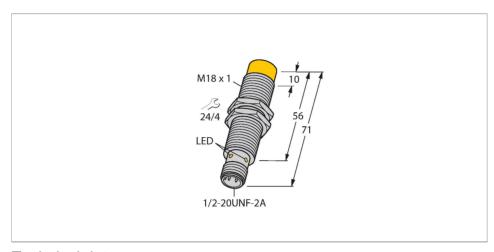


NI14-GT18-ADZ30X2-B3331/S1589 Inductive Sensor – With Weldguard® coating



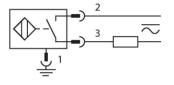
Technical data

ID 4205491 Special version S1589 Corresponds to:With weldguard coating General data Rated switching distance 14 mm Mounting conditions Non-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 315 % Electrical data Operating voltage U₀ 20250 VAC Operating voltage U₀ 10300 VDC AC rated operational current ≤ 400 mA DC rated operating current I₀ ≤ 300 mA Frequency ≥ 50≤ 60 Hz Residual current ≤ 1.7 mA Isolation test voltage 1.5 kV Surge current ≤ 3 A (≤ 20 ms max. 5 Hz) Short-circuit protection yes/Latching Voltage drop at I₀ ≤ 6 V Wire break/reverse polarity protection Output function 2-wire, NO contact, 2-wire	Туре	NI14-GT18-ADZ30X2-B3331/S1589
Coating General data Rated switching distance 14 mm Mounting conditions Non-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 315 % Electrical data Operating voltage U ₈ 20250 VAC Operating voltage U ₈ 20250 VAC Operating voltage U ₈ 400 mA DC rated operational current ≤ 400 mA DC rated operating current I ₈ ≤ 300 mA Frequency ≥ 50≤ 60 Hz Residual current ≤ 1.7 mA Isolation test voltage 1.5 kV Surge current ≤ 3 A (≤ 20 ms max. 5 Hz) Short-circuit protection yes/Latching Voltage drop at I ₈ ≤ 6 V Wire break/reverse polarity protection yes/Complete	ID	4205491
Rated switching distance 14 mm Mounting conditions Non-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 315 % Electrical data Operating voltage U ₈ Operating voltage U ₈ 10300 VDC AC rated operational current ≤ 400 mA DC rated operating current I ₈ ≤ 300 mA Frequency ≥ 50≤ 60 Hz Residual current ≤ 1.7 mA Isolation test voltage 1.5 kV Surge current ≤ 3 A (≤ 20 ms max. 5 Hz) Short-circuit protection yes/Latching Voltage drop at I ₈ ≤ 6 V Wire break/reverse polarity protection yes/Complete	Special version	,
Mounting conditionsNon-flushSecured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $St37 = 1$; Al = 0.3; stainless steel = 0.7; Ms = 0.4Repeat accuracy $\leq 2 \% \text{ of full scale}$ Hysteresis 315% Electrical data 20250 VAC Operating voltage U_B 20250 VAC Operating voltage U_B 10300 VDC AC rated operational current $\leq 400 \text{ mA}$ DC rated operating current I_B $\leq 300 \text{ mA}$ Frequency $\geq 50 \leq 60 \text{ Hz}$ Residual current $\leq 1.7 \text{ mA}$ Isolation test voltage 1.5 kV Surge current $\leq 3 \text{ A } (\leq 20 \text{ ms max. 5 Hz})$ Short-circuit protectionyes/LatchingVoltage drop at I_B $\leq 6 \text{ V}$ Wire break/reverse polarity protectionyes/Complete	General data	
Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $\begin{array}{l} St37 = 1; \text{ Al} = 0.3; \text{ stainless steel} = 0.7; \text{ Ms} = 0.4 \\ \hline Repeat accuracy \qquad \leq 2 \text{ % of full scale} \\ \hline Hysteresis \qquad 315 \text{ %} \\ \hline Electrical data \\ \hline Operating voltage U_8 \qquad 20250 \text{ VAC} \\ \hline Operating voltage U_8 \qquad 10300 \text{ VDC} \\ \hline AC rated operational current \qquad \leq 400 \text{ mA} \\ \hline DC rated operating current I_e \qquad \leq 300 \text{ mA} \\ \hline Frequency \qquad \geq 50 \leq 60 \text{ Hz} \\ \hline Residual current \\ \hline \leq 1.7 \text{ mA} \\ \hline Isolation test voltage \qquad 1.5 \text{ kV} \\ \hline Surge current \qquad \leq 3 \text{ A } (\leq 20 \text{ ms max. 5 Hz}) \\ \hline Short-circuit protection \qquad yes/Latching \\ \hline Voltage drop at I_e \qquad \leq 6 \text{ V} \\ \hline Wire break/reverse polarity protection \qquad yes/Complete \\ \hline \end{array}$	Rated switching distance	14 mm
Correction factors	Mounting conditions	Non-flush
Electrical data	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis Electrical data Operating voltage U _B 20250 VAC Operating voltage U _B 10300 VDC AC rated operational current $\leq 400 \text{ mA}$ DC rated operating current I _B $\leq 300 \text{ mA}$ Frequency $\geq 50 \leq 60 \text{ Hz}$ Residual current $\leq 1.7 \text{ mA}$ Isolation test voltage 1.5 kV Surge current $\leq 3 \text{ A} (\leq 20 \text{ ms max. 5 Hz})$ Short-circuit protection yes/Latching Voltage drop at I _B $\leq 6 \text{ V}$ Wire break/reverse polarity protection yes/Complete	Correction factors	
Electrical dataOperating voltage U_B 20250 VAC Operating voltage U_B 10300 VDC AC rated operational current $\leq 400 \text{ mA}$ DC rated operating current I_B $\leq 300 \text{ mA}$ Frequency $\geq 50 \leq 60 \text{ Hz}$ Residual current $\leq 1.7 \text{ mA}$ Isolation test voltage 1.5 kV Surge current $\leq 3 \text{ A } (\leq 20 \text{ ms max. 5 Hz})$ Short-circuit protectionyes/LatchingVoltage drop at I_B $\leq 6 \text{ V}$ Wire break/reverse polarity protectionyes/Complete	Repeat accuracy	≤ 2 % of full scale
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Hysteresis	315 %
Operating voltage U_B 10300 VDC AC rated operational current ≤ 400 mA DC rated operating current I_B ≤ 300 mA Frequency ≥ 50≤ 60 Hz Residual current ≤ 1.7 mA Isolation test voltage 1.5 kV Surge current ≤ 3 A (≤ 20 ms max. 5 Hz) Short-circuit protection yes/Latching Voltage drop at I_B ≤ 6 V Wire break/reverse polarity protection yes/Complete	Electrical data	
AC rated operational current $\leq 400 \text{ mA}$ DC rated operating current I_e $\leq 300 \text{ mA}$ Frequency $\geq 50 \leq 60 \text{ Hz}$ Residual current $\leq 1.7 \text{ mA}$ Isolation test voltage 1.5 kV Surge current $\leq 3 \text{ A} (\leq 20 \text{ ms max. 5 Hz})$ Short-circuit protection yes/Latching Voltage drop at I_e $\leq 6 \text{ V}$ Wire break/reverse polarity protection yes/Complete	Operating voltage U _в	20250 VAC
DC rated operating current I_e $\leq 300 \text{ mA}$ Frequency $\geq 50 \leq 60 \text{ Hz}$ Residual current $\leq 1.7 \text{ mA}$ Isolation test voltage 1.5 kV Surge current $\leq 3 \text{ A} (\leq 20 \text{ ms max. 5 Hz})$ Short-circuit protection yes/Latching Voltage drop at I_e $\leq 6 \text{ V}$ Wire break/reverse polarity protection yes/Complete	Operating voltage U _B	10300 VDC
Frequency ≥ 50≤ 60 Hz Residual current ≤ 1.7 mA Isolation test voltage 1.5 kV Surge current ≤ 3 A (≤ 20 ms max. 5 Hz) Short-circuit protection yes/Latching Voltage drop at I_e ≤ 6 V Wire break/reverse polarity protection yes/Complete	AC rated operational current	≤ 400 mA
Residual current ≤ 1.7 mA Isolation test voltage 1.5 kV Surge current ≤ 3 A (≤ 20 ms max. 5 Hz) Short-circuit protection yes/Latching Voltage drop at I₀ ≤ 6 V Wire break/reverse polarity protection yes/Complete	DC rated operating current I _o	≤ 300 mA
	Frequency	≥ 50≤ 60 Hz
	Residual current	≤ 1.7 mA
Short-circuit protection yes/Latching Voltage drop at I₀ ≤ 6 V Wire break/reverse polarity protection yes/Complete	Isolation test voltage	1.5 kV
Voltage drop at I _e ≤ 6 V Wire break/reverse polarity protection yes/Complete	Surge current	≤ 3 A (≤ 20 ms max. 5 Hz)
Wire break/reverse polarity protection yes/Complete	Short-circuit protection	yes/Latching
	Voltage drop at I _e	≤ 6 V
Output function 2-wire, NO contact, 2-wire	Wire break/reverse polarity protection	yes/Complete
	Output function	2-wire, NO contact, 2-wire

Features

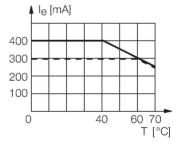
- ■Threaded barrel, M18 x 1
- ■Brass, PTFE-coated
- ■AC 2-wire, 20...250 VAC
- ■DC 2-wire, 10...300 VDC
- ■NO contact
- ■1/2" male connector

Wiring diagram



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.



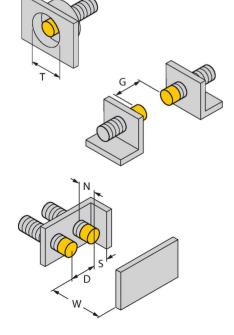


Technical data

Smallest operating current	≥ 3 mA
Switching frequency	0.02 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	70 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, PA12-GF30, PTFE-coated
Max. tightening torque of housing nut	25 Nm
Electrical connection	Connector, 1/2"
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
Power-on indication	LED, Green
Switching state	LED, Red

Mounting instructions

Mounting instructions/Description

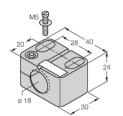


Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 18 mm



Accessories

BST-18B 6947214

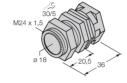


Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

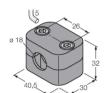
QMT-18



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.



BSS-18 6901320



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

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.