BI8U-EM18EWD-AP6X-H1141
Inductive Sensor –   For the Food Industry


Technical data
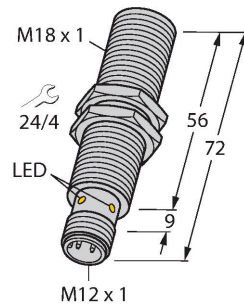
Features

■ Threaded barrel, M18 x 1
■ Stainless steel, 1.4404
■ Front cap made of liquid crystal polymer
■ Factor 1 for all metals
■ Resistant to magnetic fields
■ For temperatures of -40 °C…+100 °C
■ High protection class IP69K for harsh environments
■ Special double-lip seal
■ Protection against all common acidic and alkaline cleaning agents
■ Laser engraved label, permanently legible
■ DC 3-wire, 10…30 VDC
■ NO contact, PNP output
■ M12 x 1 male connector

|	
Type	BI8U-EM18EWD-AP6X-H1141
ID	1635232
General data	
Rated switching distance	8 mm
Secured operating distance	≤ (0.81 × Sn) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
	≤ ± 20 %, ≤ -25 °C , ≥ +70 °C
Hysteresis	3…15 %
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 200 mA
No-load current	≤ 25 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire break/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

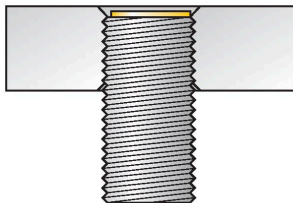## Wiring diagram
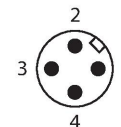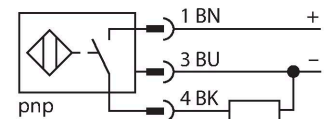
Functional principle

The inductive sensors for the food industry are absolutely tight and resistant to cleaning agents and disinfectants. The requirements of the protection classes IP68 and IP69K are well exceeded by our uprox®+ sensors. The sensors are entirely protected by the LCP front cap and the stainless steel housing.

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Technical data

Mechanical data

Design	Threaded barrel, M18 x 1
Dimensions	72 mm
Housing material	Stainless steel, 1.4404 (AISI 316L)
Active area material	Plastic, LCP
End cap	Plastic, EPTR
Connector housing	plastic, PP
Admissible pressure on front cap	≤ 15 bar
Max. tightening torque of housing nut	25 Nm
Electrical connection	Connector, M12 × 1

Environmental conditions

|	
Ambient temperature	-40…+100 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow
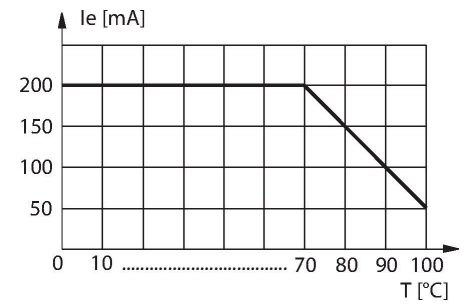
Mounting instructions

Mounting instructions/Description	

Distance D	36 mm
Distance W	24 mm
Distance T	54 mm
Distance S	27 mm
Distance G	48 mm
Diameter active area B	Ø 18 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.
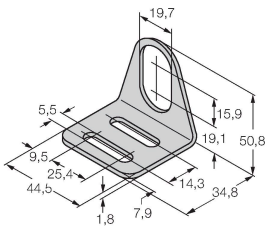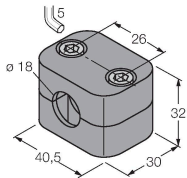
Accessories

PN-M18	6905310
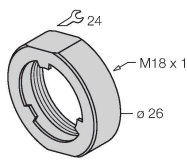
Protective nut for M18 x 1 threaded barrels; material: Stainless steel A2 1.4305 (AISI 303)

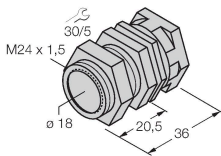

MW18	6945004

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 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

Wiring 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