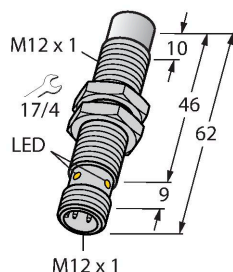


# NI10U-EM12EWD-VP6X-H1141

## Inductive Sensor – For the food industry



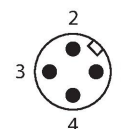
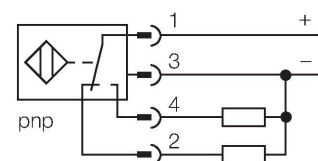
### Features

- Threaded barrel, M12 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
- M12 x 1 male connector

### Technical data

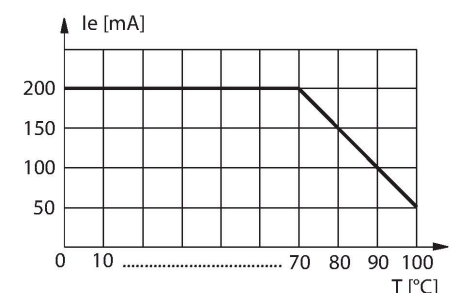
Type	NI10U-EM12EWD-VP6X-H1141
ID	100000634
<b>General data</b>	
Rated switching distance	10 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2$ % of full scale
Temperature drift	$\leq \pm 10$ %
	$\leq \pm 20$ %, $\leq -25$ °C, $\geq +70$ °C
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage $U_B$	10...30 VDC
Ripple $U_{ss}$	$\leq 10$ % $U_{Bmax}$
DC rated operating current $I_o$	$\leq 200$ mA
No-load current	$\leq 25$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, PNP
DC field stability	300 mT
AC field stability	300 mT <sub>ss</sub>
Insulation class	□
Switching frequency	1 kHz
<b>Mechanical data</b>	
Design	Threaded barrel, M12 x 1

### 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.



Technical data

Dimensions	62 mm
Housing material	Stainless steel, 1.4404 (AISI 316L)
Active area material	Plastic, LCP
Connector housing	plastic, PP
Admissible pressure on front cap	≤ 20 bar
Max. tightening torque of housing nut	10 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

The image contains three technical diagrams illustrating different mounting configurations for the sensor. The top-left diagram shows a side view of a sensor mounted in a plate, with dimension T indicating the distance from the sensor's active area to the edge of the plate. The middle-left diagram shows two sensors mounted in a plate, with dimension G indicating the distance between the sensors and dimension B indicating the distance from the sensor's active area to the edge of the plate. The bottom-left diagram shows two sensors mounted in a plate, with dimensions N, S, D, and W indicating various distances related to the sensor's position and the plate's dimensions.

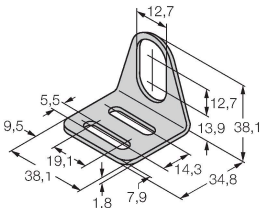
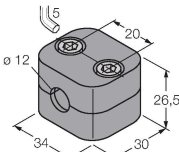
The image contains two technical diagrams illustrating different mounting configurations for the sensor. The top-right diagram shows a front view of a sensor mounted in a plate, with dimension X indicating the distance from the sensor's active area to the edge of the plate. The bottom-right diagram shows a side view of a sensor mounted in a plate, with dimension X indicating the distance from the sensor's active area to the edge of the plate.

Distance D	48 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 12 mm

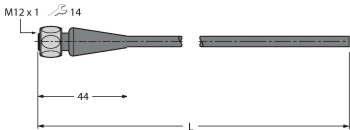
All non-flush mountable uprox®+ threaded barrel sensors can be screwed to the upper edge of the barrel. In this mounting position, the sensor operates safely with a 20 % reduced switching distance.

When installed in an aperture plate a distance of X = 50 mm must be observed.

Accessories

MW12	6945003	BSS-12	6901321
	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)		Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

Accessories

Dimension drawing	Type	ID	
	RKH4.4-2/TFE	6934473	Connection cable, M12 female connector, straight, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray; temperature range: -25...+80 °C
	RKH4.4-2/TFG	6933086	Connection cable, M12 female connector, straight, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C