



Inductive proximity sensors Cylindrical threaded housing, IM12

IM12-04NAO-ZU0

Model Name > [IM12-04NAO-ZU0](#)
Part No. > [7902121](#)



At a glance

- Size M12
- IP 67 enclosure rating
- Operating temperature from -25° C to +75° C

Your benefits

- Reduced machine downtime
- Reduced mechanical damage
- Fewer maintenance costs due to longer service life
- High resistance to shock and vibrations



Features

Design:	Cylindrical
Thread size:	M12 x 1
Sensing range Sn:	4 mm
Assured sensing range Sa:	3.24 mm
Installation type:	Non-flush
Switching frequency:	25 Hz
Output function:	NC
Electrical wiring:	AC 2-wire
Enclosure rating:	IP 67 ¹⁾
Electrical connection:	Cable, 2-wire, 2 m
Housing:	Standard

¹⁾ According to EN 60529

Mechanics/electronics

Supply voltage:	20 V AC ... 250 V AC
Voltage drop:	≤ 8.5 V ¹⁾
Time delay before availability:	≤ 10 ms
Hysteresis:	1 % ... 15 %
Repeatability:	≤ 10 % ^{2) 3)}
Temperature drift (of Sr):	± 10 %
EMC:	According to EN 60947-5-2
Output current I _a :	≤ 200 mA (80 °C), ≤ 250 mA (50 °C)
Off-state current:	≤ 1.5 mA (AC 120 V), ≤ 3 mA (AC 250 V)
Load resistance, min.:	8 mA

Short-time withstand current:	0.9 A ⁴⁾
Cable material:	PUR/PVC
Conductor cross-section:	0.5 mm ²
Wire-break protection:	0
Short-circuit protection ⁵⁾ :	-
Reverse polarity protection:	-
Power-up pulse protection:	✓
Shock and vibration resistance:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Ambient temperature operation:	-25 °C ... 80 °C
Housing material:	Metal, Nickel-plated brass
Housing cap material:	Plastic
Housing length:	71 mm
Thread length:	46 mm
Tightening torque, max.:	≤ 7 Nm
Protection class:	II

¹⁾ At I_a max ²⁾ Ub and Ta constant ³⁾ Of Sr ⁴⁾ 20 ms/0.5 Hz ⁵⁾ Miniature fuse as per IEC 60217-2 Sheet 1, ≤ 2 A (quick-blow)

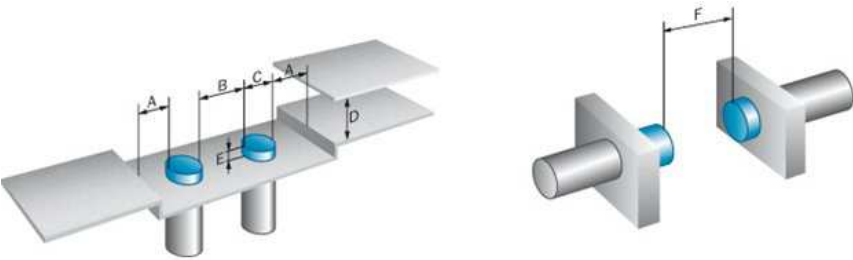
Reduction factors

Note:	The values are reference values which may vary
Stainless steel (V2A, 304):	Ca. 0.8
Copper (Cu):	Ca. 0.4
Aluminum (Al):	Ca. 0.45

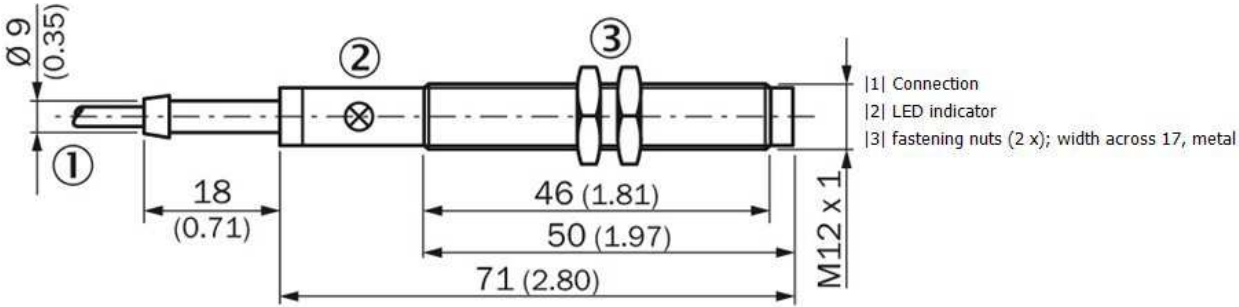
Installation note

A:	12 mm
B:	24 mm
C:	12 mm
D:	12 mm
E:	8 mm
F:	32 mm
Remark:	Associated graphic see "Installation"

Installation note

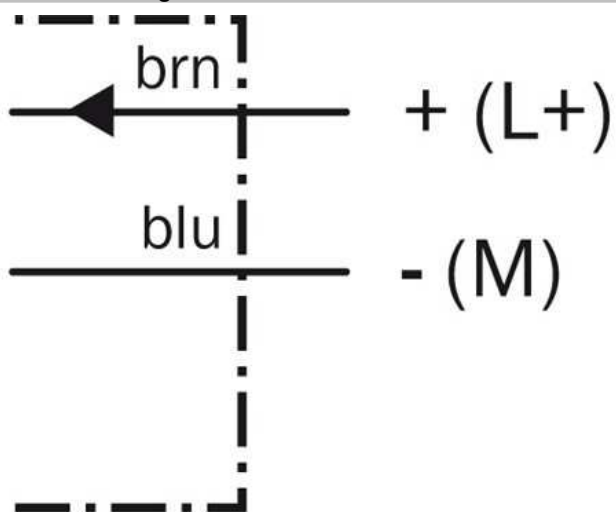


Dimensional drawing



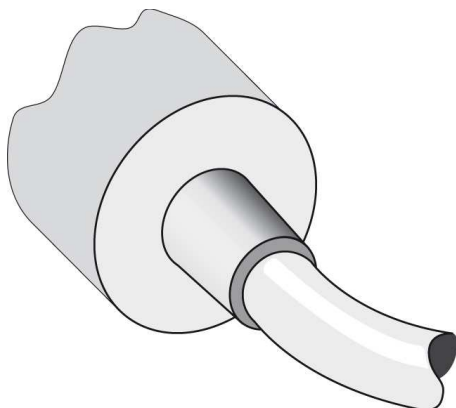
All dimensions in mm (inch)

Connection diagram



Miniature fuse to IEC60127-2
sheet 1, ≤ 2 A (fast acting)

Connection type



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