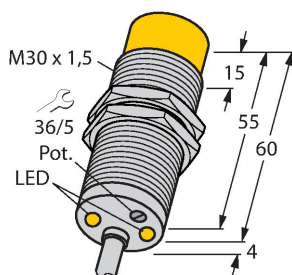


DNI20U-M30-AP4X2

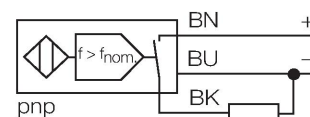
Inductive Sensor – Rotation speed monitor



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

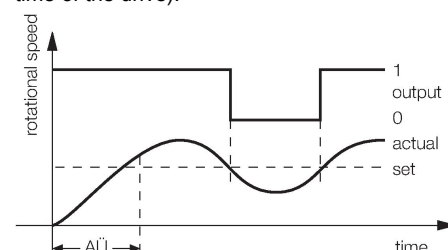


Technical data

Type	DNI20U-M30-AP4X2
ID	1582233
General data	
Rotational speed range, adjustable	0.05...50 Hz
	adjustable via potentiometer
Hysteresis (rotational-speed range)	3...15 %
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	10...65 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 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 break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Insulation class	□
Mechanical data	
Design	Threaded barrel, M30 x 1.5

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).



Technical data

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 0.34 mm ²
Environmental conditions	
Ambient temperature	-30...+85 °C
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

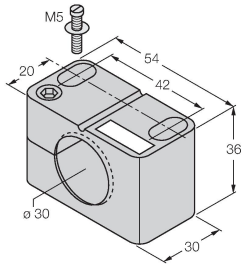
Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of a device. The top diagram shows a single unit with a dimension line labeled 'T' indicating the thickness of the mounting plate. The middle diagram shows two units mounted on a common plate, with a dimension line labeled 'G' indicating the distance between the centers of the two units. The bottom diagram shows a row of three units mounted on a common plate, with dimension lines labeled 'N' (distance from the edge to the center of the first unit), 'S' (distance between the centers of adjacent units), 'D' (distance from the edge to the center of the last unit), and 'W' (total width of the mounting plate). A side view of the mounting plate is also shown, indicating the active area 'B'.

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

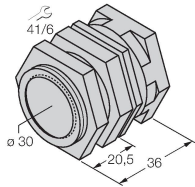
Accessories

BST-30B 6947216



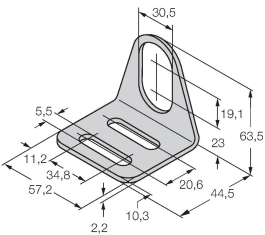
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

QM-30 6945103



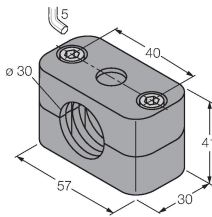
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

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