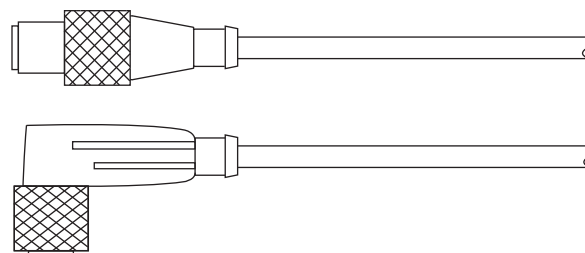
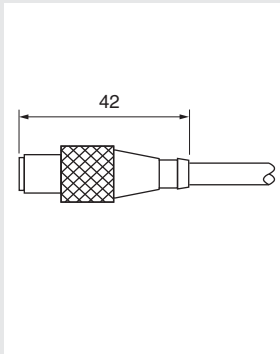
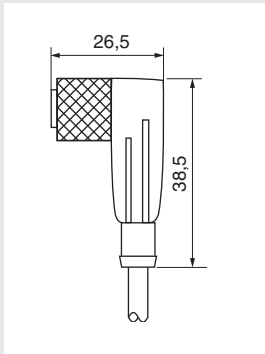
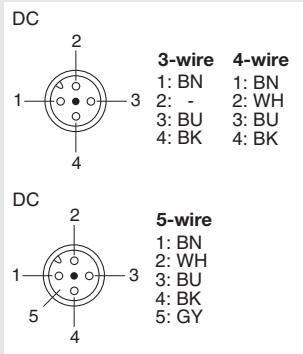
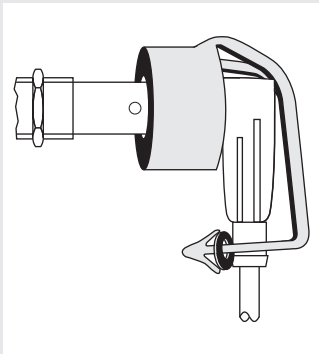


M12 connector

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 1: BN 2: - 3: BU 4: BK</p> <p>4-wire 1: BN 2: WH 3: BU 4: BK</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).

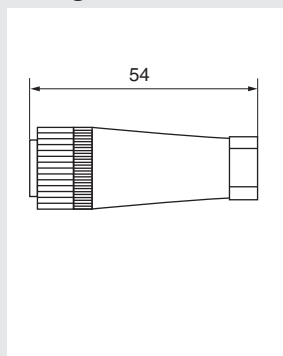
M12 connector

System SB

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

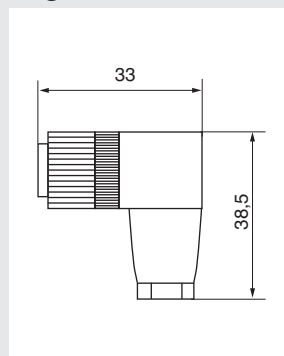


Cable plug housing straight

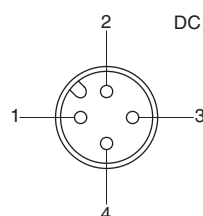


SBG...

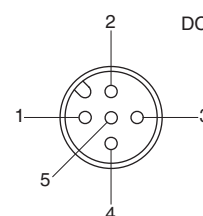
Cable plug housing angular



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.

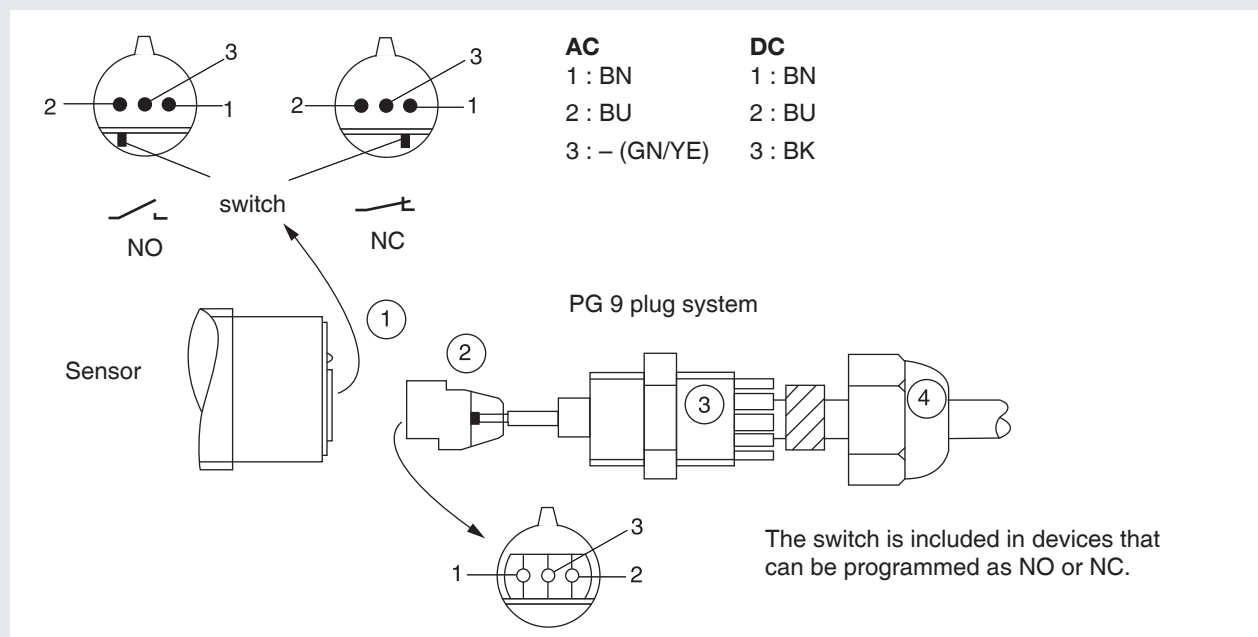
Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white

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.

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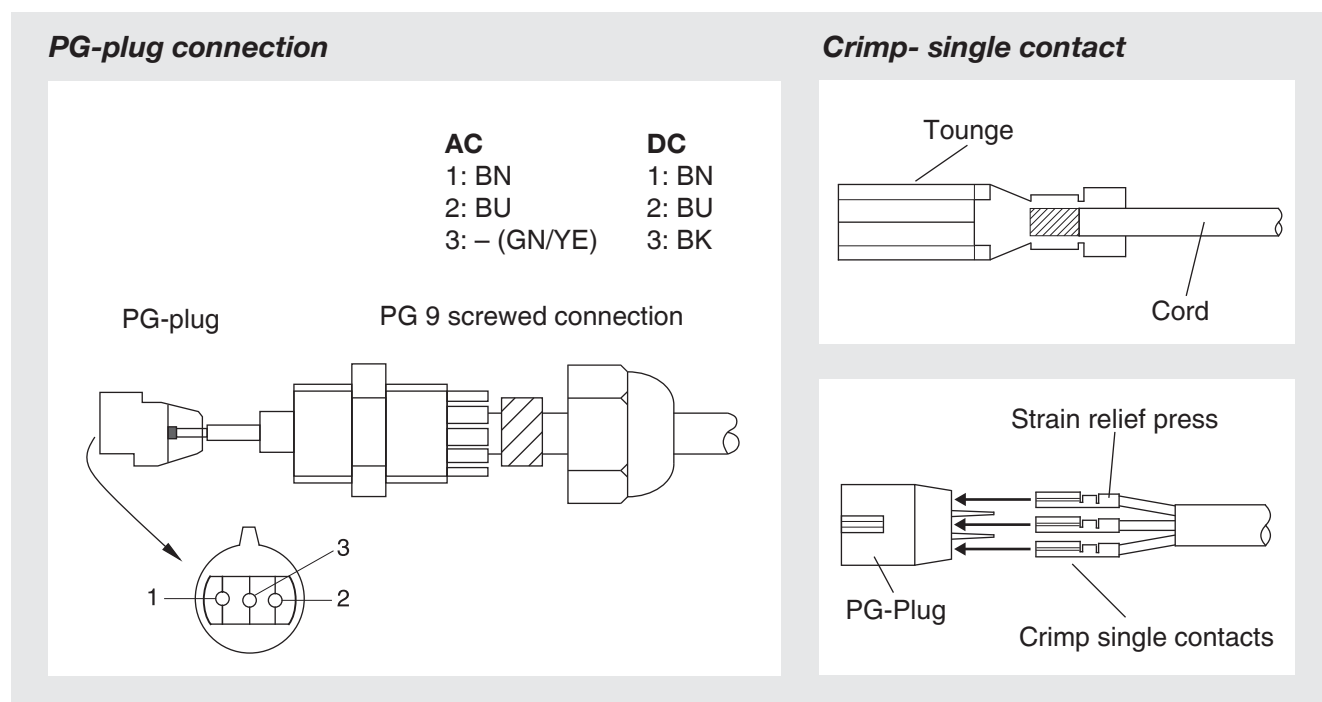
PG plug system

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

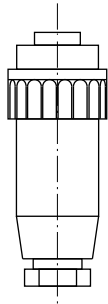
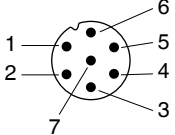
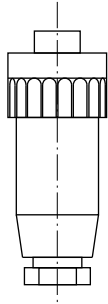
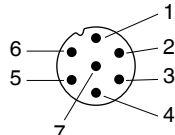
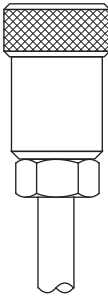
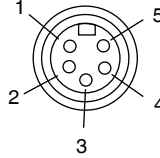

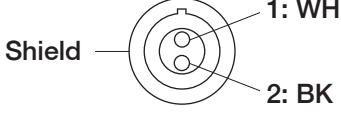
PVC 205	Z01061	PVC-cable 2x0.5 mm ²	Lead colour coding: BN/BU
PVC 205B	Z01062	PVC-cable 2x0.5 mm ²	Lead colour coding: BN/BU
PVC 275	Z01086	PVC-cable 2x0.75 mm ²	Lead colour coding: BN/BU
PVC 305	Z01063	PVC-cable 3x0.5 mm ²	Lead colour coding: BN/BU/BK
PVC 305E	Z01064	PVC-cable 3x0.5 mm ²	Lead colour 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.

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Summary of plug connections

TYPE	ID-NO.	DESIGN	CONNECTION	APPLICATION
K031-S (C16S)	Z01042 (Z00039)		 <p>view to solder connection</p>	Cable plug
K031-D	Z01043		 <p>view to solder connection</p>	Cable plug casing
VEG5-... VEG5-5	Z00501		 <p>1: BK 2: BU 3: GN/YE 4: BN 5: -</p> <p>view to plug side</p>	<p>Cable plug casing with cable IP 68</p> <p>Cable plug casing 5 m PU-cable IP 68</p>
LEM01	Z01104		 <p>Shield</p> <p>1: WH 2: BK</p>	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

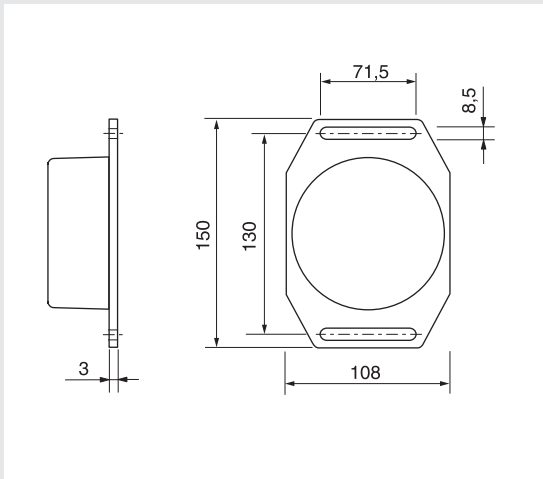
TYPE	ID-NO.	MATERIAL/SHEAT	Ø _A [mm]*	WIRE SPECIFICATION	COLOUR
PVC205	Z01061	PVC, grey	5.2	2x0.5 mm ²	BU, BN
PVC205B	Z01062	PVC, blue	4.4	2x0.5 mm ²	BU, BN
PVC275	Z01086	PVC, grey	6.0	2x0.75 mm ²	BU, BN
PVC275BS	Z01108	PVC, blue	6.3	2x0.75 mm ² shielded	numbered cable
PVC334	Z01109	PVC, grey	4.5	3x0.34 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
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
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

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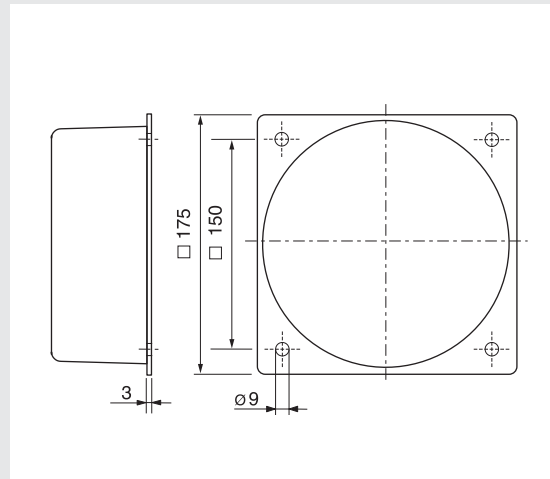
Mounting plates for inductive switches

IMAF 108



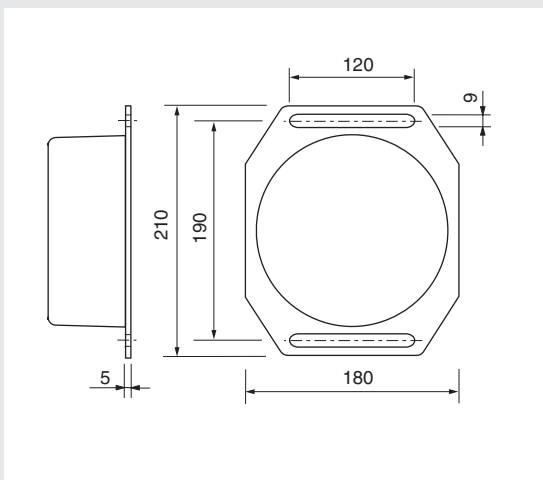
Z01088

IMAF 150



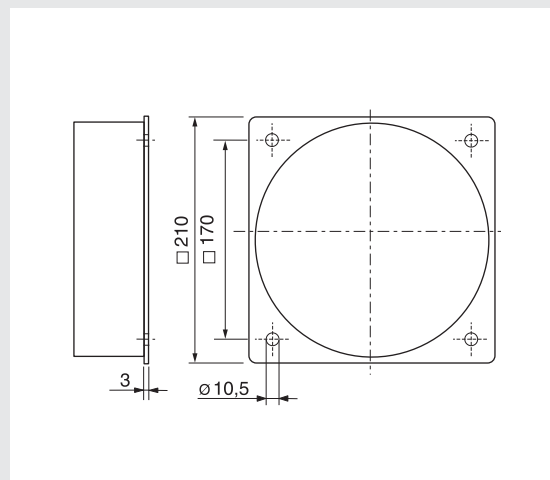
Z01089

IMAF 180



Z00124

IMAF 210 / IMEF 210



Z00123 / Z01090

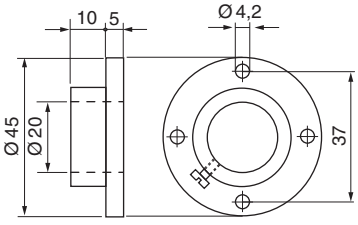
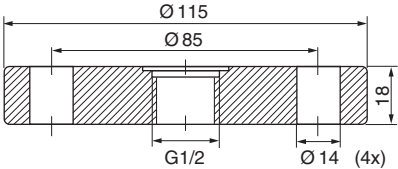
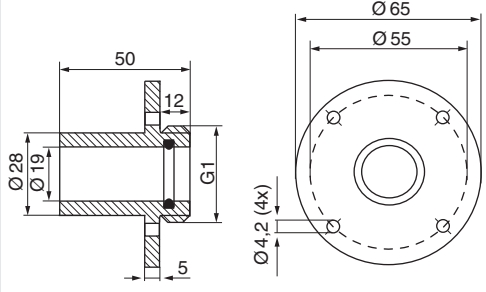
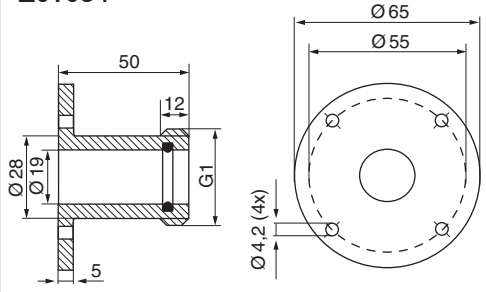
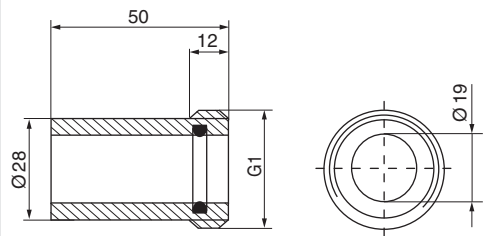
TYPE	ID-NO.	DESIGN		
IMAF 108	Z01088	for INS 100	Aluminium	Sensor and plate are joined together
IMAF 150	Z01089	for INS 160	Aluminium	Sensor and plate are joined together
IMAF 180	Z00124	for INS 160	Aluminium	Sensor and plate are joined together
IMAF 210	Z00123	for IDS 200	Aluminium	Sensor and plate are joined together
IMEF 210	Z01090	for IDS 200	Stainless steel	Sensor and plate are joined together

Note

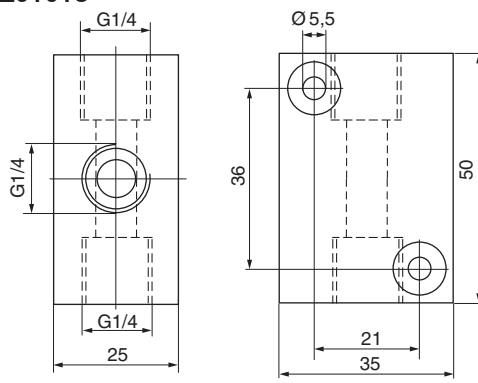
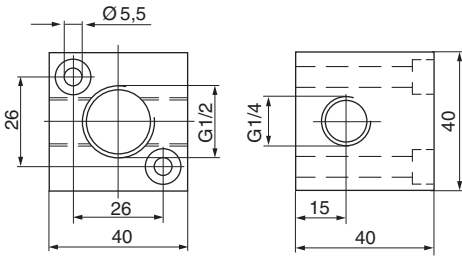
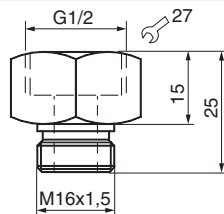
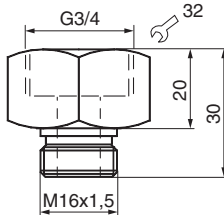
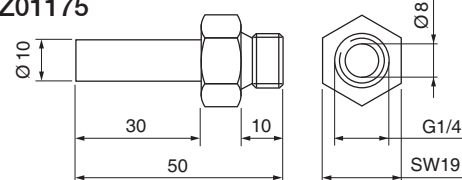
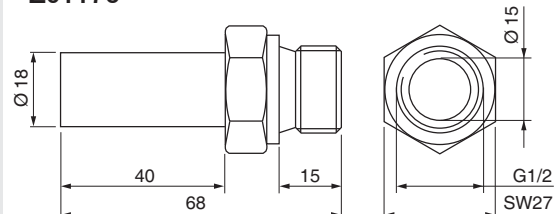
The mounting plate and the sensor are joined at the factory. Therefore they must be ordered together with the sensors.

Different designs and materials on request.

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.	Z01097	Z01098	Z00112	Z00113	Z00115
Nut thickness [mm]	3	4	4	4	5
Thread	M5x0.5	M8x1	M12x1	M18x1	M30x1.5
Spanner size	7	13	17	24	36

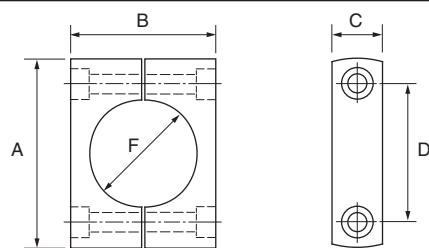
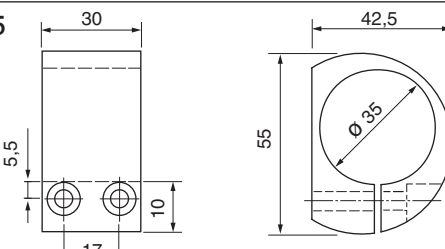
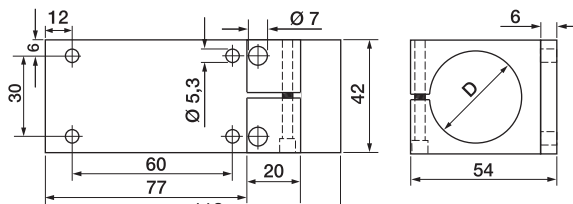
lock nuts, plastics

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

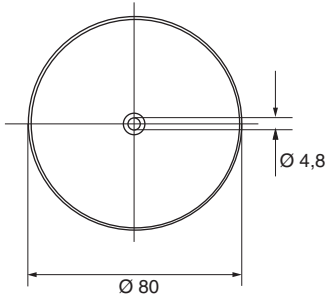
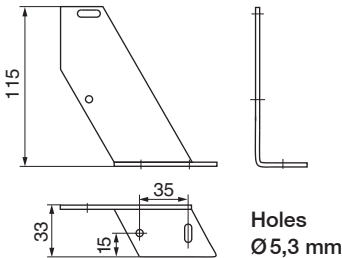
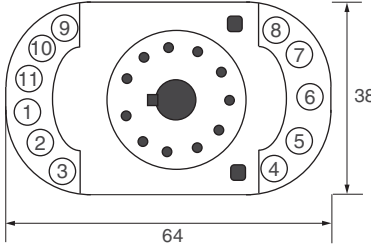
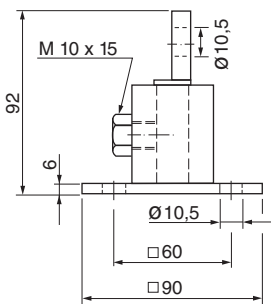
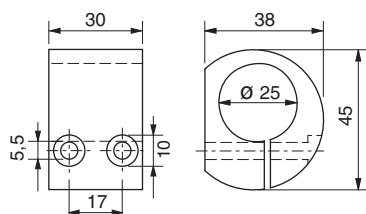
Central screw, polyamide

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
Bracket	Z01095	 <p>Holes Ø 5,3 mm</p>	Mounting of the rectangular sensor type U...900
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