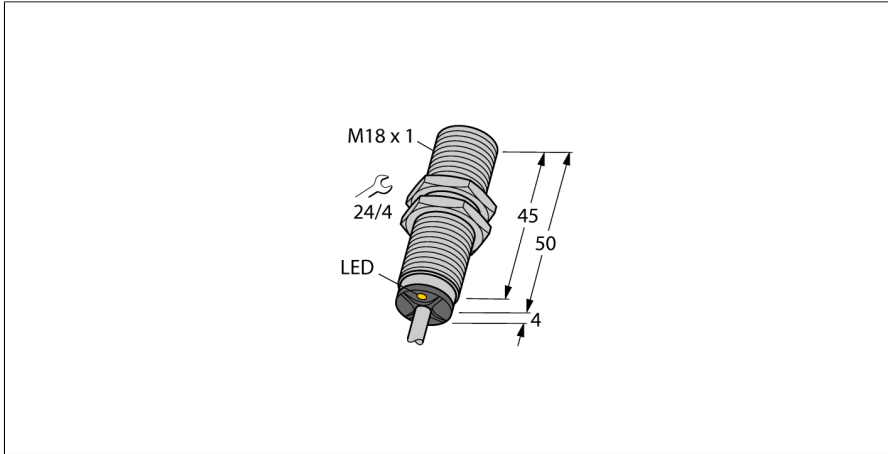
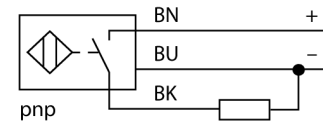


Inductive Sensor With Extended Switching Distance BI8U-EM18-AP6X/S90



- Threaded barrel, M18 x 1
- Stainless steel, 1.4301
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Recessed mountable
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring Diagram



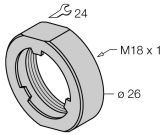
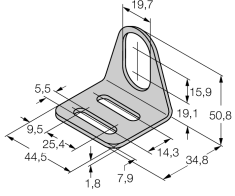
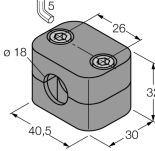
Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Type	BI8U-EM18-AP6X/S90
ID	1644749
General data	
Rated switching distance S_n	8 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$ $\leq \pm 15\%, \leq -25\text{ °C } v \geq +70\text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{s}$
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	1.5 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	54 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, LCP
End cap	Plastic, EPTR
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY-11Y, PUR, 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	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	
	LED, Yellow

Accessories

Type code	Ident no.		Dimension drawing
PN-M18	6905310	Protective nut for M18 x 1 threaded barrels; material: Stainless steel A2 1.4305 (AISI 303)	
MW-18	6945004	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-18	6901320	Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene	
QM-18	6945102	Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.	