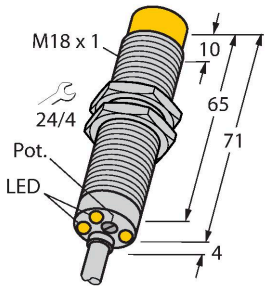
DNI12U-M18E-AP4X3
Inductive Sensor – Rotation speed monitor



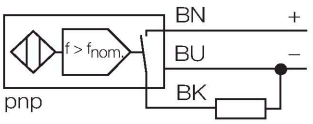
Technical data

Type	DNI12U-M18E-AP4X3
Ident. no.	1582235
Rotational speed range, adjustable	0.05…50 Hz
	adjustable via potentiometer
Hysteresis (rotational-speed range)	3…15 %
Rated switching distance	12 mm
Mounting conditions	Non-flush
Secured operating distance	≤ (0.81 × Sn) 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	⧈

Features

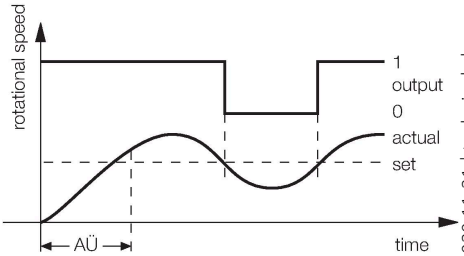
- Threaded barrel, M18 x 1
- Chrome-plated brass
- Large monitoring range of 3 to 3000 1/min
- Adjusted via potentiometer
- Fixed start-up time delay 5 s
- Resistant to magnetic fields
- DC 3-wire, 10…65 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



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).



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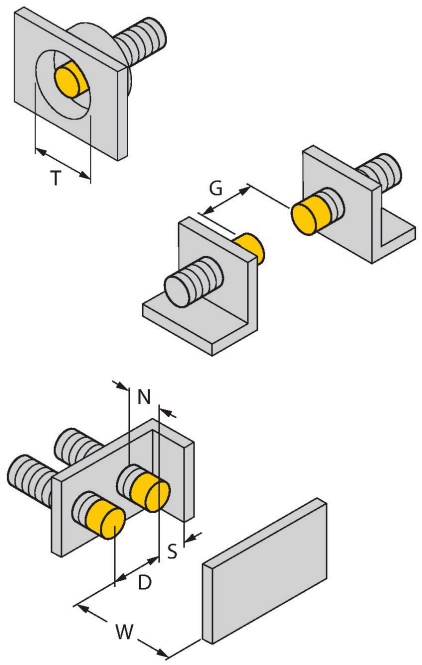
Technical data

Design	Threaded barrel, M18 × 1
Dimensions	75 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PBT
End cap	Plastic, EPTR
Max. tightening torque housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.34 mm²
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

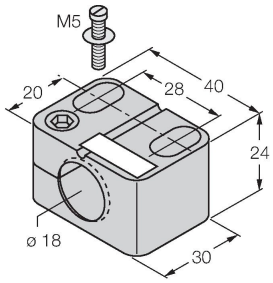
Mounting instructions/Description



Distance D	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 18 mm

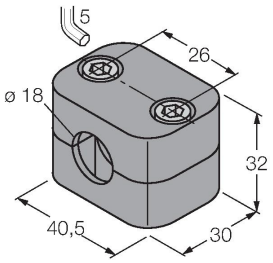
Accessories

BST-18B	6947214



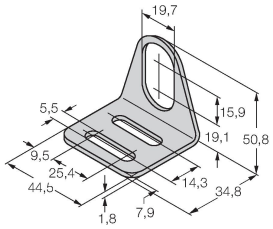
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

BSS-18	6901320



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

MW18	6945004



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

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