



Accessories | Mounting sleeves

It is not necessary to empty the vessel for routine sensor inspection

PTFE housing for high chemical resistance

O-ring moisture barrier



| Design | KNM-35 | KNM-20 | KPM-35 |
|----------------------------|--|------------|------------|
| Dimensions | | | |
| ID.-No. | P40501 | P40500 | P40502 |
| Type | KNM-35 | KNM-20 | KPM-35 |
| Housing material | PTFE | PTFE | Crastin |
| Torque max. [Nm] | 1 | 1 | 3 |
| Compressive strength [bar] | 3 | 3 | 6 |
| Thread | G1 1/4 | G3/4 | G1 1/2 |
| For sensor type | KNK-025... | KNK-015... | KNK-025... |
| Usefully sensors | see in our brochure „Capacitive Sensors“ | | |

Fitting in of sleeves and sensors

Mounting sleeves are used for lateral or vertical passage through the vessel side. In order to ensure full pressure resistance, the thread should be screwed into the vessel threaded bush over a length of approximately 20 mm. If this is not possible because the vessel side is too thin, a suitable bush must be installed. However, the threaded passage should not be longer than the thread on the mounting sleeve. The interior thread must comply with DIN ISO 228. Sealing of the thread is either carried out with hemp and a sealing paste according to DIN-DVGW, or with PTFE sealing tape if higher chemical resistance is required. In any case, chemical resistance of the seal must be checked for this application. When screwing in the sleeve, maximum admissible torque must not be exceeded.

Metallic or metal clad vessels should be earthed. In the case of plastic vessels filled with electrically conductive materials, the latter should be earthed. In the case of plastic vessels filled with non-conducting materials, an earthed metal band applied on the outside of the vessel may be used as a counter electrode. For fitting the sensor, the closing ring is unscrewed from the

mounting sleeve. The sensor connecting cable must be fitted through the closing ring and the sensor fitted into the sleeve. After this, the closing ring is screwed back into the mounting sleeve, until the gasket is firmly pressed against the sensor housing. This ensures that no external humidity will penetrate into the mounting sleeve, as this might lead to sensor switching failures.

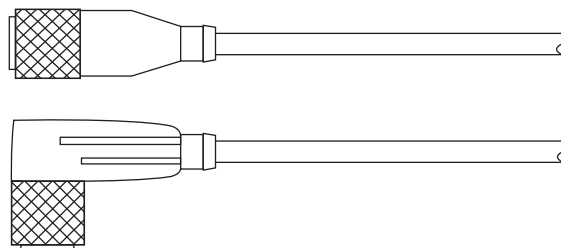
Sensor compensation

To start with, the plastic screw which protects the compensating potentiometer against humidity must be removed. The screwdriver blade used for compensation should be narrower than 2.4 mm. The sensor is now fitted into the sleeve, and the vessel filled to a level allowing for complete immersion of the sleeve. Beginning at the left limit, turn the potentiometer clockwise until the switching output is operated (NO), after which the potentiometer is turned further clockwise about one revolution. The switching output of the sensor should now be closed. In case of very small bulk densities and corresponding small dielectric constant, it may be necessary to turn only half a revolution.



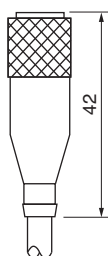
Accessories | M12 connector

Finished cable plug housing
Self locking screw plug
Protection IP 67

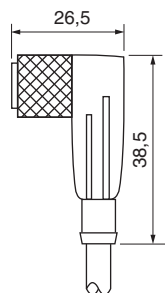


Cable plug housing

straight



angular

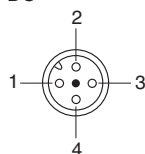


SLG...

SLW...

Pin-assignment

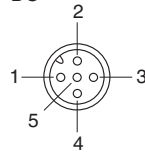
DC



3-wire
1: BN
2: -
3: BU
4: BK

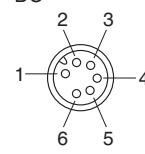
4-wire
1: BN
2: WH
3: BU
4: BK

DC



5-wire
1: BN
2: WH
3: BU
4: BK
5: GY

DC



6-wire
1: BN
2: WH
3: BU
4: BK
5: GY
6: PK

DC

| TYPE | ID-NO. | DESIGN |
|-------------|--------|--|
| SLG 3-2 | Z01076 | Cable plug housing straight, 2 m cable 3x0.34 mm ² max. 250 V / 4 A |
| SLG 3-5 | Z01077 | Cable plug housing straight, 5 m cable 3x0.34 mm ² max. 250 V / 4 A |
| SLW 3-2 | Z01078 | Cable plug housing angular, 2 m cable 3x0.34 mm ² max. 250 V / 4 A |
| SLW 3-5 | Z01079 | Cable plug housing angular, 5 m cable 3x0.34 mm ² max. 250 V / 4 A |
| SLW 3-2-LED | Z00052 | Cable plug housing angular, 2 m cable 3x0.34 mm ² max. 250 V / 4 A PNP with LED |
| SLG 4-2 | Z00445 | Cable plug housing straight, 2 m cable 4x0.25 mm ² max. 250 V / 4 A |
| SLG 4-5 | Z00449 | Cable plug housing straight, 5 m cable 4x0.25 mm ² max. 250 V / 4 A |
| SLW 4-2 | Z00446 | Cable plug housing angular, 2 m cable 4x0.25 mm ² max. 250 V / 4 A |
| SLW 4-5 | Z00450 | Cable plug housing angular, 5 m cable 4x0.25 mm ² max. 250 V / 4 A |
| SLW 4-2-LED | Z01157 | Cable plug housing angular, 2 m cable 4x0.25 mm ² max. 250 V / 4 A PNP with LED |
| SLG 5-2 | Z01150 | Cable plug housing straight, 2 m cable 5x0.34 mm ² max. 60 V / 2 A |
| SLW 5-2 | Z01151 | Cable plug housing angular, 2 m cable 5x0.34 mm ² max. 60 V / 2 A |
| SLG 6-2 | Z01197 | Cable plug housing straight, 2 m cable 6x0.25 mm ² max. 36 V / 2 A |
| SLW 6-2 | Z01198 | Cable plug housing angular, 2 m cable 6x0.25 mm ² max. 36 V / 2 A |

DATA

| | | | |
|-------------------|--------------|-----------------------|--|
| Thread | M12x1 | Contact resistance | ≤ 5 mΩ |
| Material | PVC | Insulation resistance | >10 ⁹ |
| Protection | IP 67 | Testing voltage | 2.0 KV eff. / 5 and 6 pol. 1.5 KV eff. |
| Temperature range | -25...+80 °C | | |

Note:

The cable plug housings are fitted with a sealing ring and can be used in temperature range of -25 °C...+80 °C. Sensors with DC-NC/NO output (antivalent) are connected to 4-pole cable plug housings (4x0,25 mm²). In this case, the NC output is connected to the white lead (connection 2).



Accessories | Assembly parts

Lock nuts, brass-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, stainless 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 | G 3/4 | G 1 |
| 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 Ø 20 KLS 34 Ø 34 | Z00100 Z00102 | <p>E: hexagon socket screw 1.4305</p> | Clamps of PA, for smooth-bodied switches <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 | <p>hexagon socket screw 1.4571</p> | Clamp of PTFE (Teflon), for smooth-bodied switches hexagon socket screw M5x40 | | | | | | | | | | | | | | | | | | |
| Screw-on-electrode L = 330 mm L = 530 mm L = 1030 mm | Z01205 Z01206 Z01207 | | Sensor: CFC 050 GSOP Material: AISI 316 Ti For the use in plastic containers | | | | | | | | | | | | | | | | | | |