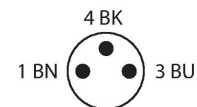
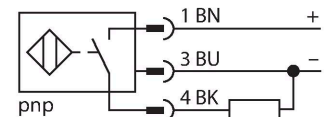


NI20U-TS12-AP6X2-V1531/S930/S989 Inductive Sensor – Detection of Small and Fast Tube-guided Parts

Features

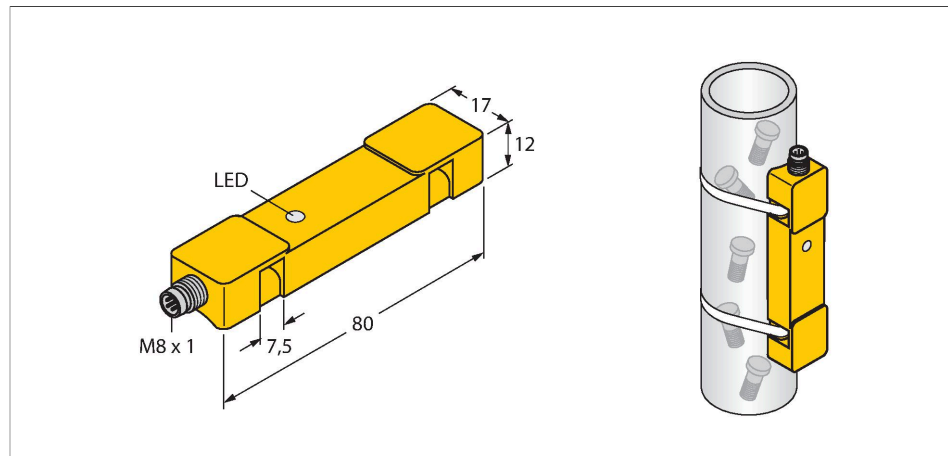
- Rectangular, height 12 mm
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- High sensitivity for detection of small parts
- Output pulse length min. 100 ms
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M8 x 1 male connector

Wiring diagram



Functional principle

The highly sensitive sensor detects even small and fast tube-guided parts. Easily mounted with retaining straps. Can be repositioned or replaced during operation. High-quality alternative to simple ring sensors.

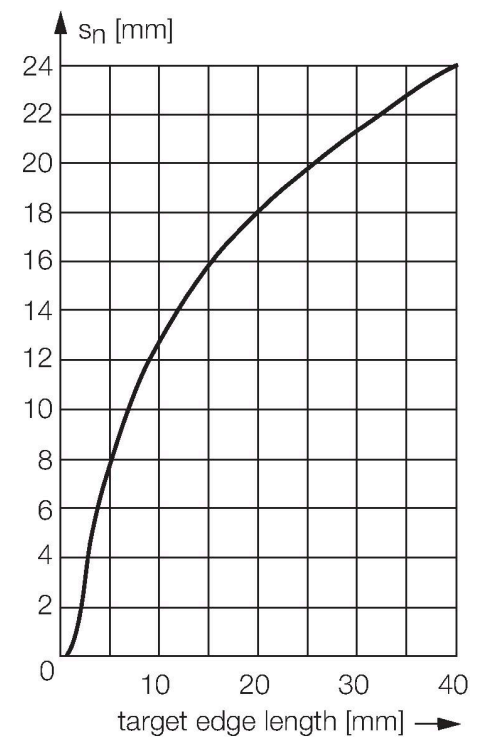


Technical data

Type	NI20U-TS12-AP6X2-V1531/S930/S989
Ident. no.	1646646
Special version	S930 corresponds to: Except for transparent housing parts, all other plastic parts are black
Rated switching distance	20 mm
Fly-by speed	0...20 m/s
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	≤ 2 % of full scale
pulse stop	≥ 5 ms
Pulse duration at the output	≥ 100 ms ± 20 %
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Ambient temperature	-10...+60 °C
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current	≤ 15 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

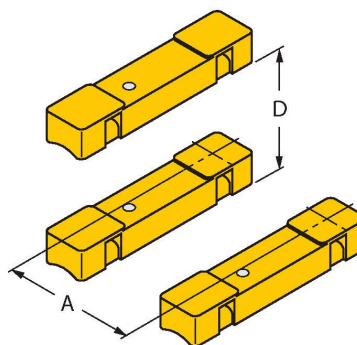
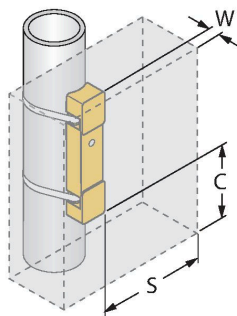
Technical data

Output function	3-wire, NO contact, PNP
Switching frequency	0.008 kHz
Design	Rectangular, TS12
Dimensions	80 x 17 x 12 mm
Housing material	Plastic, PBT-GF30-V0, Black
Electrical connection	Connector, M8 × 1
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
Power-on indication	LED, Green
Switching state	LED, Yellow
Included in delivery	2 retaining straps



Mounting instructions

Mounting instructions/Description



Distance D	80 mm
Distance W	56 mm
Distance S	56 mm
Distance A	68 mm
Distance C	48 mm
Width active area B	17 mm

The TS12 has no tailback detection function.
To achieve optimal functionality, use only small targets with a max. length of 20 mm.