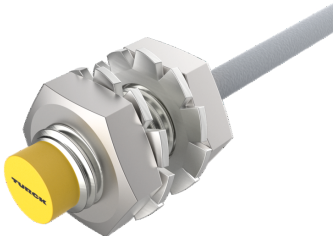
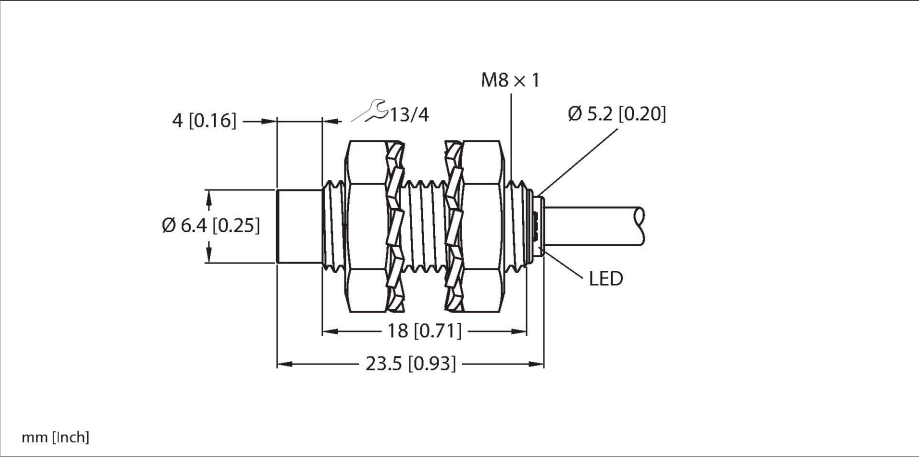


# NI3-EG08K-AP6X

## Inductive Sensor



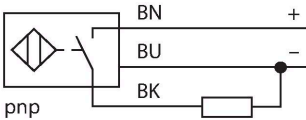
### Technical data

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| Type                                      | NI3-EG08K-AP6X                                      |
| ID                                        | 4669600                                             |
| General data                              |                                                     |
| Rated switching distance                  | 3 mm                                                |
| Mounting conditions                       | Non-flush                                           |
| Secured operating distance                | ≤ (0.81 × Sn) mm                                    |
| Correction factors                        | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy                           | ≤ 2 % of full scale                                 |
| Temperature drift                         | ≤ ±10 %                                             |
| Hysteresis                                | 20 %                                                |
| Electrical data                           |                                                     |
| Operating voltage U <sub>B</sub>          | 10...30 VDC                                         |
| Ripple U <sub>ss</sub>                    | ≤ 10 % U <sub>Bmax</sub>                            |
| DC rated operating current I <sub>o</sub> | ≤ 150 mA                                            |
| No-load current                           | ≤ 15 mA                                             |
| Residual current                          | ≤ 0.1 mA                                            |
| Isolation test voltage                    | 0.5 kV                                              |
| Short-circuit protection                  | yes/Cyclic                                          |
| Voltage drop at I <sub>o</sub>            | ≤ 1.8 V                                             |
| Wire break/reverse polarity protection    | yes/Complete                                        |
| Output function                           | 3-wire, NO contact, PNP                             |
| Switching frequency                       | 3 kHz                                               |
| Mechanical data                           |                                                     |
| Design                                    | Threaded barrel, M8 x 1                             |
| Dimensions                                | 23.5 mm                                             |
| Housing material                          | Stainless steel, 1.4305 (AISI 303)                  |

### Features

- M8 × 1 threaded tube
- Stainless steel, 1.4305 (AISI 303)
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

### Wiring diagram



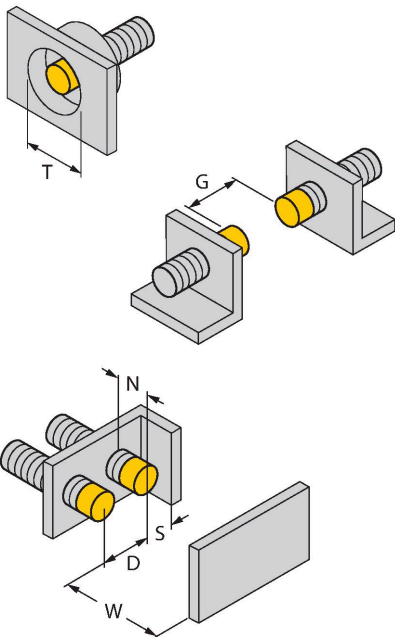
### Functional principle

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.

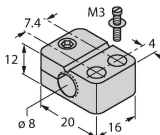
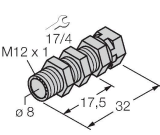
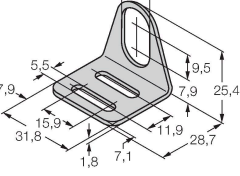
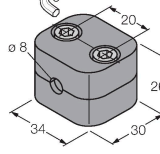
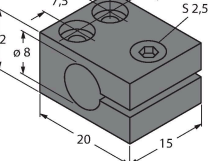
Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Active area material                  | Plastic, PBT                               |
| End cap                               | Plastic, PP                                |
| Max. tightening torque of housing nut | 5 Nm                                       |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 3.3 mm, Gray, LiFY-11Y, PUR, 2 m         |
| Core cross-section                    | 3 x 0.14 mm <sup>2</sup>                   |
| 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                                                   |                        |         |
|-------------------------------------------------------------------------------------|------------------------|---------|
|  | Distance D             | 3 x B   |
|                                                                                     | 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 8 mm  |
|                                                                                     |                        |         |

Accessories

|                                                                                     |         |                                                                                              |                                                                                    |         |                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BST-08B                                                                             | 6947210 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6                    | QM-08                                                                              | 6945100 | Quick-mount bracket with dead-stop, chrome-plated brass, male thread M12 x 1. Note: The switching distance of proximity switches may be reduced through the use of quick-mount brackets. |
|    |         |                                                                                              |  |         |                                                                                                                                                                                          |
| MW08                                                                                | 6945008 | Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304) | BSS-08                                                                             | 6901322 | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene                                                                                                           |
|    |         |                                                                                              |  |         |                                                                                                                                                                                          |
| MBS80                                                                               | 69479   | Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum         |                                                                                    |         |                                                                                                                                                                                          |
|  |         |                                                                                              |                                                                                    |         |                                                                                                                                                                                          |