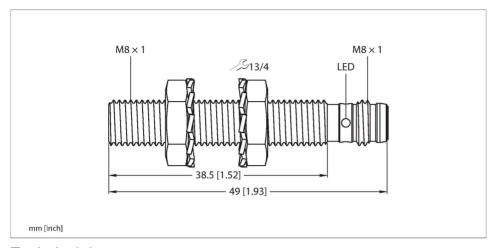


BI1.5-EG08-RP6X-V1131 Inductive Sensor



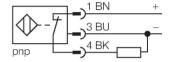
Technical data

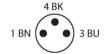
| ID | Type | BI1.5-EG08-RP6X-V1131 |
|---|---|--------------------------|
| Rated switching distance Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors St37 = 1; AI = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 20 % Electrical data Operating voltage U ₈ 1030 VDC Ripple U _{ss} ≤ 10 % U _{smax} DC rated operating current I _e ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | ID | 4602203 |
| Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors \$137 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 20 % Electrical data Operating voltage U _B Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _s ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _s ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | General data | |
| Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $St37 = 1$; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy $\leq 2 \%$ of full scale Hysteresis 20% Electrical data Operating voltage U_B 1030 VDC Ripple U_{SS} $\leq 10 \% U_{Bmax}$ DC rated operating current I_B $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection 0.5 kV Short-circuit protection 0.5 kV Wire break/reverse polarity protection 0.5 kV Wire break/reverse polarity protection 0.5 kV Switching frequency 0.5 kHz | Rated switching distance | 1.5 mm |
| Correction factors $ \begin{array}{ll} St37 = 1; \ Al = 0.3; \ stainless \ steel = 0.7; \ Ms \\ = 0.4 \\ \hline \\ Repeat \ accuracy & \leq 2 \% \ of \ full \ scale \\ \hline \\ Hysteresis & 20 \% \\ \hline \\ Electrical \ data \\ \hline \\ Operating \ voltage \ U_{\scriptscriptstyle B} & 1030 \ VDC \\ \hline \\ Ripple \ U_{\scriptscriptstyle SS} & \leq 10 \% \ U_{\scriptscriptstyle Bmax} \\ \hline \\ DC \ rated \ operating \ current \ I_{\scriptscriptstyle e} & \leq 150 \ mA \\ \hline \\ No-load \ current & \leq 15 \ mA \\ \hline \\ Residual \ current & \leq 0.1 \ mA \\ \hline \\ Isolation \ test \ voltage & 0.5 \ kV \\ \hline \\ Short-circuit \ protection & yes/Cyclic \\ \hline \\ Voltage \ drop \ at \ I_{\scriptscriptstyle e} & \leq 1.8 \ V \\ \hline \\ Wire \ break/reverse \ polarity \ protection & yes/Complete \\ \hline \\ Output \ function & 3-wire, \ NC \ contact, \ PNP \\ \hline \\ Switching \ frequency & 3 \ kHz \\ \hline \\ Mechanical \ data \\ \hline \end{array} $ | Mounting conditions | Flush |
| $= 0.4$ Repeat accuracy $\leq 2 \text{ % of full scale}$ Hysteresis 20 % Electrical data $Operating \text{ voltage } U_{\text{B}}$ 1030 VDC Ripple U_{ss} $\leq 10 \text{ % } U_{\text{Bmax}}$ DC rated operating current I_{o} $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_{o} $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection yes/Complete Output function $3-\text{wire, NC contact, PNP}$ Switching frequency 3 kHz Mechanical data | Secured operating distance | ≤ (0.81 × Sn) mm |
| Hysteresis 20 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Braux} DC rated operating current I _B ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Correction factors | |
| Electrical data Operating voltage U_B To30 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_e No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection Output function 3-wire, NC contact, PNP Switching frequency 3 kHz | Repeat accuracy | ≤ 2 % of full scale |
| Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Hysteresis | 20 % |
| Ripple Uss ≤ 10 % Usmax DC rated operating current I_e ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Electrical data | |
| DC rated operating current I _e ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Operating voltage U _B | 1030 VDC |
| No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Ripple U _{ss} | ≤ 10 % U _{Bmax} |
| Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | DC rated operating current I _e | ≤ 150 mA |
| Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | No-load current | ≤ 15 mA |
| Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Output function Switching frequency Mechanical data Session yes/Cyclic ≤ 1.8 V yes/Complete yes/Complete 3-wire, NC contact, PNP Skitching frequency 3 kHz | Residual current | ≤ 0.1 mA |
| Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Isolation test voltage | 0.5 kV |
| Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Short-circuit protection | yes/Cyclic |
| Output function 3-wire, NC contact, PNP Switching frequency 3 kHz Mechanical data | Voltage drop at I _e | ≤ 1.8 V |
| Switching frequency 3 kHz Mechanical data | Wire break/reverse polarity protection | yes/Complete |
| Mechanical data | Output function | 3-wire, NC contact, PNP |
| | Switching frequency | 3 kHz |
| Design Threaded barrel, M8 x 1 | Mechanical data | |
| | Design | Threaded barrel, M8 x 1 |

Features

- ■M8 × 1 threaded barrel
- Stainless steel, 1.4305 (AISI 303)
- ■DC 3-wire, 10...30 VDC
- ■NC contact, PNP output
- ■M8 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.

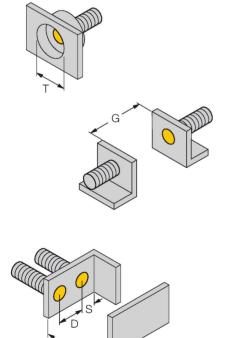


Technical data

| 49 mm |
|--|
| Stainless steel, 1.4305 (AISI 303) |
| Plastic, PA6.6 |
| 5 Nm |
| Connector, M8 × 1 |
| |
| -25+70 °C |
| 55 Hz (1 mm) |
| 30 g (11 ms) |
| IP67 |
| 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| LED, Yellow |
| |

Mounting instructions

Mounting instructions/Description



| Distance D | 2 x B |
|------------------------|---------|
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 8 mm |



Accessories

QM-08 6945100



Quick-mount bracket with deadstop, chrome-plated brass, male thread M12 x 1. Note: The switching distance of proximity switches may be reduced through the use of quickmount brackets.

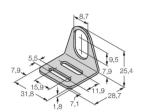
BST-08B

6947210

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



MW08 6945008

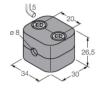


Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-08

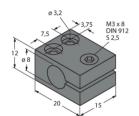
6901322

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



MBS80





Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum