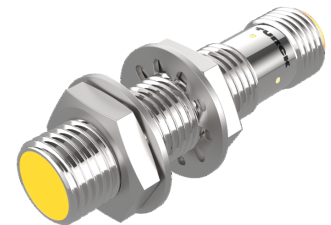
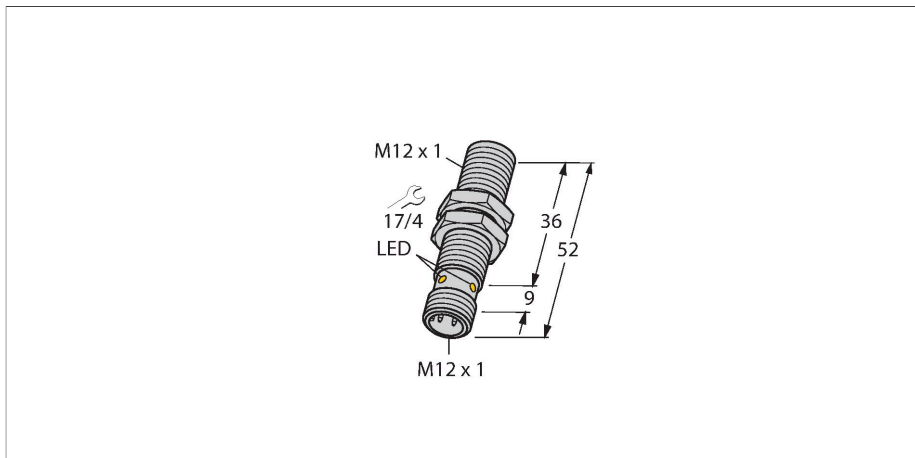


# BI4U-EM12-AP6X-H1141

## Inductive Sensor – With Extended Switching Distance



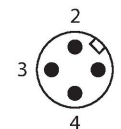
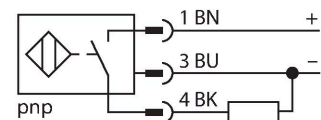
### Technical data

Type	BI4U-EM12-AP6X-H1141
ID	1634807
<b>General data</b>	
Rated switching distance	4 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 %
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\%$ $U_{ss}$
DC rated operational current	$\leq 200$ mA
No-load current	25 mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_o$	$\leq 1.8$ 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 <sub>ss</sub>
Insulation class	□
Switching frequency	3 kHz

### Features

- Threaded barrel, M12 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
- M12 x 1 male connector

### Wiring diagram



### Functional principle

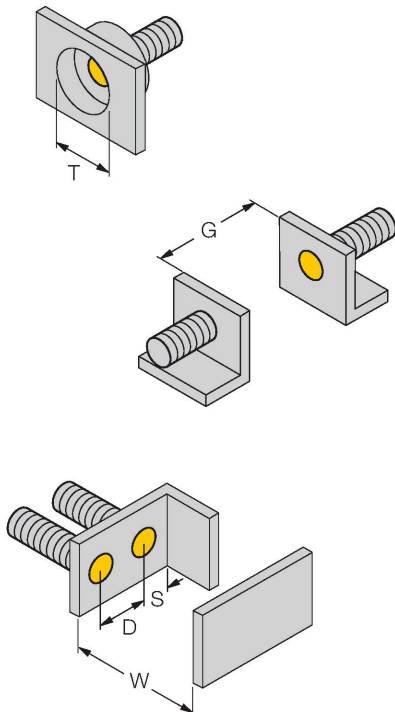
Inductive sensors are designed for wear-free and contactless detection of metal objects. proxx+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## Technical data

Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	52 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, LCP
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 x 1
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

## Mounting instructions

### Mounting instructions/Description

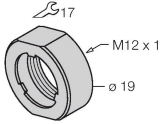


Distance D	24 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

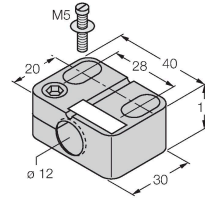
All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

Accessories

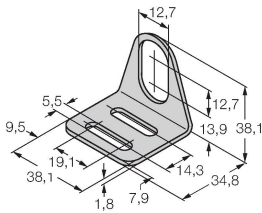
**PN-M12** **6905309**  
 Impact protection nut for M12x1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)



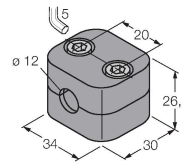
**BST-12B** **6947212**  
 Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



**MW-12** **6945003**  
 Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



**BSS-12** **6901321**  
 Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene



Accessories

Dimension drawing	Type	ID	
	RKH4-2/TFE	6935482	Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray; temperature range: -25...+80 °C
	RKH4-2/TFG	6934384	Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C