Pcs. / Pkt.     | Order No.       | Pcs. / Pkt. |
| 4-pos.                                       |                 | 5-pos.          |                 | 8-pos.          |             |
| 1419755                                      | 20              | 1441778         | 20              | 1441817         | 20          |
| 1419742                                      | 20              | 1441765         | 20              | 1441804         | 20          |
| 1441752                                      | 20              |                 |                 |                 |             |
| 1441749                                      | 20              |                 |                 |                 |             |
|                                              |                 | 1441794         | 20              |                 |             |
|                                              |                 | 1441781         | 20              |                 |             |
| Order No.                                    | Pcs. / Pkt.     | Order No.       | Pcs. / Pkt.     | Order No.       | Pcs. / Pkt. |
| 12-pos.                                      |                 | 17-pos.         |                 |                 |             |
| 1441833                                      | 20              | 1441859         | 20              |                 |             |
| 1441820                                      | 20              | 1441846         | 20              |                 |             |



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

**M16 fastening thread, one-piece, for wave soldering processes, shielded**



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



| Technical data                               |                 |                 |                 |
|----------------------------------------------|-----------------|-----------------|-----------------|
| 4-pos.                                       | 5-pos.          | 8-pos.          |                 |
| General data                                 |                 |                 |                 |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| Pollution degree                             | 3               | 3               | 3               |
| Degree of protection                         | IP67            | IP67            | IP67            |
| Connection method                            | Solder pins     | Solder pins     | Solder pins     |
| Electrical data                              |                 |                 |                 |
| Rated voltage                                | 250 V           | 60 V            | 30 V            |
| Rated current                                | 4 A             | 4 A             | 2 A             |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |
| Material data                                |                 |                 |                 |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       | CuZn / Au       |
| Contact carrier material                     | PA 66           | PA 66           | PA 66           |
| Inflammability class according to UL 94      | V0              | V0              | V0              |
| Temperature data                             |                 |                 |                 |
| Plug / socket                                | -25 ... 85      | -25 ... 85      | -25 ... 85      |

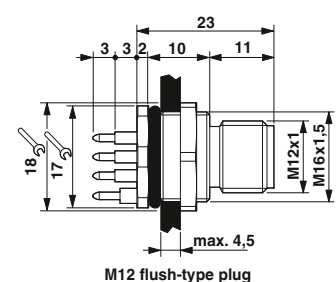
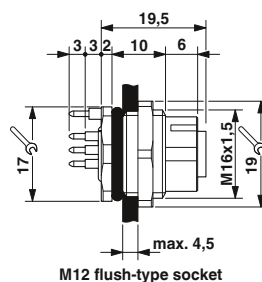
| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             | 8-pos.    |             |
| 1419771       | 20          | 1441891   | 20          | 1441930   | 20          |
| 1419768       | 20          | 1441888   | 20          | 1441927   | 20          |
| 1441875       | 20          |           |             |           |             |
| 1441862       | 20          |           |             |           |             |
|               |             | 1441914   | 20          |           |             |
|               |             | 1441901   | 20          |           |             |

| Accessories        |         |    |
|--------------------|---------|----|
| SACC-M16-KD-NUT-SH | 1440164 | 10 |

| Technical data                               |                 |                 |       |
|----------------------------------------------|-----------------|-----------------|-------|
| 12-pos.                                      | 17-pos.         |                 |       |
| General data                                 |                 |                 |       |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 | -     |
| Pollution degree                             | 3               | 3               | -     |
| Degree of protection                         | IP67            | IP67            | -     |
| Connection method                            | Solder pins     | Solder pins     | -     |
| Electrical data                              |                 |                 |       |
| Rated voltage                                | 30 V            | 30 V            | -     |
| Rated current                                | 1.5 A           | 1.5 A           | -     |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          | -     |
| Material data                                |                 |                 |       |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       | - / - |
| Contact carrier material                     | PA 66           | PA 66           | -     |
| Inflammability class according to UL 94      | V0              | V0              | -     |
| Temperature data                             |                 |                 |       |
| Plug / socket                                | -25 ... 85      | -25 ... 85      | -     |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |           |             |
| 1441956       | 20          | 1441972   | 20          |           |             |
| 1441943       | 20          | 1441969   | 20          |           |             |

| Accessories        |         |    |
|--------------------|---------|----|
| SACC-M16-KD-NUT-SH | 1440164 | 10 |



## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Contact carrier, two-piece, angled,  
for wave soldering processes



Angled, 4, 5, 8-pos.



Angled, shielded, 4, 5, 8-pos.



| Technical data                               |                 |                 |                 |
|----------------------------------------------|-----------------|-----------------|-----------------|
|                                              | 4-pos.          | 5-pos.          | 8-pos.          |
| General data                                 |                 |                 |                 |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| Pollution degree                             | 3               | 3               | 3               |
| Degree of protection                         | IP67            | IP67            | IP67            |
| Connection method                            | Solder pins     | Solder pins     | Solder pins     |
| Electrical data                              |                 |                 |                 |
| Rated voltage                                | 250 V           | 60 V            | 30 V            |
| Rated current                                | 4 A             | 4 A             | 2 A             |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |
| Material data                                |                 |                 |                 |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       | CuZn / Au       |
| Contact carrier material                     | PA 66           | PA 66           | PA 66           |
| Inflammability class according to UL 94      | V0              | V0              | V0              |
| Temperature data                             |                 |                 |                 |
| Plug / socket [°C]                           | -25 ... 85      | -25 ... 85      | -25 ... 85      |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             | 8-pos.    |             |

| Description            | Coding       |
|------------------------|--------------|
| <b>Contact carrier</b> |              |
| Socket                 | A - standard |
| Plug                   | A - standard |
| Socket                 | D - data     |
| Plug                   | D - data     |
| Socket                 | B - inverse  |
| Plug                   | B - inverse  |

|         |    |         |    |         |    |
|---------|----|---------|----|---------|----|
| 1436628 | 20 | 1436644 | 20 | 1436990 | 20 |
| 1436660 | 20 | 1436686 | 20 | 1436987 | 20 |

| Accessories          |  |
|----------------------|--|
| See page 258 onwards |  |

**Housing screw connections**, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers

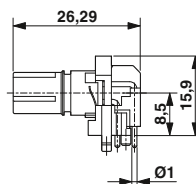


| Technical data   |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|
|                  | 4-pos.          | 5-pos.          | 8-pos.          |
| General data     |                 |                 |                 |
| IEC 61076-2-101  | IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| 3                | 3               | 3               | 3               |
| IP67             | IP67            | IP67            | IP67            |
| Solder pins      | Solder pins     | Solder pins     | Solder pins     |
| Electrical data  |                 |                 |                 |
| 250 V            | 60 V            | 30 V            |                 |
| 4 A              | 4 A             | 2 A             |                 |
| ≤ 3 mΩ           | ≤ 3 mΩ          | ≤ 3 mΩ          |                 |
| Material data    |                 |                 |                 |
| CuZn / Au        | CuZn / Au       | CuZn / Au       |                 |
| PA 66            | PA 66           | PA 66           |                 |
| V0               | V0              | V0              |                 |
| Temperature data |                 |                 |                 |
| -25 ... 85       | -25 ... 85      | -25 ... 85      |                 |

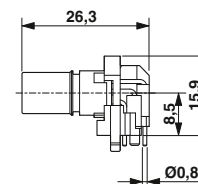
| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             | 8-pos.    |             |

|         |    |         |    |         |    |
|---------|----|---------|----|---------|----|
| 1432444 | 20 | 1432431 | 20 | 1437009 | 20 |
| 1439887 | 20 | 1439890 | 20 | 1437038 | 20 |
| 1432457 | 20 |         |    |         |    |
| 1436673 | 20 |         |    |         |    |
|         |    | 1432512 | 20 |         |    |
|         |    | 1436699 | 20 |         |    |

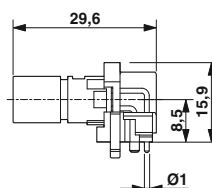
| Accessories          |  |
|----------------------|--|
| See page 258 onwards |  |



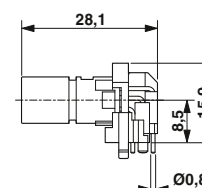
M12 socket contact carrier, angled, 4, 5-pos.



M12 socket contact carrier, angled, 8-pos.



M12 pin contact carrier, angled, 4, 5-pos.



M12 pin contact carrier, angled, 8-pos.

Contact carrier, two-piece, angled,  
for wave soldering processes

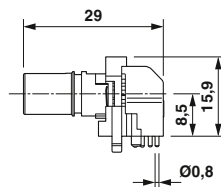


Angled, 12, 17-pos.

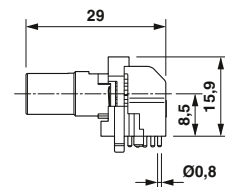


Angled, shielded, 12, 17-pos.

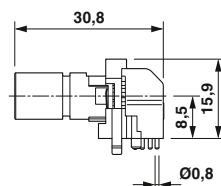
|                                                                                                                                     | Technical data  |                      |             | Technical data  |                      |            |             |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------|-------------|-----------------|----------------------|------------|-------------|
|                                                                                                                                     | 12-pos.         | 17-pos.              |             | 12-pos.         | 17-pos.              |            |             |
| General data                                                                                                                        |                 |                      |             |                 |                      |            |             |
| M12 circular plug-in connector according to:                                                                                        | IEC 61076-2-101 | IEC 61076-2-101      | -           | IEC 61076-2-101 | IEC 61076-2-101      | -          |             |
| Pollution degree                                                                                                                    | 3               | 3                    | -           | 3               | 3                    | -          |             |
| Degree of protection                                                                                                                | IP67            | IP67                 | -           | IP67            | IP67                 | -          |             |
| Connection method                                                                                                                   | Solder pins     | Solder pins          | -           | Solder pins     | Solder pins          | -          |             |
| Electrical data                                                                                                                     |                 |                      |             |                 |                      |            |             |
| Rated voltage                                                                                                                       | 30 V            | 30 V                 | -           | 30 V            | 30 V                 | -          |             |
| Rated current                                                                                                                       | 1.5 A           | 1.5 A                | -           | 1.5 A           | 1.5 A                | -          |             |
| Volume resistance                                                                                                                   | ≤ 3 mΩ          | ≤ 3 mΩ               | -           | ≤ 3 mΩ          | ≤ 3 mΩ               | -          |             |
| Material data                                                                                                                       |                 |                      |             |                 |                      |            |             |
| Material contact / contact surface                                                                                                  | CuZn / Au       | CuZn / Au            | - / -       | CuZn / Au       | CuZn / Au            | - / -      |             |
| Contact carrier material                                                                                                            | PA6T            | PA6T                 | -           | PA6T            | PA6T                 | -          |             |
| Inflammability class according to UL 94                                                                                             | V0              | V0                   | -           | V0              | V0                   | -          |             |
| Temperature data                                                                                                                    |                 |                      |             |                 |                      |            |             |
| Plug / socket                                                                                                                       | [°C]            | -25 ... 85           | -25 ... 85  | -               | -25 ... 85           | -25 ... 85 | -           |
|                                                                                                                                     | Ordering data   |                      |             | Ordering data   |                      |            |             |
| Description                                                                                                                         | Coding          | Order No.            | Pcs. / Pkt. | Order No.       | Pcs. / Pkt.          | Order No.  | Pcs. / Pkt. |
|                                                                                                                                     |                 | 12-pos.              | 17-pos.     |                 |                      | 12-pos.    | 17-pos.     |
| Device plug-in connectors                                                                                                           |                 |                      |             |                 |                      |            |             |
| Socket                                                                                                                              | A - standard    | 1424195              | 20          | 1424197         | 20                   | 1424199    | 20          |
| Plug                                                                                                                                | A - standard    | 1424194              | 20          | 1424196         | 20                   | 1424198    | 20          |
|                                                                                                                                     |                 | Accessories          |             |                 | Accessories          |            |             |
| Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers |                 | See page 258 onwards |             |                 | See page 258 onwards |            |             |



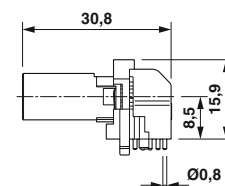
M12 socket contact carrier, angled, 12-pos.



M12 socket contact carrier, angled, 17-pos.



M12 pin contact carrier, angled, 12-pos.



M12 pin contact carrier, angled, 17-pos.

M5 to M12 circular plug-in connectors

M12 sensor/actuator device plug-in connectors, rear mounting

Contact carrier, two-piece,  
for wave soldering processes



Straight, 5-pos.



Straight, shielded, 4, 5-pos.



| Technical data                               |                 |       |       |
|----------------------------------------------|-----------------|-------|-------|
| 5-pos.                                       |                 |       |       |
| General data                                 |                 |       |       |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | -     | -     |
| Pollution degree                             | 3               | -     | -     |
| Degree of protection                         | IP67            | -     | -     |
| Connection method                            | Solder pins     | -     | -     |
| Electrical data                              |                 |       |       |
| Rated voltage                                | 60 V            | -     | -     |
| Rated current                                | 4 A             | -     | -     |
| Volume resistance                            | ≤ 3 mΩ          | -     | -     |
| Material data                                |                 |       |       |
| Material contact / contact surface           | CuZn / Au       | - / - | - / - |
| Contact carrier material                     | PA 66           | -     | -     |
| Inflammability class according to UL 94      | V0              | -     | -     |
| Temperature data                             |                 |       |       |
| Plug / socket                                | -25 ... 85      | -     | -     |
|                                              | [°C]            |       |       |

| Ordering data   |  |              |  |
|-----------------|--|--------------|--|
| 5-pos.          |  |              |  |
| Order No.       |  | Pcs. / Pkt.  |  |
| 1551464         |  | 20           |  |
| Contact carrier |  |              |  |
| Socket          |  | A - standard |  |
| Socket          |  | D - data     |  |
| Socket          |  | B - inverse  |  |

Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers

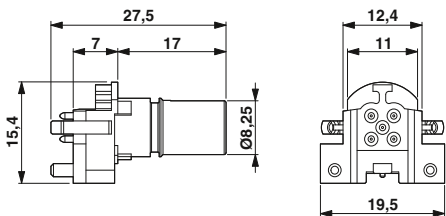
See page 258 onwards



| Technical data                               |                 |                 |       |
|----------------------------------------------|-----------------|-----------------|-------|
| 4-pos.                                       |                 | 5-pos.          |       |
| General data                                 |                 |                 |       |
| M12 circular plug-in connector according to: | IEC 61076-2-101 | IEC 61076-2-101 | -     |
| Pollution degree                             | 3               | 3               | -     |
| Degree of protection                         | IP67            | IP67            | -     |
| Connection method                            | Solder pins     | Solder pins     | -     |
| Electrical data                              |                 |                 |       |
| Rated voltage                                | 250 V           | 60 V            | -     |
| Rated current                                | 4 A             | 4 A             | -     |
| Volume resistance                            | ≤ 3 mΩ          | ≤ 3 mΩ          | -     |
| Material data                                |                 |                 |       |
| Material contact / contact surface           | CuZn / Au       | CuZn / Au       | - / - |
| Contact carrier material                     | PA 66           | PA 66           | -     |
| Inflammability class according to UL 94      | V0              | V0              | -     |
| Temperature data                             |                 |                 |       |
| Plug / socket                                | -25 ... 85      | -25 ... 85      | -     |

| Ordering data |  |             |    |
|---------------|--|-------------|----|
| 4-pos.        |  | 5-pos.      |    |
| Order No.     |  | Pcs. / Pkt. |    |
| 1551480       |  | 20          |    |
|               |  | 1551477     | 20 |

See page 258 onwards



M12 socket contact carrier, straight, 4, 5-pos.



## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Two-piece, for reflow processes,  
tray packaging, tape-on-reel packing



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



| Technical data        |                       |                       |
|-----------------------|-----------------------|-----------------------|
| 4-pos.                | 5-pos.                | 8-pos.                |
| IEC 61076-2-101       | IEC 61076-2-101       | IEC 61076-2-101       |
| 3                     | 3                     | 3                     |
| IP67                  | IP67                  | IP67                  |
| THR solder connection | THR solder connection | THR solder connection |
| 250 V                 | 60 V                  | 30 V                  |
| 4 A                   | 4 A                   | 2 A                   |
| ≤ 3 mΩ                | ≤ 3 mΩ                | ≤ 3 mΩ                |
| CuZn / Au             | CuZn / Au             | CuZn / Au             |
| PPA                   | PPA                   | PPA                   |
| V0                    | V0                    | V0                    |
| -25 ... 85            | -25 ... 85            | -25 ... 85            |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |
| 1439942       | 60          | 1551448   |
| 1437164       | 60          | 1552227   |
| 1457610       | 100         | 1457649   |
| 1457490       | 100         | 1457526   |

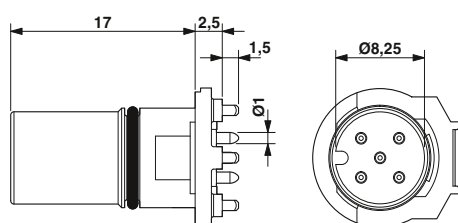
| Accessories          |  |  |
|----------------------|--|--|
| See page 258 onwards |  |  |



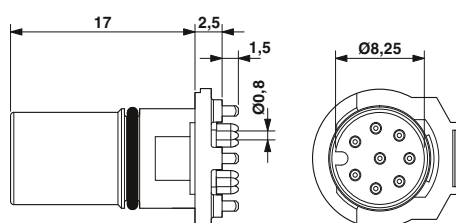
| Technical data        |                       |       |
|-----------------------|-----------------------|-------|
| 12-pos.               | 17-pos.               |       |
| IEC 61076-2-101       | IEC 61076-2-101       | -     |
| 3                     | 3                     | -     |
| IP67                  | IP67                  | -     |
| THR solder connection | THR solder connection | -     |
| 30 V                  | 30 V                  | -     |
| 1.5 A                 | 1.5 A                 | -     |
| ≤ 3 mΩ                | ≤ 3 mΩ                | -     |
| CuZn / Au             | CuZn / Au             | - / - |
| PPA                   | PPA                   | -     |
| V0                    | V0                    | -     |
| -25 ... 85            | -25 ... 85            | -     |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 12-pos.       | 17-pos.     |           |
| 1441970       | 60          | 1441998   |
| 1441985       | 60          | 1442007   |
| 1457694       | 100         | 1457717   |
| 1457571       | 100         | 1457597   |

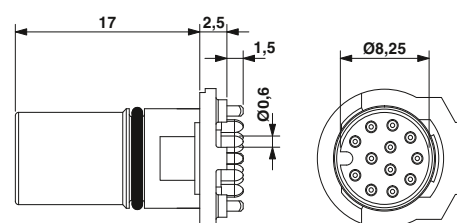
| Accessories          |  |  |
|----------------------|--|--|
| See page 258 onwards |  |  |



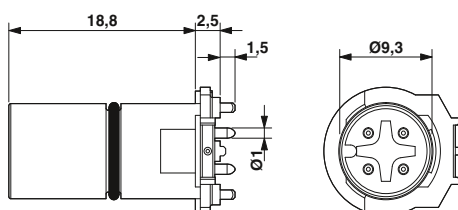
M12 socket contact carrier, straight, 4, 5-pos.



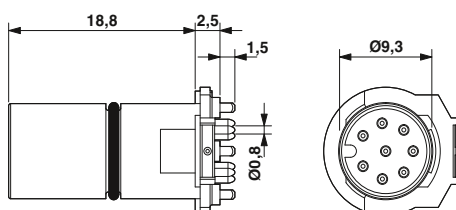
M12 socket contact carrier, straight, 8-pos.



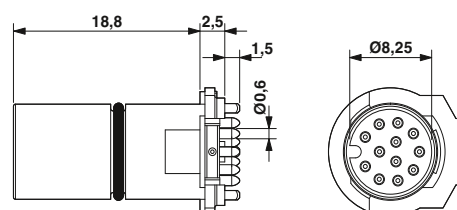
M12 socket contact carrier, straight, 12, 17-pos.



M12 plug contact carrier, straight, 4, 5-pos.



M12 plug contact carrier, straight, 8-pos.



M12 plug contact carrier, straight, 12, 17-pos.

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

Two-piece, for reflow processes,  
shielded, tray packaging,  
tape-on-reel packing



Straight, 4, 5, 8-pos.



Straight, 12, 17-pos.



| Technical data        |                       |                       |  |
|-----------------------|-----------------------|-----------------------|--|
| 4-pos.                | 5-pos.                | 8-pos.                |  |
| IEC 61076-2-101       | IEC 61076-2-101       | IEC 61076-2-101       |  |
| 3                     | 3                     | 3                     |  |
| IP67                  | IP67                  | IP67                  |  |
| THR solder connection | THR solder connection | THR solder connection |  |
| 250 V                 | 60 V                  | 30 V                  |  |
| 4 A                   | 4 A                   | 2 A                   |  |
| ≤ 3 mΩ                | ≤ 3 mΩ                | ≤ 3 mΩ                |  |
| CuZn / Au             | CuZn / Au             | CuZn / Au             |  |
| PPA                   | PPA                   | PPA                   |  |
| V0                    | V0                    | V0                    |  |
| -25 ... 85            | -25 ... 85            | -25 ... 85            |  |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             |
| 1439955       | 60          | 1432363   | 60          |
| 1439939       | 60          | 1432350   | 60          |
| 1551451       | 60          | 1551422   | 60          |
| 1552214       | 60          | 1557581   | 60          |
|               |             | 1551435   | 60          |
|               |             | 1552230   | 60          |
| 1457623       | 100         | 1457652   | 100         |
| 1457500       | 100         | 1457539   | 100         |
| 1457636       | 100         | 1457681   | 100         |
| 1457513       | 100         | 1457568   | 100         |
|               |             | 1457665   | 100         |
|               |             | 1457542   | 100         |

| Accessories          |  |
|----------------------|--|
| See page 258 onwards |  |



| Technical data        |                       |  |  |
|-----------------------|-----------------------|--|--|
| 12-pos.               | 17-pos.               |  |  |
| IEC 61076-2-101       | IEC 61076-2-101       |  |  |
| 3                     | 3                     |  |  |
| IP67                  | IP67                  |  |  |
| THR solder connection | THR solder connection |  |  |
| 30 V                  | 30 V                  |  |  |
| 1.5 A                 | 1.5 A                 |  |  |
| ≤ 3 mΩ                | ≤ 3 mΩ                |  |  |
| CuZn / Au             | CuZn / Au             |  |  |
| PPA                   | PPA                   |  |  |
| V0                    | V0                    |  |  |
| -25 ... 85            | -25 ... 85            |  |  |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |
| 1442052       | 60          | 1442078   | 60          |
| 1442065       | 60          | 1442081   | 60          |
| 1457704       | 100         | 1457720   | 100         |
| 1457584       | 100         | 1457607   | 100         |

| Accessories          |  |
|----------------------|--|
| See page 258 onwards |  |

| Description                                                    | Coding       |
|----------------------------------------------------------------|--------------|
| <b>Contact carrier, tray packaging</b>                         |              |
| Socket                                                         | A - standard |
| Plug                                                           | A - standard |
| Socket                                                         | D - data     |
| Plug                                                           | D - data     |
| Socket                                                         | B - inverse  |
| Plug                                                           | B - inverse  |
| <b>Contact carrier, tape-on-reel packing with assembly pad</b> |              |
| Socket                                                         | A - standard |
| Plug                                                           | A - standard |
| Socket                                                         | D - data     |
| Plug                                                           | D - data     |
| Socket                                                         | B - inverse  |
| Plug                                                           | B - inverse  |

Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

#### Housing screw connections, screw versions

- For two-piece M12 device plug-in connectors



With O-ring



With flat gasket

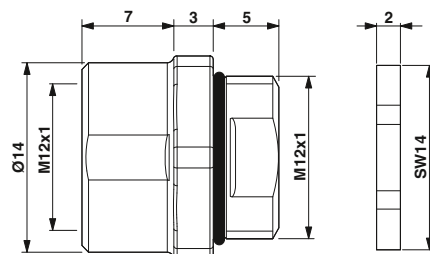


| Technical data                |           |             |
|-------------------------------|-----------|-------------|
| Zinc die-cast (nickel-plated) |           |             |
| -25 °C ... 85 °C              |           |             |
| Ordering data                 |           |             |
| Type                          | Order No. | Pcs. / Pkt. |
| SACC-M12-SCO NUT              | 1552243   | 60          |
| SACC-M12-SCO PLUG             | 1551493   | 60          |

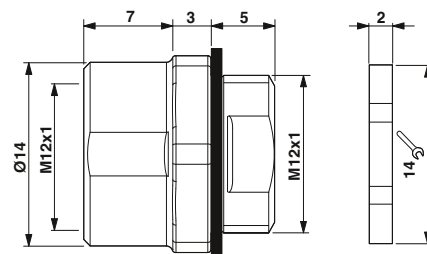


| Technical data                |           |             |
|-------------------------------|-----------|-------------|
| Zinc die-cast (nickel-plated) |           |             |
| -25 °C ... 85 °C              |           |             |
| Ordering data                 |           |             |
| Type                          | Order No. | Pcs. / Pkt. |
| SACC-M12-SCO NUT L 90         | 1432460   | 10          |
| SACC-M12-SCO PLUG L90         | 1436709   | 10          |

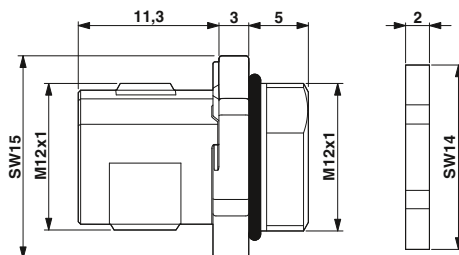
|                                                                                                                      |  |
|----------------------------------------------------------------------------------------------------------------------|--|
| Material data                                                                                                        |  |
| Material                                                                                                             |  |
| Temperature data                                                                                                     |  |
| Ambient temperature (operation)                                                                                      |  |
| Description                                                                                                          |  |
| <b>Housing screw connections</b> , SPEEDCON screw versions for all two-piece THR and wave soldering contact carriers |  |
| Socket                                                                                                               |  |
| Plug                                                                                                                 |  |



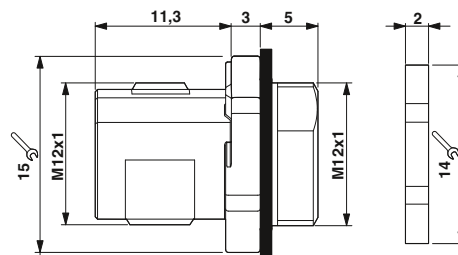
Socket housing screw connection, with O-ring



Socket housing screw connection, with flat gasket



Pin housing screw connection, with O-ring



Pin housing screw connection, with flat gasket

Housing screw connections,  
press-in versions

- For two-piece M12 device plug-in connectors



M12 socket



M12 pin



Technical data

|                                 |
|---------------------------------|
| Material data                   |
| Material                        |
| Temperature data                |
| Ambient temperature (operation) |

|                      |
|----------------------|
| CuZn (nickel-plated) |
| -25 °C ... 85 °C     |

Ordering data

|                                                                                             |
|---------------------------------------------------------------------------------------------|
| Description                                                                                 |
| <b>Housing screw connection</b> , for all two-piece THR and wave soldering contact carriers |
| Socket                                                                                      |
| Plug                                                                                        |

| Type               | Order No. | Pcs. / Pkt. |
|--------------------|-----------|-------------|
| SACC-M12 NUT PRESS | 1437889   | 10          |

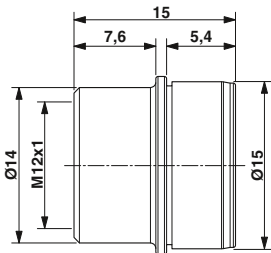


Technical data

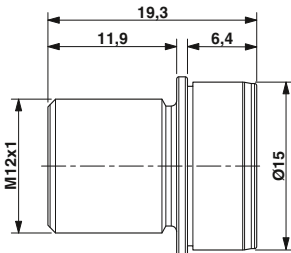
|                      |
|----------------------|
| CuZn (nickel-plated) |
| -25 °C ... 85 °C     |

Ordering data

| Type                | Order No. | Pcs. / Pkt. |
|---------------------|-----------|-------------|
| SACC-M12 PLUG PRESS | 1437892   | 10          |



Socket housing screw connection



Pin housing screw connection

### M12 sensor/actuator device plug-in connectors, rear mounting

**EtherCAT**   
Technologies Group



**Sercos**  
the automation bus

**CAT5/CAT5e**260 | PHOENIX CONTACT

# M12 flush-type plug-in connector, solder connection


CAT6<sub>A</sub>, X-coded

## Ethernet



CAT5e, Y-coded

| Technical data                                                                                                                                                                  |                                |           |             | Technical data                               |           |             |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|-------------|----------------------------------------------|-----------|-------------|--|
| SACC-DSI-FSX-8CON...                                                                                                                                                            |                                |           |             | VS-08-DSIV-L180-HYB SCO                      |           |             |  |
| Electrical data                                                                                                                                                                 |                                |           |             | 30 V (Data)                                  |           |             |  |
| Nominal voltage U <sub>N</sub>                                                                                                                                                  | 48 V                           |           |             | 0.5 A (Data) / 6 A (Power)                   |           |             |  |
| Rated current                                                                                                                                                                   | 0.5 A                          |           |             | CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001) |           |             |  |
| Transmission characteristics (category)                                                                                                                                         | CAT6 <sub>A</sub>              |           |             | CuZn                                         |           |             |  |
| Contact material                                                                                                                                                                | CuZn                           |           |             | Zinc die-cast, nickel-plated                 |           |             |  |
| Material of grip body                                                                                                                                                           | Zinc die-cast, nickel-plated   |           |             | V0                                           |           |             |  |
| Inflammability class according to UL 94                                                                                                                                         | V0                             |           |             | 8                                            |           |             |  |
| No. of pos.                                                                                                                                                                     | 8                              |           |             | ≥ 100                                        |           |             |  |
| Insertion/withdrawal cycles                                                                                                                                                     | ≥ 100                          |           |             |                                              |           |             |  |
| Temperature data                                                                                                                                                                |                                |           |             | -40 ... 85                                   |           |             |  |
| Plug / socket                                                                                                                                                                   | [°C]                           |           |             |                                              |           |             |  |
| Ordering data                                                                                                                                                                   |                                |           |             | Ordering data                                |           |             |  |
| Description                                                                                                                                                                     | Type                           | Order No. | Pcs. / Pkt. | Type                                         | Order No. | Pcs. / Pkt. |  |
| <b>Flush-type socket</b> , CAT6 <sub>A</sub> , Ethernet, one-piece, 8-pos., M12 SPEEDCON, with straight solder connection, rear/screw mounting with:                            |                                |           |             |                                              |           |             |  |
| M16 fastening thread                                                                                                                                                            | SACC-DSI-FSX-8CON-M16-L180 SCO | 1424177   | 20          |                                              |           |             |  |
| Pg9 fastening thread                                                                                                                                                            | SACC-DSI-FSX-8CON-PG9-L180 SCO | 1404741   | 20          |                                              |           |             |  |
| <b>Hybrid flush-type plug-in connector for the reflow soldering process</b> , with straight solder connection, 4 x power contacts, 4 x signal contacts, rear mounting, SPEEDCON |                                |           |             |                                              |           |             |  |
| Socket                                                                                                                                                                          |                                |           |             | <b>VS-08-DSIV-L180-HYB SCO</b>               | 1456666   | 20          |  |
| <b>Hybrid flush-type plug-in connector for the wave soldering process</b> , with straight solder connection, 4 x power contacts, 4 x signal contacts, rear mounting, SPEEDCON   |                                |           |             |                                              |           |             |  |
| Socket                                                                                                                                                                          |                                |           |             | <b>SACC-DSI-FSY-8CON-M16-L180 SCO</b>        | 1407503   | 20          |  |
| <b>Contact carrier, two-piece</b> , CAT6 <sub>A</sub> , Ethernet, 8-pos., rear mounting, with angled solder connection                                                          |                                |           |             |                                              |           |             |  |
|                                                                                                                                                                                 | <b>SACC-CI-M12FSX-8CON-L90</b> | 1424180   | 20          |                                              |           |             |  |
| <b>Hybrid contact carrier, two-piece</b> , Ethernet, 8-pos., rear/screw mounting, with angled solder connection                                                                 |                                |           |             | <b>SACC-CI-M12FSY-8CON-L90</b>               | 1424193   | 20          |  |
| Accessories                                                                                                                                                                     |                                |           |             | Accessories                                  |           |             |  |
| <b>Housing screw connection</b> , SPEEDCON, for all two-piece THR and wave soldering contact carriers                                                                           | See page 258 onwards           |           |             | See page 258 onwards                         |           |             |  |

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, rear mounting

**M12, two-piece,  
for wave soldering processes**

#### Ethernet

**PROFI  
NET**



Straight, 4, 5, 8-pos.



Straight, shielded, 5-pos.



#### Technical data

|                                              |                   |
|----------------------------------------------|-------------------|
| General data                                 |                   |
| M12 circular plug-in connector according to: | IEC 61076-2-101   |
| Pollution degree                             | 3                 |
| Degree of protection                         | IP67              |
| Connection method                            | Solder pins       |
| Electrical data                              |                   |
| Rated voltage                                | 250 V             |
| Rated current                                | 4 A               |
| Volume resistance                            | ≤ 3 mΩ            |
| Material data                                |                   |
| Material contact / contact surface           | CuZn / Au         |
| Contact carrier material                     | PA 66             |
| Inflammability class according to UL 94      | HB                |
| Temperature data                             |                   |
| Plug / socket                                | [-25 ... 85] [°C] |

| 4-pos.          | 5-pos.          | 8-pos.          |
|-----------------|-----------------|-----------------|
| IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| 3               | 3               | 3               |
| IP67            | IP67            | IP67            |
| Solder pins     | Solder pins     | Solder pins     |
| 250 V           | 60 V            | 30 V            |
| 4 A             | 4 A             | 2 A             |
| ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |
| CuZn / Au       | CuZn / Au       | CuZn / Au       |
| PA 66           | PA 66           | PA 66           |
| HB              | HB              | HB              |
| -25 ... 85      | -25 ... 85      | -25 ... 85      |



#### Technical data

| 5-pos.          |       |       |
|-----------------|-------|-------|
| IEC 61076-2-101 | -     | -     |
| 3               | -     | -     |
| IP67            | -     | -     |
| Solder pins     | -     | -     |
| 60 V            | -     | -     |
| 4 A             | -     | -     |
| ≤ 3 mΩ          | -     | -     |
| CuZn / Au       | - / - | - / - |
| PA 66           | -     | -     |
| HB              | -     | -     |
| -25 ... 85      | -     | -     |

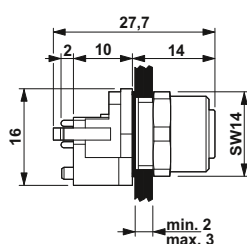
#### Ordering data

| Description                            | Coding       |
|----------------------------------------|--------------|
| Flush-type plug-in connector, straight |              |
| Socket                                 | A - standard |
| Plug                                   | A - standard |
| Socket                                 | D - data     |
| Socket                                 | B - inverse  |
| Plug                                   | B - inverse  |

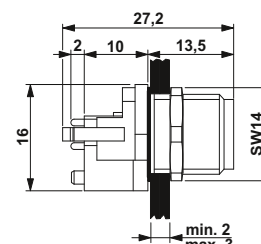
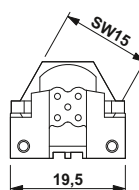
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 4-pos.    |             | 5-pos.    |             | 8-pos.    |             |
|           |             | 1694237   | 10          | 1556854   | 10          |
|           |             | 1694211   | 10          |           |             |
| 1534627   | 10          | 1515934   | 10          |           |             |
|           |             | 1514883   | 10          |           |             |

#### Ordering data

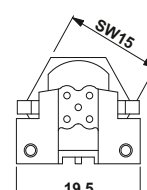
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 5-pos.    |             |           |             |           |             |
| 1437193   | 10          |           |             |           |             |
| 1437180   | 10          |           |             |           |             |
| 1437203   | 10          |           |             |           |             |



M12 flush-type socket, straight,



M12 flush-type plug, straight,



### Pg9 fastening thread, plastic



Solder connection, 5, 8-pos.



With 0.5 m long litz wires, 5, 8-pos.



#### Technical data

|                                              |           |
|----------------------------------------------|-----------|
| General data                                 |           |
| M12 circular plug-in connector according to: |           |
| Pollution degree                             | 3         |
| Degree of protection                         | IP67      |
| Electrical data                              |           |
| Rated voltage                                | 60 V      |
| Rated current                                | 4 A       |
| Volume resistance                            | ≤ 3 mΩ    |
| Material data                                |           |
| Material contact / contact surface           | CuZn / Au |
| Contact carrier material                     | PA 66     |
| Inflammability class according to UL 94      | HB        |
| Temperature data                             |           |
| Plug / socket                                | [°C]      |
| Cable, fixed installation                    | [°C]      |

| 5-pos.          | 8-pos.          |
|-----------------|-----------------|
| IEC 61076-2-101 | IEC 61076-2-101 |
| 3               | 3               |
| IP67            | IP67            |
| 60 V            | 30 V            |
| 4 A             | 2 A             |
| ≤ 3 mΩ          | ≤ 3 mΩ          |
| CuZn / Au       | CuZn / Au       |
| PA 66           | PA 66           |
| HB              | HB              |
| -25 ... 85      | -25 ... 85      |
| -               | -               |



#### Technical data

| 5-pos.          | 8-pos.          |
|-----------------|-----------------|
| IEC 61076-2-101 | IEC 61076-2-101 |
| 3               | 3               |
| IP67            | IP67            |
| 60 V            | 30 V            |
| 4 A             | 2 A             |
| ≤ 3 mΩ          | ≤ 3 mΩ          |
| CuZn / Au       | CuZn / Au       |
| PA 66           | PA 66           |
| HB              | HB              |
| -25 ... 85      | -25 ... 85      |
| -25 ... 85      | -25 ... 85      |

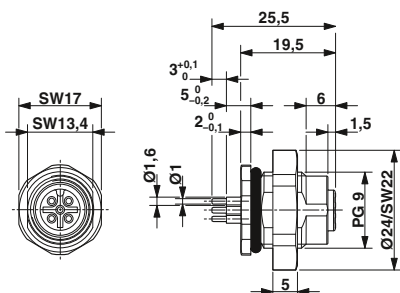
#### Ordering data

| Description                                    | Coding       |
|------------------------------------------------|--------------|
| Flush-type plug-in connector, with solder pins |              |
| Socket                                         | A - standard |
| Flush-type plug-in connector, with solder cups |              |
| Socket                                         | A - standard |
| Flush-type plug-in connector, with litz wires  |              |
| Socket                                         | A - standard |

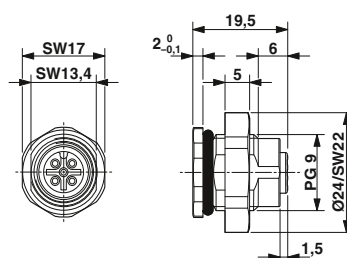
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 5-pos.    |             | 8-pos.    |             |
| 1436330   | 20          | 1436343   | 20          |
| 1436314   | 20          | 1436327   | 20          |

#### Ordering data

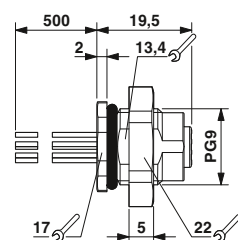
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 5-pos.    |             | 8-pos.    |             |
| 1436356   | 1           | 1436369   | 1           |



M12, Pg9 fastening thread, solder pins



M12 socket, Pg9 fastening thread, solder cups



M12 socket, Pg9 fastening thread, with litz wires

M5 to M12 circular plug-in connectors

M12 sensor/actuator device plug-in connectors, rear mounting

Control cabinet feed-through



4, 5, 8-pos.

|                                                    |  | Technical data  |  |                 |  |                 |  |
|----------------------------------------------------|--|-----------------|--|-----------------|--|-----------------|--|
|                                                    |  | 4-pos.          |  | 5-pos.          |  | 8-pos.          |  |
| General data                                       |  |                 |  |                 |  |                 |  |
| M12 circular plug-in connector according to:       |  | IEC 61076-2-101 |  | IEC 61076-2-101 |  | IEC 61076-2-101 |  |
| Pollution degree                                   |  | 3               |  | 3               |  | 3               |  |
| Degree of protection                               |  | IP67            |  | IP67            |  | IP67            |  |
| Electrical data                                    |  |                 |  |                 |  |                 |  |
| Rated voltage                                      |  | 60 V            |  | 24 V            |  | 24 V            |  |
| Rated current                                      |  | 4 A             |  | 4 A             |  | 1.5 A           |  |
| Volume resistance                                  |  | ≤ 3 mΩ          |  | ≤ 3 mΩ          |  | ≤ 3 mΩ          |  |
| Material data                                      |  |                 |  |                 |  |                 |  |
| Contact material                                   |  | CuZn            |  | CuZn            |  | CuZn            |  |
| Contact surface material                           |  | Au              |  | Au              |  | Au              |  |
| Contact carrier material                           |  | PA 66           |  | PA 66           |  | PA 66           |  |
| Inflammability class according to UL 94            |  | HB              |  | HB              |  | HB              |  |
| Temperature data                                   |  |                 |  |                 |  |                 |  |
| Plug / socket                                      |  | [°C]            |  | -25 ... 85      |  | -25 ... 85      |  |
|                                                    |  |                 |  |                 |  |                 |  |
|                                                    |  | Ordering data   |  |                 |  |                 |  |
|                                                    |  |                 |  |                 |  |                 |  |
| Description                                        |  | Coding          |  | Order No.       |  | Pcs. / Pkt.     |  |
|                                                    |  |                 |  | Order No.       |  | Pcs. / Pkt.     |  |
|                                                    |  |                 |  | Order No.       |  | Pcs. / Pkt.     |  |
| Control cabinet feed-through, M16 fastening thread |  |                 |  |                 |  |                 |  |
| Plug on socket                                     |  | A - standard    |  | 1551671         |  | 1               |  |
| Plug on socket                                     |  | B - inverse     |  | 1551684         |  | 1               |  |
| Socket to socket                                   |  | D - data        |  | 1424326         |  | 1               |  |

Control cabinet feed-through, socket to socket on both sides

Control cabinet feed-through, socket to pin on both sides

## M5 to M12 circular plug-in connectors

### 7/8" sensor/actuator device plug-in connectors, front mounting

**Front mounting,  
Pg13.5 fastening thread,  
with 0.5 m long litz wires**

**Notes:**

Flat nut recommended for housing wall thicknesses < 2.5 mm.



3, 4-pos.



5-pos.



#### Technical data

|                                         | 3-pos.           | 4-pos.           |
|-----------------------------------------|------------------|------------------|
| General data                            |                  |                  |
| Pollution degree                        | 3                | 3                |
| Degree of protection                    | IP67             | IP67             |
| Connection method                       | Individual wires | Individual wires |
| Electrical data                         |                  |                  |
| Rated voltage                           | 250 V            | 250 V            |
| Rated current                           | 12 A             | 9 A              |
| Volume resistance                       | ≤ 5 mΩ           | ≤ 5 mΩ           |
| Surge voltage category                  | II               | II               |
| Material data                           |                  |                  |
| Material contact / contact surface      | CuZn / Au        | CuZn / Au        |
| Contact carrier material                | PUR              | PUR              |
| Inflammability class according to UL 94 | HB               | HB               |
| Cable type                              | PVC litz wire    | PVC litz wire    |
| Temperature data                        |                  |                  |
| Plug / socket                           | [°C]             | [°C]             |
| Cable, fixed installation               | -40 ... 85       | -40 ... 85       |

#### Ordering data

| Description                      | Coding       | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|----------------------------------|--------------|-----------|-------------|-----------|-------------|
|                                  |              | 3-pos.    |             | 4-pos.    |             |
| <b>Device plug-in connectors</b> |              |           |             |           |             |
| Socket                           | A - standard | 1521407   | 1           | 1521423   | 1           |
| Plug                             | A - standard | 1521410   | 1           | 1521436   | 1           |

#### Accessories

|                        |                  |         |     |
|------------------------|------------------|---------|-----|
| <b>Flat nut, with:</b> |                  |         |     |
| Pg13.5 thread          | SACC-E-MU-PG13,5 | 1539143 | 100 |



#### Technical data

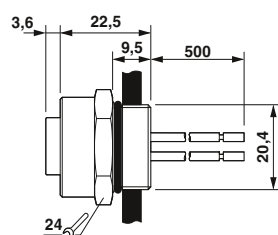
|                                         | 5-pos.           |       |
|-----------------------------------------|------------------|-------|
| General data                            |                  |       |
| Pollution degree                        | 3                | -     |
| Degree of protection                    | IP67             | -     |
| Connection method                       | Individual wires | -     |
| Electrical data                         |                  |       |
| Rated voltage                           | 250 V            | -     |
| Rated current                           | 9 A              | -     |
| Volume resistance                       | ≤ 5 mΩ           | -     |
| Surge voltage category                  | II               | -     |
| Material data                           |                  |       |
| Material contact / contact surface      | CuZn / Au        | - / - |
| Contact carrier material                | PUR              | -     |
| Inflammability class according to UL 94 | HB               | -     |
| Cable type                              | PVC litz wire    | -     |
| Temperature data                        |                  |       |
| Plug / socket                           | -40 ... 85       | -     |
| Cable, fixed installation               | -40 ... 85       | -     |

#### Ordering data

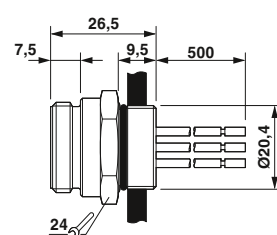
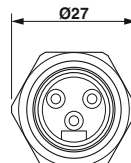
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
|           |             | 5-pos.    |             |
| 1521449   | 1           |           |             |
| 1521452   | 1           |           |             |

#### Accessories

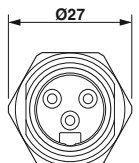
|                  |         |     |
|------------------|---------|-----|
| SACC-E-MU-PG13,5 | 1539143 | 100 |
|------------------|---------|-----|



7/8" flush-type socket



7/8" flush-type plug



## M5 to M12 circular plug-in connectors

### 7/8" sensor/actuator device plug-in connectors, rear mounting

7/8", with 1.0 m long litz wires



3, 4, 5-pos.



3, 4, 5-pos.



#### Technical data

|                                         | 3-pos.           | 4-pos.           | 5-pos.           |
|-----------------------------------------|------------------|------------------|------------------|
| General data                            |                  |                  |                  |
| Pollution degree                        | 3                | 3                | 3                |
| Degree of protection                    | IP67             | IP67             | IP67             |
| Connection method                       | Individual wires | Individual wires | Individual wires |
| Electrical data                         |                  |                  |                  |
| Rated voltage                           | 250 V            | 250 V            | 250 V            |
| Rated current                           | 12 A             | 9 A              | 9 A              |
| Volume resistance                       | ≤ 5 mΩ           | ≤ 5 mΩ           | ≤ 5 mΩ           |
| Surge voltage category                  | II               | II               | II               |
| Material data                           |                  |                  |                  |
| Contact material                        | CuZn             | CuZn             | CuZn             |
| Contact surface material                | Au               | Au               | Au               |
| Contact carrier material                | PUR              | PUR              | PUR              |
| Inflammability class according to UL 94 | HB               | HB               | HB               |
| Temperature data                        |                  |                  |                  |
| Plug / socket [°C]                      | -40 ... 85       | -40 ... 85       | -40 ... 85       |
| Cable, fixed installation [°C]          | -40 ... 85       | -40 ... 85       | -40 ... 85       |

#### Ordering data

| Description | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|             | 3-pos.    |             | 4-pos.    |             | 5-pos.    |             |
| Socket      | 1453782   | 1           | 1453795   | 1           | 1453805   | 1           |
| Plug        |           |             |           |             |           |             |

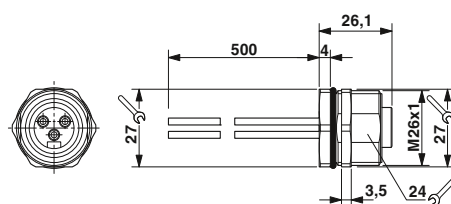


#### Technical data

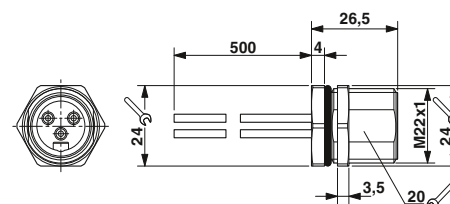
|                                         | 3-pos.           | 4-pos.           | 5-pos.           |
|-----------------------------------------|------------------|------------------|------------------|
| General data                            |                  |                  |                  |
| Pollution degree                        | 3                | 3                | 3                |
| Degree of protection                    | IP67             | IP67             | IP67             |
| Connection method                       | Individual wires | Individual wires | Individual wires |
| Electrical data                         |                  |                  |                  |
| Rated voltage                           | 250 V            | 250 V            | 250 V            |
| Rated current                           | 12 A             | 9 A              | 9 A              |
| Volume resistance                       | ≤ 5 mΩ           | ≤ 5 mΩ           | ≤ 5 mΩ           |
| Surge voltage category                  | II               | II               | II               |
| Material data                           |                  |                  |                  |
| Contact material                        | CuZn             | CuZn             | CuZn             |
| Contact surface material                | Au               | Au               | Au               |
| Contact carrier material                | PUR              | PUR              | PUR              |
| Inflammability class according to UL 94 | HB               | HB               | HB               |
| Temperature data                        |                  |                  |                  |
| Plug / socket [°C]                      | -40 ... 85       | -40 ... 85       | -40 ... 85       |
| Cable, fixed installation [°C]          | -40 ... 85       | -40 ... 85       | -40 ... 85       |

#### Ordering data

| Description | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|             | 3-pos.    |             | 4-pos.    |             | 5-pos.    |             |
| Socket      | 1453782   | 1           | 1453795   | 1           | 1453805   | 1           |
| Plug        | 1453753   | 1           | 1453766   | 1           | 1453799   | 1           |



7/8" flush-type socket



7/8" flush-type plug

# M5 to M12 circular plug-in connectors

## 7/8" sensor/actuator device plug-in connectors, rear mounting

7/8" rear mounting,  
for wave soldering processes



3, 4, 5-pos.



3, 4, 5-pos.



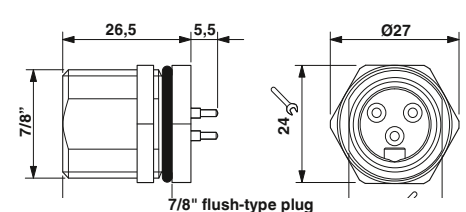
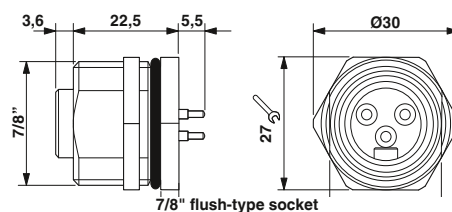
| Technical data                          |             |             |             |
|-----------------------------------------|-------------|-------------|-------------|
|                                         | 3-pos.      | 4-pos.      | 5-pos.      |
| General data                            |             |             |             |
| Pollution degree                        | 3           | 3           | 3           |
| Degree of protection                    | IP67        | IP67        | IP67        |
| Connection method                       | Solder pins | Solder pins | Solder pins |
| Electrical data                         |             |             |             |
| Rated voltage                           | 250 V       | 250 V       | 250 V       |
| Rated current                           | 12 A        | 9 A         | 9 A         |
| Volume resistance                       | ≤ 5 mΩ      | ≤ 5 mΩ      | ≤ 5 mΩ      |
| Surge voltage category                  | II          | II          | II          |
| Material data                           |             |             |             |
| Contact material                        | CuZn        | CuZn        | CuZn        |
| Contact surface material                | Au          | Au          | Au          |
| Contact carrier material                | PUR         | PUR         | PUR         |
| Inflammability class according to UL 94 | HB          | HB          | HB          |
| Temperature data                        |             |             |             |
| Plug / socket                           | -40 ... 85  | -40 ... 85  | -40 ... 85  |

| Ordering data                                       |              |           |             |           |             |
|-----------------------------------------------------|--------------|-----------|-------------|-----------|-------------|
| Description                                         | Coding       | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 3-pos.                                              |              |           |             |           |             |
| 4-pos.                                              |              |           |             |           |             |
| 5-pos.                                              |              |           |             |           |             |
| Socket                                              | A - standard | 1457830   | 1           | 1457843   | 1           |
| Flush-type plug-in connector, 7/8" fastening thread |              |           |             |           |             |
| Plug                                                | A - standard |           |             |           |             |



| Technical data                          |             |             |             |
|-----------------------------------------|-------------|-------------|-------------|
|                                         | 3-pos.      | 4-pos.      | 5-pos.      |
| General data                            |             |             |             |
| Pollution degree                        | 3           | 3           | 3           |
| Degree of protection                    | IP67        | IP67        | IP67        |
| Connection method                       | Solder pins | Solder pins | Solder pins |
| Electrical data                         |             |             |             |
| Rated voltage                           | 250 V       | 250 V       | 250 V       |
| Rated current                           | 12 A        | 9 A         | 9 A         |
| Volume resistance                       | ≤ 5 mΩ      | ≤ 5 mΩ      | ≤ 5 mΩ      |
| Surge voltage category                  | II          | II          | II          |
| Material data                           |             |             |             |
| Contact material                        | CuZn        | CuZn        | CuZn        |
| Contact surface material                | Au          | Au          | Au          |
| Contact carrier material                | PUR         | PUR         | PUR         |
| Inflammability class according to UL 94 | HB          | HB          | HB          |
| Temperature data                        |             |             |             |
| Plug / socket                           | -40 ... 85  | -40 ... 85  | -40 ... 85  |

| Ordering data                                       |              |           |             |           |             |
|-----------------------------------------------------|--------------|-----------|-------------|-----------|-------------|
| Description                                         | Coding       | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 3-pos.                                              |              |           |             |           |             |
| 4-pos.                                              |              |           |             |           |             |
| 5-pos.                                              |              |           |             |           |             |
| Socket                                              | A - standard | 1457830   | 1           | 1457843   | 1           |
| Flush-type plug-in connector, 7/8" fastening thread |              |           |             |           |             |
| Plug                                                | A - standard |           |             |           |             |



## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, stainless steel versions

**Front mounting,  
Pg9/M16 fastening thread,  
with 0.5 m long litz wires**

– Housing material, stainless steel 1.4404



4, 5, 8-pos.



Can be positioned, 4, 5, 8-pos.



| Technical data                                         |                                                        |                                                        |
|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| 4-pos.                                                 | 5-pos.                                                 | 8-pos.                                                 |
| IEC 61076-2-101<br>3<br>IP67/IP69K<br>Individual wires | IEC 61076-2-101<br>3<br>IP67/IP69K<br>Individual wires | IEC 61076-2-101<br>3<br>IP67/IP69K<br>Individual wires |
| 250 V<br>4 A<br>≤ 3 mΩ                                 | 60 V<br>4 A<br>≤ 3 mΩ                                  | 30 V<br>2 A<br>≤ 3 mΩ                                  |
| CuZn / Au<br>PA66 GF<br>V0<br>TPE litz wire            | CuZn / Au<br>PA66 GF<br>V0<br>TPE litz wire            | CuZn / Au<br>PA66 GF<br>V0<br>TPE litz wire            |
| -25 ... 85                                             | -25 ... 85                                             | -25 ... 85                                             |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |

|                                              |
|----------------------------------------------|
| General data                                 |
| M12 circular plug-in connector according to: |
| Pollution degree                             |
| Degree of protection                         |
| Connection method                            |
| Electrical data                              |
| Rated voltage                                |
| Rated current                                |
| Volume resistance                            |
| Material data                                |
| Material contact / contact surface           |
| Contact carrier material                     |
| Inflammability class according to UL 94      |
| Cable type                                   |
| Temperature data                             |
| Plug / socket                                |



| Technical data                                         |                                                        |                                                        |
|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| 4-pos.                                                 | 5-pos.                                                 | 8-pos.                                                 |
| IEC 61076-2-101<br>3<br>IP67/IP69K<br>Individual wires | IEC 61076-2-101<br>3<br>IP67/IP69K<br>Individual wires | IEC 61076-2-101<br>3<br>IP67/IP69K<br>Individual wires |
| 250 V<br>4 A<br>≤ 3 mΩ                                 | 60 V<br>4 A<br>≤ 3 mΩ                                  | 30 V<br>2 A<br>≤ 3 mΩ                                  |
| CuZn / Au<br>PA66 GF<br>V0<br>TPE litz wire            | CuZn / Au<br>PA66 GF<br>V0<br>TPE litz wire            | CuZn / Au<br>PA66 GF<br>V0<br>TPE litz wire            |
| -25 ... 85                                             | -25 ... 85                                             | -25 ... 85                                             |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |

#### Device plug-in connector, Pg9 fastening thread

|        |              |
|--------|--------------|
| Socket | A - standard |
| Plug   | A - standard |

|         |   |         |   |         |   |
|---------|---|---------|---|---------|---|
| 1555448 | 1 | 1699863 | 1 | 1554607 | 1 |
| 1554555 | 1 | 1554568 | 1 | 1554571 | 1 |

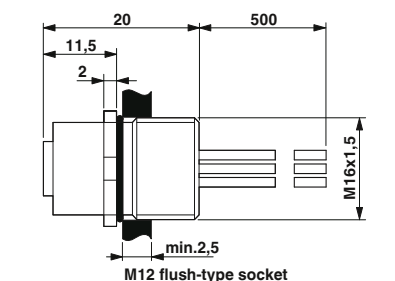
|         |   |         |   |         |   |
|---------|---|---------|---|---------|---|
| 1554649 | 1 | 1554652 | 1 | 1554665 | 1 |
| 1554610 | 1 | 1554623 | 1 | 1554636 | 1 |

#### Device plug-in connector, M16 fastening thread

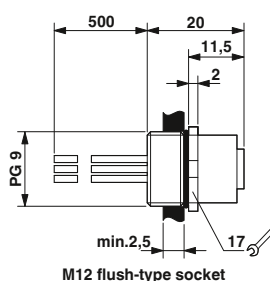
|        |              |
|--------|--------------|
| Socket | A - standard |
| Plug   | A - standard |

|         |   |         |   |         |   |
|---------|---|---------|---|---------|---|
| 1458855 | 1 | 1458871 | 1 | 1458842 | 1 |
| 1405233 | 1 | 1458868 | 1 | 1405221 | 1 |

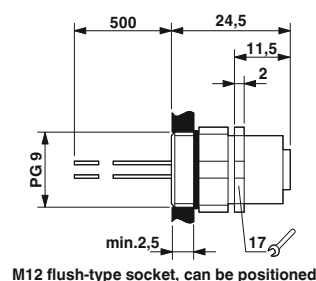
|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|  |  |  |  |  |  |



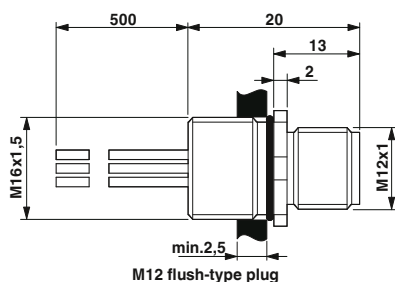
M12 flush-type socket



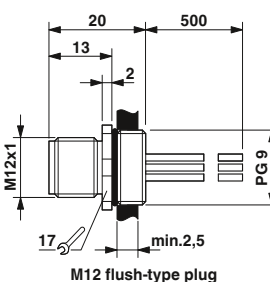
M12 flush-type socket



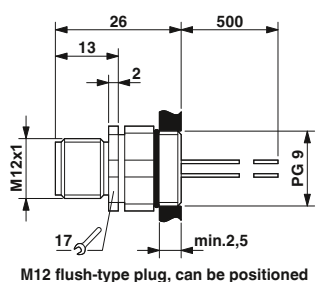
M12 flush-type socket, can be positioned



M12 flush-type plug



M12 flush-type plug



M12 flush-type plug, can be positioned

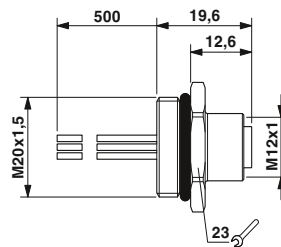
**Front mounting,  
M20 fastening thread,  
with 0.5 m long litz wires**

– Housing material, stainless steel 1.4404

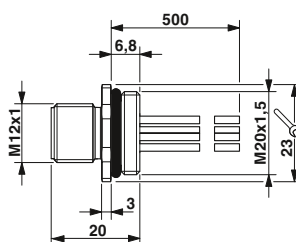


4, 5, 8-pos.

|                                              |              | Technical data   |   |                  |   |                  |   |
|----------------------------------------------|--------------|------------------|---|------------------|---|------------------|---|
|                                              |              | 4-pos.           |   | 5-pos.           |   | 8-pos.           |   |
|                                              |              |                  |   |                  |   |                  |   |
| General data                                 |              |                  |   |                  |   |                  |   |
| M12 circular plug-in connector according to: |              | IEC 61076-2-101  |   | IEC 61076-2-101  |   | IEC 61076-2-101  |   |
| Pollution degree                             |              | 3                |   | 3                |   | 3                |   |
| Degree of protection                         |              | IP67/IP69K       |   | IP67/IP69K       |   | IP67/IP69K       |   |
| Connection method                            |              | Individual wires |   | Individual wires |   | Individual wires |   |
| Electrical data                              |              |                  |   |                  |   |                  |   |
| Rated voltage                                |              | 250 V            |   | 60 V             |   | 30 V             |   |
| Rated current                                |              | 4 A              |   | 4 A              |   | 2 A              |   |
| Volume resistance                            |              | ≤ 3 mΩ           |   | ≤ 3 mΩ           |   | ≤ 3 mΩ           |   |
| Material data                                |              |                  |   |                  |   |                  |   |
| Material contact / contact surface           |              | CuZn / Au        |   | CuZn / Au        |   | CuZn / Au        |   |
| Contact carrier material                     |              | PA 66            |   | PA 66            |   | PA 66            |   |
| Inflammability class according to UL 94      |              | V0               |   | V0               |   | V0               |   |
| Cable type                                   |              | TPE litz wire    |   | TPE litz wire    |   | TPE litz wire    |   |
| Temperature data                             |              |                  |   |                  |   |                  |   |
| Plug / socket                                |              | [°C]             |   | -25 ... 85       |   | -25 ... 85       |   |
|                                              |              |                  |   |                  |   |                  |   |
|                                              |              | Ordering data    |   |                  |   |                  |   |
|                                              |              |                  |   |                  |   |                  |   |
|                                              |              |                  |   |                  |   |                  |   |
| Description                                  |              | Coding           |   | Order No.        |   | Order No.        |   |
|                                              |              |                  |   | Pcs. / Pkt.      |   | Pcs. / Pkt.      |   |
|                                              |              |                  |   |                  |   |                  |   |
|                                              |              | 4-pos.           |   | 5-pos.           |   | 8-pos.           |   |
| Device plug-in connectors                    |              |                  |   |                  |   |                  |   |
| Socket                                       | A - standard | 1408416          | 1 | 1452071          | 1 | 1452110          | 1 |
| Plug                                         | A - standard | 1408415          | 1 | 1452068          | 1 | 1452107          | 1 |
| Socket                                       | B - inverse  |                  |   | 1452097          | 1 |                  |   |
| Plug                                         | B - inverse  |                  |   | 1452084          | 1 |                  |   |



M12 flush-type socket



M12 flush-type plug

## M5 to M12 circular plug-in connectors

### M12 sensor/actuator device plug-in connectors, stainless steel versions

#### Device plug-in connector, rear mounting

– Housing material, stainless steel 1.4404



With 0.5 m long litz wires, 4, 5, 8-pos.



For wave soldering processes, 4, 5, 8-pos.



#### Technical data

| General data                                 |      |
|----------------------------------------------|------|
| M12 circular plug-in connector according to: |      |
| Pollution degree                             |      |
| Degree of protection                         |      |
| Connection method                            |      |
| Electrical data                              |      |
| Rated voltage                                |      |
| Rated current                                |      |
| Volume resistance                            |      |
| Material data                                |      |
| Material contact / contact surface           |      |
| Contact carrier material                     |      |
| Inflammability class according to UL 94      |      |
| Cable type                                   |      |
| Temperature data                             |      |
| Plug / socket                                | [°C] |

| 4-pos.           | 5-pos.           | 8-pos.           |
|------------------|------------------|------------------|
| IEC 61076-2-101  | IEC 61076-2-101  | IEC 61076-2-101  |
| 3                | 3                | 3                |
| IP67/IP69K       | IP67/IP69K       | IP67/IP69K       |
| Individual wires | Individual wires | Individual wires |
| 250 V            | 60 V             | 30 V             |
| 4 A              | 4 A              | 2 A              |
| ≤ 3 mΩ           | ≤ 3 mΩ           | ≤ 3 mΩ           |
| CuZn / Au        | CuZn / Au        | CuZn / Au        |
| PA 66            | PA 66            | PA 66            |
| V0               | V0               | V0               |
| TPE litz wire    | TPE litz wire    | TPE litz wire    |
| -25 ... 85       | -25 ... 85       | -25 ... 85       |

#### Ordering data

| Description                      | Coding       |
|----------------------------------|--------------|
| <b>Device plug-in connectors</b> |              |
| Socket                           | A - standard |
| Plug                             | A - standard |

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 4-pos.    |             | 5-pos.    |             | 8-pos.    |             |
| 1405240   | 1           | 1554717   | 1           | 1554720   | 1           |
| 1405239   | 1           | 1554681   | 1           | 1554694   | 1           |

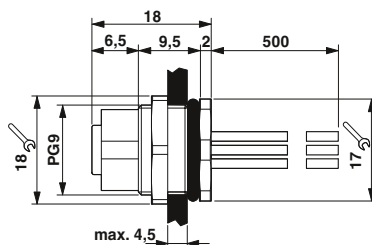


#### Technical data

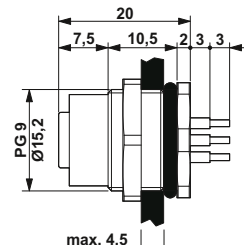
| 4-pos.          | 5-pos.          | 8-pos.          |
|-----------------|-----------------|-----------------|
| IEC 61076-2-101 | IEC 61076-2-101 | IEC 61076-2-101 |
| 3               | 3               | 3               |
| IP67/IP69K      | IP67/IP69K      | IP67/IP69K      |
| Solder pins     | Solder pins     | Solder pins     |
| 250 V           | 60 V            | 30 V            |
| 4 A             | 4 A             | 2 A             |
| ≤ 3 mΩ          | ≤ 3 mΩ          | ≤ 3 mΩ          |
| CuZn / Au       | CuZn / Au       | CuZn / Au       |
| PA 66           | PA 66           | PA 66           |
| V0              | V0              | V0              |
| -               | -               | -               |
| -25 ... 85      | -25 ... 85      | -25 ... 85      |

#### Ordering data

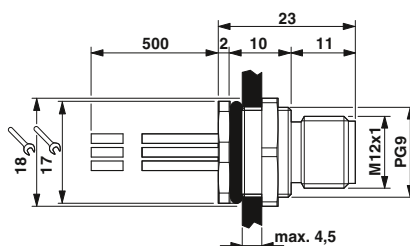
| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|-----------|-------------|
| 4-pos.    |             | 5-pos.    |             | 8-pos.    |             |
| 1404974   | 20          | 1554733   | 20          | 1529797   | 20          |
| 1404979   | 20          | 1554746   | 20          | 1529807   | 20          |



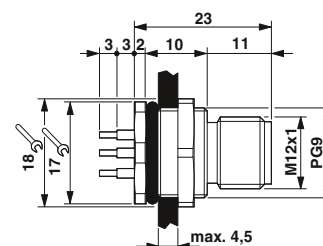
M12 flush-type socket



M12 flush-type socket



M12 flush-type plug



M12 flush-type plug



## M5 to M12 circular plug-in connectors

### Sensor/actuator plug-in connectors for assembly

#### M8, insulation displacement connection



0.08 mm<sup>2</sup> - 0.25 mm<sup>2</sup>, 3, 4-pos.



0.25 mm<sup>2</sup> - 0.5 mm<sup>2</sup>, 3, 4-pos.



#### Technical data

|                                             |      |
|---------------------------------------------|------|
| General data                                |      |
| M8 circular plug-in connector according to: |      |
| Pollution degree                            |      |
| Degree of protection                        |      |
| Connection method                           |      |
| Cable diameter                              |      |
| Electrical data                             |      |
| Rated voltage                               |      |
| Rated current                               |      |
| Volume resistance                           |      |
| Insulation resistance                       |      |
| Material data                               |      |
| Material contact / contact surface          |      |
| Contact carrier material                    |      |
| Inflammability class according to UL 94     |      |
| Temperature data                            |      |
| Plug / socket                               | [°C] |

| 3-pos.                             | 4-pos.   |
|------------------------------------|----------|
| IEC 61076-2-104                    |          |
| 3                                  |          |
| IP65/67                            |          |
| Insulation displacement connection |          |
| 2.5 mm ... 5 mm ± 0.2 mm           |          |
| 60 V                               | 30 V     |
|                                    | 4 A      |
|                                    | ≤ 5 mΩ   |
|                                    | ≥ 100 MΩ |
| CuSn / Ni/Au                       |          |
| TPU GF                             |          |
| HB                                 |          |
|                                    |          |
| -25 ... 80                         |          |

#### Ordering data

|                          |
|--------------------------|
| Description              |
| <b>Plug-in connector</b> |
| Socket, straight         |
| Plug, straight           |

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 3-pos.    |             | 4-pos.    |             |
| 1441040   | 1           | 1441053   | 1           |
| 1441008   | 1           | 1441011   | 1           |



#### Technical data

| 3-pos.                             | 4-pos.   |
|------------------------------------|----------|
| IEC 61076-2-104                    |          |
| 3                                  |          |
| IP65/67                            |          |
| Insulation displacement connection |          |
| 2.5 mm ... 5 mm ± 0.2 mm           |          |
| 60 V                               | 30 V     |
|                                    | 4 A      |
|                                    | ≤ 5 mΩ   |
|                                    | ≥ 100 MΩ |
| CuSn / Ni/Au                       |          |
| TPU GF                             |          |
| HB                                 |          |
|                                    |          |
| -25 ... 80                         |          |

#### Ordering data

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 3-pos.    |             | 4-pos.    |             |
| 1441066   | 1           | 1441079   | 1           |
| 1441024   | 1           | 1441037   | 1           |

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M8, screw connections



Unshielded, 3, 4-pos.



Shielded, 3, 4-pos.



| Technical data                               |        |
|----------------------------------------------|--------|
| 3-pos.                                       | 4-pos. |
| IEC 61076-2-104                              |        |
| 3                                            |        |
| IP67                                         |        |
| Screw connection                             |        |
| 3.5 mm ... 5 mm                              |        |
| 0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |        |
| 60 V                                         | 30 V   |
| 4 A                                          |        |
| ≤ 3 mΩ                                       |        |
| ≥ 100 MΩ                                     |        |
| CuZn / Au                                    |        |
| PA                                           |        |
| HB                                           |        |
| -40 ... 85                                   |        |

| Ordering data |  |             |         |
|---------------|--|-------------|---------|
| Order No.     |  | Pcs. / Pkt. |         |
| 3-pos.        |  | 4-pos.      |         |
| 1506888       |  | 1           | 1506891 |
| 1501252       |  | 1           | 1501265 |
| 1407582       |  | 1           | 1407584 |
| 1407583       |  | 1           | 1407585 |

| Accessories                                   |  |   |  |
|-----------------------------------------------|--|---|--|
| Pressure screw and seal, for cable diameters: |  |   |  |
| 2.5 mm ... 3.5 mm                             |  | 5 |  |



| Technical data                               |        |
|----------------------------------------------|--------|
| 3-pos.                                       | 4-pos. |
| IEC 61076-2-104                              |        |
| 3                                            |        |
| IP67                                         |        |
| Screw connection                             |        |
| 3.5 mm ... 5.5 mm                            |        |
| 0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |        |
| 60 V                                         | 30 V   |
| 4 A                                          |        |
| ≤ 3 mΩ                                       |        |
| ≥ 100 MΩ                                     |        |
| CuSn / Au                                    |        |
| PUR / PA66                                   |        |
| HB                                           |        |
| -40 ... 85                                   |        |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 3-pos.        |             | 4-pos.    |             |
| 1542907       | 1           | 1542910   | 1           |
| 1542884       | 1           | 1542897   | 1           |

| Accessories                                   |  |   |  |
|-----------------------------------------------|--|---|--|
| Pressure screw and seal, for cable diameters: |  |   |  |
| 2.5 mm ... 3.5 mm                             |  | 5 |  |

## M5 to M12 circular plug-in connectors

### Sensor/actuator plug-in connectors for assembly

#### M8, solder connection



Unshielded, 3, 4-pos.



Shielded, 3, 4-pos.



#### Technical data

|                                             | 3-pos.                | 4-pos. |
|---------------------------------------------|-----------------------|--------|
| General data                                |                       |        |
| M8 circular plug-in connector according to: | IEC 61076-2-104       |        |
| Pollution degree                            | 3                     |        |
| Degree of protection                        | IP67                  |        |
| Connection method                           | Solder connection     |        |
| Cable diameter                              | 3.5 mm ... 5 mm       |        |
| Connection cross section [mm²]              | 0.08 mm² ... 0.25 mm² |        |
| Electrical data                             |                       |        |
| Rated voltage                               | 60 V                  | 30 V   |
| Rated current                               | 4 A                   |        |
| Volume resistance                           | ≤ 3 mΩ                |        |
| Insulation resistance                       | ≥ 100 MΩ              |        |
| Material data                               |                       |        |
| Material contact / contact surface          | CuSn / Au             |        |
| Contact carrier material                    | PUR / PA66            |        |
| Inflammability class according to UL 94     | V0                    |        |
| Temperature data                            |                       |        |
| Plug / socket                               | -40 ... 85            |        |

[°C]

#### Ordering data

| Description              | 3-pos.    |             | 4-pos.    |             |
|--------------------------|-----------|-------------|-----------|-------------|
|                          | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| <b>Plug-in connector</b> |           |             |           |             |
| Socket, angled           | 1529399   | 1           | 1513444   | 1           |
| Plug, angled             | 1699902   | 1           | 1554209   | 1           |
| Socket, straight         | 1681172   | 1           | 1681185   | 1           |
| Plug, straight           | 1681156   | 1           | 1681169   | 1           |

#### Accessories

|                                                      |                      |         |   |
|------------------------------------------------------|----------------------|---------|---|
| <b>Pressure screw and seal, for cable diameters:</b> |                      |         |   |
| 2.5 mm ... 3.5 mm                                    | SACC-M 8-SET/2,2-3,5 | 1436945 | 5 |



#### Technical data

|                                             | 3-pos.                | 4-pos. |
|---------------------------------------------|-----------------------|--------|
| General data                                |                       |        |
| M8 circular plug-in connector according to: | IEC 61076-2-104       |        |
| Pollution degree                            | 3                     |        |
| Degree of protection                        | IP67                  |        |
| Connection method                           | Solder connection     |        |
| Cable diameter                              | 3.5 mm ... 5 mm       |        |
| Connection cross section [mm²]              | 0.08 mm² ... 0.25 mm² |        |
| Electrical data                             |                       |        |
| Rated voltage                               | 60 V                  | 30 V   |
| Rated current                               | 4 A                   |        |
| Volume resistance                           | ≤ 3 mΩ                |        |
| Insulation resistance                       | ≥ 100 MΩ              |        |
| Material data                               |                       |        |
| Material contact / contact surface          | CuSn / Au             |        |
| Contact carrier material                    | PUR / PA66            |        |
| Inflammability class according to UL 94     | HB                    |        |
| Temperature data                            |                       |        |
| Plug / socket                               | -40 ... 85            |        |

#### Ordering data

| Description              | 3-pos.    |             | 4-pos.    |             |
|--------------------------|-----------|-------------|-----------|-------------|
|                          | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| <b>Plug-in connector</b> |           |             |           |             |
| Socket, angled           | 1436479   | 1           | 1436482   | 1           |
| Plug, angled             | 1436453   | 1           | 1436466   | 1           |
| Socket, straight         | 1506927   | 1           | 1506930   | 1           |
| Plug, straight           | 1506901   | 1           | 1506914   | 1           |

#### Accessories

|                                                      |  |  |  |
|------------------------------------------------------|--|--|--|
| <b>Pressure screw and seal, for cable diameters:</b> |  |  |  |
| 2.5 mm ... 3.5 mm                                    |  |  |  |

## M12, solder and Piercecon® connection



**Solder connection, 12-pos.**



**Piercecon® connection, 12, 17-pos.**



| Technical data |                   |
|----------------|-------------------|
| Unshielded     | Shielded          |
|                | IEC 61076-2-101   |
|                | 3                 |
|                | IP67              |
|                | Solder connection |
|                | 6 mm ... 8 mm     |
|                | 30 V              |
|                | 1 A               |
|                | ≤ 3 mΩ            |
|                | > 10 GΩ           |
|                | CuSn / Au         |
|                | PA                |
|                | -                 |
|                | -25 ... 85        |

| Technical data             |         |
|----------------------------|---------|
| 12-pos.                    | 17-pos. |
| IEC 61076-2-101            |         |
| 3                          |         |
| IP67                       |         |
| Piercecon® fast connection |         |
| 5.4 mm ... 8.2 mm          |         |
| 30 V                       |         |
| 1.5 A                      |         |
| ≤ 5 mΩ                     |         |
| ≥ 100 MΩ                   |         |
| CuZn / Ni/Au               |         |
| PA                         |         |
| V0                         |         |
| -25 ... 85                 |         |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| Unshielded    |             | Shielded  |             |
| 1404420       | 1           | 1404411   | 1           |
| 1404419       | 1           | 1404410   | 1           |
| 1404423       | 1           | 1404413   | 1           |
| 1404421       | 1           | 1404412   | 1           |

| Ordering data |             |           |             |
|---------------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 12-pos.       |             | 17-pos.   |             |
| 1559631       | 1           | 1559644   | 1           |
| 1559592       | 1           | 1559602   | 1           |

| Description              | Coding       |
|--------------------------|--------------|
| <b>Plug-in connector</b> |              |
| Socket, straight         | A - standard |
| Plug, straight           | A - standard |
| Socket, angled           | A - standard |
| Plug, angled             | A - standard |

## M5 to M12 circular plug-in connectors

### Sensor/actuator plug-in connectors for assembly

#### M12 plug-in connector, for assembly

##### Ethernet



M12 plug-in connector, 10 Gbps, Piercecon® connection

##### Ethernet



M12 plug-in connector, 100 Mbps, screw connection



##### Technical data

VS-08-M12...-10G-P SCO

##### Electrical data

Nominal voltage  $U_N$   
Rated current  
Transmission characteristics (category)  
Material contact / contact surface  
Material of grip body  
Inflammability class according to UL 94  
No. of pos.  
Connection method  
Connection cross section AWG  
Insertion/withdrawal cycles

48 V  
0.5 A  
CAT6<sub>A</sub>  
CuSn / Ni/Au  
Zinc die-cast, nickel-plated  
V0  
8  
Piercecon®  
26  
≥ 100

##### Temperature data

Ambient temperature (operation)

-40 °C ... 85 °C

##### Ordering data

| Type                  | Order No. | Pcs. / Pkt. |
|-----------------------|-----------|-------------|
| VS-08-M12MS-10G-P SCO | 1417430   | 1           |
| VS-08-M12MR-10G-P SCO | 1417443   | 1           |

##### Accessories

|                      |         |   |
|----------------------|---------|---|
| VS-CABLE-STRIP-VARIO | 1657407 | 1 |
|----------------------|---------|---|

##### Technical data

SACC-M12MSD-4CON-...-SH

60 V  
4 A  
CAT5 (IEC 11801:2002), CAT5e (TIA 568B:2001)  
CuZn / Au  
Zinc die-cast, nickel-plated  
HB  
4  
Screw connection  
24 ... 18  
≥ 100

##### Ordering data

| Type                     | Order No. | Pcs. / Pkt. |
|--------------------------|-----------|-------------|
| SACC-M12MSD-4CON-PG 7-SH | 1521258   | 1           |
| SACC-M12MSD-4CON-PG 9-SH | 1521261   | 1           |

##### Accessories

|                      |         |   |
|----------------------|---------|---|
| VS-CABLE-STRIP-VARIO | 1657407 | 1 |
|----------------------|---------|---|

##### Description

**Plug-in connector**, CAT6<sub>A</sub>, plug, 8-pos., shielded, X-coded, **cable diameter: 4 mm ... 8 mm**

Straight  
Angled

**Plug-in connector**, Pg7 screw connection, 4-pos., D-coded, **cable diameter: 4 mm ... 6 mm**

Plug, straight

**Plug-in connector**, Pg9 screw connection, 4-pos., D-coded, **cable diameter: 4 mm ... 8 mm**

Plug, straight

**Stripping tool**, for multiple-stage repositioning of shielded conductors



## M5 to M12 circular plug-in connectors

### Sensor/actuator plug-in connectors for assembly

#### M12, insulation displacement connection



0.14 mm² ... 0.34 mm²



0.34 mm² ... 0.75 mm²



#### Technical data

|                                    |
|------------------------------------|
| <b>4-pos.</b>                      |
| IEC 61076-2-101                    |
| 3                                  |
| IP65/67                            |
| Insulation displacement connection |
| 3.5 mm ... 6 mm                    |
| 125 V                              |
| 4 A                                |
| ≤ 5 mΩ                             |
| ≥ 100 MΩ                           |

|                                              |
|----------------------------------------------|
| General data                                 |
| M12 circular plug-in connector according to: |
| Pollution degree                             |
| Degree of protection                         |
| Connection method                            |
| Cable diameter                               |
| Electrical data                              |
| Rated voltage                                |
| Rated current                                |
| Volume resistance                            |
| Insulation resistance                        |
| Material data                                |
| Material contact / contact surface           |
| Contact carrier material                     |
| Inflammability class according to UL 94      |
| Temperature data                             |
| Plug / socket                                |

[°C]

#### Ordering data

| Type                                                  | Order No.                     | Pcs. / Pkt. |
|-------------------------------------------------------|-------------------------------|-------------|
| <b>Plug-in connector</b> , with plastic knurl         |                               |             |
| Socket, straight                                      | <b>SACC-M12FS-4QO-0,34</b>    | 1641701     |
| Plug, straight                                        | <b>SACC-M12MS-4QO-0,34</b>    | 1641714     |
| <b>Plug-in connector</b> , with metal knurl, SPEEDCON |                               |             |
| Socket, straight                                      | <b>SACC-FS-4QO-0,34-M SCO</b> | 1521588     |
| Plug, straight                                        | <b>SACC-MS-4QO-0,34-M SCO</b> | 1521575     |
| <b>Plug-in connector</b> , with metal knurl           |                               |             |
| Socket, straight                                      | <b>SACC-M12FS-4QO-0,34-M</b>  | 1641688     |
| Plug, straight                                        | <b>SACC-M12MS-4QO-0,34-M</b>  | 1641691     |
| <b>Plug-in connector</b> , with stainless steel knurl |                               |             |
| Socket, straight                                      | <b>SACC-M12FS-4QO-0,34-VA</b> | 1440766     |
| Plug, straight                                        | <b>SACC-M12MS-4QO-0,34-VA</b> | 1440753     |



#### Technical data

|                                    |
|------------------------------------|
| <b>4-pos.</b>                      |
| IEC 61076-2-101                    |
| 3                                  |
| IP65/67                            |
| Insulation displacement connection |
| 4 mm ... 8 mm                      |
| 250 V                              |
| 4 A                                |
| ≤ 5 mΩ                             |
| ≥ 100 MΩ                           |

|              |
|--------------|
| CuSn / Ni/Au |
| TPU          |
| V0           |

-25 ... 80

#### Ordering data

| Type                                                  | Order No.                     | Pcs. / Pkt. |
|-------------------------------------------------------|-------------------------------|-------------|
| <b>Plug-in connector</b> , with plastic knurl         |                               |             |
| Socket, straight                                      | <b>SACC-M12FS-4QO-0,75</b>    | 1641756     |
| Plug, straight                                        | <b>SACC-M12MS-4QO-0,75</b>    | 1641769     |
| <b>Plug-in connector</b> , with metal knurl, SPEEDCON |                               |             |
| Socket, straight                                      | <b>SACC-FS-4QO-0,75-M SCO</b> | 1521601     |
| Plug, straight                                        | <b>SACC-MS-4QO-0,75-M SCO</b> | 1521591     |
| <b>Plug-in connector</b> , with metal knurl           |                               |             |
| Socket, straight                                      | <b>SACC-M12FS-4QO-0,75-M</b>  | 1641772     |
| Plug, straight                                        | <b>SACC-M12MS-4QO-0,75-M</b>  | 1641785     |
| <b>Plug-in connector</b> , with stainless steel knurl |                               |             |
| Socket, straight                                      | <b>SACC-M12FS-4QO-0,75-VA</b> | 1440782     |
| Plug, straight                                        | <b>SACC-M12MS-4QO-0,75-VA</b> | 1440779     |

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly

### M12, spring-cage connections



Unshielded, 4, 5-pos.



Shielded, 4, 5-pos.



| Technical data                               |        |
|----------------------------------------------|--------|
| 4-pos.                                       | 5-pos. |
| General data                                 |        |
| M12 circular plug-in connector according to: |        |
| IEC 61076-2-101                              |        |
| 3                                            |        |
| Degree of protection                         |        |
| IP67                                         |        |
| Connection method                            |        |
| Spring-cage conn.                            |        |
| Cable diameter                               |        |
| 4 mm ... 8 mm                                |        |
| Connection cross section [mm <sup>2</sup> ]  |        |
| 0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |        |
| Electrical data                              |        |
| Rated voltage                                |        |
| 250 V                                        | 60 V   |
| Rated current                                |        |
| 4 A                                          |        |
| Volume resistance                            |        |
| ≤ 8 mΩ                                       |        |
| Insulation resistance                        |        |
| ≥ 100 MΩ                                     |        |
| Material data                                |        |
| Material contact / contact surface           |        |
| CuSn / Ni/Au                                 |        |
| Contact carrier material                     |        |
| TPU                                          |        |
| Inflammability class according to UL 94      |        |
| V0                                           |        |
| Temperature data                             |        |
| Plug / socket                                |        |
| -40 ... 85                                   |        |

| Ordering data                                                                    |              |           |             |
|----------------------------------------------------------------------------------|--------------|-----------|-------------|
| 4-pos.                                                                           |              | 5-pos.    |             |
| Description                                                                      | Coding       | Order No. | Pcs. / Pkt. |
| <b>Plug-in connector</b> , terminal marking: standard color coding and numbering |              |           |             |
| Socket, angled                                                                   | A - standard | 1432622   | 1           |
| Plug, angled                                                                     | A - standard | 1432606   | 1           |
| Socket, straight                                                                 | A - standard | 1432619   | 1           |
| Plug, straight                                                                   | A - standard | 1432635   | 1           |



| Technical data                               |        |
|----------------------------------------------|--------|
| 4-pos.                                       | 5-pos. |
| General data                                 |        |
| M12 circular plug-in connector according to: |        |
| IEC 61076-2-101                              |        |
| 3                                            |        |
| Degree of protection                         |        |
| IP67                                         |        |
| Connection method                            |        |
| Spring-cage conn.                            |        |
| Cable diameter                               |        |
| 4 mm ... 8 mm                                |        |
| Connection cross section [mm <sup>2</sup> ]  |        |
| 0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |        |
| Electrical data                              |        |
| Rated voltage                                |        |
| 60 V                                         |        |
| Rated current                                |        |
| 4 A                                          |        |
| Volume resistance                            |        |
| ≤ 8 mΩ                                       |        |
| Insulation resistance                        |        |
| ≥ 100 MΩ                                     |        |
| Material data                                |        |
| Material contact / contact surface           |        |
| CuSn / Ni/Au                                 |        |
| Contact carrier material                     |        |
| TPU                                          |        |
| Inflammability class according to UL 94      |        |
| V0                                           |        |
| Temperature data                             |        |
| Plug / socket                                |        |
| -40 ... 85                                   |        |

| Ordering data                                                                    |              |           |             |
|----------------------------------------------------------------------------------|--------------|-----------|-------------|
| 4-pos.                                                                           |              | 5-pos.    |             |
| Description                                                                      | Coding       | Order No. | Pcs. / Pkt. |
| <b>Plug-in connector</b> , terminal marking: standard color coding and numbering |              |           |             |
| Socket, angled                                                                   | A - standard | 1432758   | 1           |
| Plug, angled                                                                     | A - standard | 1432732   | 1           |
| Socket, straight                                                                 | A - standard | 1432745   | 1           |
| Plug, straight                                                                   | A - standard | 1432729   | 1           |

## M5 to M12 circular plug-in connectors

### Sensor/actuator plug-in connectors for assembly

#### M12, screw connections



Plastic knurl, 4, 5-pos.



Metal knurl, SPEEDCON, 4, 5-pos.



|                                              | Technical data        |         |      |
|----------------------------------------------|-----------------------|---------|------|
|                                              | 4-pos.                | 5-pos.  |      |
| General data                                 |                       |         |      |
| M12 circular plug-in connector according to: | IEC 61076-2-101       | -       |      |
| Pollution degree                             | 3                     | -       |      |
| Degree of protection                         | IP67                  | -       |      |
| Connection method                            | Screw connection      | -       |      |
| Connection cross section [mm²]               | 0.25 mm² ... 0.75 mm² | - ... - |      |
| Electrical data                              |                       |         |      |
| Rated voltage                                | 250 V                 | 60 V    | -    |
| Rated current                                | 4 A                   | -       | -    |
| Volume resistance                            | ≤ 8 mΩ                | -       | -    |
| Insulation resistance                        | ≥ 100 MΩ              | -       | -    |
| Material data                                |                       |         |      |
| Material contact / contact surface           | CuZn / CuSnZn         | - / -   |      |
| Contact carrier material                     | PA 66                 | -       |      |
| Inflammability class according to UL 94      | HB                    | -       |      |
| Temperature data                             |                       |         |      |
| Plug / socket                                | -40 ... 85            | -       | [°C] |



|                                              | Technical data        |         |      |
|----------------------------------------------|-----------------------|---------|------|
|                                              | 4-pos.                | 5-pos.  |      |
| General data                                 |                       |         |      |
| M12 circular plug-in connector according to: | IEC 61076-2-101       | -       |      |
| Pollution degree                             | 3                     | -       |      |
| Degree of protection                         | IP67                  | -       |      |
| Connection method                            | Screw connection      | -       |      |
| Connection cross section [mm²]               | 0.25 mm² ... 0.75 mm² | - ... - |      |
| Electrical data                              |                       |         |      |
| Rated voltage                                | 250 V                 | 60 V    | -    |
| Rated current                                | 4 A                   | -       | -    |
| Volume resistance                            | ≤ 8 mΩ                | -       | -    |
| Insulation resistance                        | ≥ 100 MΩ              | -       | -    |
| Material data                                |                       |         |      |
| Material contact / contact surface           | CuZn / CuSnZn         | - / -   |      |
| Contact carrier material                     | PA 66                 | -       |      |
| Inflammability class according to UL 94      | HB                    | -       |      |
| Temperature data                             |                       |         |      |
| Plug / socket                                | -40 ... 85            | -       | [°C] |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             |           |             |
| 1681130       | 1           | 1662308   | 1           |           |             |
| 1681091       | 1           | 1662269   | 1           |           |             |
| 1681114       | 1           | 1662298   | 1           |           |             |
| 1681088       | 1           | 1662256   | 1           |           |             |
|               |             | 1500790   | 1           |           |             |
|               |             | 1513431   | 1           |           |             |
|               |             | 1500787   | 1           |           |             |
|               |             | 1500774   | 1           |           |             |

| Ordering data |             |           |             |           |             |
|---------------|-------------|-----------|-------------|-----------|-------------|
| Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
| 4-pos.        |             | 5-pos.    |             |           |             |
| 1543058       | 1           | 1543061   | 1           |           |             |
| 1542981       | 1           | 1542994   | 1           |           |             |
| 1543029       | 1           | 1543032   | 1           |           |             |
| 1542952       | 1           | 1542965   | 1           |           |             |
|               |             |           |             |           |             |
|               |             | 1543414   | 1           |           |             |
|               |             | 1543003   | 1           |           |             |
|               |             | 1543045   | 1           |           |             |
|               |             | 1542978   | 1           |           |             |

|                                                                                                                                                                        |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Power plug-in connector, with Pg11 screw connection, cable diameter: 8 mm ... 10 mm, rated current: up to 8 A (5th pos. max. 2 A) with 1.5 mm² wires/litz wires</b> |              |
| Socket, straight                                                                                                                                                       | A - standard |
| Plug, straight                                                                                                                                                         | A - standard |

| Accessories                                   |                      |         |   |
|-----------------------------------------------|----------------------|---------|---|
| Pressure screw and seal, for cable diameters: |                      |         |   |
| 2.5 mm ... 3.5 mm                             | SACC-M12-SET/2,5-3,5 | 1436505 | 5 |

| Accessories                                   |                      |         |   |
|-----------------------------------------------|----------------------|---------|---|
| Pressure screw and seal, for cable diameters: |                      |         |   |
| 2.5 mm ... 3.5 mm                             | SACC-M12-SET/2,5-3,5 | 1436505 | 5 |

# M5 to M12 circular plug-in connectors

## Sensor/actuator plug-in connectors for assembly



Metal knurl, 4, 5, 8-pos.



Metal knurl, 4, 5-pos., with SKINTOP® screw connection



Stainless steel knurl, 4, 5-pos.



| Technical data                                |                                              |           |
|-----------------------------------------------|----------------------------------------------|-----------|
| 4-pos.                                        | 5-pos.                                       | 8-pos.    |
| IEC 61076-2-101                               |                                              |           |
| 3                                             |                                              |           |
| IP67                                          |                                              |           |
| Screw connection                              |                                              |           |
| 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> | 0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup> |           |
| 250 V                                         | 60 V                                         | 30 V      |
| 4 A                                           |                                              | 2 A       |
| ≤ 8 mΩ                                        |                                              | ≤ 3 mΩ    |
|                                               | ≥ 100 MΩ                                     |           |
| CuZn / CuSnZn                                 |                                              | CuZn / Au |
| PA 66                                         |                                              |           |
| HB                                            |                                              |           |
| -40 ... 85                                    |                                              |           |

| Technical data                                |         |       |
|-----------------------------------------------|---------|-------|
| 4-pos.                                        | 5-pos.  |       |
| IEC 61076-2-101                               |         |       |
| 3                                             |         |       |
| IP67                                          |         |       |
| Screw connection                              |         |       |
| 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> | - ... - |       |
| 250 V                                         | 125 V   | -     |
| 4 A                                           |         | -     |
| ≤ 8 mΩ                                        |         | -     |
| ≥ 100 MΩ                                      |         | -     |
| CuZn / CuSnZn                                 |         | - / - |
| PA 66                                         |         | -     |
| HB                                            |         | -     |
| -20 ... 80                                    |         |       |

| Technical data                                |         |       |
|-----------------------------------------------|---------|-------|
| 4-pos.                                        | 5-pos.  |       |
| IEC 61076-2-101                               |         |       |
| 3                                             |         |       |
| IP67/IP69K                                    |         |       |
| Screw connection                              |         |       |
| 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> | - ... - |       |
| 250 V                                         | 60 V    | -     |
| 4 A                                           |         | -     |
| ≤ 3 mΩ                                        |         | -     |
| ≥ 100 MΩ                                      |         | -     |
| CuZn / Au                                     |         | - / - |
| PA 66                                         |         | -     |
| V0                                            |         | -     |
| -40 ... 85                                    |         |       |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      | 8-pos.    |
| 1681143       | 1           | 1662984   |
| 1681101       | 1           | 1663129   |
| 1681127       | 1           | 1662968   |
| 1662528       | 1           | 1663116   |
|               | 1681499     | 1         |
|               | 1681473     | 1         |
|               | 1681486     | 1         |
|               | 1681460     | 1         |
|               |             | 1513347   |
|               |             | 1513334   |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      |           |
| 1430381       | 1           | 1559000   |
| 1556870       | 1           | 1456466   |
|               | 1556812     | 1         |
|               | 1561742     | 1         |
|               | 1556838     | 1         |
|               | 1556825     | 1         |

| Ordering data |             |           |
|---------------|-------------|-----------|
| Order No.     | Pcs. / Pkt. | Order No. |
| 4-pos.        | 5-pos.      |           |
| 1553284       | 1           | 1553297   |
| 1553200       | 1           | 1553213   |
| 1553242       | 1           | 1553255   |
| 1553161       | 1           | 1553187   |
|               | 1553307     | 1         |
| 1553226       | 1           | 1553239   |
| 1553268       | 1           | 1553271   |
| 1553174       | 1           | 1553190   |

|         |   |         |   |
|---------|---|---------|---|
| 1404416 | 1 | 1404418 | 1 |
| 1404415 | 1 | 1404417 | 1 |

| Accessories          |         |   |
|----------------------|---------|---|
| SACC-M12-SET/2,5-3,5 | 1436505 | 5 |

| Accessories |  |  |
|-------------|--|--|
|             |  |  |

| Accessories |  |  |
|-------------|--|--|
|             |  |  |

### M12, screw connection, shielded



**Stainless steel housing, 5-pos.**

| Technical data                                                                         |              |                       | Technical data |                       |             |
|----------------------------------------------------------------------------------------|--------------|-----------------------|----------------|-----------------------|-------------|
| General data                                                                           | 4-pos.       | 5-pos.                | 8-pos.         | 5-pos.                |             |
| M12 circular plug-in connector according to:                                           |              | IEC 61076-2-101       |                | IEC 61076-2-101       | -           |
| Pollution degree                                                                       |              | 3                     |                | 3                     | -           |
| Degree of protection                                                                   |              | IP67                  |                | IP67/IP69K            | -           |
| Connection method                                                                      |              | Screw connection      |                | Screw connection      | -           |
| Connection cross section [mm²]                                                         |              | 0.25 mm² ... 0.75 mm² |                | 0.25 mm² ... 0.75 mm² | - ... -     |
| Electrical data                                                                        |              |                       |                |                       |             |
| Rated voltage                                                                          |              | 60 V                  | 30 V           | 60 V                  | -           |
| Rated current                                                                          |              | 4 A                   | 2 A            | 4 A                   | -           |
| Volume resistance                                                                      |              | ≤ 3 mΩ                |                | ≤ 3 mΩ                | -           |
| Insulation resistance                                                                  |              | ≥ 100 MΩ              |                | ≥ 100 MΩ              | -           |
| Material data                                                                          |              |                       |                |                       |             |
| Material contact / contact surface                                                     |              | CuZn / Au             |                | CuZn / Au             | - / -       |
| Contact carrier material                                                               |              | PA 66                 |                | PA 66                 | -           |
| Inflammability class according to UL 94                                                |              | HB                    |                | V0                    | -           |
| Temperature data                                                                       |              |                       |                |                       |             |
| Plug / socket                                                                          | [°C]         | -40 ... 85            |                | -40 ... 85            | -           |
| Ordering data                                                                          |              |                       | Ordering data  |                       |             |
| Description                                                                            | Coding       | Order No.             | Pcs. / Pkt.    | Order No.             | Pcs. / Pkt. |
|                                                                                        |              | 4-pos.                | 5-pos.         | 8-pos.                | 5-pos.      |
| <b>Plug-in connector, with Pg7 screw connection, cable diameter: 4 mm ... 6 mm</b>     |              |                       |                |                       |             |
| Plug, angled                                                                           | A - standard | 1694279               | 1              | 1693429               | 1           |
| Socket, straight                                                                       | A - standard | 1694295               | 1              | 1694305               | 1           |
| Plug, straight                                                                         | A - standard | 1693830               | 1              | 1693416               | 1           |
| <b>Plug-in connector, with Pg9 screw connection, cable diameter: 6 mm ... 8 mm</b>     |              |                       |                |                       |             |
| Socket, angled                                                                         | A - standard |                       | 1430433        | 1                     |             |
| Plug, angled                                                                           | A - standard |                       | 1694282        | 1                     |             |
| Socket, straight                                                                       | A - standard | 1515170               | 1              | 1694318               | 1           |
| Plug, straight                                                                         | A - standard | 1501540               | 1              | 1694266               | 1           |
| <b>Plug-in connector, with Pg9 screw connection, cable diameter: 6 mm ... 8.5 mm</b>   |              |                       |                |                       |             |
| Socket, straight                                                                       | A - standard |                       | 1508365        | 1                     |             |
| Plug, straight                                                                         | A - standard |                       | 1508352        | 1                     |             |
| <b>Plug-in connector, with M16 screw connection, cable diameter: 3 mm ... 5.5 mm</b>   |              |                       |                |                       |             |
| Socket, straight                                                                       | A - standard |                       |                |                       | 1440038     |
| Plug, straight                                                                         | A - standard |                       |                |                       | 1440012     |
| <b>Plug-in connector, with M16 screw connection, cable diameter: 5.5 mm ... 8.6 mm</b> |              |                       |                |                       |             |
| Socket, straight                                                                       | A - standard |                       |                |                       | 1440041     |
| Plug, straight                                                                         | A - standard |                       |                |                       | 1440025     |

## M5 to M12 circular plug-in connectors

### Sensor/actuator plug-in connectors for assembly

#### M12, power plug-in connector, screw connection



Metal knurl, 3-pos. + PE, S-coded



Metal knurl, 4-pos., T-coded

|                                         | Technical data            |                           |             | Technical data            |                           |             |
|-----------------------------------------|---------------------------|---------------------------|-------------|---------------------------|---------------------------|-------------|
|                                         | 3-pos. + PE               |                           |             | 4-pos.                    |                           |             |
| General data                            |                           |                           |             |                           |                           |             |
| Pollution degree                        | 3                         |                           |             | 3                         |                           |             |
| Degree of protection                    | IP67                      |                           |             | IP67                      |                           |             |
| Connection method                       | Screw connection          |                           |             | Screw connection          |                           |             |
| Connection cross section [mm²]          | 0.75 mm² ... 1.5 mm²      |                           |             | 0.75 mm² ... 1.5 mm²      |                           |             |
| Electrical data                         |                           |                           |             |                           |                           |             |
| Rated voltage                           | 630 V                     |                           |             | 60 V                      |                           |             |
| Rated current                           | 12 A                      |                           |             | 12 A                      |                           |             |
| Volume resistance                       | ≤ 3 mΩ                    |                           |             | ≤ 3 mΩ                    |                           |             |
| Insulation resistance                   | > 10 GΩ                   |                           |             | > 10 GΩ                   |                           |             |
| Material data                           |                           |                           |             |                           |                           |             |
| Material contact / contact surface      | CuZn / Au                 |                           |             | CuZn / Au                 |                           |             |
| Contact carrier material                | PA 46                     |                           |             | PA 46                     |                           |             |
| Inflammability class according to UL 94 | V0                        |                           |             | V0                        |                           |             |
| Temperature data                        |                           |                           |             |                           |                           |             |
| Plug / socket                           | [°C] -40 ... 85           |                           |             | -40 ... 85                |                           |             |
|                                         | Ordering data             |                           |             | Ordering data             |                           |             |
| Description                             | Type                      | Order No.                 | Pcs. / Pkt. | Type                      | Order No.                 | Pcs. / Pkt. |
|                                         |                           |                           |             |                           |                           |             |
|                                         | SACC-M12FSS-3PECON-PG11-M | 1404642                   | 1           | SACC-M12FST-3PECON-PG11-M | 1404644                   | 1           |
|                                         | Socket, straight          |                           |             |                           |                           |             |
|                                         | Plug, straight            | SACC-M12MSS-3PECON-PG11-M | 1404641     | 1                         | SACC-M12MST-3PECON-PG11-M | 1404643     |

## M5 to M12 circular plug-in connectors

### Sensor/actuator plug-in connectors for assembly

#### M12, DUO plug-in connector, screw connection

##### Notes:

SPEEDCON and plastic knurls without key areas.



Metal knurl, 4, 5-pos.



SPEEDCON metal knurl/plastic knurl, 5 pos.



##### Technical data

|                                              | 4-pos.                                        | 5-pos. |
|----------------------------------------------|-----------------------------------------------|--------|
| General data                                 |                                               |        |
| M12 circular plug-in connector according to: | IEC 61076-2-101                               |        |
| Pollution degree                             | 3                                             |        |
| Degree of protection                         | IP67                                          |        |
| Connection method                            | Screw connection                              |        |
| Connection cross section [mm <sup>2</sup> ]  | 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> |        |
| Electrical data                              |                                               |        |
| Rated voltage                                | 250 V                                         | 60 V   |
| Rated current                                | 4 A                                           |        |
| Volume resistance                            | ≤ 8 mΩ                                        |        |
| Insulation resistance                        | ≥ 100 MΩ                                      |        |
| Material data                                |                                               |        |
| Material contact / contact surface           | CuZn / CuSnZn                                 |        |
| Contact carrier material                     | PA 66                                         |        |
| Inflammability class according to UL 94      | V0                                            |        |
| Temperature data                             |                                               |        |
| Plug / socket                                | -40 ... 85                                    |        |

##### Ordering data

| Description                                                                                   | Coding       |
|-----------------------------------------------------------------------------------------------|--------------|
| <b>Plug-in connector, with Pg11 DUO screw connection, cable diameter: 2 x 3 mm ... 5.2 mm</b> |              |
| Socket, straight                                                                              | A - standard |
| Plug, straight                                                                                | A - standard |
| Plug, angled                                                                                  | A - standard |

| Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|-----------|-------------|-----------|-------------|
| 4-pos.    |             | 5-pos.    |             |
| 1507052   | 1           | 1662748   | 1           |



##### Technical data

|                                             | Metal knurl, SPEEDCON, 5-pos.                 | Plastic knurl, 5-pos. |
|---------------------------------------------|-----------------------------------------------|-----------------------|
| General data                                |                                               |                       |
| IEC 61076-2-101                             |                                               |                       |
| Pollution degree                            | 3                                             |                       |
| Degree of protection                        | IP67                                          |                       |
| Connection method                           | Screw connection                              |                       |
| Connection cross section [mm <sup>2</sup> ] | 0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> |                       |
| Electrical data                             |                                               |                       |
| Rated voltage                               | 60 V                                          |                       |
| Rated current                               | 4 A                                           |                       |
| Volume resistance                           | ≤ 8 mΩ                                        |                       |
| Insulation resistance                       | ≥ 100 MΩ                                      |                       |
| Material data                               |                                               |                       |
| Material contact / contact surface          | CuZn / CuSnZn                                 |                       |
| Contact carrier material                    | PA 66                                         |                       |
| Inflammability class according to UL 94     | V0                                            |                       |
| Temperature data                            |                                               |                       |
| Plug / socket                               | -40 ... 85                                    | -25 ... 85            |

##### Ordering data

| Order No.                     | Pcs. / Pkt. | Order No.             | Pcs. / Pkt. |
|-------------------------------|-------------|-----------------------|-------------|
| Metal knurl, SPEEDCON, 5-pos. |             | Plastic knurl, 5-pos. |             |
| 1543016                       | 1           | 1694596               | 1           |
|                               |             | 1662285               | 1           |
|                               |             | 1531044               | 1           |

### Sensor/actuator plug-in connectors for assembly

**7/8", screw connection**



**Connection cross section:**  
1.5 mm<sup>2</sup>, 3, 4, 5-pos.



**Connection cross section:**  
2.5 mm<sup>2</sup>, 5-pos.



| Technical data |                                              |        |
|----------------|----------------------------------------------|--------|
| 3-pos.         | 4-pos.                                       | 5-pos. |
|                | 3                                            |        |
|                | IP67                                         |        |
|                | Screw connection                             |        |
|                | 0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |        |
|                | 22 ... 16                                    |        |
|                | 250 V                                        |        |
| 12 A           |                                              | 9 A    |
|                | ≤ 5 mΩ                                       |        |
|                | ≥ 100 MΩ                                     |        |
|                | CuZn / Au                                    |        |
|                | PUR / PA66                                   |        |
|                | HB                                           |        |
|                | -25 ... 85                                   |        |



| Technical data       |         |       |
|----------------------|---------|-------|
| 5-pos.               |         |       |
| 3                    |         | -     |
| IP67                 |         | -     |
| Screw connection     |         | -     |
| 0.34 mm² ... 2.5 mm² | - ... - | -     |
| 22 ... 14            | - ... - | -     |
| 250 V                |         | -     |
| 9 A                  |         | -     |
| ≤ 5 mΩ               |         | -     |
| ≥ 100 MΩ             |         | -     |
| CuZn / Au            |         | - / - |
| PUR / PA66           |         | -     |
| HB                   |         | -     |
| -25 ... 85           |         | -     |

| Description                                                                                               | Ordering data |             |           |             |           |             | Ordering data |             |           |             |           |             |
|-----------------------------------------------------------------------------------------------------------|---------------|-------------|-----------|-------------|-----------|-------------|---------------|-------------|-----------|-------------|-----------|-------------|
|                                                                                                           | Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No.     | Pcs. / Pkt. | Order No. | Pcs. / Pkt. | Order No. | Pcs. / Pkt. |
|                                                                                                           | 3-pos.        |             | 4-pos.    |             | 5-pos.    |             | 5-pos.        |             |           |             |           |             |
| <b>Plug-in connector</b> , with <b>Pg9</b> screw connection,<br><b>cable diameter: 6 mm ... 8 mm</b>      |               |             |           |             |           |             |               |             |           |             |           |             |
| Socket, angled                                                                                            | 1521478       | 1           | 1521494   | 1           | 1521517   | 1           |               |             |           |             |           |             |
| Plug, angled                                                                                              | 1521465       | 1           | 1521481   | 1           | 1521504   | 1           |               |             |           |             |           |             |
| Socket, straight                                                                                          | 1521300       | 1           | 1521342   | 1           | 1521384   | 1           |               |             |           |             |           |             |
| Plug, straight                                                                                            | 1521287       | 1           | 1521326   | 1           | 1521668   | 1           |               |             |           |             |           |             |
| <b>Plug-in connector</b> , with <b>Pg11</b> screw connection,<br><b>cable diameter: 8 mm ... 10 mm</b>    |               |             |           |             |           |             |               |             |           |             |           |             |
| Socket, angled                                                                                            |               |             |           |             | 1456297   | 1           |               |             |           |             |           |             |
| Plug, angled                                                                                              |               |             |           |             | 1456242   | 1           |               |             |           |             |           |             |
| Socket, straight                                                                                          |               |             |           |             | 1456271   | 1           |               |             |           |             |           |             |
| Plug, straight                                                                                            |               |             |           |             | 1456226   | 1           |               |             |           |             |           |             |
| <b>Plug-in connector</b> , with <b>Pg13.5</b> screw connection,<br><b>cable diameter: 10 mm ... 12 mm</b> |               |             |           |             |           |             |               |             |           |             |           |             |
| Socket, angled                                                                                            |               |             |           |             |           |             | 1456307       | 1           |           |             |           |             |
| Plug, angled                                                                                              |               |             |           |             |           |             | 1456255       | 1           |           |             |           |             |
| Socket, straight                                                                                          | 1521313       | 1           | 1521355   | 1           | 1521397   | 1           | 1456284       | 1           |           |             |           |             |
| Plug, straight                                                                                            | 1521290       | 1           | 1521339   | 1           | 1521371   | 1           | 1456213       | 1           |           |             |           |             |
| <b>Plug-in connector</b> , with <b>Pg16</b> screw connection,<br><b>cable diameter: 12 mm ... 14 mm</b>   |               |             |           |             |           |             |               |             |           |             |           |             |
| Socket, straight                                                                                          |               |             |           |             | 1559071   | 1           | 1456268       | 1           |           |             |           |             |
| Plug, straight                                                                                            |               |             |           |             | 1559039   | 1           | 1456239       | 1           |           |             |           |             |

## M5 to M12 circular plug-in connectors

### M12 power plug-in connectors

#### M12 power flush-type plug-in connectors, with 0.5 m long litz wires



S-coded, 3-pos. + PE



T-coded, 4-pos.

|                                                    | Technical data   |             |                  |             |  | Technical data   |             |                  |             |
|----------------------------------------------------|------------------|-------------|------------------|-------------|--|------------------|-------------|------------------|-------------|
|                                                    | Front mounting   |             | Rear mounting    |             |  | Front mounting   |             | Rear mounting    |             |
| General data                                       |                  |             |                  |             |  |                  |             |                  |             |
| Pollution degree                                   | 3                |             | 3                |             |  | 3                |             | 3                |             |
| Degree of protection                               | IP67             |             | IP67             |             |  | IP67             |             | IP67             |             |
| Connection method                                  | Individual wires |             | Individual wires |             |  | Individual wires |             | Individual wires |             |
| Electrical data                                    |                  |             |                  |             |  |                  |             |                  |             |
| Rated voltage                                      | 630 V            |             | 630 V            |             |  | 60 V             |             | 60 V             |             |
| Rated current                                      | 12 A             |             | 12 A             |             |  | 12 A             |             | 12 A             |             |
| Volume resistance                                  | ≤ 3 mΩ           |             | ≤ 3 mΩ           |             |  | ≤ 3 mΩ           |             | ≤ 3 mΩ           |             |
| Insulation resistance                              | ≥ 100 MΩ         |             | ≥ 100 MΩ         |             |  | ≥ 100 MΩ         |             | ≥ 100 MΩ         |             |
| Surge voltage category                             | III              |             | III              |             |  | III              |             | III              |             |
| Material data                                      |                  |             |                  |             |  |                  |             |                  |             |
| Material contact / contact surface                 | CuZn / Au        |             | CuZn / Au        |             |  | CuZn / Au        |             | CuZn / Au        |             |
| Contact carrier material                           | PA6              |             | PA6              |             |  | PA6              |             | PA6              |             |
| Cable type                                         | PP litz wire     |             | PP litz wire     |             |  | PP litz wire     |             | PP litz wire     |             |
| Temperature data                                   |                  |             |                  |             |  |                  |             |                  |             |
| Plug / socket                                      | [°C]             | -25 ... 85  |                  | -25 ... 85  |  | -25 ... 85       |             | -25 ... 85       |             |
| Cable, fixed installation                          | [°C]             | -40 ... 90  |                  | -40 ... 90  |  | -40 ... 90       |             | -40 ... 90       |             |
|                                                    | Ordering data    |             |                  |             |  | Ordering data    |             |                  |             |
| Description                                        | Order No.        | Pcs. / Pkt. | Order No.        | Pcs. / Pkt. |  | Order No.        | Pcs. / Pkt. | Order No.        | Pcs. / Pkt. |
|                                                    | Front mounting   |             | Rear mounting    |             |  | Front mounting   |             | Rear mounting    |             |
| Flush-type plug-in connector, M16 fastening thread |                  |             |                  |             |  |                  |             |                  |             |
| Socket                                             | 1424137          | 1           | 1424133          | 1           |  | 1424138          | 1           | 1424134          | 1           |
| Plug                                               | 1424139          | 1           | 1424132          | 1           |  | 1424140          | 1           | 1424136          | 1           |
|                                                    | Accessories      |             |                  |             |  | Accessories      |             |                  |             |
| Flat nut, with:<br>M16 thread                      | SACC-E-MU-M16    |             | 1504097          | 100         |  | SACC-E-MU-M16    |             | 1504097          | 100         |

**M12 power flush-type plug-in connectors, modular, 25 mm square flange, pre-assembled**



Flange housing, 2.7 mm housing bore holes



Pre-assembled contact carrier and insulating body with 0.5 m long litz wires

|                                                                                         | Technical data               |             | Technical data       |                  |
|-----------------------------------------------------------------------------------------|------------------------------|-------------|----------------------|------------------|
|                                                                                         |                              |             | S-coded, 3-pos. + PE | T-coded, 4-pos.  |
| General data                                                                            |                              |             |                      |                  |
| Pollution degree                                                                        | -                            | -           | 3                    | 3                |
| Degree of protection                                                                    | -                            | -           | IP67                 | IP67             |
| Connection method                                                                       | -                            | -           | Individual wires     | Individual wires |
| Electrical data                                                                         |                              |             |                      |                  |
| Rated voltage                                                                           | -                            | -           | 630 V                | 60 V             |
| Rated current                                                                           | -                            | -           | 12 A                 | 12 A             |
| Volume resistance                                                                       | -                            | -           | ≤ 3 mΩ               | ≤ 3 mΩ           |
| Surge voltage category                                                                  | -                            | -           | III                  | III              |
| Material data                                                                           |                              |             |                      |                  |
| Material contact / contact surface                                                      | - / -                        | - / -       | CuZn / Au            | CuZn / Au        |
| Contact carrier material                                                                | -                            | -           | PA6                  | PA6              |
| Cable gland material                                                                    | Zinc die-cast, nickel-plated | -           | -                    | -                |
| Cable type                                                                              | -                            | -           | PP litz wire         | PP litz wire     |
| Temperature data                                                                        |                              |             |                      |                  |
| Plug / socket                                                                           | [°C]                         | -40 ... 85  | -25 ... 85           | -25 ... 85       |
| Cable, fixed installation                                                               | [°C]                         | -           | -40 ... 90           | -40 ... 90       |
|                                                                                         | Ordering data                |             | Ordering data        |                  |
|                                                                                         | Order No.                    | Pcs. / Pkt. | Order No.            | Pcs. / Pkt.      |
| Description                                                                             |                              |             | S-coded, 3-pos. + PE | T-coded, 4-pos.  |
|                                                                                         |                              |             |                      |                  |
| Square flange housing, with flat gasket                                                 | 1424131                      | 10          |                      |                  |
| Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts |                              |             | 1424129              | 1                |
| Plug                                                                                    |                              |             |                      | 1424130 1        |

M5 to M12 circular plug-in connectors

M12 power plug-in connectors

M12, power device plug-in connector, two-piece, for reflow processes, rear mounting

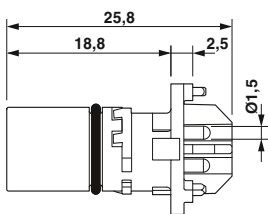


S-coded, 3-pos. + PE

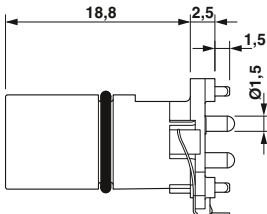


T-coded, 4-pos.

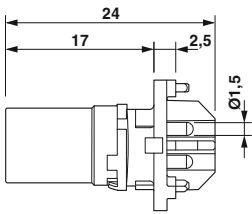
|                                                                                                                                     | Technical data        |                       | Technical data        |                       |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                                                                                                                     | Plug                  | Socket                | Plug                  | Socket                |
| General data                                                                                                                        |                       |                       |                       |                       |
| Pollution degree                                                                                                                    | 3                     | 3                     | 3                     | 3                     |
| Degree of protection                                                                                                                | IP67                  | IP67                  | IP67                  | IP67                  |
| Connection method                                                                                                                   | THR solder connection | THR solder connection | THR solder connection | THR solder connection |
| Electrical data                                                                                                                     |                       |                       |                       |                       |
| Rated voltage                                                                                                                       | 630 V                 | 630 V                 | 60 V                  | 60 V                  |
| Rated current                                                                                                                       | 12 A                  | 12 A                  | 12 A                  | 12 A                  |
| Volume resistance                                                                                                                   | ≤ 3 mΩ                | ≤ 3 mΩ                | ≤ 3 mΩ                | ≤ 3 mΩ                |
| Surge voltage category                                                                                                              | III                   | III                   | III                   | III                   |
| Material data                                                                                                                       |                       |                       |                       |                       |
| Material contact / contact surface                                                                                                  | CuZn / Au             | CuZn / Au             | CuZn / Au             | CuZn / Au             |
| Contact carrier material                                                                                                            | PA4T                  | PA4T                  | PA4T                  | PA4T                  |
| Inflammability class according to UL 94                                                                                             | V0                    | V0                    | V0                    | V0                    |
| Temperature data                                                                                                                    |                       |                       |                       |                       |
| Plug / socket                                                                                                                       | -40 ... 85            | -40 ... 85            | -40 ... 85            | -40 ... 85            |
|                                                                                                                                     | [°C]                  |                       |                       |                       |
|                                                                                                                                     | Ordering data         |                       | Ordering data         |                       |
| Description                                                                                                                         | Order No.             | Pcs. / Pkt.           | Order No.             | Pcs. / Pkt.           |
|                                                                                                                                     | Plug                  |                       | Plug                  |                       |
| Contact carrier, for reflow processes                                                                                               | 1406410               | 20                    | 1406409               | 20                    |
| Contact carrier, shielded, for reflow processes                                                                                     |                       |                       | 1406396               | 60                    |
|                                                                                                                                     |                       |                       | 1406411               | 60                    |
|                                                                                                                                     |                       |                       | 1406397               | 60                    |
|                                                                                                                                     |                       |                       | 1406412               | 60                    |
|                                                                                                                                     | Accessories           |                       | Accessories           |                       |
| Housing screw connections, SPEEDCON screw versions and press-in versions, for all two-piece THR and wave soldering contact carriers | See page 258 onwards  |                       | See page 258 onwards  |                       |



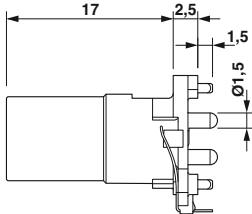
M12 flush-type plug



M12 flush-type plug



M12 flush-type socket



M12 flush-type socket

# M12, power plug-in connector, screw connection



S-coded, 3-pos. + PE

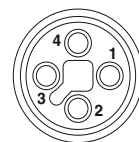


T-coded, 4-pos.

|                                    | Technical data                                                                |            |             | Technical data            |           |             |
|------------------------------------|-------------------------------------------------------------------------------|------------|-------------|---------------------------|-----------|-------------|
| General data                       |                                                                               |            |             |                           |           |             |
| Pollution degree                   | 3                                                                             |            |             | 3                         |           |             |
| Degree of protection               | IP67                                                                          |            |             | IP67                      |           |             |
| Connection method                  | Screw connection                                                              |            |             | Screw connection          |           |             |
| Cable diameter                     | 8 mm ... 10 mm                                                                |            |             | 8 mm ... 10 mm            |           |             |
| Connection cross section [mm²]     | 0.75 mm² ... 1.5 mm²                                                          |            |             | 0.75 mm² ... 1.5 mm²      |           |             |
| Electrical data                    |                                                                               |            |             |                           |           |             |
| Rated voltage                      | 630 V                                                                         |            |             | 60 V                      |           |             |
| Rated current                      | 12 A                                                                          |            |             | 12 A                      |           |             |
| Volume resistance                  | ≤ 3 mΩ                                                                        |            |             | ≤ 3 mΩ                    |           |             |
| Surge voltage category             | III                                                                           |            |             | III                       |           |             |
| Material data                      |                                                                               |            |             |                           |           |             |
| Material contact / contact surface | CuZn / Au                                                                     |            |             | CuZn / Au                 |           |             |
| Contact carrier material           | PA 46                                                                         |            |             | PA 46                     |           |             |
| Temperature data                   |                                                                               |            |             |                           |           |             |
| Plug / socket                      | [°C]                                                                          | -40 ... 85 |             | -40 ... 85                |           |             |
| Ordering data                      |                                                                               |            |             | Ordering data             |           |             |
| Description                        | Type                                                                          | Order No.  | Pcs. / Pkt. | Type                      | Order No. | Pcs. / Pkt. |
|                                    | Plug-in connector, with Pg11 screw connection, cable diameter: 8 mm ... 10 mm |            |             | SACC-M12FST-3PECON-PG11-M |           |             |
|                                    | SACC-M12FSS-3PECON-PG11-M                                                     | 1404642    | 1           | SACC-M12MST-3PECON-PG11-M | 1404644   | 1           |
|                                    | Socket, straight                                                              | 1404641    | 1           | SACC-M12MSS-3PECON-PG11-M | 1404643   | 1           |
| Plug, straight                     |                                                                               |            |             |                           |           |             |



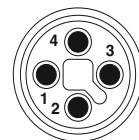
Pin assignment of M12 socket, 4-pos., S-coded, view of socket side



Pin assignment of M12 socket, 4-pos., T-coded, view of socket side



Pin assignment of M12 plug, 4-pos., S-coded, view of plug side

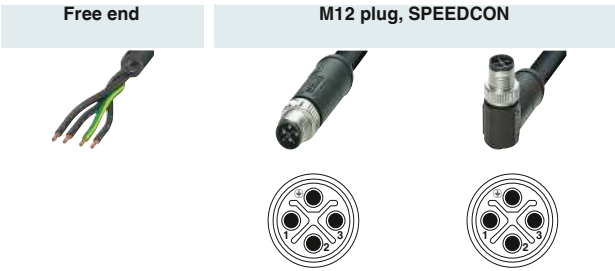


Pin assignment of M12 plug, 4-pos., T-coded, view of plug side

M5 to M12 circular plug-in connectors

M12 power plug-in connectors

M12-SPEEDCON power cable, 3-pos.+PE, S-coded, unshielded



|                                                                                   |                                                                                   | Ordering data |         | Ordering data |         | Ordering data |         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------|---------|---------------|---------|---------------|---------|
| Free end                                                                          |                                                                                   | Order No.     |         | Order No.     |         | Order No.     |         |
|   |                                                                                   |               |         | 1 m           | 1408835 | 1 m           | 1408839 |
|                                                                                   |                                                                                   |               |         | 2 m           | 1408836 | 2 m           | 1408840 |
|                                                                                   |                                                                                   |               |         | 5 m           | 1408837 | 5 m           | 1408841 |
|                                                                                   |                                                                                   |               |         | 10 m          | 1408838 | 10 m          | 1408842 |
| M12 socket, SPEEDCON, straight                                                    |                                                                                   |               |         |               |         |               |         |
|  |  | 1 m           | 1408843 |               |         |               |         |
|                                                                                   |                                                                                   | 2 m           | 1408844 |               |         |               |         |
|                                                                                   |                                                                                   | 5 m           | 1408845 |               |         |               |         |
|                                                                                   |                                                                                   | 10 m          | 1408846 |               |         |               |         |
| M12 socket, SPEEDCON, angled                                                      |                                                                                   |               |         |               |         |               |         |
|  |  | 1 m           | 1408848 |               |         |               |         |
|                                                                                   |                                                                                   | 2 m           | 1408852 |               |         |               |         |
|                                                                                   |                                                                                   | 5 m           | 1408853 |               |         |               |         |
|                                                                                   |                                                                                   | 10 m          | 1408854 |               |         |               |         |

| Cable description         | Cable type | Color coding |   | Pin assignment |
|---------------------------|------------|--------------|---|----------------|
| PUR, halogen-free - black | PUR        | BK1          | 1 | 1              |
|                           |            | BK2          | 2 | 2              |
|                           |            | BK3          | 3 | 3              |
|                           |            | GNYE         |   | PE             |

| Technical data               |      |                                             |
|------------------------------|------|---------------------------------------------|
| M12                          |      |                                             |
| Rated voltage                | [V]  | 630                                         |
| Rated current                | [A]  | 12                                          |
| Volume resistance            |      | ≤ 3 mΩ                                      |
| Material contact M12         |      | CuZn                                        |
| Material contact surface M12 |      | Au                                          |
| Material handle M12          |      | TPU, hardly inflammable, self-extinguishing |
| Material, knurls             |      | Zinc die-cast, nickel-plated                |
| Degree of protection         |      | IP65 / IP67                                 |
| Temperature data             |      |                                             |
| Plug / socket                | [°C] | -25 ... 85                                  |

# M12-SPEEDCON power cable, 3-pos.+PE, S-coded, shielded

Free end


M12 plug, SPEEDCON,  
360° shielded


Ordering data

Ordering data

Ordering data

| Free end | Order No. | Order No. | Order No. |
|----------|-----------|-----------|-----------|
|          | 1.5 m     | 1424104   | 1.5 m     |
|          | 3 m       | 1424105   | 3 m       |
|          | 5 m       | 1424245   | 5 m       |
|          | 10 m      | 1424107   | 10 m      |

## M12 socket, SPEEDCON, straight, 360° shielded



|       |         |
|-------|---------|
| 1.5 m | 1424096 |
| 3 m   | 1424097 |
| 5 m   | 1424098 |
| 10 m  | 1424099 |

## M12 socket, SPEEDCON, angled, 360° shielded



|       |         |
|-------|---------|
| 1.5 m | 1424100 |
| 3 m   | 1424101 |
| 5 m   | 1424102 |
| 10 m  | 1424103 |

### Cable description

PUR, halogen-free - orange

### Cable type

PUR

### Color coding

|      |    |
|------|----|
| BK1  | 1  |
| BK2  | 2  |
| BK3  | 3  |
| GNYE | PE |

### Pin assignment

|    |
|----|
| 1  |
| 2  |
| 3  |
| PE |

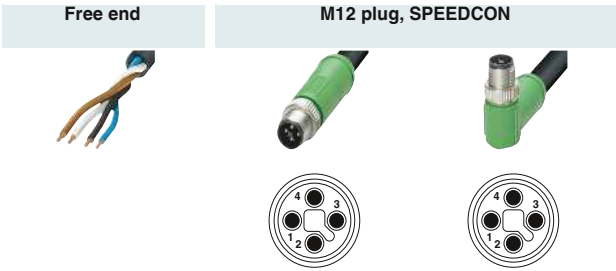
### Technical data

|                              | M12                                         |
|------------------------------|---------------------------------------------|
| Rated voltage [V]            | 630                                         |
| Rated current [A]            | 12                                          |
| Volume resistance            | ≤ 3 mΩ                                      |
| Material contact M12         | CuZn                                        |
| Material contact surface M12 | Au                                          |
| Material handle M12          | TPU, hardly inflammable, self-extinguishing |
| Material, knurls             | Zinc die-cast, nickel-plated                |
| Degree of protection         | IP65 / IP67                                 |
| Temperature data             |                                             |
| Plug / socket [°C]           | -25 ... 85                                  |

M5 to M12 circular plug-in connectors

M12 power plug-in connectors

M12-SPEEDCON power cable, 4-pos., T-coded, unshielded



| Ordering data                  |           | Ordering data |           | Ordering data |           |
|--------------------------------|-----------|---------------|-----------|---------------|-----------|
| Free end                       | Order No. | Order No.     | Order No. | Order No.     | Order No. |
|                                |           | 1 m           | 1408812   | 1 m           | 1408816   |
|                                |           | 2 m           | 1408813   | 2 m           | 1408819   |
|                                |           | 5 m           | 1408814   | 5 m           | 1408820   |
|                                |           | 10 m          | 1408815   | 10 m          | 1408822   |
| M12 socket, SPEEDCON, straight |           |               |           |               |           |
|                                | 1 m       | 1408823       | 1 m       | 1408808       |           |
|                                | 2 m       | 1408824       | 2 m       | 1408809       |           |
|                                | 5 m       | 1408825       | 5 m       | 1408810       |           |
|                                | 10 m      | 1408826       | 10 m      | 1408811       |           |
| M12 socket, SPEEDCON, angled   |           |               |           |               |           |
|                                | 1 m       | 1408827       |           |               |           |
|                                | 2 m       | 1408828       |           |               |           |
|                                | 5 m       | 1408829       |           |               |           |
|                                | 10 m      | 1408830       |           |               |           |

| Cable description         | Cable type | Color coding | Pin assignment |
|---------------------------|------------|--------------|----------------|
| PUR, halogen-free - black | PUR        | BN           | 1              |
|                           |            | WH           | 2              |
|                           |            | BK           | 4              |
|                           |            | BU           | 3              |

|                              |      | Technical data                              |
|------------------------------|------|---------------------------------------------|
|                              |      | M12                                         |
| Rated voltage                | [V]  | 60                                          |
| Rated current                | [A]  | 12                                          |
| Volume resistance            |      | ≤ 3 mΩ                                      |
| Material contact M12         |      | CuZn                                        |
| Material contact surface M12 |      | Au                                          |
| Material handle M12          |      | TPU, hardly inflammable, self-extinguishing |
| Material, knurls             |      | Zinc die-cast, nickel-plated                |
| Degree of protection         |      | IP65 / IP67                                 |
| Temperature data             |      |                                             |
| Plug / socket                | [°C] | -25 ... 85                                  |

**M12-SPEEDCON power cable,  
4-pos., T-coded, shielded**

Free end



M12 plug, SPEEDCON  
360° shielded



Ordering data

Ordering data

Ordering data

Free end

Order No.

Order No.

Order No.



1.5 m  
3 m  
5 m  
10 m

**1424120**  
**1424121**  
**1424122**  
**1424123**

1.5 m  
3 m  
5 m  
10 m

**1424124**  
**1424125**  
**1424126**  
**1424127**

M12 socket, SPEEDCON, straight, 360° shielded



1.5 m  
3 m  
5 m  
10 m

**1424112**  
**1424113**  
**1424114**  
**1424115**

M12 socket, SPEEDCON, angled, 360° shielded



1.5 m  
3 m  
5 m  
10 m

**1424116**  
**1424117**  
**1424118**  
**1424128**

Cable description

Cable type

Color coding

Pin assignment

PUR, halogen-free - black

**PUR**

BN  
WH  
BK  
BU

1  
2  
4  
3

Technical data

M12

Rated voltage

[V]

60

Rated current

[A]

12

Volume resistance

≤ 3 mΩ

Material contact M12

CuZn

Material contact surface M12

Au

Material handle M12

TPU, hardly inflammable,

self-extinguishing

Material, knurls

Zinc die-cast, nickel-plated

Degree of protection

IP65 / IP67

Temperature data

Plug / socket

[°C]

-25 ... 85

## M5 to M12 circular plug-in connectors

### Accessories

#### Sealing elements

During transport or in the field, unoccupied plug-in connections must be protected or closed. The screw plugs, sealing caps and closing caps made of plastic or metal are suitable for this purpose. IP65/IP67 protection as well as IP69K protection is thereby achieved.



| Description                                                                                                                                                              | Ordering data                    |                |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------|-------------|
|                                                                                                                                                                          | Type                             | Order No.      | Pcs. / Pkt. |
| <b>M5 screw plug</b> ①<br>For unoccupied M5 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors                                               | <b>PROT-M5</b>                   | <b>1533288</b> | 10          |
| <b>M8 screw plug</b> ②<br>For unoccupied M8 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors                                               | <b>PROT-M8</b>                   | <b>1682540</b> | 5           |
| <b>M12 screw plug</b> ③<br>For the unused M12 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors                                             | <b>PROT-M12</b>                  | <b>1680539</b> | 5           |
| <b>M12 screw plug with SPEEDCON quick locking</b> ④<br>For unoccupied M12 sockets of the sensor/actuator cables, boxes and flush-type plug-in connectors                 | <b>PROT-MS SCO</b>               | <b>1553129</b> | 5           |
| <b>M12 sealing cap</b> ⑤<br>For unoccupied M12 plugs of the sensor/actuator cables, flush-type plug-in connectors and I/O devices in the field                           | <b>PROT-M12 FS</b>               | <b>1560251</b> | 5           |
| <b>M12 screw plug, metal</b> ⑥<br>For unoccupied M12 sockets of the shielded sensor/actuator cables, boxes and flush-type plug-in connectors                             | <b>PROT-M12 SH</b>               | <b>1503302</b> | 5           |
| <b>M12 sealing cap, metal</b> ⑦<br>For unoccupied M12 plugs of the sensor/actuator cables, flush-type plug-in connectors and I/O devices in the field                    | <b>PROT-M12 FS-M</b>             | <b>1430488</b> | 10          |
| <b>M12 screw plug, stainless steel</b> ⑧<br>For unused M12 sockets of the sensor/actuator cables, boxes, and flush-type plug-in connectors in the food and outdoor range | <b>PROT-M12 FB</b>               | <b>1555538</b> | 5           |
| <b>Closing cap</b> ⑨<br>For Pg9/ Pg11, to close unoccupied connections                                                                                                   | <b>Q-PROT 9/11</b>               | <b>1670235</b> | 10          |
| <b>M16 locking screw</b> ⑩<br>With flat nut for oval housing cutouts                                                                                                     | <b>SACC-M16-SEALING PLUG SET</b> | <b>1453368</b> | 10          |

### Sealing elements with holding band or fixing chain

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in sizes M8, M12 and 7/8". The holding bands are fastened on the cable or the housing and are thus held captive.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



| Description                                                                                          | Ordering data                 |           |             |
|------------------------------------------------------------------------------------------------------|-------------------------------|-----------|-------------|
|                                                                                                      | Type                          | Order No. | Pcs. / Pkt. |
| <b>Screw plug</b> made from <b>plastic</b> with retaining strap, for sealing unused <b>sockets</b> ① |                               |           |             |
| M8 for SAC cables                                                                                    | PROT-M 8 MS-PA-CHAIN          | 1430860   | 10          |
| M8 with 3 mm fastening eye                                                                           | PROT-M 8 MS-PA-CHAIN-EYE-DM3  | 1441105   | 10          |
| M8 with 12 mm fastening eye                                                                          | PROT-M 8 MS-PA-CHAIN-EYE      | 1441095   | 10          |
| M12 for SAC cables                                                                                   | PROT-M12 MS-PA-CHAIN          | 1430899   | 5           |
| M12 with 15 mm fastening eye                                                                         | PROT-M12 MS-PA-CHAIN-EYE-DM14 | 1456200   | 5           |
| 7/8" for SAC cables                                                                                  | PROT-MINMS-PA-CHAIN           | 1430925   | 10          |
| <b>Plastic sealing cap</b> with holding band, for closing unoccupied <b>connectors</b> ②             |                               |           |             |
| M8 for SAC cables                                                                                    | PROT-M 8 FS-PA-CHAIN          | 1430857   | 10          |
| M8 with 8 mm fastening eye                                                                           | PROT-M 8 FS-PA-CHAIN-EYE      | 1441082   | 10          |
| M12 for SAC cables                                                                                   | PROT-M12 FS-PA-CHAIN          | 1430873   | 5           |
| M12 with 12 mm fastening eye                                                                         | PROT-M12 FS-PA-CHAIN-EYE-DM12 | 1456187   | 5           |
| M12 with 15 mm fastening eye                                                                         | PROT-M12 FS-PA-CHAIN-EYE-DM14 | 1456190   | 5           |
| 7/8" for SAC cables                                                                                  | PROT-MINFS-PA-CHAIN           | 1430912   | 10          |
| <b>Metal sealing cap</b> with fixing chain, for closing unoccupied <b>connectors</b> ③               |                               |           |             |
| M12 with 16 mm fastening eye                                                                         | PROT-M12 FS-M-CHAIN           | 1430491   | 10          |

# M5 to M12 circular plug-in connectors

## Accessories

### Accessories for flush-type plug-in connectors

Special fixing nuts are available for EMC-compliant installation of M12 flush-type plug-in connectors on coated or varnished housing surfaces. When tightened, these cut through the surface coating, thus establishing contact between the housing and the connector.

Alternatively, flat gaskets can be used as the seal between the housing panel and the device plug. Flat gaskets are recommended for thin panels, as the housing cutouts do not have to be chamfered.



| Ordering data                                                                       |                    |           |             |
|-------------------------------------------------------------------------------------|--------------------|-----------|-------------|
| Description                                                                         | Type               | Order No. | Pcs. / Pkt. |
| EMC hexagonal nuts with fine tooting, for all flush-type plug-in connectors with: ① |                    |           |             |
| M12 fastening thread                                                                | SACC-M12-KD-NUT-SH | 1440151   | 10          |
| EMC hexagonal nuts with fine tooting, for all flush-type plug-in connectors with: ② |                    |           |             |
| M16 fastening thread                                                                | SACC-M16-KD-NUT-SH | 1440164   | 10          |
| Pg9 fastening thread                                                                | SACC-PG9-KD-NUT-SH | 1440177   | 10          |
| Flat gasket for all flush-type plug-in connectors with: ③                           |                    |           |             |
| M16 fastening thread                                                                | SACC-M16-SEAL CLM  | 1430394   | 10          |
| Pg9 fastening thread                                                                | SACC-PG9-SEAL CLM  | 1556320   | 10          |

### Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular plug-in connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

The version for M12 connectors with hexagonal stainless steel knurl is also made from stainless steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are also available. When used in conjunction with the adapter insert, they can also be used to accommodate the available plug attachments.



| Ordering data                                                                                                                                                      |                                       |                               |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------|-------------|
| Description                                                                                                                                                        | Type                                  | Order No.                     | Pcs. / Pkt. |
| <b>Torque screwdriver</b> ①<br>With a preset torque of 0.8 Nm and a 4 mm hexagonal drive                                                                           | TSD 08 SAC                            | 1212597                       | 1           |
| <b>Nut</b> ②<br>For assembling 7/8" plug-in connectors, with 4 mm hexagonal drive                                                                                  | SAC BIT MIN-D25                       | 1212512                       | 1           |
| <b>Torque screwdriver</b> ③<br>With preset torque of 0.4 Nm and 4 mm hexagonal drive                                                                               | TSD 04 SAC                            | 1208429                       | 1           |
| <b>Nut</b> ④<br>For mounting M12 plug-in connectors with hexagonal stainless steel knurl, wrench size 14, with 4 mm hexagonal drive                                | SAC BIT M12-W14                       | 1212513                       | 1           |
| <b>Torque screwdriver</b> , accuracy according to standard EN ISO 6789 ⑤<br>Adjustable from 0.3 - 1.2 Nm<br>Adjustable from 1.2 - 3 Nm<br>Adjustable from 3 - 6 Nm | TSD-M 1,2NM<br>TSD-M 3NM<br>TSD-M 6NM | 1212224<br>1212225<br>1212226 | 1<br>1<br>1 |
| <b>Adapter insert</b> ⑥<br>For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive                            | TSD-M SAC-BIT ADAPTER                 | 1212600                       | 1           |

# M5 to M12 circular plug-in connectors

## Pin assignments

### M5 flush-type plug-in connectors

#### Pin assignments



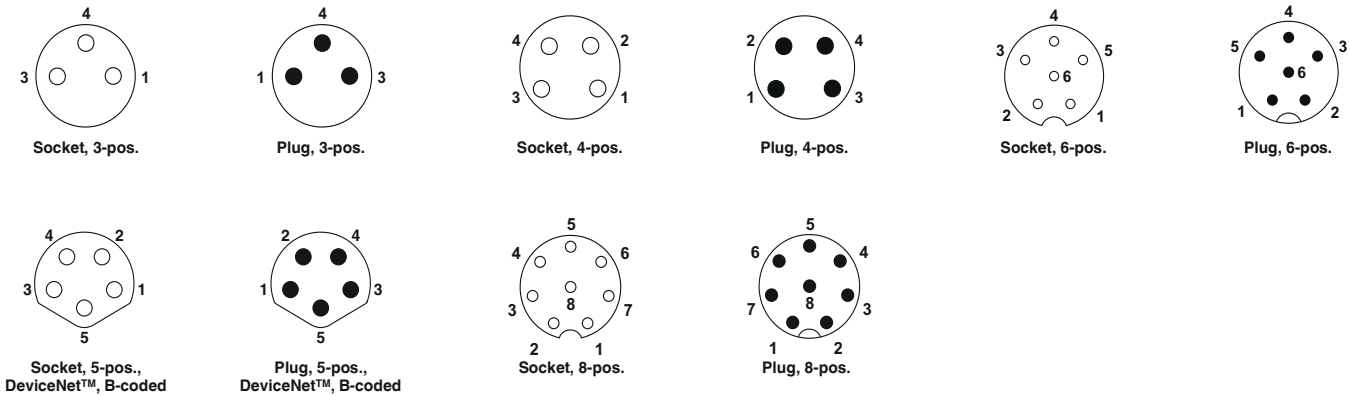
#### Litz wire colors

| Pin | Wire color |  |        |  |
|-----|------------|--|--------|--|
|     | 3-pos.     |  | 4-pos. |  |
| 1   | BN         |  | BN     |  |
| 2   | –          |  | WH     |  |
| 3   | BU         |  | BU     |  |
| 4   | BK         |  | BK     |  |

Assignment: M5 flush-type plugs/sockets

### M8 flush-type plug-in connectors

#### Pin assignments



#### Litz wire colors

| Pin | Wire color |  |        |  |        |  |        |  |
|-----|------------|--|--------|--|--------|--|--------|--|
|     | 3-pos.     |  | 4-pos. |  | 6-pos. |  | 8-pos. |  |
| 1   | BN         |  | BN     |  | BN     |  | WH     |  |
| 2   | –          |  | WH     |  | WH     |  | BN     |  |
| 3   | BU         |  | BU     |  | BU     |  | GN     |  |
| 4   | BK         |  | BK     |  | BK     |  | YE     |  |
| 5   | –          |  | –      |  | GY     |  | GY     |  |
| 6   | –          |  | –      |  | PK     |  | PK     |  |
| 7   | –          |  | –      |  | –      |  | BU     |  |
| 8   | –          |  | –      |  | –      |  | RD     |  |

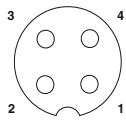
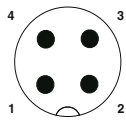
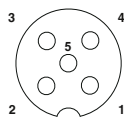
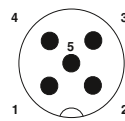
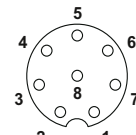
Assignment: M8 flush-type plugs/sockets

| Pin | Wire color | Signal<br>DeviceNet™ |
|-----|------------|----------------------|
| 1   | Shield     | Drain                |
| 2   | RD         | V+                   |
| 4   | BK         | V–                   |
| 3   | WH         | CAN_H                |
| 5   | BU         | CAN_L                |

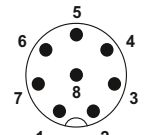
Assignment: CANopen®/DeviceNet™

## M12 flush-type plug-in connectors

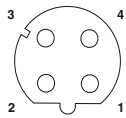
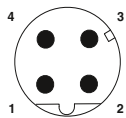
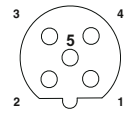
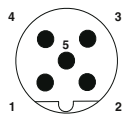
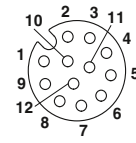
## Pin assignments

Socket, 4-pos.,  
A-codedPlug, 4-pos.,  
A-codedSocket, 5-pos.,  
A-codedPlug, 5-pos.,  
A-coded

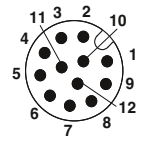
Socket, 8-pos.



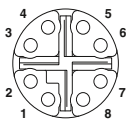
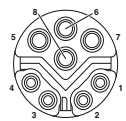
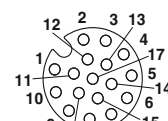
Plug, 8-pos.

Socket, 4-pos.,  
D-codedPlug, 4-pos.,  
D-codedSocket, 5-pos.,  
B-codedPlug, 5-pos.,  
B-coded

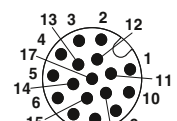
Socket, 12-pos.



Plug, 12-pos.

Socket, 8-pos.,  
X-codedSocket, 8-pos.,  
Y-coded

Socket, 17-pos.



Plug, 17-pos.

## Litz wire colors

| Pin | 4-pos.,<br>A-coded | 4-pos.,<br>D-coded |
|-----|--------------------|--------------------|
| 1   | BN                 | YE                 |
| 2   | WH                 | WH                 |
| 3   | BU                 | OG                 |
| 4   | BK                 | BU                 |
| –   | –                  | –                  |

Assignment: M12 flush-type plugs/sockets

| Pin | 5-pos.,<br>A-coded | 5-pos.,<br>B-coded |
|-----|--------------------|--------------------|
| 1   | BN                 | BN                 |
| 2   | WH                 | WH                 |
| 3   | BU                 | BU                 |
| 4   | BK                 | BK                 |
| 5   | GY                 | GY                 |

Assignment: M12 flush-type plugs/sockets

| Pin | 8-pos. | 12-pos. |
|-----|--------|---------|
| 1   | WH     | BN      |
| 2   | BN     | BU      |
| 3   | GN     | WH      |
| 4   | YE     | GN      |
| 5   | GY     | PK      |
| 6   | PK     | YE      |
| 7   | BU     | BK      |
| 8   | RD     | GY      |
| 9   | –      | RD      |
| 10  | –      | VT      |
| 11  | –      | GYPK    |
| 12  | –      | RDBU    |

Assignment: M12 flush-type plugs/sockets

| Pin | Wire color       | Signal<br>PROFIBUS |
|-----|------------------|--------------------|
| 1   | –                | –                  |
| 2   | GN               | A cable            |
| 3   | –                | –                  |
| 4   | RD               | B cable            |
| 5   | Filler litz wire | –                  |

Shield on housing

Assignment: PROFIBUS

| Pin | Wire color | Signal<br>CANopen® |
|-----|------------|--------------------|
| 1   | Shield     | –                  |
| 2   | RD         | –                  |
| 3   | BK         | CAN_GND            |
| 4   | WH         | CAN_H              |
| 5   | BU         | CAN_L              |

Shield on housing

Assignment: CANopen®

| Pin | Wire color | Signal<br>DeviceNet™ |
|-----|------------|----------------------|
| 1   | Shield     | Drain                |
| 2   | RD         | V+                   |
| 3   | BK         | V-                   |
| 4   | WH         | CAN_H                |
| 5   | BU         | CAN_L                |

Shield on housing

Assignment: DeviceNet™

| Pin | Wire color | Signal<br>Ethernet |
|-----|------------|--------------------|
| 1   | WHOG       | TD+                |
| 2   | WHGN       | RD+                |
| 3   | OG         | TD-                |
| 4   | GN         | RD-                |

Shield on housing

Assignment: Ethernet

| Pin | Wire color | Signal<br>INTERBUS |
|-----|------------|--------------------|
| 1   | YE         | DO                 |
| 2   | GN         | DI                 |
| 3   | GY         | DI                 |
| 4   | PK         | DI                 |
| 5   | BN         | COM                |
| –   | WH         | NC                 |

Shield on housing

Assignment: INTERBUS

| Pin | Wire color | Signal<br>Ethernet |
|-----|------------|--------------------|
| 1   | WH         | D1+                |
| 2   | OG         | D1-                |
| 3   | WH         | D2+                |
| 4   | GN         | D2-                |
| 5   | WH         | D4+                |
| 6   | BN         | D4-                |
| 7   | WH         | D3-                |
| 8   | BU         | D3+                |

Assignment: Ethernet CAT6<sub>A</sub>

| Pin | 17-pos. |
|-----|---------|
| 1   | BN      |
| 2   | BU      |
| 3   | WH      |
| 4   | GN      |
| 5   | PK      |
| 6   | YE      |
| 7   | BK      |
| 8   | GY      |
| 9   | RD      |
| 10  | VT      |
| 11  | GYPK    |
| 12  | RDBU    |
| 13  | WHGN    |
| 14  | BNGN    |
| 15  | WHYE    |
| 16  | YEBN    |
| 17  | WHGY    |

Assignment: M12 flush-type plugs/sockets

# M5 to M12 circular plug-in connectors

## Pin assignments

### M12 power flush-type plug-in connectors

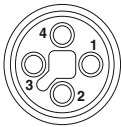
#### Pin assignments



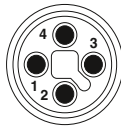
Socket, S-coded, 3+PE



Plug, A-coded, 3+PE



Socket, T-coded, 4-pos.



Plug, T-coded, 4-pos.

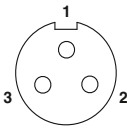
#### Litz wire colors

| Pin | 3+PE, S-cod. | Pin | 4-pos, T-cod. |
|-----|--------------|-----|---------------|
| 1   | BK1          | 1   | BN            |
| 2   | BK2          | 2   | WH            |
| 3   | BK3          | 3   | BU            |
| PE  | GNYE         | 4   | BK            |

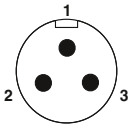
Assignment: M12 flush-type plugs/sockets

### 7/8" flush-type plug-in connectors

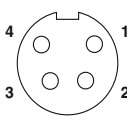
#### Pin assignments



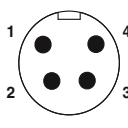
Socket, 3-pos.



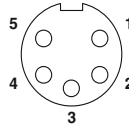
Plug, 3-pos.



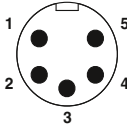
Socket, 4-pos.



Plug, 4-pos.



Socket, 5-pos.



Plug, 5-pos.

#### Litz wire colors

| Pin | 3-pos. | 4-pos. | 5-pos. |
|-----|--------|--------|--------|
| 1   | BK     | BK     | BK     |
| 2   | BN     | BU     | BU     |
| 3   | BU     | BN     | GNYE   |
| 4   | –      | WH     | BN     |
| 5   | –      | –      | WH     |

Assignment: 7/8" flush-type plugs/sockets

## THR processing notes

### Information for THR processing

|                                |                                |
|--------------------------------|--------------------------------|
| PCB thickness                  | Max. 1.6 mm                    |
| Residual ring                  | Recommended: 0.5 mm            |
| Overprinting on soldering mold | Residual ring diameter: 0.2 mm |
| Soldering mold thickness       | 150 µm                         |
| Soldering profile              | IEC 61760-3                    |

### Further information

|                  |          |
|------------------|----------|
| RoHS conformance | Attained |
|------------------|----------|



