



Inductive proximity sensors
Cylindrical threaded housing, IM12

IM12-06BNS-ZC1



Model Name > **IM12-06BNS-ZC1**
Part No. > **6030524**



At a glance

- Triple operating distance up to 10 mm
- Operating temperature from -25 °C to +70 °C
- High switching frequencies
- Sizes M12

Your benefits

- Reduced machine downtime and maintenance costs
- Large operating reserve due to triple operating distance improves machine throughput - no missed targets
- Saves installation space on the machine. Less space required for the same operating distance when compared with standard sensors
- Lower risk of mechanical damage due their ability to be mounted further from the target
- High level of sensitivity makes them suitable for detecting difficult parts such as wires, thin sheets, small screws – reduces design and installation time



Features

Design:	Cylindrical
Thread size:	M12 x 1
Sensing range Sn:	6 mm
Assured sensing range Sa:	4.86 mm
Installation type:	Quasi-flush ¹⁾
Switching frequency:	800 Hz
Output type:	NPN
Output function:	NO
Electrical wiring:	DC 3-wire
Enclosure rating:	IP 67 ²⁾
Electrical connection:	Connector M12, 4-pin
Housing:	Standard

¹⁾ When installed in conductive materials, sensors must protrude by distance E (E = 2 mm) ²⁾ According to EN 60529

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC
Residual ripple:	≤ 20 % ¹⁾
Voltage drop:	≤ 2 V ²⁾
Power consumption:	≤ 10 mA ³⁾

Time delay before availability:	≤ 50 ms
Hysteresis:	1 % ... 15 %
Repeatability::	≤ 5 % ^{4) 5)}
Temperature drift (of Sr):	± 10 %
EMC:	According to EN 60947-5-2
Output current I _a :	≤ 200 mA
Short-circuit protection:	✓
Reverse polarity protection:	✓
Power-up pulse protection:	✓
Shock and vibration resistance:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Adjustment indicator:	-
Ambient temperature operation:	-25 °C ... 70 °C
Housing material:	Metal, Chrome-plated brass
Housing cap material:	Plastic, PBTP
Housing length:	60 mm
Thread length:	37 mm
Tightening torque, max.:	10 Nm

¹⁾ Of V_S ²⁾ At I_a max ³⁾ Without load ⁴⁾ Of Sr ⁵⁾ UB = 20 V DC ... 30 V DC, TA = 23 °C ± 5 °C ⁶⁾ LED lights continuously (0 ≤ s ≤ 0.8 Sr); LED flashing (0.8 Sr < s ≤ Sr)

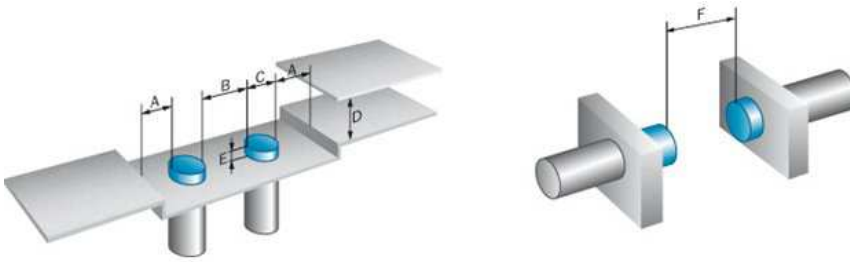
Reduction factors

Note:	The values are reference values which may vary
Copper (Cu):	Ca. 0.25
Aluminum (Al):	Ca. 0.3
Brass (Br):	Ca. 0.4
Stainless steel (V4A, 316L):	Ca. 0.7

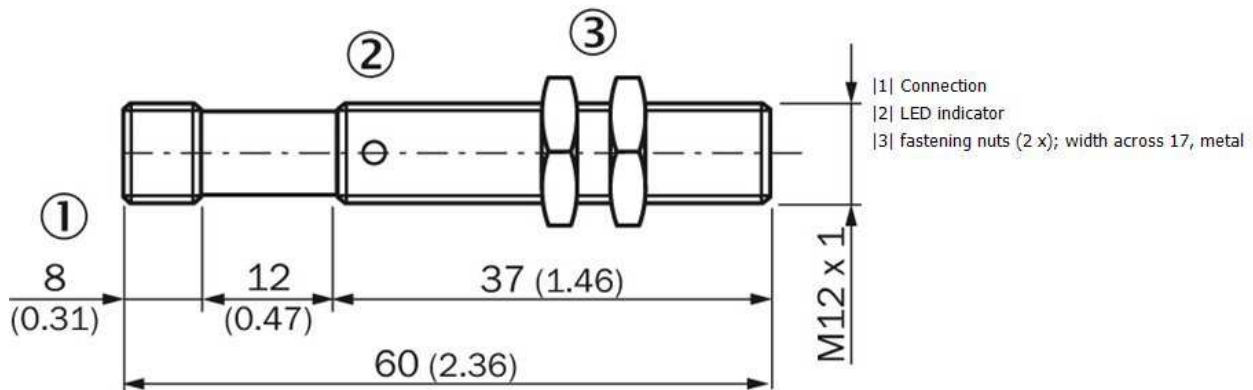
Installation note

A:	6 mm
B:	18 mm
C:	12 mm
D:	18 mm
E:	2 mm
F:	60 mm
Remark:	Associated graphic see "Installation"

Installation note

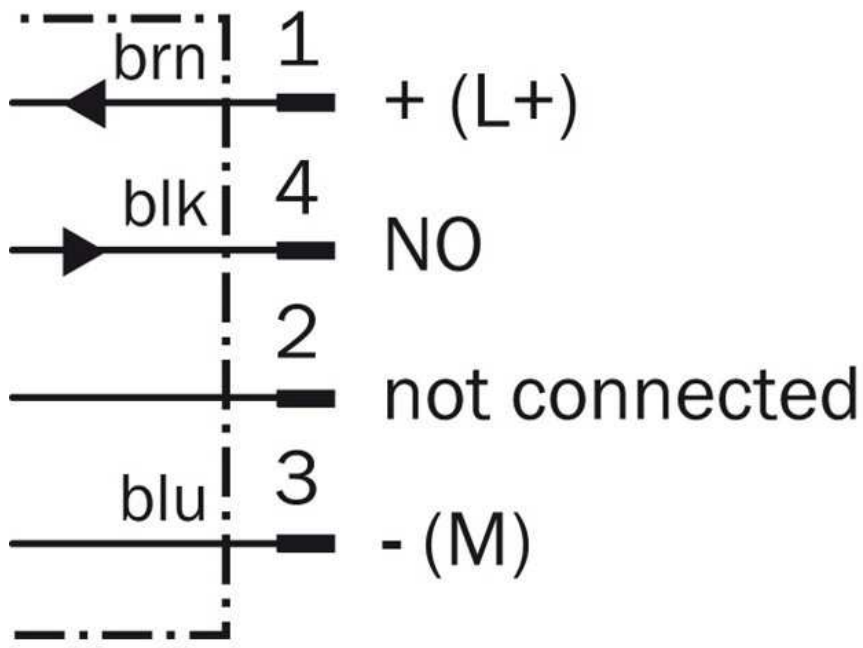


Dimensional drawing

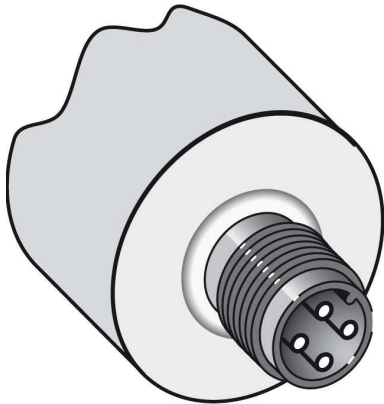


All dimensions in mm (inch)

Connection diagram



Connection type



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