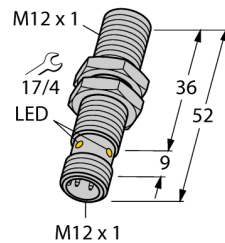


# Inductive sensor Bi2-M12-RP6X-H1141

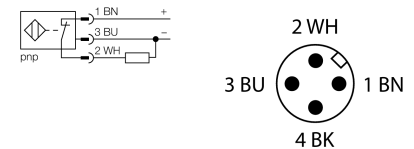
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- Threaded barrel, M12 x 1
- Chrome-plated brass
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- M12 x 1 male connector

## 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.

|                                             |                                                     |
|---------------------------------------------|-----------------------------------------------------|
| <b>Type code</b>                            | Bi2-M12-RP6X-H1141                                  |
| Ident no.                                   | 4606503                                             |
| <b>Rated switching distance Sn</b>          | 2 mm                                                |
| Mounting conditions                         | flush                                               |
| Assured switching distance                  | $\leq (0,81 \times S_n) \text{ mm}$                 |
| Correction factors                          | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeatability                               | $\leq 2 \%$ of full scale                           |
| Temperature drift                           | $\leq \pm 10 \%$                                    |
| Hysteresis                                  | 3...15 %                                            |
| Ambient temperature                         | -25...+70 °C                                        |
| <b>Operating voltage</b>                    | 10...30VDC                                          |
| Residual ripple                             | $\leq 10 \% U_{ss}$                                 |
| DC rated operational current                | $\leq 200 \text{ mA}$                               |
| No-load current $I_0$                       | $\leq 15 \text{ mA}$                                |
| Residual current                            | $\leq 0.1 \text{ mA}$                               |
| Rated insulation voltage                    | $\leq 0.5 \text{ kV}$                               |
| Short-circuit protection                    | yes/ cyclic                                         |
| Voltage drop at $I_0$                       | $\leq 1.8 \text{ V}$                                |
| Wire breakage / Reverse polarity protection | yes/ complete                                       |
| Output function                             | 3-wire, NC contact, PNP                             |
| Switching frequency                         | 2 kHz                                               |
| <b>Construction</b>                         | threaded barrel, M12 x 1                            |
| Dimensions                                  | 52 mm                                               |
| Housing material                            | metal, CuZn, chrome-plated                          |
| Material active area                        | plastic, PA                                         |
| Max. tightening torque housing nut          | 10 Nm                                               |
| Connection                                  | male, M12 x 1                                       |
| Vibration resistance                        | 55 Hz (1 mm)                                        |
| Shock resistance                            | 30 g (11 ms)                                        |
| IP Rating                                   | IP67                                                |
| MTTF                                        | 2283 years acc. to SN 29500 (Ed. 99) 40 °C          |
| <b>Switching state</b>                      | LED yellow                                          |

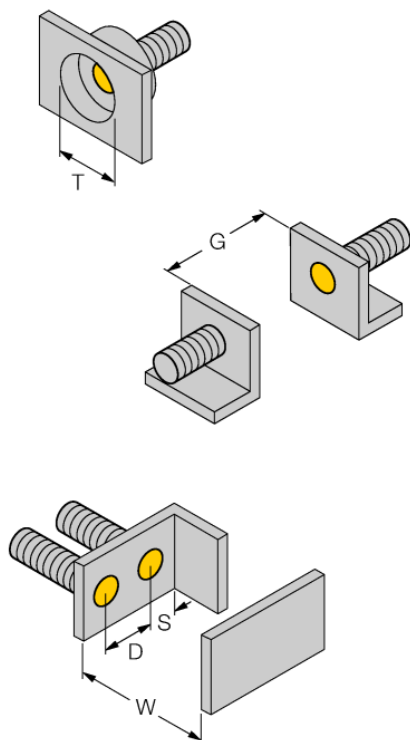
## Inductive sensor Bi2-M12-RP6X-H1141

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|            |         |
|------------|---------|
| Distance D | 24 mm   |
| Distance W | 3 x Sn  |
| Distance T | 3 x B   |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn  |

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|                               |         |
|-------------------------------|---------|
| Diameter of the active area B | Ø 12 mm |
|-------------------------------|---------|

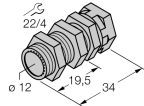
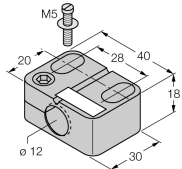
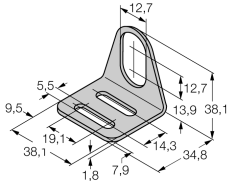
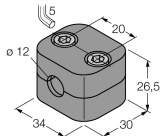


# Inductive sensor Bi2-M12-RP6X-H1141

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## Accessories

| Type code | Ident no. | Description                                                                                                                                                                                  | Design                                                                                |
|-----------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| QM-12     | 6945101   | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets. |    |
| BST-12B   | 6947212   | Fixing clamp for threaded barrel devices, with dead-stop; material: PA6                                                                                                                      |    |
| MW-12     | 6945003   | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)                                                                                                 |  |
| BSS-12    | 6901321   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene                                                                                                             |  |