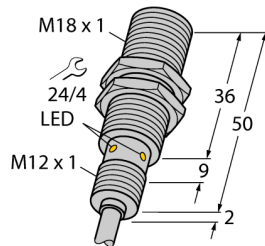


Inductive Sensor For the Food Industry BI8U-EM18WD-VP6X 7M



- 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 4-wire, 10...30 VDC
- Changeover contact, PNP output
- Cable connection

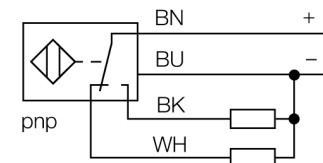
Type	BI8U-EM18WD-VP6X 7M
ID	100016736

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	$\leq \pm 10\%$
	$\leq \pm 20\%, \leq -25\text{ °C}, \geq +70\text{ °C}$
Hysteresis	3...15 %

Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{es}$
DC rated operational current	$\leq 200\text{ mA}$
Residual current	$\leq 0.1\text{ mA}$
Isolation test voltage	$\leq 0.5\text{ kV}$
Short-circuit protection	yes/ Cyclic
Voltage drop at I_L	$\leq 1.8\text{ V}$
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	4-wire, Complementary 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	52 mm
Housing material	Stainless steel, 1.4404 (AISI 316L)
Active area material	Plastic, LCP
End cap	Plastic, PP, transparent
Admissible pressure on front cap	$\leq 15\text{ bar}$
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable

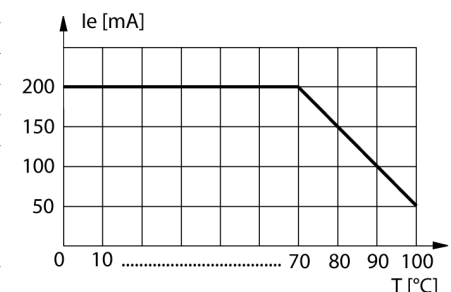
Wiring Diagram



Functional principle

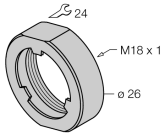
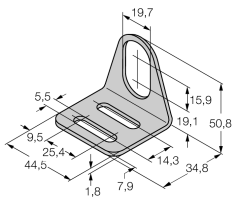
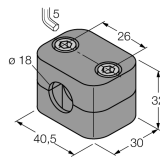
The inductive sensors for the food industry are absolutely tight and resistant to cleaning agents and disinfectants. The requirements of the protection classes IP68 and IP69K are well exceeded by our uprox®+ sensors. The sensors are entirely protected by the LCP front cap and the stainless steel housing.

Derating Curve



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	

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.	