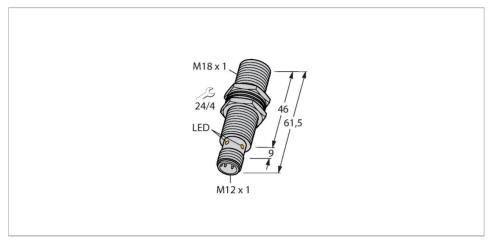
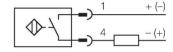


BI7-MT18-AD4X-H1144/S1589 Inductive Sensor – With Weldguard® coating



Features

- ■Threaded barrel, M18 x 1
- ■Brass, PTFE-coated
- ■DC 2-wire, 10...65 VDC
- ■NO contact
- ■M12 x 1 male connector



Technical data

ID 4414576 Special version S1589 Corresponds to:With weldguard coating General data Rated switching distance 7 mm Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 115 % Electrical data Operating voltage U _B 1065 VDC Ripple U _B ≤ 10 % U _{Break} DC rated operating current I _B ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 1 kHz	Type	BI7-MT18-AD4X-H1144/S1589
Coating General data Rated switching distance 7 mm Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 115 % Electrical data Operating voltage U _B 1065 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	ID	4414576
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Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $\frac{1}{2} \times 1 = 0.3$; stainless steel = 0.7; Ms = 0.4 Repeat accuracy $\leq 2 \%$ of full scale Hysteresis $\frac{115 \%}{115 \%}$ Electrical data Operating voltage U _B $\frac{1065 \text{ VDC}}{1065 \text{ VDC}}$ Ripple U _{ss} $\leq 10 \% \text{ U}_{\text{Brnax}}$ DC rated operating current I _e $\leq 100 \text{ mA}$ Residual current $\leq 0.6 \text{ mA}$ Isolation test voltage $\frac{10.5 \text{ kV}}{10.5 \text{ kV}}$ Short-circuit protection $\frac{1}{2} \times \frac{100 \text{ ma}}{10.5 \text{ kV}}$ Wire break/reverse polarity protection $\frac{1}{2} \times \frac{100 \text{ ma}}{10.5 \text{ kV}}$ Wire break/reverse polarity protection $\frac{1}{2} \times \frac{100 \text{ ma}}{10.5 \text{ kV}}$ Smallest operating current $\frac{1}{2} \times \frac{100 \text{ ma}}{10.5 \text{ kV}}$	Rated switching distance	7 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 & 115 \ \% \\ \hline \\ Electrical \ data \\ \hline \\ Operating \ voltage \ U_{\scriptscriptstyle B} & 1065 \ VDC \\ \hline \\ Ripple \ U_{\scriptscriptstyle Ss} & \leq 10 \ \% \ U_{\scriptscriptstyle Bmax} \\ \hline \\ DC \ rated \ operating \ current \ I_{\scriptscriptstyle 0} & \leq 100 \ mA \\ \hline \\ Residual \ current & \leq 0.6 \ mA \\ \hline \\ Isolation \ test \ voltage & 0.5 \ kV \\ \hline \\ Short-circuit \ protection & yes/Cyclic \\ \hline \\ Voltage \ drop \ at \ I_{\scriptscriptstyle 0} & \leq 5 \ V \\ \hline \\ Wire \ break/reverse \ polarity \ protection & Complete \\ \hline \\ Output \ function & 2-wire, \ NO \ contact, \ 2-wire \\ \hline \\ Smallest \ operating \ current & \geq 3 \ mA \\ \hline $	Mounting conditions	Flush
Electrical data Complete	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis 115 % Electrical data Operating voltage U _B 1065 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I _e Voltage drop at I _e Output function Smallest operating current ≥ 3 mA	Correction factors	
Electrical data Operating voltage U_B Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_e Residual current $\leq 0.6 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I_e $\leq 5 \text{ V}$ Wire break/reverse polarity protection Output function 2-wire , NO contact, 2-wire Smallest operating current $\geq 3 \text{ mA}$	Repeat accuracy	≤ 2 % of full scale
Operating voltage U_B 1065 VDC Ripple U_{ss} ≤ 10 % U_{Bmax} DC rated operating current I_e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	Hysteresis	115 %
Ripple U_{ss} ≤ 10 % U_{Bmax} DC rated operating current I_e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	Electrical data	
DC rated operating current I _e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	Operating voltage U _в	1065 VDC
Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	Ripple U _{ss}	≤ 10 % U _{Bmax}
Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	DC rated operating current I _e	≤ 100 mA
Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Output function Smallest operating current yes/Cyclic ≤ 5 V Complete 2-wire, NO contact, 2-wire	Residual current	≤ 0.6 mA
Voltage drop at I₀ ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	Short-circuit protection	yes/Cyclic
Output function 2-wire, NO contact, 2-wire Smallest operating current ≥ 3 mA	Voltage drop at I _e	≤ 5 V
Smallest operating current ≥ 3 mA	Wire break/reverse polarity protection	Complete
	Output function	2-wire, NO contact, 2-wire
Switching frequency 1 kHz	Smallest operating current	≥ 3 mA
	Switching frequency	1 kHz



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

DIZ MT40 ADAY H4444/04500

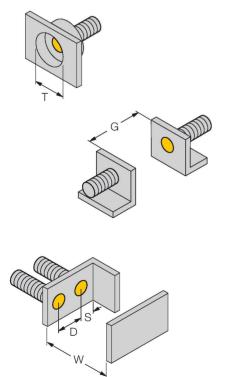


Technical data

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	61.5 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, PA12-GF30 + WeldGuard™, PTFE-coated
Max. tightening torque of housing nut	15 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



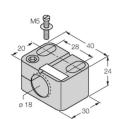
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 18 mm



6945104

Accessories

BST-18B 6947214



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

QMT-18



Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

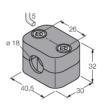
QM-18 6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BSS-18





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