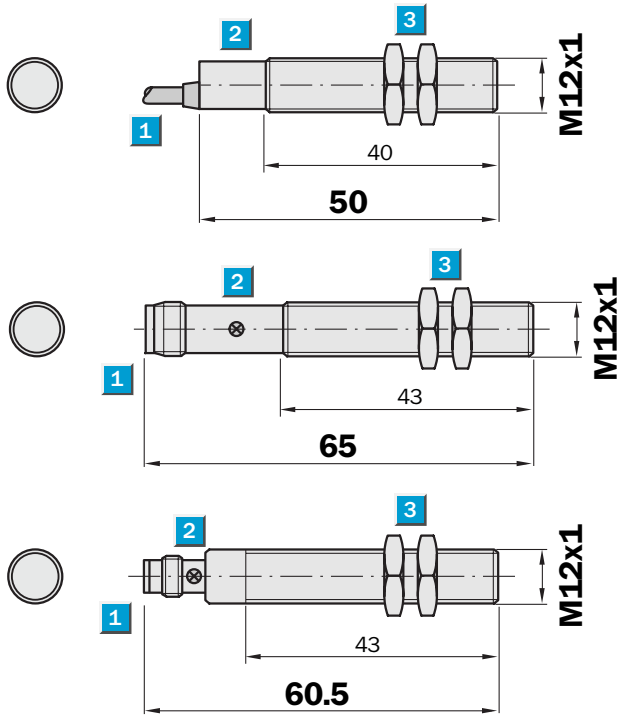


Sensing range
2 mm

Inductive sensor

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

Dimensional drawing

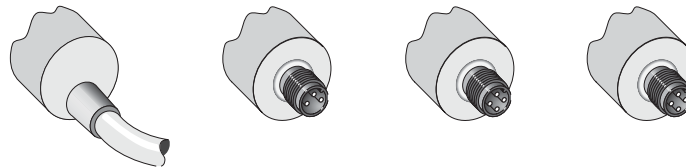


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal



Connection type

IM12-02BNO-ZW1	IM12-02BPS-ZT1	IM12-02BNS-ZC1	IM12-02BNO-ZC1
IM12-02BNS-ZW1	IM12-02BNS-ZT1	IM12-02BPS-ZC1	IM12-02BPO-ZC1
IM12-02BPO-ZW1			
IM12-02BPS-ZW1			

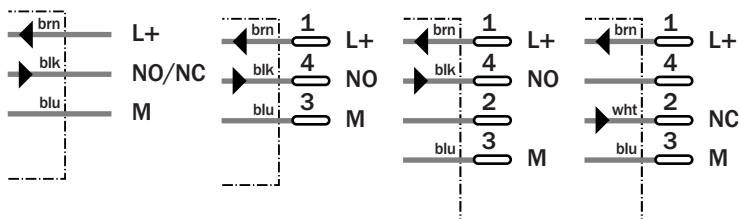


3 x 0.22 mm²

M8, 3-pin

M12, 4-pin

M12, 4-pin



Accessories

Connector, M12, 4-pin
Connector, M8, 3-pin
Mounting systems

Technical specifications		IM12-	02BNO-ZW1	02BNS-ZW1	02BPO-ZW1	02BPS-ZW1	02BNS-ZC1	02BNO-ZC1	02BPO-ZC1	02BPS-ZC1	02BNS-ZT1	02BNS-ZT1
Sensing range S_n	2 mm											
Electrical configuration	DC 3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$ ¹⁾											
Voltage drop U_d	$\leq 1.2\text{ V}$ ²⁾											
Power consumption	$\leq 20\text{ mA}$ ³⁾											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	2 ... 10 %											
Repeatability R	$\leq 2\%$ (U_b and T_a constant) ⁴⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Cable, PVC, 2 m											
	Connector, M12, 4-pin											
	Connector, M8, 3-pin											
Enclosure rating	IP 67 ⁵⁾											
Max. switching frequency	2,000 Hz											
Dimensions	M12 x 1 ⁶⁾											
Short-circuit protection	✓ ⁷⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +70 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	10 Nm											

¹⁾ of U_b
²⁾ at I_a max

³⁾ without load
⁴⁾ of s_r

⁵⁾ According to EN 60529
⁶⁾ Thread diameter x pitch (mm)

⁷⁾ (pulsed)

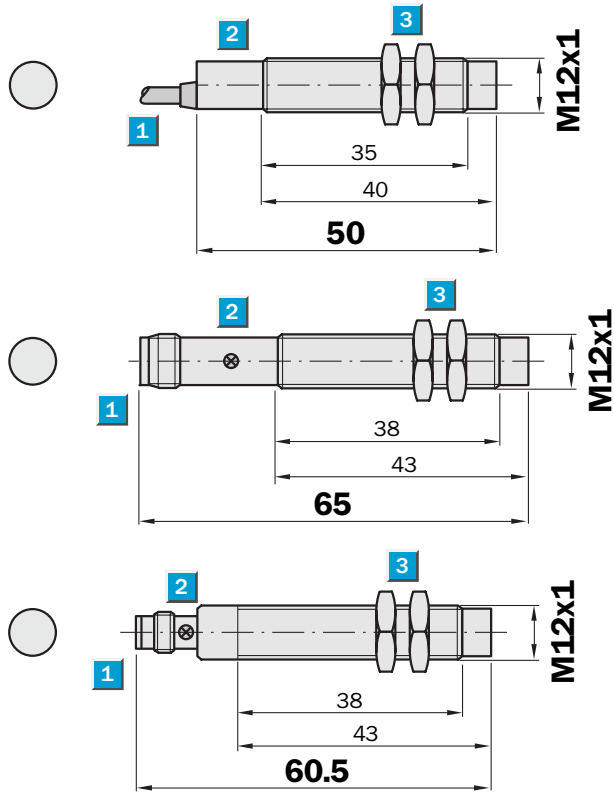
Ordering information	
Type	Part Number
IM12-02BNO-ZW1	6 011 966
IM12-02BNS-ZW1	6 011 964
IM12-02BPO-ZW1	6 011 965
IM12-02BPS-ZW1	6 011 963
IM12-02BNS-ZC1	6 011 972
IM12-02BNO-ZC1	6 011 974
IM12-02BPO-ZC1	6 011 973
IM12-02BPS-ZC1	6 011 971
IM12-02BPS-ZT1	6 011 967
IM12-02BNS-ZT1	6 011 968

Sensing range
4 mm

Inductive sensor

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

Dimensional drawing

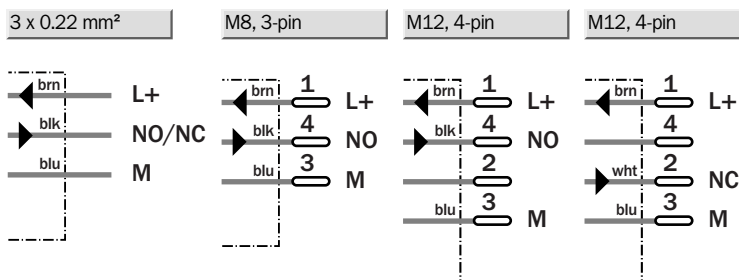
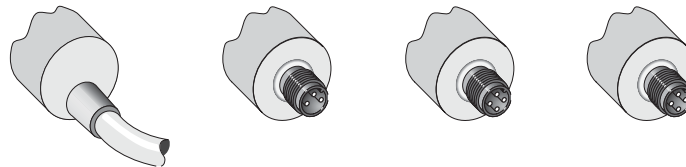


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal / stainless steel



Connection type

IM12-04NNS-ZW1	IM12-04NPS-ZT1	IM12-04NNS-ZC1	IM12-04NPO-ZC1
IM12-04NPS-ZW1	IM12-04NNS-ZT1	IM12-04NPS-ZC1	
IM12-04NPO-ZW1			
IM12-04NPS-VW1			



Accessories

Connector, M12, 4-pin
Connector, M8, 3-pin
Mounting systems

Technical specifications		IM12-	04NNS-ZW1	04NPS-ZW1	04NPO-ZW1	04NNS-ZC1	04NPO-ZC1	04NPS-ZC1	04NPS-ZT1	04NNS-ZT1	04NPS-VW1
Sensing range S_n	4 mm										
Electrical configuration	DC 3-wire										
Supply voltage V_s	DC 10 ... 30 V										
Ripple U_{pp}	$\leq 10\%$ ¹⁾										
Voltage drop U_d	$\leq 1.2\text{ V}$ ²⁾										
Power consumption	$\leq 20\text{ mA}$ ³⁾										
Continuous current I_a	$\leq 200\text{ mA}$										
Time delay before availability t_v	$\leq 100\text{ ms}$										
Hysteresis H, of s_r	2 ... 10 %										
Repeatability R	$\leq 2\%$ (U_b and T_a constant) ⁴⁾										
Temperature drift, of s_r	$\pm 10\%$										
EMC	According to EN 60947-5-2										
Switching output	NPN										
	PNP										
Output function	Normally open										
	Normally closed										
Installation	Non-flush										
Connection type	Cable, PVC, 2 m										
	Connector, M12, 4-pin										
	Connector, M8, 3-pin										
Enclosure rating	IP 67 ⁵⁾										
Max. switching frequency	2,000 Hz										
Dimensions	M12 x 1 ⁶⁾										
Short-circuit protection	✓ ⁷⁾										
Reverse polarity protection	✓										
Power-up pulse suppression	✓										
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm										
Ambient temperature T_a	-25 °C ... +70 °C										
Housing material	Brass nickel-plated, plastic										
	Stainless steel V2A										
Tightening torque	10 Nm										

¹⁾ of U_b
²⁾ at I_a max

³⁾ without load
⁴⁾ of s_r

⁵⁾ According to EN 60529
⁶⁾ Thread diameter x pitch (mm)

⁷⁾ (pulsed)

Ordering information

Type	Part Number
IM12-04NNS-ZW1	6 011 976
IM12-04NPS-ZW1	6 011 975
IM12-04NPO-ZW1	6 011 977
IM12-04NNS-ZC1	6 011 984
IM12-04NPO-ZC1	6 011 985
IM12-04NPS-ZC1	6 011 983
IM12-04NPS-ZT1	6 011 979
IM12-04NNS-ZT1	6 011 980
IM12-04NPS-VW1	6 033 255