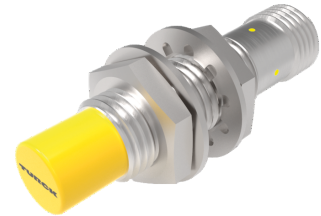
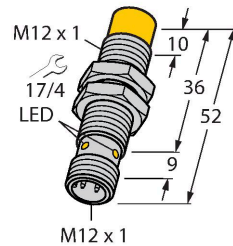


NI8-M12-RD4X-H1143

Inductive Sensor – With Increased Switching Distance



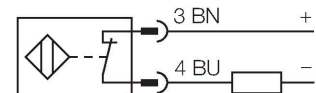
Technical data

| | |
|--|---|
| Type | NI8-M12-RD4X-H1143 |
| ID | 4411212 |
| General data | |
| Rated switching distance | 8 mm |
| Mounting conditions | Non-flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Correction factors | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy | $\leq 2 \%$ of full scale |
| Temperature drift | $\leq \pm 10 \%$ |
| Hysteresis | 1...15 % |
| Electrical data | |
| Operating voltage U_B | 10...65 VDC |
| Ripple U_{rs} | $\leq 10 \%$ U_{Bmax} |
| DC rated operating current I_o | ≤ 100 mA |
| Residual current | ≤ 0.6 mA |
| Isolation test voltage | 0.5 kV |
| Short-circuit protection | yes/Cyclic |
| Voltage drop at I_o | ≤ 5 V |
| Wire break/reverse polarity protection | Complete |
| Output function | NC contact, 2-wire |
| Smallest operating current | ≥ 3 mA |
| Switching frequency | 1 kHz |

Features

- M12 x 1 threaded barrel
- Chrome-plated brass
- Large sensing range
- DC 2-wire, 10...65 VDC
- NC contact
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

| Mechanical data | |
|---------------------------------------|--|
| Design | Threaded barrel, M12 x 1 |
| Dimensions | 52 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PA12-GF30 |
| Max. tightening torque of housing nut | 10 Nm |
| Electrical connection | Connector, M12 × 1 |
| Environmental conditions | |
| Ambient temperature | -25...+70 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP67 |
| MTTF | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

Mounting instructions

Mounting instructions/Description

The image contains three technical drawings of a sensor mounting. The top drawing is a side view showing a sensor (yellow cylinder) mounted on a plate (grey) with a dimension line labeled 'T' indicating the distance from the sensor to the edge of the plate. The middle drawing is a top view showing two sensors mounted on a plate with a dimension line labeled 'G' indicating the distance between the sensors. The bottom drawing is a perspective view showing a sensor mounted on a plate with dimensions 'N' (height), 'S' (width), 'D' (depth), and 'W' (width) indicated by dimension lines.

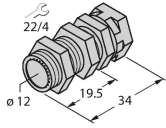
| | |
|------------------------|---------|
| Distance D | 5 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Distance N | 2 x Sn |
| Diameter active area B | Ø 12 mm |

N18-M12-RD4X-H1143| 02/21/2025 14-13 | technical changes reserved

Accessories

QM-12

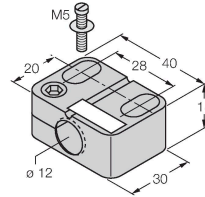
6945101



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B

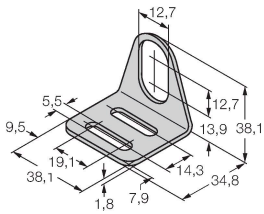
6947212



Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW12

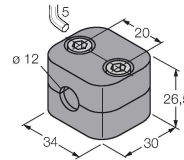
6945003



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-12

6901321



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene