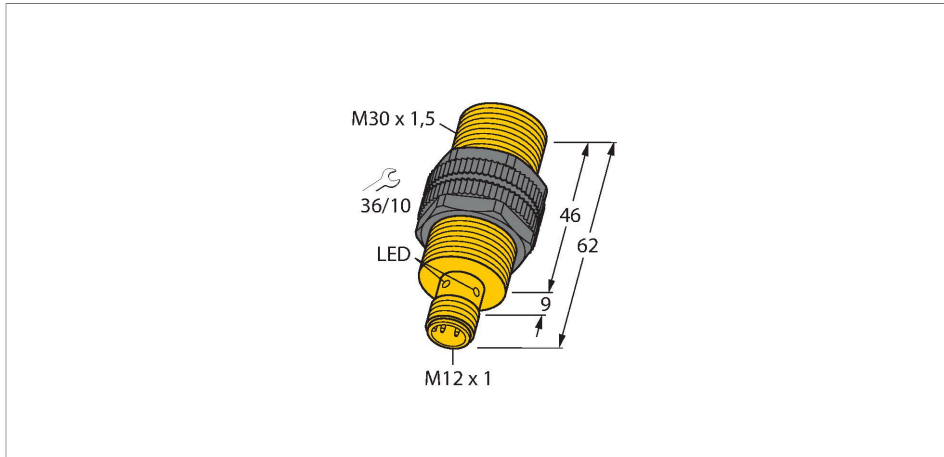


NI20U-S30-AP6X-H1141

Inductive Sensor



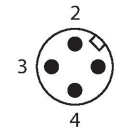
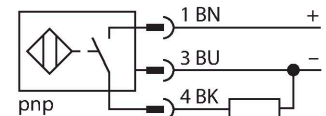
Features

- Threaded barrel, M30 x 1.5
- Plastic, PBT-GF30
- Factor 1 for all metals
- Protection type IP67
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- Auto-compensation protects against predamping
- Laser engraving
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Technical data

Type	NI20U-S30-AP6X-H1141
ID	1646600
General data	
Rated switching distance	20 mm
Mounting conditions	Non-flush, partially embeddable
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
	$\leq \pm 20\%$, $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
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	yes / Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□

Wiring diagram



Functional principle

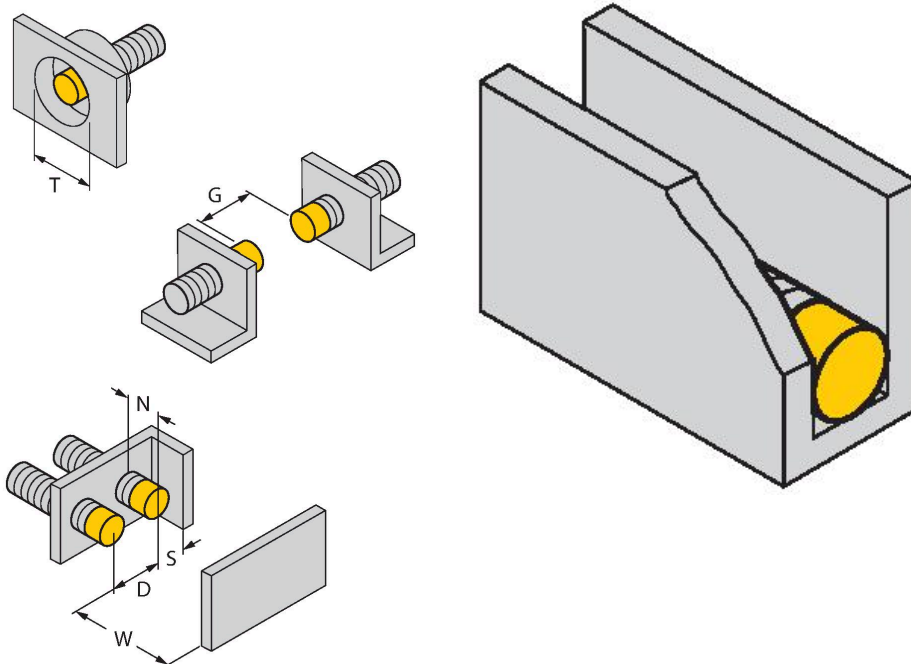
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Technical data

Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M30 × 1.5
Dimensions	62 mm
Housing material	Plastic, PBT-GF30
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	5 Nm
Electrical connection	Connector, M12 × 1
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
Switching state	LED, Yellow

Mounting instructions

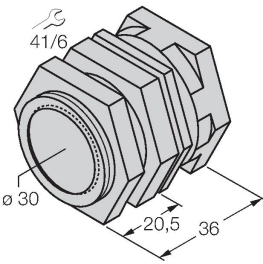
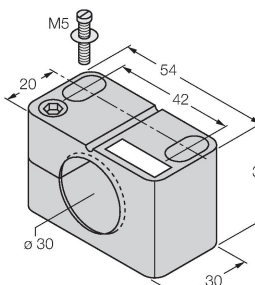
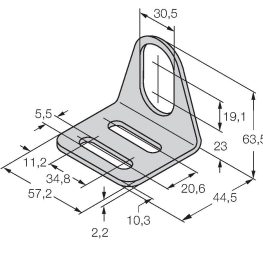
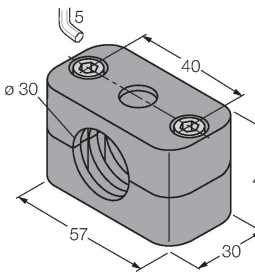
Mounting instructions/Description



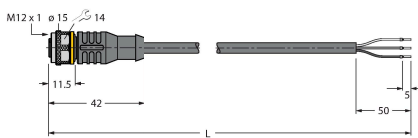
Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	0.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 30 mm

up to 3-side flush mounting possible
 1-side flush mounting: Sr = 15 mm
 2-side flush mounting: Sr = 12 mm
 3-side flush mounting: Sr = 11 mm

Accessories

<p>QM-30</p> 	<p>6945103</p> <p>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.</p>	<p>BST-30B</p> 	<p>6947216</p> <p>Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6</p>
<p>MW-30</p> 	<p>6945005</p> <p>Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)</p>	<p>BSS-30</p> 	<p>6901319</p> <p>Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene</p>

Wiring accessories

Dimension drawing	Type	ID	
	<p>RKC4T-2/TEL</p>	<p>6625010</p>	<p>Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com</p>

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