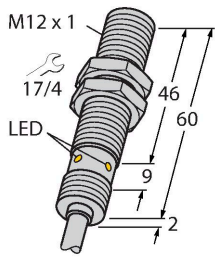
BI4U-EM12EWD-VP6X
Inductive Sensor – For the Food Industry



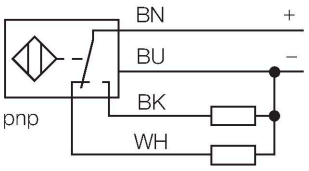
Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- 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 4-wire, 10…30 VDC
- Changeover contact, PNP output
- Cable connection

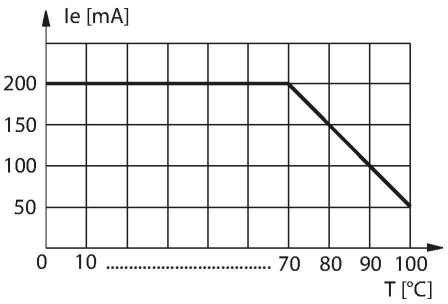
Technical data

Type	BI4U-EM12EWD-VP6X
Ident. no.	100000769
Rated switching distance	4 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
	≤ ± 20 %, ≤ -25 °C , ≥ +70 °C
Hysteresis	3…15 %
Ambient temperature	-40…+100 °C
Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 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_e	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	4-wire, Complementary contact, PNP
Insulation class	⧈
Switching frequency	2 kHz
Design	Threaded barrel, M12 × 1
Dimensions	64 mm

Wiring diagram



Functional principle



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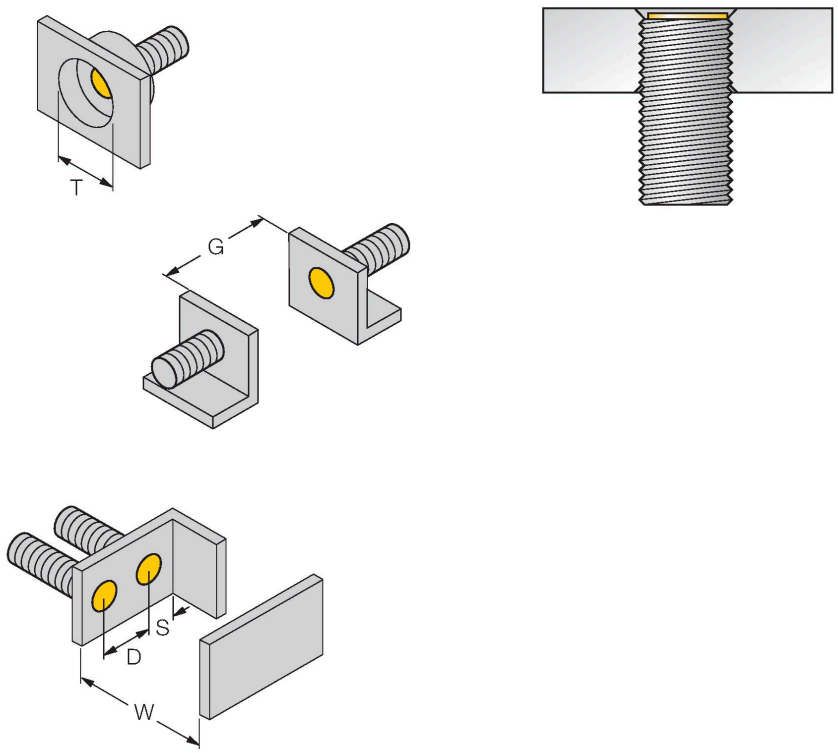
Technical data

Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, LCP
End cap	Plastic, EPTR
Connector housing	PP
Admissible pressure on front cap	≤ 20 bar
Max. tightening torque housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, White, D12YSL9Y-OB, PP, 2 m
	halogen-free
Core cross-section	4 x 0.34 mm^2
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	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.

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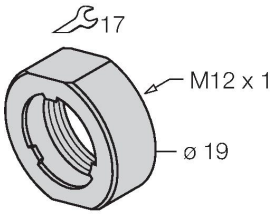
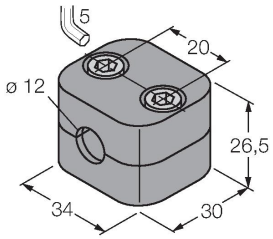
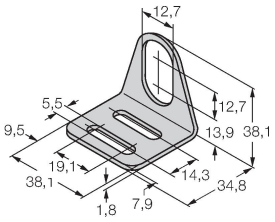
Accessories

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

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

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

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