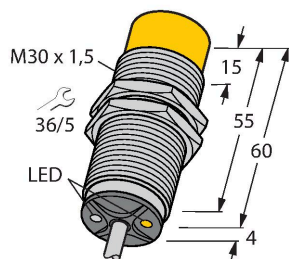


NI20U-M30-ADZ30X2

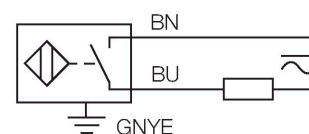
Inductive Sensor



Features

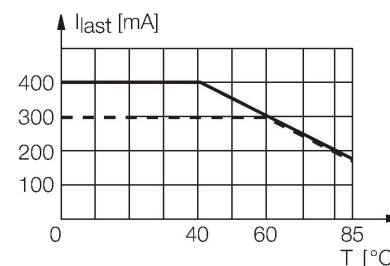
- M30 × 1.5 threaded tube
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx 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

Type	NI20U-M30-ADZ30X2
ID	4282810
General data	
Rated switching distance	20 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
	$\leq \pm 15$ %, ≤ -25 °C v $\geq +70$ °C
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	20...250 VAC
Operating voltage U_B	10...300 VDC
AC rated operational current	≤ 400 mA
DC rated operating current I_o	≤ 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_o	≤ 6 V
Wire break/reverse polarity protection	yes/Complete
Output function	2-wire, NO contact, 2-wire
DC field stability	300 mT
AC field stability	300 mT _{ss}
Smallest operating current	≥ 3 mA
Switching frequency	0.01 kHz

Technical data

Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	64 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PBT
End cap	Plastic, EPTR
Max. tightening torque of housing nut	75 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.5 mm ²
Environmental conditions	
Ambient temperature	-30...+85 °C
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
Power-on indication	LED, Green
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

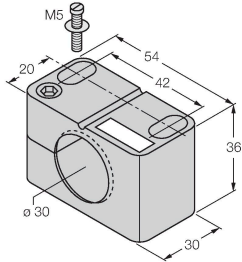
The image contains three technical diagrams illustrating different mounting configurations for a sensor. The top diagram shows a single sensor mounted on a surface, with dimension T indicating the distance from the mounting surface to the sensor's active area. The middle diagram shows two sensors mounted on a surface, with dimension G indicating the distance between the sensors and dimension S indicating the distance from the mounting surface to the sensor's active area. The bottom diagram shows two sensors mounted on a surface, with dimension N indicating the distance between the sensors, dimension S indicating the distance from the mounting surface to the sensor's active area, dimension D indicating the distance from the mounting surface to the sensor's active area, and dimension W indicating the distance from the mounting surface to the sensor's active area.

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 30 mm

Accessories

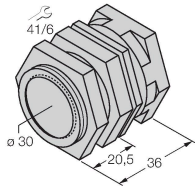
BST-30B 6947216

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



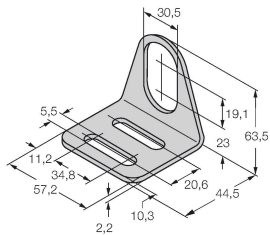
QM-30 6945103

Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



MW30 6945005

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



BSS-30 6901319

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

