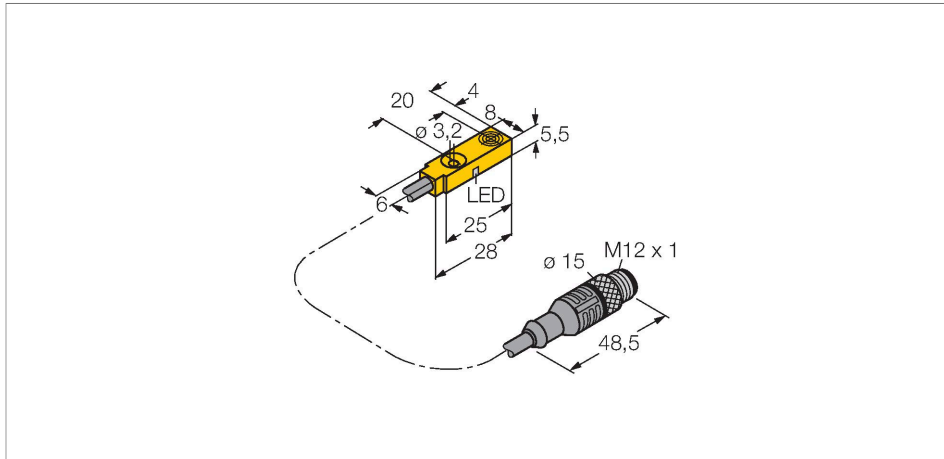


# NI3.5-Q5.5-AN6X-0.3-RS4T Inductive Sensor



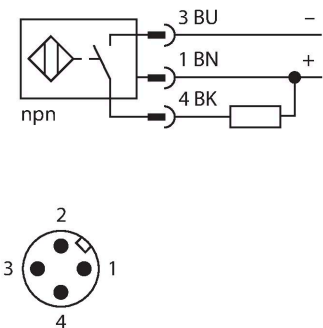
## Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | NI3.5-Q5.5-AN6X-0.3-RS4T                            |
| ID                                     | 46136100                                            |
| General data                           |                                                     |
| Rated switching distance               | 3.5 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                           |
| Hysteresis                             | 3...15 %                                            |
| Electrical data                        |                                                     |
| Operating voltage $U_b$                | 10...30 VDC                                         |
| Ripple $U_{ss}$                        | $\leq 10 \%$ $U_{Bmax}$                             |
| DC rated operating current $I_o$       | $\leq 150$ 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                        | 3-wire, NO contact, NPN                             |
| Switching frequency                    | 2 kHz                                               |
| Mechanical data                        |                                                     |
| Design                                 | Rectangular, Q5,5                                   |

## Features

- Rectangular, height 5.5 mm
- Active face on top
- Plastic, PP
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Pigtail with M12 × 1 connector

## Wiring diagram

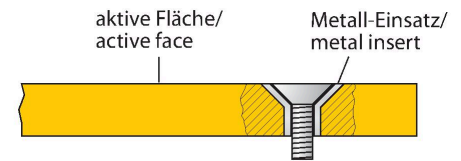


## Functional principle

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

|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Dimensions                      | 28 x 8 x 5.5 mm                                                     |
| Housing material                | Plastic, PP-GF20                                                    |
| Active area material            | PP-GF20                                                             |
| Material coupling nut           | metal, CuZn, nickel-plated                                          |
| Tightening torque fixing screw  | 0.5 Nm                                                              |
| Electrical connection           | Cable with connector, M12 × 1                                       |
| Cable quality                   | Ø 3 mm, Gray, Lif9Y-11Y, PUR, 0.3 m                                 |
|                                 | Suited for E-ChainSystems® acc. to manufacturers declaration H1063M |
| Core cross-section              | 3 x 0.14 mm <sup>2</sup>                                            |
| <b>Environmental conditions</b> |                                                                     |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <p>The diagrams illustrate the mounting of the sensor into a channel. The first diagram shows the sensor being inserted. The second diagram shows the sensor fully seated, with dimensions A, B, C, D, G, N, S, and W labeled. The third diagram shows the sensor being secured with a screw. The fourth diagram shows the sensor being secured with a screw. The fifth diagram shows the sensor being secured with a screw. The sixth diagram shows the sensor being secured with a screw. The seventh diagram shows the sensor being secured with a screw. The eighth diagram shows the sensor being secured with a screw.</p> | Distance D          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3 x B               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Distance W          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3 x Sn              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Distance S          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.5 x B             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Distance G          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6 x Sn              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Distance N          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2 x Sn              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Distance A          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1 x Sn              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Distance C          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2 x Sn              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Width active area B |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 8 mm                |

## Accessories

MW-Q4.7/Q5.5

6945013

Mounting bracket for rectangular Q4.7  
or Q5.5; material VA 1.4401

