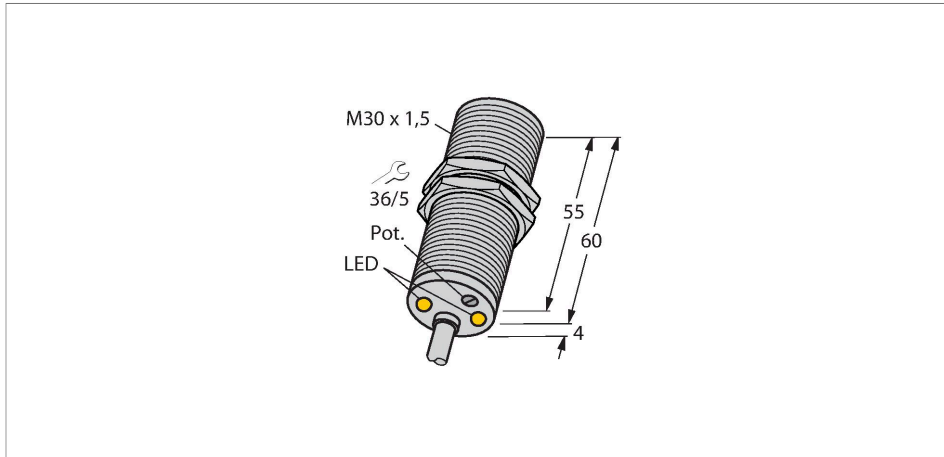


DBI10U-M30-AP4X2

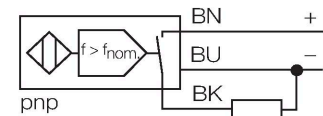
Inductive Sensor – Rotation speed monitor



Features

- M30 × 1.5 threaded tube
- Chrome-plated brass
- Large monitoring range of 3 to 3000 1/min
- Adjusted via potentiometer
- Fixed start-up time delay 5 s
- Resistant to magnetic fields
- DC 3-wire, 10...65 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram

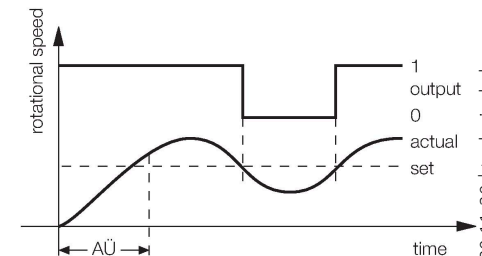


Technical data

| | |
|---|-------------------------------|
| Type | DBI10U-M30-AP4X2 |
| Ident. no. | 1582231 |
| Rotational speed range, adjustable | 0.05...50 Hz |
| | adjustable via potentiometer |
| Hysteresis (rotational-speed range) | 3...15 % |
| Rated switching distance | 10 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0.81 × S _n) mm |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % |
| | ≤ ± 15 %, ≤ -25 °C v ≥ +70 °C |
| Hysteresis | 3...15 % |
| Ambient temperature | -30...+85 °C |
| Operating voltage | 10...65 VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| DC rated operational current | ≤ 200 mA |
| No-load current | ≤ 20 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at I _e | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |
| Insulation class | □ |

Functional principle

The rotational speed is detected by periodic damping of the integrated inductive sensor. This can be accomplished via metal targets or teeth on the monitored shaft. The pulse sequence generated is compared to an adjustable reference value in a comparator circuit. If the rotational speed is below the reference value, the output is switched off (0). If the reference value is exceeded, the output is switched on (1). The start-up time delay (AÜ) is triggered by applying voltage to the device and closes the output for 5 s (start-up time of the drive).



DBI10U-M30-AP4X2 | 05/27/2020 11-20 | technical changes reserved

Technical data

| | |
|------------------------------------|----------------------------|
| Design | Threaded barrel, M30 × 1.5 |
| Dimensions | 64 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PBT |
| End cap | Plastic, EPTR |
| Max. tightening torque housing nut | 75 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, LifYY, PVC, 2 m |
| Core cross-section | 3 x 0.34 mm ² |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP67 |
| Power-on indication | LED, Green |
| Switching state | LED, Green/Yellow/Blue |

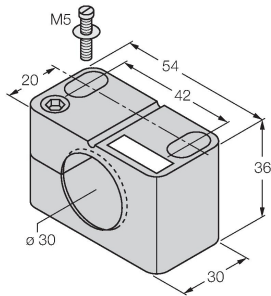
Mounting instructions

| Mounting instructions/Description | | |
|-----------------------------------|------------------------|---------|
| | Distance D | 2 x B |
| | Distance W | 3 x Sn |
| | Distance T | 3 x B |
| | Distance S | 1.5 x B |
| | Distance G | 6 x Sn |
| | Diameter active area B | Ø 30 mm |

Accessories

BST-30B

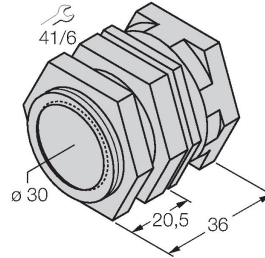
6947216



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

QM-30

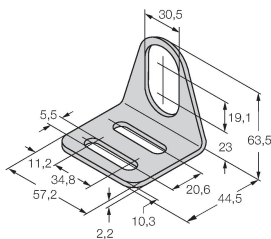
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Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW30

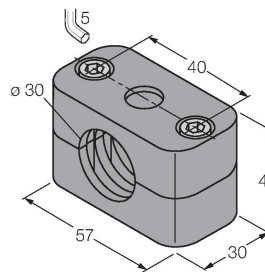
6945005



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