



Inductive proximity sensors Cylindrical threaded housing, IM08

IM08-03BNS-ZW1



Model Name > **IM08-03BNS-ZW1**
Part No. > **6028074**



At a glance

- Triple operating distance up to 6 mm
- Operating temperature from -25 °C to +70 °C
- High switching frequencies
- Sizes M8

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: | M8 x 1 |
| Sensing range Sn: | 3 mm |
| Assured sensing range Sa: | 2.43 mm |
| Installation type: | Quasi-flush ¹⁾ |
| Switching frequency: | 1,000 Hz |
| Output type: | NPN |
| Output function: | NO |
| Electrical wiring: | DC 3-wire |
| Enclosure rating: | IP 67 ²⁾ |
| Electrical connection: | Cable, 3-wire, 2 m |
| Housing: | Standard |

¹⁾ When installed in conductive materials, sensors must protrude by distance A (A = 1 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 |
| Cable material: | PVC |
| Conductor cross-section: | 0.14 mm ² |
| Cable diameter: | 3.5 mm |
| 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: | 45 mm |
| Thread length: | 45 mm |
| Tightening torque, max.: | 4 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. 0.27 |
| Aluminum (Al): | Ca. 0.33 |
| Brass (Br): | Ca. 0.41 |
| Stainless steel (V4A, 316L): | Ca. 0.72 |

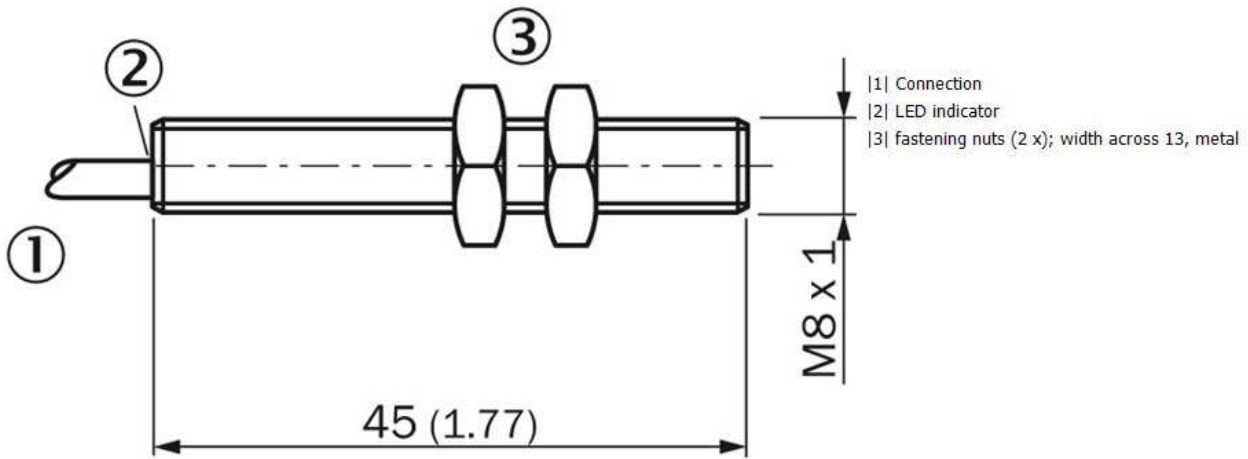
Installation note

| | |
|---------|---------------------------------------|
| A: | 2 mm |
| B: | 8 mm |
| C: | 8 mm |
| D: | 9 mm |
| E: | 1 mm |
| F: | 30 mm |
| Remark: | Associated graphic see "Installation" |

Installation note non-flush installation



Dimensional drawing

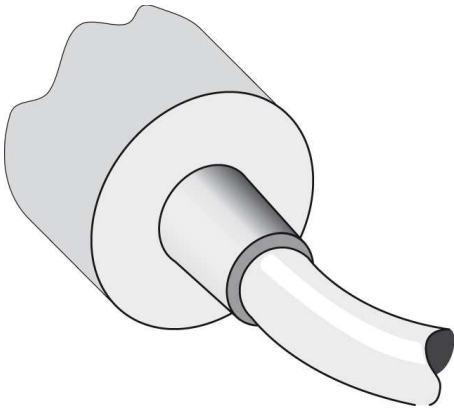


All dimensions in mm (inch)

Connection diagram



Connection type



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