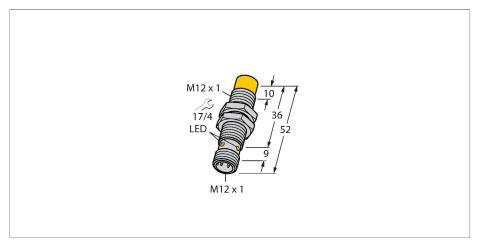


NI8U-M12-AN6X-H1141 Inductive Sensor





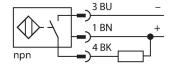
Technical data

ID no. 1644150 Rated switching distance 8 mm Mounting conditions Non-flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ± 10 % ≤ ± 15 %, ≤ -25 °C v ≥ +70 °C Hysteresis 315 % Ambient temperature -30+85 °C Operating voltage 1030 VDC Residual ripple ≤ 10 % U₂s DC rated operational current ≤ 200 mA No-load current 25 mA Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I₂ ≤ 1.8 V Wire breakage/Reverse polarity protection Output function 3-wire, NO contact, NPN DC field stability 300 mT AC field stability 300 mT AC field stability 300 mT	Туре	NI8U-M12-AN6X-H1141	
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Repeat accuracy ≤ 2 % of full scale Temperature drift $\leq \pm 10$ % $\leq \pm 15$ %, ≤ -25 °C v ≥ +70 °C Hysteresis 315 % Ambient temperature $-30+85$ °C Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 200 mA No-load current 25 mA Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I _o ≤ 1.8 V Wire breakage/Reverse polarity protection Output function 3 -wire, NO contact, NPN DC field stability 300 mT	Mounting conditions	Non-flush	
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Hysteresis 315 % Ambient temperature -30+85 °C Operating voltage 1030 VDC Residual ripple ≤ 10 % U₅s DC rated operational current ≤ 200 mA No-load current 25 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, NPN DC field stability 300 mT	Temperature drift	≤ ± 10 %	
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Operating voltage 1030 VDC Residual ripple ≤ 10 % U₅ѕ DC rated operational current ≤ 200 mA No-load current 25 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, NPN DC field stability 300 mT	Hysteresis	315 %	
Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 200 mA No-load current 25 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, NPN DC field stability 300 mT	Ambient temperature	-30+85 °C	
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No-load current 25 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, NPN DC field stability 300 mT	Residual ripple	≤ 10 % U _{ss}	
Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, NPN DC field stability 300 mT	DC rated operational current	≤ 200 mA	
Isolation test voltage ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, NPN DC field stability 300 mT	No-load current	25 mA	
Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection Output function 3-wire, NO contact, NPN DC field stability 300 mT	Residual current	≤ 0.1 mA	
Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, NPN DC field stability 300 mT	Isolation test voltage	≤ 0.5 kV	
Wire breakage/Reverse polarity protection Output function 3-wire, NO contact, NPN DC field stability 300 mT	Short-circuit protection	yes / Cyclic	
tion Output function 3-wire, NO contact, NPN DC field stability 300 mT	Voltage drop at I _e	≤ 1.8 V	
DC field stability 300 mT		yes / Complete	
	Output function	3-wire, NO contact, NPN	
AC field stability 300 mT _{ss}	DC field stability	300 mT	
	AC field stability	300 mT _{ss}	
Insulation class	Insulation class		
Switching frequency 2 kHz	Switching frequency	2 kHz	
Design Threaded barrel, M12 × 1	Design	Threaded barrel, M12 × 1	
Dimensions 52 mm	Dimensions	52 mm	
Housing material Metal, CuZn, Chrome-plated	Housing material	Metal, CuZn, Chrome-plated	

Features

- ■M12 × 1 threaded barrel
- ■Chrome-plated brass
- Factor 1 for all metals
- ■Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- ■NO contact, NPN output
- ■M12 x 1 male connector

Wiring diagram





Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

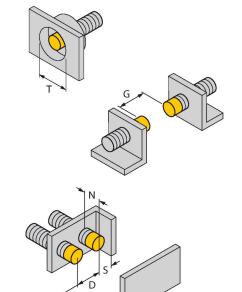


Technical data

Active area material	Plastic, LCP
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

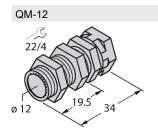
Mounting instructions

Mounting instructions/Description



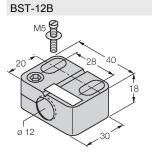
Distance D	48 mm
Distance W	3 x Sn
Distance T	45 mm
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 12 mm

Accessories



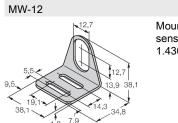
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

6945101



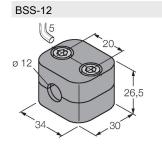
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

6947212



6945003

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

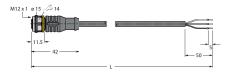


6901321

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

Accessories

Dimension drawing	Туре	ID no.	
	RKC4T-2/TEL	6625010	Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath



3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com