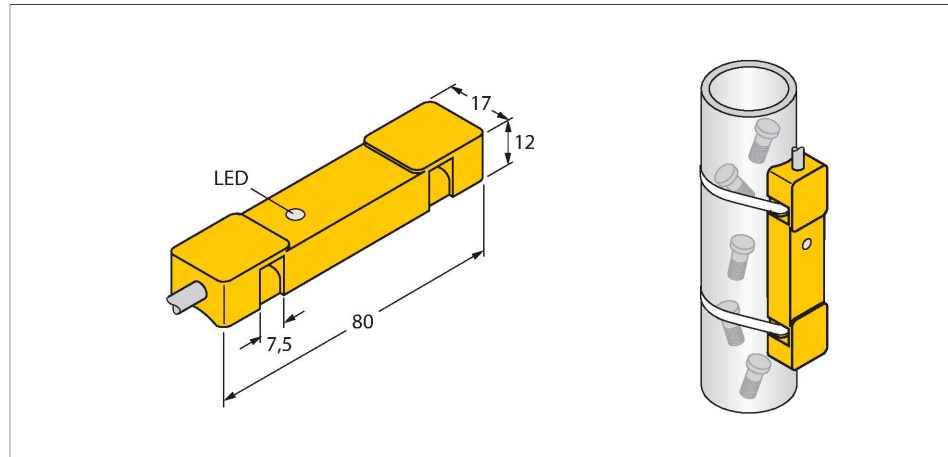


NI20U-TS12-AP6X2

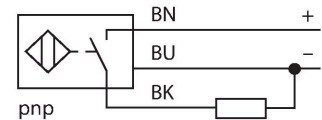
Inductive Sensor – Detection of Small and Fast Tube-guided Parts



Features

- Rectangular, height 12 mm
- Plastic, PBT-GF30-V0
- Resistant to magnetic fields
- 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
- Cable connection

Wiring diagram

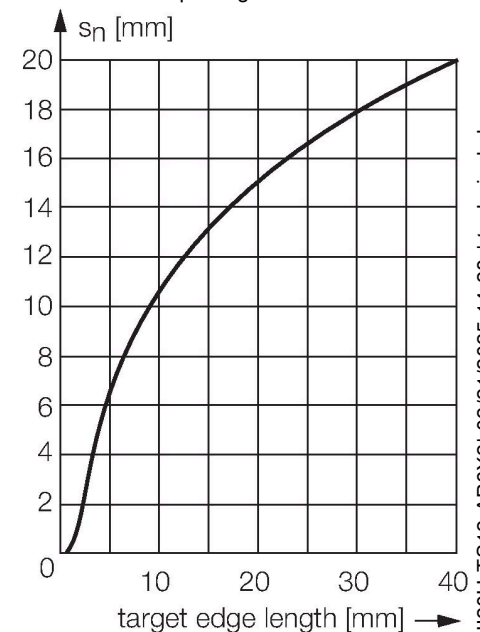


Technical data

Type	NI20U-TS12-AP6X2
ID	1646647
General data	
Rated switching distance	20 mm
Fly-by speed	0...20 m/s
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
pulse stop	≥ 5 ms
Pulse duration at the output	≥ 100 ms $\pm 20 \%$
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 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 break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT

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.



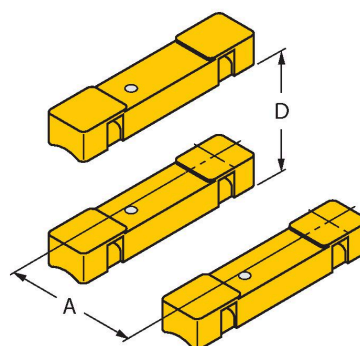
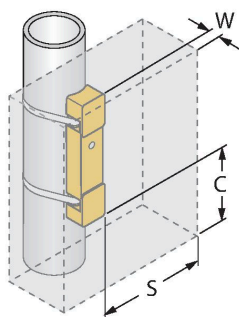
NI20U-TS12-AP6X2 | 02/21/2025 14-28 | technical changes reserved

Technical data

AC field stability	300 mT _{ss}
Switching frequency	0.008 kHz
Mechanical data	
Design	Rectangular, TS12
Dimensions	80 x 17 x 12 mm
Housing material	Plastic, PBT-GF30-V0
Electrical connection	Cable
Cable quality	Ø 4 mm, LifY-11Y, PUR, 2 m
Core cross-section	3 x 0.25 mm ²
Environmental conditions	
Ambient temperature	-25...+70 °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
Power-on indication	LED, Green
Switching state	LED, Yellow
Included in delivery	2 retaining straps

Mounting instructions

Mounting instructions/Description



Distance D	50 mm
Distance W	35 mm
Distance S	35 mm
Distance A	42 mm
Distance C	30 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.