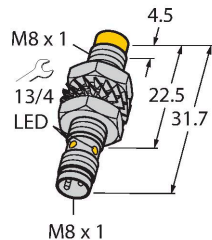


# NI3-M08K-VP6X-V1141

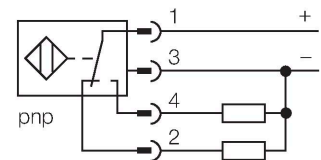
## Inductive Sensor – With Increased Switching Distance



### Features

- Threaded barrel, M8 x 1
- Nickel-plated brass
- Large sensing range
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- M8 x 1 male connector

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | NI3-M08K-VP6X-V1141                                 |
| ID                                     | 4602859                                             |
| <b>General data</b>                    |                                                     |
| Rated switching distance               | 3 mm                                                |
| Mounting conditions                    | Non-flush                                           |
| Secured operating distance             | $\leq (0.81 \times S_n)$ mm                         |
| Correction factors                     | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy                        | $\leq 2$ % of full scale                            |
| Temperature drift                      | $\leq \pm 10$ %                                     |
| 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 $I_o$       | $\leq 150$ mA                                       |
| No-load current                        | $\leq 15$ 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                  |
| Switching frequency                    | 2.8 kHz                                             |
| <b>Mechanical data</b>                 |                                                     |
| Design                                 | Threaded barrel, M8 x 1                             |
| Dimensions                             | 31.7 mm                                             |
| Housing material                       | Metal, CuZn, Nickel Plated                          |

Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Active area material                  | Plastic, PP-GF20                           |
| Max. tightening torque of housing nut | 7 Nm                                       |
| Electrical connection                 | Connector, M8 × 1                          |
| Environmental conditions              |                                            |
| Ambient temperature                   | -25...+70 °C                               |
| Vibration resistance                  | 55 Hz (1 mm)                               |
| Shock resistance                      | 30 g (11 ms)                               |
| Protection class                      | IP67                                       |
| MTTF                                  | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Yellow                                |

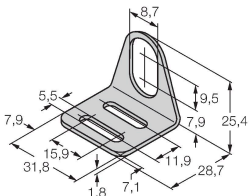
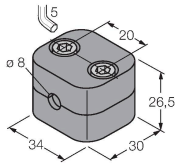
Mounting instructions

# Mounting instructions/Description

The image contains three isometric diagrams illustrating the mounting of a sensor. The top diagram shows a single sensor being mounted to a wall, with dimension T indicating the distance from the wall to the sensor face. The middle diagram shows two sensors mounted side-by-side, with dimension G indicating the distance between the sensor faces. The bottom diagram shows two sensors mounted side-by-side, with dimensions N, S, D, and W indicating various distances: N is the distance between the sensor faces, S is the distance from the wall to the sensor face, D is the distance between the sensor faces, and W is the distance from the wall to the sensor face.

|                        |                            |
|------------------------|----------------------------|
| Distance D             | $3 \times B$               |
| Distance W             | $3 \times S_n$             |
| Distance T             | $3 \times B$               |
| Distance S             | $1.5 \times B$             |
| Distance G             | $6 \times S_n$             |
| Distance N             | $2 \times S_n$             |
| Diameter active area B | $\varnothing 8 \text{ mm}$ |

Accessories

|                                                                                              |         |                                                                                      |         |
|----------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------|---------|
| MW08                                                                                         | 6945008 | BSS-08                                                                               | 6901322 |
|           |         |  |         |
| Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304) |         | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene       |         |

MBS80

69479

Mounting clamp for smooth barrel sensors; mounting block material:  
Anodized aluminum

