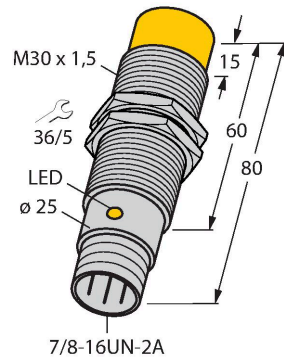


# NI20U-GT30-AP6X-B1141/S332

## Inductive Sensor



### Features

- Threaded barrel, M30 x 1.5
- Brass, PTFE-coated
- 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, PNP output
- 7/8" male connector

### 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.

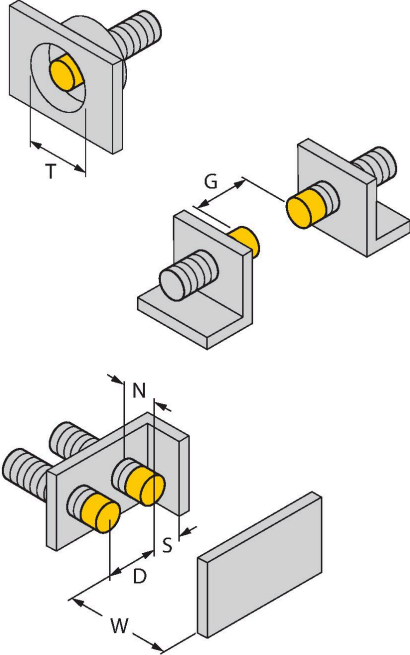
### Technical data

|  |  |
|--|--|
| Type                                   | NI20U-GT30-AP6X-B1141/S332   |
| ID                                     | 1646248  |
| Special version                        | S332 Corresponds to: Thread 45 mm, total length mm                                 |
| <b>General data</b>                    |  |
| Rated switching distance               | 20 mm  |
| Mounting conditions                    | Non-flush  |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm  |
| Repeat accuracy                        | $\leq 2 \%$ of full scale  |
| Temperature drift                      | $\leq \pm 10 \%$<br>$\leq \pm 15 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$ |
| Hysteresis                             | 3...15 %   |
| <b>Electrical data</b>                 |  |
| Operating voltage $U_B$                | 10...30 VDC  |
| Ripple $U_{rs}$                        | $\leq 10 \%$ $U_{Bmax}$  |
| DC rated operating current $I_B$       | $\leq 200$ mA  |
| No-load current                        | $\leq 15$ mA   |
| Residual current                       | $\leq 0.1$ mA  |
| Isolation test voltage                 | 0.5 kV   |
| Short-circuit protection               | yes/Cyclic   |
| Voltage drop at $I_B$                  | $\leq 1.8$ V   |
| Wire break/reverse polarity protection | yes/Complete   |
| Output function                        | 3-wire, NO contact, PNP  |
| DC field stability                     | 300 mT   |

Technical data

|                                       |   |
|---------------------------------------|---|
| AC field stability                    | 300 mT <sub>ss</sub>                      |
| Insulation class                      | □   |
| Switching frequency                   | 1 kHz                                     |
| Mechanical data                       |   |
| Design                                | Threaded barrel, M30 x 1.5                |
| Dimensions                            | 80 mm                                     |
| Housing material                      | Metal, CuZn, PTFE-coated                  |
| Active area material                  | Plastic, PBT, PTFE-coated                 |
| Max. tightening torque of housing nut | 75 Nm                                     |
| Electrical connection                 | Connector, 7/8"                           |
| 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             | 1.5 x B |
|   | Distance G             | 6 x Sn  |
|   | Distance N             | 2 x Sn  |
|   | Diameter active area B | Ø 30 mm |
|   |                        |         |

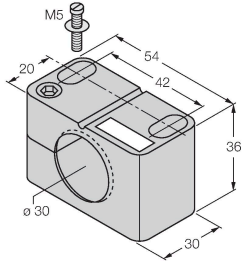
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## Accessories

BST-30B

6947216

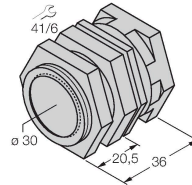
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



QMT-30

6945105

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



BSS-30

6901319

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

