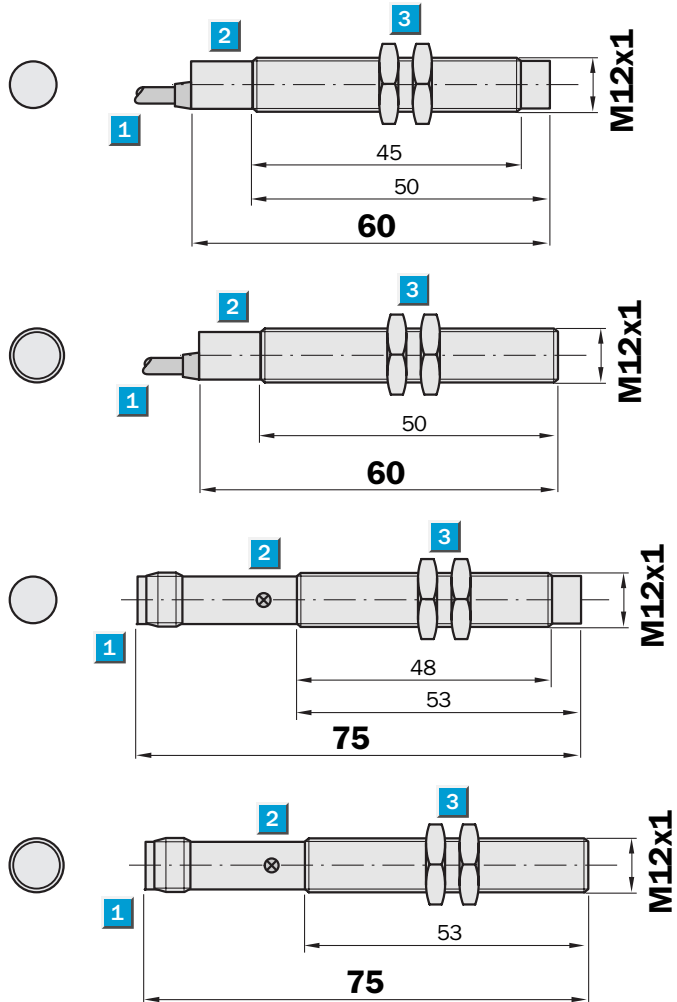


**Sensing range**  
2 / 4 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Enclosure rating IP 67
- High switching frequency

Dimensional drawing



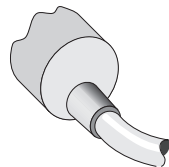
- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal



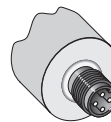
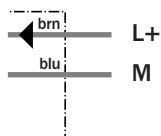
Connection type

IM12-02BDS-ZW1  
IM12-02BDO-ZW1  
IM12-04NDO-ZW1  
IM12-04NDS-ZW1

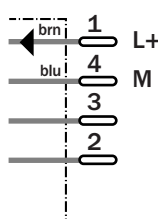
IM12-02BDS-ZC1  
IM12-04NDS-ZC1



2 x 0.22 mm<sup>2</sup>



M12, 4-pin



See chapter Accessories

Connector, M12, 4-pin  
Mounting systems

Technical specifications		IM12-	02BDS-ZC1	04NDS-ZC1	02BDS-ZW1	02BDO-ZW1	04ND-O-ZW1	04NDS-ZW1				
<b>Sensing range S<sub>n</sub></b>	2 mm											
	4 mm											
<b>Electrical configuration</b>	DC 2-wire											
<b>Supply voltage V<sub>s</sub></b>	DC 10 ... 30 V											
Ripple U <sub>pp</sub>	≤ 10 %											
Voltage drop U <sub>d</sub>	≤ 2.8 V <sup>1)</sup>											
<b>Continuous current I<sub>a</sub></b>	≤ 100 mA											
Min. load current	≥ 3 mA											
Residual current	≤ 0.8 mA											
Time delay before availability t <sub>v</sub>	≤ 50 ms											
Hysteresis H, of s <sub>r</sub>	2 ... 10 %											
Repeatability R	≤ 5 % (U <sub>b</sub> and T <sub>a</sub> constant) <sup>2)</sup>											
Temperature drift, of s <sub>r</sub>	± 10 %											
EMC	According to EN 60947-5-2											
<b>Output function</b>	Normally open											
	Normally closed											
<b>Installation</b>	Flush											
	Non-flush											
<b>Connection type</b>	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
<b>Enclosure rating</b>	IP 67 <sup>3)</sup>											
Max. switching frequency	1,500 Hz											
Dimensions	M12 x 1 <sup>4)</sup>											
<b>Short-circuit protection</b>	✓ <sup>5)</sup>											
<b>Reverse polarity protection</b>	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T <sub>a</sub>	-25 °C ... +70 °C											
<b>Housing material</b>	Brass nickel-plated, plastic											
Tightening torque	10 Nm											

<sup>1)</sup> at I<sub>a</sub> max

<sup>2)</sup> of s<sub>r</sub>

<sup>3)</sup> according to EN 60529

<sup>4)</sup> Thread diameter x pitch (mm)  
<sup>5)</sup> (pulsed)

Order information	
Type	Order no.
IM12-02BDS-ZC1	6 020 312
IM12-04NDS-ZC1	6 020 316
IM12-02BDS-ZW1	6 020 310
IM12-02BDO-ZW1	6 020 311
IM12-04NDO-ZW1	6 020 315
IM12-04NDS-ZW1	6 020 314