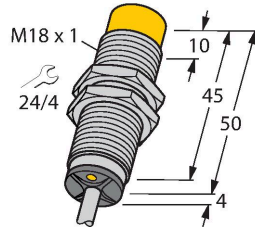


# NI15U-M18-AN6X

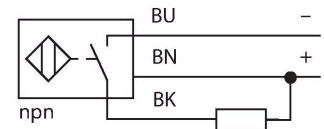
## Inductive Sensor – With Extended Switching Distance



### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- Integrated protection against predamping
- Little metal-free spaces
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

### Wiring diagram



### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

### Technical data

|                                        |                                                                |
|----------------------------------------|----------------------------------------------------------------|
| Type                                   | NI15U-M18-AN6X                                                 |
| ID                                     | 1635334                                                        |
| General data                           |                                                                |
| Rated switching distance               | 15 mm                                                          |
| Mounting conditions                    | Non-flush                                                      |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm                                    |
| Repeat accuracy                        | $\leq 2 \%$ of full scale                                      |
| Temperature drift                      | $\leq \pm 10 \%$                                               |
|                                        | $\leq \pm 15 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$ |
| Hysteresis                             | 3...15 %                                                       |
| Electrical data                        |                                                                |
| 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                                                         |
| AC field stability                     | 300 mT <sub>ss</sub>                                           |
| Insulation class                       | □                                                              |
| Switching frequency                    | 1 kHz                                                          |
| Mechanical data                        |                                                                |
| Design                                 | Threaded barrel, M18 x 1                                       |

Technical data

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Dimensions                            | 54 mm                                     |
| Housing material                      | Metal, CuZn, Chrome-plated                |
| Active area material                  | Plastic, LCP                              |
| End cap                               | Plastic, EPTR                             |
| Max. tightening torque of housing nut | 25 Nm                                     |
| Electrical connection                 | Cable                                     |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 2 m                 |
| Core cross-section                    | 3 x 0.34 mm²                              |
| Environmental conditions              |                                           |
| Ambient temperature                   | -30...+85 °C                              |
| Vibration resistance                  | 55 Hz (1 mm)                              |
| Shock resistance                      | 30 g (11 ms)                              |
| Protection class                      | IP68                                      |
| MTTF                                  | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Yellow                               |

Mounting instructions

| Mounting instructions/Description                                                                                                                                                                     |                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|                                                                                                                                                                                                       | Distance D 70 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.                                                                                                                        |                                |

