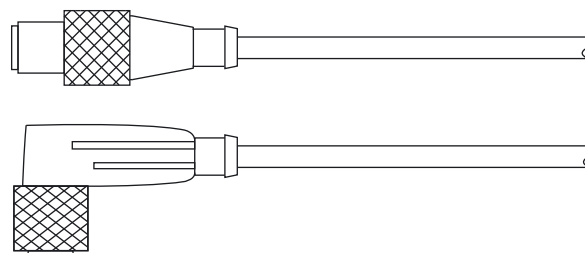
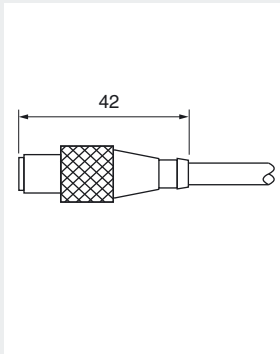
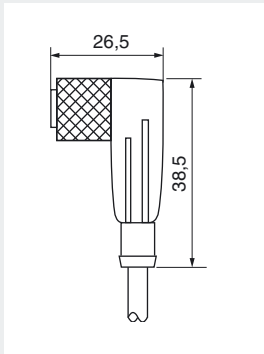
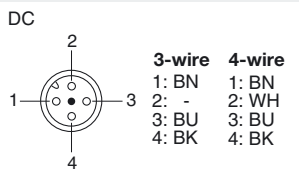
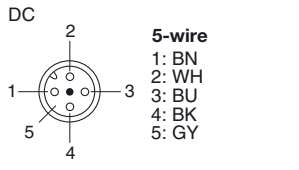
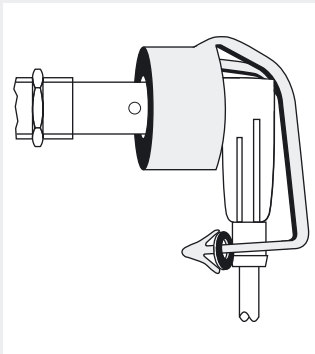


M12 connector

System SL

Finished cable plug housing
Self locking screw plug
Protection IP 67



| Cable plug housing straight | Cable plug housing angular | Pin-assignment | Plug-lock |
|--|--|---|--|
|  |  | <p>DC</p>  <p>3-wire 4-wire 1: BN 1: BN 2: - 2: WH 3: BU 3: BU 4: BK 4: BK</p> <p>DC</p>  <p>5-wire 1: BN 2: WH 3: BU 4: BK 5: GY</p> |  |
| SLG... | SLW... | DC | PL-M12 |

| TYPE | ID-NO. | DESIGN |
|-------------|--------|--|
| SLG 3-2 | Z01076 | Cable plug housing M12x1 DC, straight 2 m PVC-cable 3x0.34 mm ² |
| SLG 3-5 | Z01077 | Cable plug housing M12x1 DC, straight 5 m PVC-cable 3x0.34 mm ² |
| SLW 3-2 | Z01078 | Cable plug housing M12x1 DC, angular 2 m PVC-cable 3x0.34 mm ² |
| SLW 3-5 | Z01079 | Cable plug housing M12x1 DC, angular 5 m PVC-cable 3x0.34 mm ² |
| SLW 3-2-LED | Z00052 | Cable plug housing M12x1 DC, angular 2 m PVC-cable 3x0.34 mm ² PNP with LED |
| SLG 4-2 | Z00445 | Cable plug housing M12x1 DC, straight 2 m PVC-cable 4x0.25 mm ² |
| SLG 4-5 | Z00449 | Cable plug housing M12x1 DC, straight 5 m PVC-cable 4x0.25 mm ² |
| SLW 4-2 | Z00446 | Cable plug housing M12x1 DC, angular 2 m PVC-cable 4x0.25 mm ² |
| SLW 4-5 | Z00450 | Cable plug housing M12x1 DC, angular 5 m PVC-cable 4x0.25 mm ² |
| SLW 4-2-LED | Z01157 | Cable plug housing M12x1 DC, angular 2 m PVC-cable 4x0.25 mm ² PNP with LED |
| SLG 5-2 | Z01150 | Cable plug housing M12x1 DC, straight 2 m PVC-cable 5x0.34 mm ² |
| SLW 5-2 | Z01151 | Cable plug housing M12x1 DC, angular 2 m PVC-cable 5x0.34 mm ² |
| PL-M12 | Z01182 | Plug-lock for sensors in Ex areas |

TECHNICAL DATA

| | | | |
|--------------------|---------------|-----------------------|--------------------|
| Protection | IP 67 | Rated voltage | 250 VAC / 300 VDC |
| Contact resistance | ≤ 5 mΩ | Insulation resistance | >10 ⁹ Ω |
| Switching current | 4 A (CSA=3 A) | Testing voltage | 2.0 KV eff. |
| Temperature range | -25...+80 °C | | |

Note

Sensors with NC output are connected to 4 pole cable plug housings. In this case, the break output is connected to the white lead (connection 2).

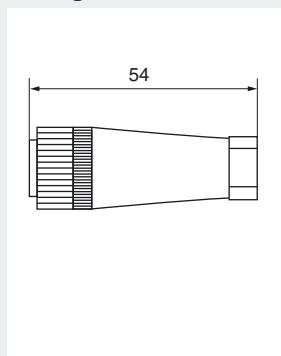
M12 connector

System SB

Cable plug user-assembled
Great variety of cables
Protection IP 67

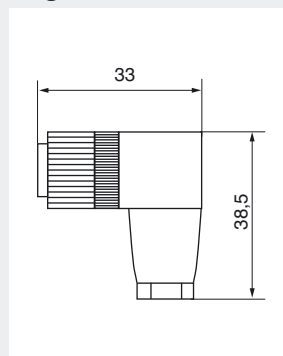


Cable plug housing straight

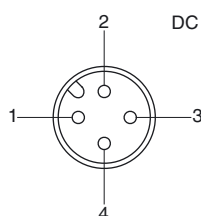


SBG...

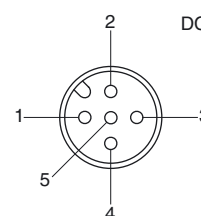
Cable plug housing angular



SBW...



SBG.../SBW...



SBG 5.../SBW 5...

| TYPE | ID-NO. | DESIGN |
|----------|--------|--|
| SBG-DC | Z01060 | DC-Cable plug housing M12x1, straight 4-pol user assembled 30 VDC, 3 A |
| SBW-DC | Z00038 | DC-Cable plug housing M12x1, angular 4-pol user assembled 30 VDC, 3 A |
| SBG 5-DC | Z01146 | DC-Cable plug housing M12x1, straight 5-pol user assembled 30 VDC, 1 A |
| SBW 5-DC | Z01147 | DC-Cable plug housing M12x1, angular 5-pol user assembled 30 VDC, 1 A |

PREFERRED CABLE

| | | | |
|-----------|--------|--|------------------------------------|
| PVC 205 | Z01061 | PVC-cable 2x0.5 mm ² | Lead colour coding: BN/BU |
| PVC 205B | Z01062 | PVC-cable 2x0.5 mm ² , blue cable covering | Lead colour coding: BN/BU |
| PVC 305 | Z01063 | PVC-cable 3x0.5 mm ² | Lead colour coding: BN/BU/BK |
| PVC 434 | Z01066 | PVC-cable 4x0.34 mm ² | Lead colour coding: BN/BU/BK/WH |
| PVC 405 | Z01067 | PVC-cable 4x0.5 mm ² | Lead colour coding: BN/BU/BK/WH |
| PVC 505 | Z01116 | PVC-cable 5x0.5 mm ² | Lead colour coding: BN/BU/BK/WH/GY |
| PUR 425S | Z01069 | PUR-cable 4x0.25 mm ² , shielded | Lead colour coding: BN/BU/BK/WH |
| PUR 425BS | Z01070 | PUR-cable 4x0.25 mm ² , shielded, blue cable covering | Lead colour coding: BN/BU/BK/WH |
| | Z01074 | Finishing of cable plug housing | |
| | Z01075 | Finishing of cable plug housing and cable extremity | |

Note

Different cables on request.

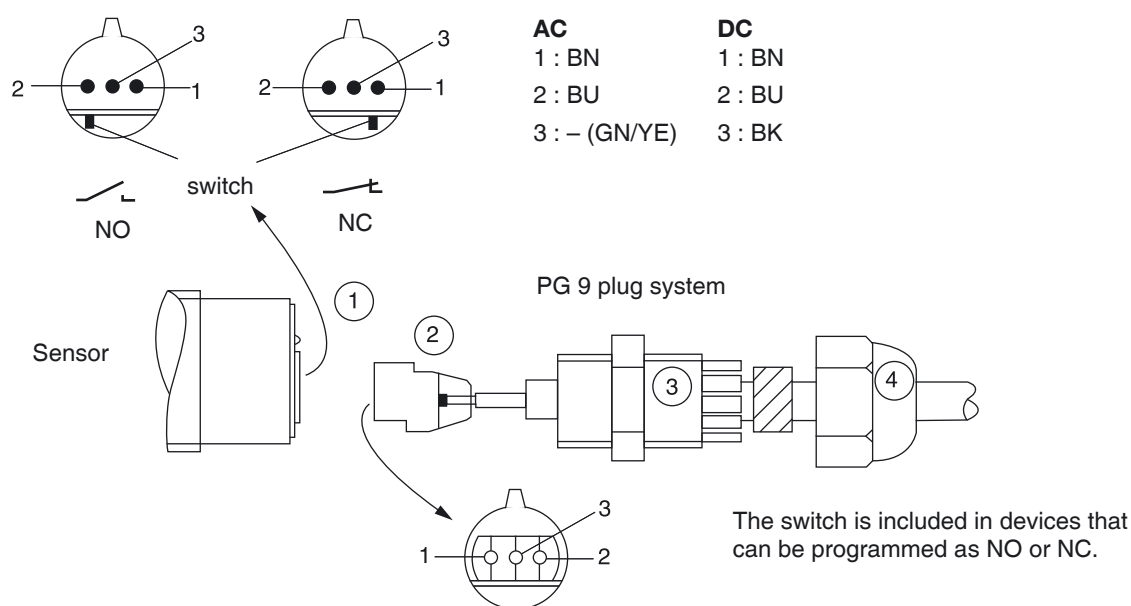
Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white

PG plug system

System PG

PG plug type connection with PVC-cable Protection IP 68

PG-plug connection



Mounting of PG-Plug system

Connect the cable to the EGE-plug (2) and put it into the plug-housing (1) until it is at the stop. Make sure that the "nose" of the plug fits exactly into the housing. If this is done in the right way, the plug is hidden in the plug-housing.

Screw part (3) into the plug-housing (1) and fix it rightly with a spanner. After about 2 hours righten it again with the spanner.

Now fit the nut (4) by hand and afterwards with a spanner. Do not apply too much force. For a good sealing there should be stet 2 mm between nut (4) and part (3).

| TYPE | ID-NO. | DESIGN |
|---------|--------|--|
| PG 2-2 | Z00025 | PG-plug connection, 2 m PVC-cable 2x0.75 mm ² AC |
| PG 2-3 | Z00026 | PG-plug connection, 3 m PVC-cable 2x0.75 mm ² AC |
| PG 2-5 | Z00027 | PG-plug connection, 5 m PVC-cable 2x0.75 mm ² AC |
| PG 2-10 | Z00028 | PG-plug connection, 10 m PVC-cable 2x0.75 mm ² AC |
| PG 2-20 | Z00029 | PG-plug connection, 20 m PVC-cable 2x0.75 mm ² AC |
| PG 3-2 | Z00020 | PG-plug connection, 2 m PVC-cable 3x0.5 mm ² DC |
| PG 3-3 | Z00021 | PG-plug connection, 3 m PVC-cable 3x0.5 mm ² DC |
| PG 3-5 | Z00022 | PG-plug connection, 5 m PVC-cable 3x0.5 mm ² DC |
| PG 3-10 | Z00023 | PG-plug connection, 10 m PVC-cable 3x0.5 mm ² DC |
| PG 3-20 | Z00024 | PG-plug connection, 20 m PVC-cable 3x0.5 mm ² DC |

Note

The power supply must be disconnected before the plug will be installed or removed.

Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white

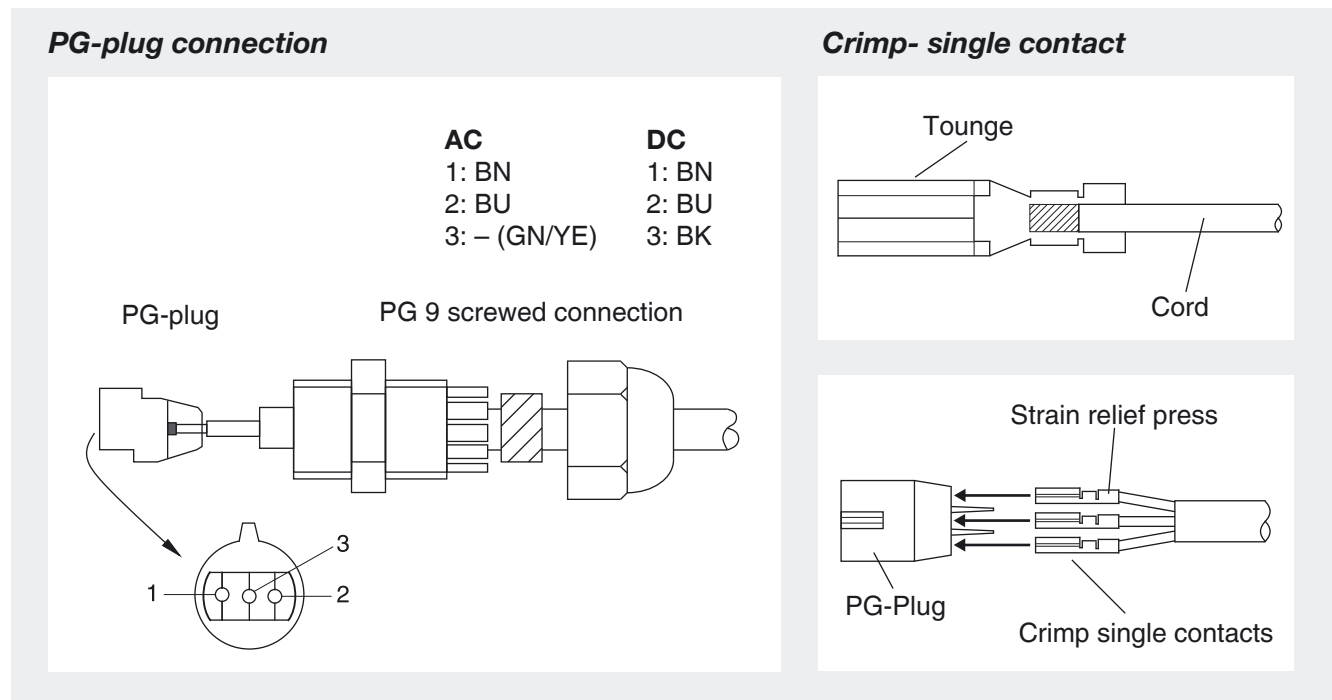
PG plug system

System PG

PG-plug system to be connected

Great variety of cables

Protection IP 68



Completing of PG-Plug system

The end of cable must be 15 mm dismantled. The end of the cords must be striped of 3 mm. Incorporate Crimp single contact (Z01082) into a roll press nipper. Put the cord into the tongue (see sketch) and press. Incorporate the contacts into the backside of the PG-plug until the strain relief press is locked. Nipper eg.: Lapp-DBR 0115 / female mould 0.5 - 1.0 mm².

| TYPE | ID-NO. | DESIGN |
|------|--------|--|
| PGS | Z00044 | PG-plug, separate 250 VAC / 220 VDC, 1 A |
| PGV | Z00043 | PG-plug, separate with PG 9 screwed connection |
| PGC | Z01082 | Crimp single contact |

PREFERRED CABLE

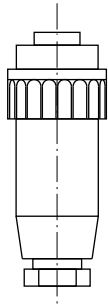
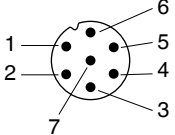
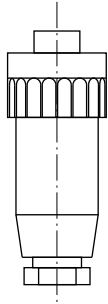
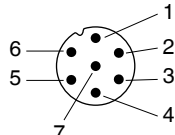
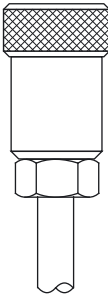
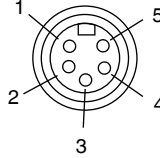

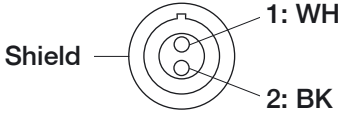
| | | | |
|----------|--------|--|---------------------------------|
| PVC 205 | Z01061 | PVC-cable 2x0.5 mm ² | Lead colour coding: BN/BU |
| PVC 205B | Z01062 | PVC-cable 2x0.5 mm ² | Lead colour coding: BN/BU |
| PVC 275 | Z01086 | PVC-cable 2x0.75 mm ² | Lead colour coding: BN/BU |
| PVC 305 | Z01063 | PVC-cable 3x0.5 mm ² | Lead colour coding: BN/BU/BK |
| PVC 305E | Z01064 | PVC-cable 3x0.5 mm ² | Lead colour coding: BN/BU/GN-YE |
| PVC 375 | Z01065 | PVC-cable 3x0.75 mm ² | Lead colour coding: BN/BU/BK |
| PUR 375 | Z01068 | PUR-cabel 3x0.75 mm ² | Lead colour coding: BN/BU/BK |
| | Z01080 | One side finishing PG-plug system incl. screwed connection | |
| | Z01081 | Finishing of PG-plug system incl. screwed connection and cable extremity | |

Note

Different cables on request. Cables with diameters less than 4 mm must be equipped with an appropriate shrinkdown plastic tubing.

Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white

Summary of plug connections

| TYPE | ID-NO. | DESIGN | CONNECTION | APPLICATION |
|------------------------|--------------------|---|---|--|
| K031-S (C16S) | Z01042 (Z00039) |  |  view to solder connection | Cable plug |
| K031-D | Z01043 |  |  view to solder connection | Cable plug casing |
| VEG5-... VEG5-5 | Z00501 |  |  1: BK 2: BU 3: GN/YE 4: BN 5: - view to plug side | Cable plug casing with cable IP 68 Cable plug casing 5 m PU-cable IP 68 |
| LEM01 | Z01104 |  |  1: WH 2: BK Shield | Cable plug application with KGFT... and KGMT... together with amplifier KK 030 / KU 120 |

Note

Cable plugs are with contact pins, cable plug casings with socket.

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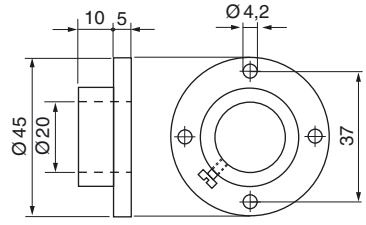
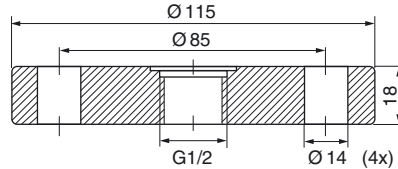
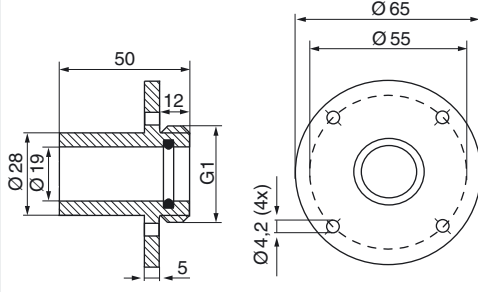
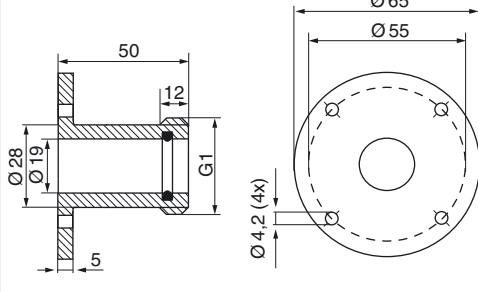
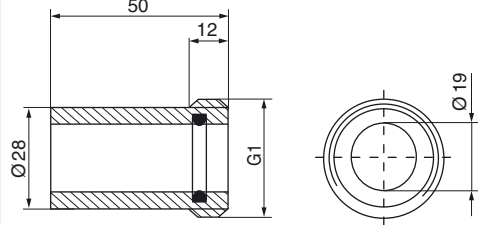
Cable

| TYPE | ID-NO. | MATERIAL/SHEAT | Ø _A [mm]* | WIRE SPECIFICATION | COLOUR |
|--------------|--------|-----------------|----------------------|---------------------------------|---------------------------|
| PVC205 | Z01061 | PVC, grey | 5.2 | 2x0.5 mm ² | BU, BN |
| PVC205B | Z01062 | PVC, blue | 4.4 | 2x0.5 mm ² | BU, BN |
| PVC275 | Z01086 | PVC, grey | 6.0 | 2x0.75 mm ² | BU, BN |
| PVC275BS | Z01108 | PVC, blue | 6.3 | 2x0.75 mm ² shielded | numbered cable |
| PVC334 | Z01109 | PVC, grey | 4.5 | 3x0.34 mm ² | BU, BN, BK |
| PVC305E | Z01064 | PVC, grey | 5.2 | 3x0.5 mm ² | BU, BN, GN/YE |
| PVC305 | Z01063 | PVC, grey | 5.2 | 3x0.5 mm ² | BU, BN, BK |
| PVC305B | Z01167 | PVC, blue | 5.2 | 3x0.5 mm ² | BU, BN, BK |
| PVC375 | Z01065 | PVC, grey | 6.0 | 3x0.75 mm ² | numbered cable |
| PVC375E | Z01111 | PVC, grey | 6.0 | 3x0.75 mm ² | BU, BN,GN/YE |
| PVC425 | Z01110 | PVC, grey | 4.3 | 4x0.25 mm ² | BU, BN, BK, WH |
| PVC434 | Z01066 | PVC, grey | 4.5 | 4x0.34 mm ² | BU, BN, BK, WH |
| PVC405 | Z01067 | PVC, grey | 5.5 | 4x0.5 mm ² | BU, BN, BK, WH |
| PVC475E | Z01113 | PVC, grey | 6.5 | 4x0.75 mm ² | BU, BN, BK, GN/YE |
| PVC475BS | Z01114 | PVC, blue | 7.3 | 4x0.75 mm ² shielded | numbered cable |
| PVC505 | Z01116 | PVC, grey | 5.8 | 5x0.5 mm ² | BU, BN, WH, BK, GY |
| PVC705 | Z01117 | PVC, grey | 6.6 | 7x0.5 mm ² | BU, BN, WH, GN/YE, GY, PK |
| PUR334 | Z01156 | PUR, grey | 5.0 | 3x0.34 mm ² | BU, BN, BK |
| PUR375 | Z01068 | PUR, black | 6.0 | 3x0.75 mm ² -40°C | BU, BN, BK |
| PUR425S | Z01069 | PUR, grey | 5.0 | 4x0.25 mm ² shielded | BU, BN, WH, BK |
| PUR425BS | Z01070 | PUR, blue | 5.0 | 4x0.25 mm ² shielded | BU, BN, WH, BK |
| PUR405 | Z01112 | PUR, black | 5.0 | 4x0.5 mm ² | BU, BN, WH, BK |
| PUR405BS | Z01173 | PUR, blue | 6.2 | 4x0.5 mm ² shielded | BU, BN, WH, BK |
| PUR475SE | Z01118 | PUR, grey | 9.0 | 4x0.75 mm ² shielded | numbered cable |
| PUR410E | Z01119 | PUR, orange | 8.0 | 4x1.0 mm ² | BU, BN, BK, GN/YE |
| FEP375S | Z01126 | FEP, red | 5.0 | 3x0.75 mm ² shielded | BU, BN, BK |
| FEP334 | Z01071 | FEP, red | 3.8 | 3x0.34 mm ² | BU, BN, BK |
| FEP425S | Z01073 | FEP, red | 4.1 | 4x0.25 mm ² shielded | BU, BN, BK, WH |
| FEP425 | Z01072 | FEP, red | 3.7 | 4x0.25 mm ² | BU, BN, BK, WH |
| FEP425BS | Z01125 | FEP, blue | 4.1 | 4x0.25 mm ² shielded | BU, BN, BK, WH |
| FEP375 | Z01165 | FEP, red | 4.2 | 3x0.75 mm ² | BU, BN, GN/YE |
| Silikon375E | Z01121 | Silicone, red | 6.0 | 3x0.75 mm ² | BU, BN, GN/YE |
| Silikon475E | Z01122 | Silicone, red | 6.3 | 4x0.75 mm ² | BU, BN, BK, GN/YE |
| Silikon475SE | Z01115 | Silicone, red | 8.8 | 4x0.75 mm ² shielded | BU, BN, BK, GN/YE |
| Silikon305 | Z01143 | Silicone, red | 5.5 | 3x0.5 mm ² | BU, BN, BK |
| PVC705SE | Z01123 | PVC-transparent | 9.2 | 7x0.5 mm ² shielded | numbered cable, GN/YE |

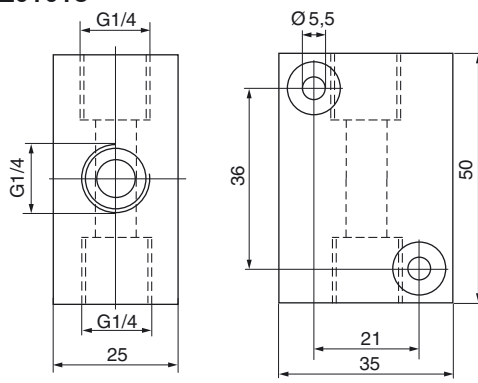
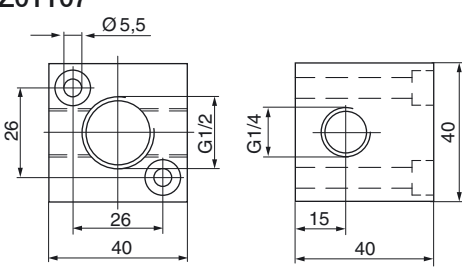
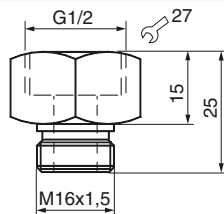
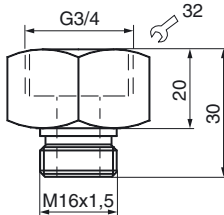
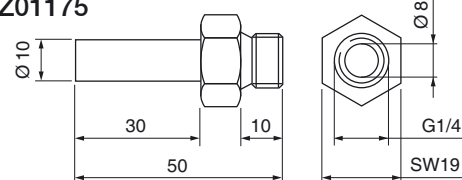
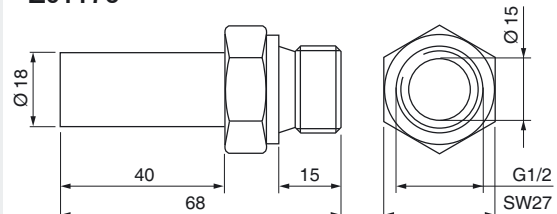
*Tolerance of diameter ±0,4 mm

Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white

Product section 1

| TYPE | ID-NO. | DIMENSIONS | DESIGN |
|------------------|--------|---|---|
| Flange - Ø20 | Z01106 |  | <p>Plastic - flange with drilled hole Ø20 mm</p> <p>for sensors type LN 520</p> |
| Flange DN25/PN40 | Z01001 |  | <p>Flange AISI 316 Ti (1.4571) EN 1092-1/05 A (DIN 2527) with central thread G1/2</p> <p>for sensors type ST... with G1/2</p> |
| A501 | Z01033 |  | <p>Thread sleeve of brass, nickel-plated L=50 mm, G1</p> <p>for sensors type LN...</p> |
| A502 | Z01034 |  | <p>Thread sleeve of brass, nickel-plated L=50 mm, G1</p> <p>for sensors type LN...</p> |
| A503 | Z01035 |  | <p>Welding sleeve of FE 360 B (1.0037), L=50 mm, G1</p> <p>for sensors type LN...</p> |

Product section 1

| TYPE | ID-NO. | DIMENSIONS | DESIGN |
|----------------------|--------|---|---|
| SIA G1/4 - 1/4 - 1/4 | Z01018 |  | <p>Adapter for G1/4-sensors with G1/4-pipe connections</p> <p>Material: AISI 316 Ti Sensors: STK 412...</p> <p>Massflow down to 10 ml/min</p> |
| SIA G1/2 - 1/4 - 1/4 | Z01107 |  | <p>Adapter for G1/2-sensors with G1/4-pipe connections</p> <p>Material: AISI 316 Ti Sensors: STK 421...</p> <p>Massflow down to 10 ml/min</p> |
| SDA M16 - G1/2 | Z01017 |  | <p>Transition piece for inline-sensors SD... to G1/2-female thread</p> <p>Material: AISI 316 Ti</p> |
| SDA M16 - G3/4 | Z01028 |  | <p>Transition piece for inline-sensors SD... to G3/4-female thread</p> <p>Material: AISI 316 Ti</p> |
| SDA G1/4-Ø10-L050 | Z01175 |  | <p>Adapter G1/4 for flow controller inline-digital display SDN 5.../1..., SDV 652..., SDI 852/1...</p> |
| SDA G1/2-Ø18-L068 | Z01176 |  | <p>Adapter G1/2 for flow controller inline-digital display SDN 552/3...</p> |

Product section 2-4

Lock nuts, nickel - plated

| ID-NO. | Z00106 | Z00107 | Z00114 | Z00109 | Z00110 |
|--------------------|--------|--------|--------|---------|---------|
| Nut thickness [mm] | 4 | 4 | 4 | 5 | 5 |
| Thread | M12x1 | M18x1 | M22x1 | M30x1.5 | M38x1.5 |
| Spanner size | 17 | 24 | 27 | 36 | 50 |

Lock nuts, special steel

| ID-NO. | Z01098 | Z00112 | Z00113 | Z00115 |
|--------------------|--------|--------|--------|---------|
| Nut thickness [mm] | 4 | 4 | 4 | 5 |
| Thread | M8x1 | M12x1 | M18x1 | M30x1.5 |
| Spanner size | 13 | 17 | 24 | 36 |

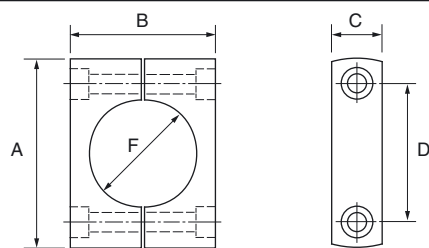
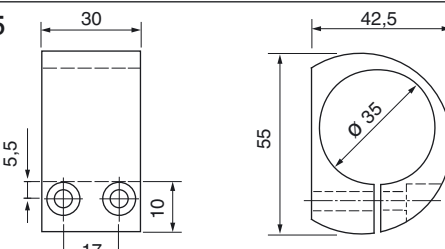
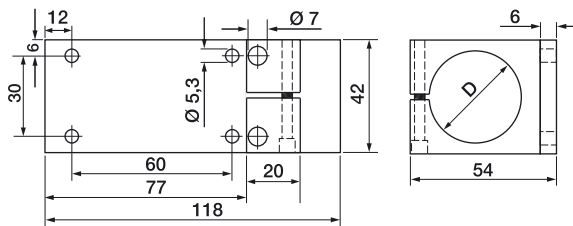
lock nuts, plastics

| ID-NO. | Z00180 | Z00120 | Z00117 | Z00118 | Z00119 | Z01092 | Z01052 |
|--------------------|--------|---------|--------|--------|---------|--------|--------|
| Nut thickness [mm] | 6 | 8 | 4 | 5 | 5,5 | 8 | 8 |
| Thread | M14x1 | M30x1.5 | M12x1 | M18x1 | M30x1.5 | G3/4 | G1 |
| Spanner size | 22 | 41 | 17 | 24 | 36 | 41 | 50 |
| Material | PTFE | PTFE | PPE | PPE | PPE | PTFE | PTFE |

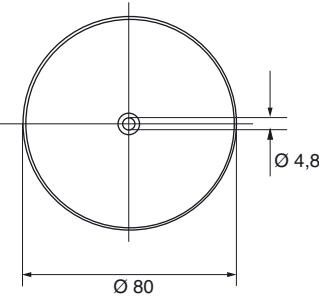
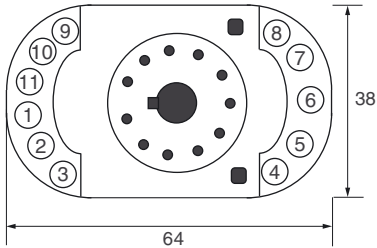
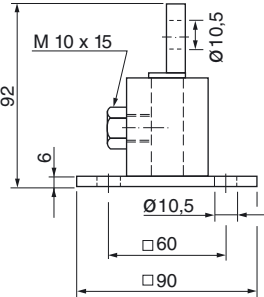
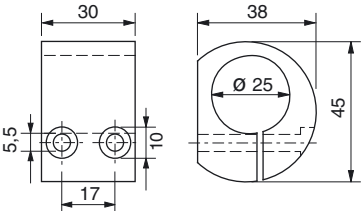
Central screw, polyamide

| | |
|--------|--|
| Z00104 | M12, length 70 mm, hexagon socket 10 mm, material PA |
| Z00105 | M16, length 90 mm, hexagon socket 14 mm, material PA |

MOUNTING CLAMPS

| TYPE | ID-NO. | DIMENSIONS | DESIGN | | | | | | | | | | | | | | | | | | |
|-------------------------------|----------------------|---|---|------|------|---------|------|---------|------|---------|------|----|---|----|----|---|----|----|---|-------|-------|
| KLS 20 KLS 34 | Ø 20 Ø 34 | Z00100 Z00102 | Clamps of PA, for smooth-bodied switches | | | | | | | | | | | | | | | | | | |
| | |  <p>E: hexagon socket screw 1.4305</p> | <table border="1"> <thead> <tr> <th>F</th> <th>Ø 20</th> <th>Ø 34</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>47</td> <td>61</td> </tr> <tr> <td>B</td> <td>30</td> <td>47</td> </tr> <tr> <td>C</td> <td>17</td> <td>15</td> </tr> <tr> <td>D</td> <td>32</td> <td>45</td> </tr> <tr> <td>E</td> <td>M5x30</td> <td>M5x50</td> </tr> </tbody> </table> | F | Ø 20 | Ø 34 | A | 47 | 61 | B | 30 | 47 | C | 17 | 15 | D | 32 | 45 | E | M5x30 | M5x50 |
| F | Ø 20 | Ø 34 | | | | | | | | | | | | | | | | | | | |
| A | 47 | 61 | | | | | | | | | | | | | | | | | | | |
| B | 30 | 47 | | | | | | | | | | | | | | | | | | | |
| C | 17 | 15 | | | | | | | | | | | | | | | | | | | |
| D | 32 | 45 | | | | | | | | | | | | | | | | | | | |
| E | M5x30 | M5x50 | | | | | | | | | | | | | | | | | | | |
| KLB 35 | Ø 35 | Z00125 | Clamp of PTFE (Teflon), for smooth-bodied switches hexagon socket screw M5x40 | | | | | | | | | | | | | | | | | | |
| | |  <p>hexagon socket screw 1.4571</p> | | | | | | | | | | | | | | | | | | | |
| KBM 025 KBM 030 KBM 035 | Ø 25 Ø 30 Ø 35 | Z01189 Z01188 Z01187 | Mounting clamp of aluminium | | | | | | | | | | | | | | | | | | |
| | |  | <table border="1"> <thead> <tr> <th>Type</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>KBM 025</td> <td>Ø 25</td> </tr> <tr> <td>KBM 030</td> <td>Ø 30</td> </tr> <tr> <td>KBM 035</td> <td>Ø 35</td> </tr> </tbody> </table> | Type | D | KBM 025 | Ø 25 | KBM 030 | Ø 30 | KBM 035 | Ø 35 | | | | | | | | | | |
| Type | D | | | | | | | | | | | | | | | | | | | | |
| KBM 025 | Ø 25 | | | | | | | | | | | | | | | | | | | | |
| KBM 030 | Ø 30 | | | | | | | | | | | | | | | | | | | | |
| KBM 035 | Ø 35 | | | | | | | | | | | | | | | | | | | | |

Product section 5-6

| TYPE | ID-NO. | DIMENSIONS | DESIGN |
|---------------------|--------|--|--|
| Reflector Ø 80 mm | Z01093 |  | Reflector for retro reflective photo sensors central screw mounting |
| Plug adapter | Z01096 |  | Adapter with screw clamp connection for DIN rail (EN 50022) to connect to the amplifier UV 70... |
| OMB 01 | Z06004 |  | Adjustable mounting for infrared detectors and opto sensors Material: AISI 316 Ti (1.4571) |
| Mounting clamp Ø 25 | Z00126 |  <p>hexagon socket screw 1.4305</p> | Clamp of chromium - plated brass for auxilliary optics type ULV... hexagon socket screw M5x40 |