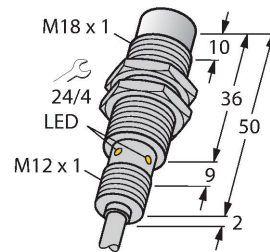


# NI12U-EM18WD-AN6X/S50-S1163 7M Inductive Sensor – For the Food Industry



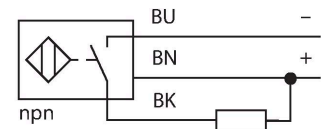
## Features

- 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, NPN output
- Cable connection

## Technical data

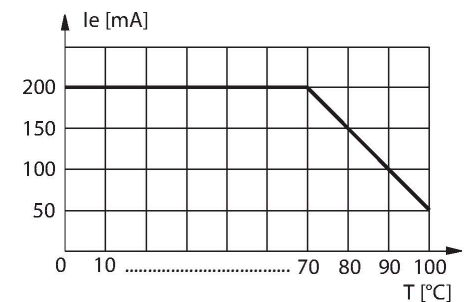
|  |  |
|--|--|
| Type                                   | NI12U-EM18WD-AN6X/S50-S1163 7M   |
| ID                                     | 1645354  |
| Special version                        | S1163 Corresponds to:Old version — Wound coil system in V4A pipe with LCP cap  |
| <b>General data</b>                    |  |
| Rated switching distance               | 12 mm  |
| Mounting conditions                    | Non-flush  |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm  |
| Repeat accuracy                        | $\leq 2 \%$ of full scale  |
| Temperature drift                      | $\leq \pm 10 \%$<br>$\leq \pm 20 \%, \leq -25 \text{ °C}, \geq +70 \text{ °C}$ |
| 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                        | 3-wire, NO contact, NPN  |
| DC field stability                     | 300 mT   |

## 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.

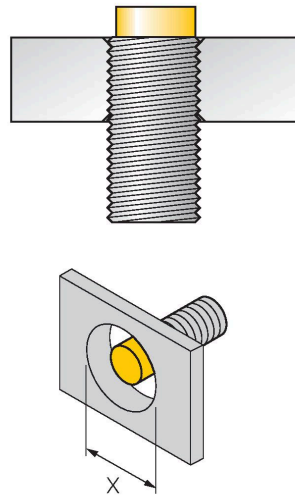
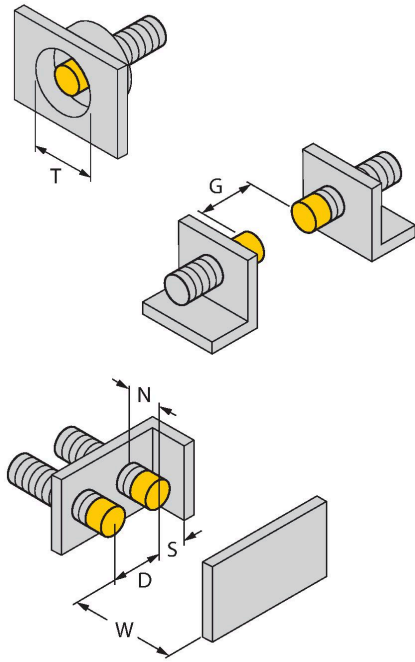


## Technical data

|                                       |   |
|---------------------------------------|---|
| AC field stability                    | 300 mT <sub>ss</sub>                      |
| Insulation class                      | □   |
| Switching frequency                   | 1 kHz                                     |
| <b>Mechanical data</b>                |   |
| 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      | ≤ 15 bar                                  |
| Max. tightening torque of housing nut | 25 Nm                                     |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 7 m                 |
| Core cross-section                    | 3 x 0.34 mm <sup>2</sup>                  |
| <b>Environmental conditions</b>       |   |
| Ambient temperature                   | -40...+100 °C                             |
| Vibration resistance                  | 55 Hz (1 mm)                              |
| Shock resistance                      | 30 g (11 ms)                              |
| Protection class                      | IP68<br>IP69K                             |
| MTTF                                  | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Yellow                               |

## Mounting instructions

### Mounting instructions/Description



|                        |         |
|------------------------|---------|
| Distance D             | 72 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 18 mm |

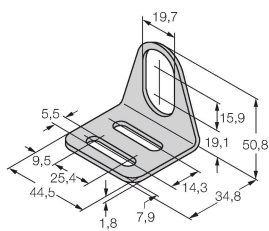
All non-flush mountable uprox®+ threaded barrel sensors can be screwed to the upper edge of the barrel. In this mounting position, the sensor operates safely with a 20 % reduced switching distance.

When installed in an aperture plate, a distance of X = 70 mm must be observed.

## Accessories

MW18

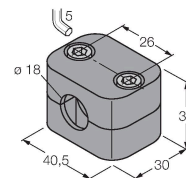
6945004



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

BSS-18

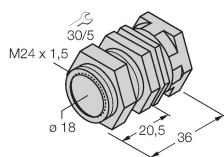
6901320



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