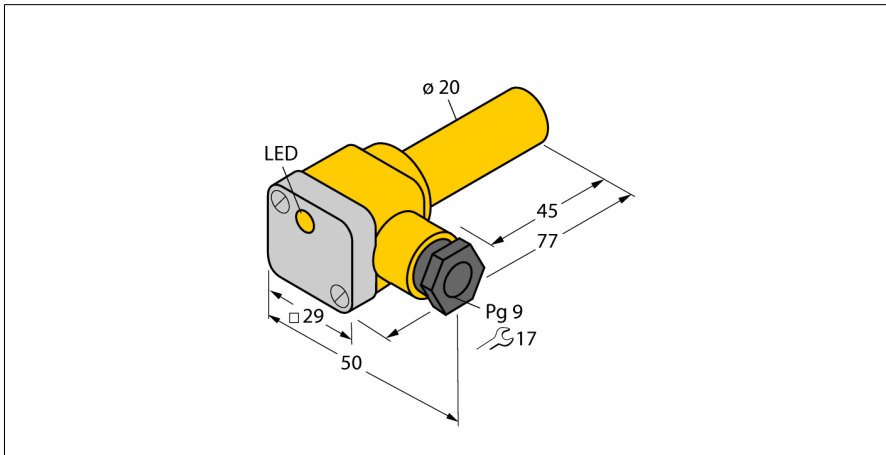
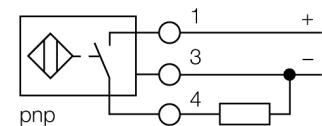


Inductive Sensor NI12U-K20SK-AP6X



- Smooth barrel, Ø 20 mm
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- Auto-compensation protects against pre-damping
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Terminal chamber

Wiring Diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Type	NI12U-K20SK-AP6X
ID	1645330
General data	
Rated switching distance S_n	12 mm
Mounting conditions	Non-flush, partially embeddable
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$ $\leq \pm 20\%$, $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{is}$
DC rated operational current	≤ 200 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes/ Cyclic
Voltage drop at I_s	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	1 kHz
Mechanical data	
Design	Smooth barrel, 20 mm
Dimensions	77 mm
Housing material	Plastic, PBT-GF30-V0
Terminal chamber cover material	plastic, Ultem
Terminal chamber housing material	plastic, PA12-GF30
Active area material	Plastic, PBT
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 mm ²
Cable external diameter	4.5...8mm

Environmental conditions	
Ambient temperature	-30...+85 °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
Switching state	
Included in delivery	LED, Yellow BS20; cable gland; 2x plastic seals

Accessories

Type code	Ident no.		Dimension drawing
BS 20	69464	Fixing clamp; material mounting block: PBT	