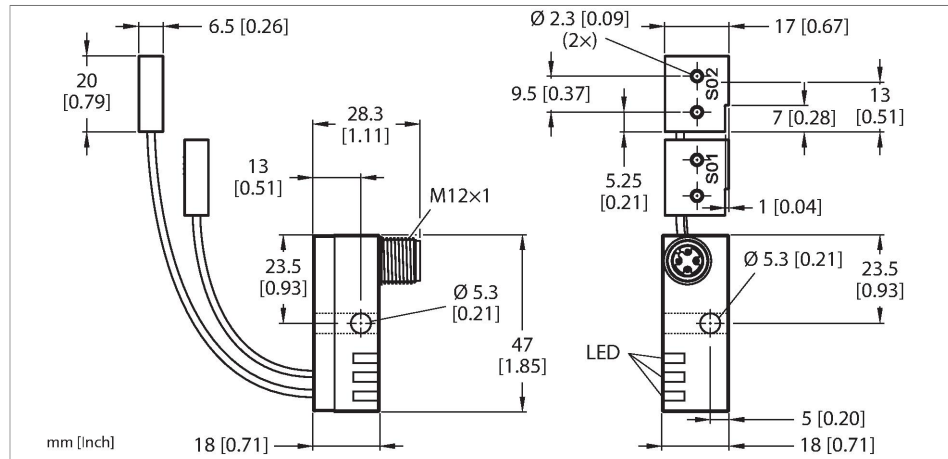


# NI2-Q6.5-AP6-0.15-FS4.4X3/S304 Inductive Sensor – Monitoring Kit for Power Clamps



## Technical data

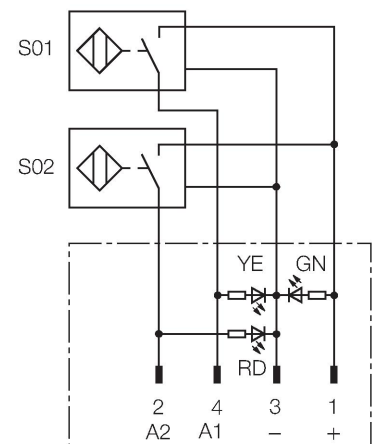
|                 |                                                                                                                                                                                                                         |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type            | NI2-Q6.5-AP6-0.15-FS4.4X3/S304                                                                                                                                                                                          |
| ID              | 1650074                                                                                                                                                                                                                 |
| Special version | S304 Corresponds to: 2 x Ni./Bi.-...-AP(N)6/S34. Function for DeviceNet. Defined length at connector FS4.4/FS4.4K or FSF5.5/FSF5.5K (with PE connection) or FS4.4X3. Example for order : Ni2-Q6.5-AP6-0.1-FSF4.4X3/S304 |

| General data                     |                                                       |
|----------------------------------|-------------------------------------------------------|
| Rated switching distance         | 2 mm                                                  |
| Mounting conditions              | Non-flush                                             |
| Secured operating distance       | $\leq (0.81 \times S_n)$ mm                           |
| Correction factors               | St37 = 1; Al = 0.7; stainless steel = 0.75; Ms = 0.45 |
| Repeat accuracy                  | $\leq 2 \%$ of full scale                             |
| Temperature drift                | $\leq \pm 10 \%$                                      |
| 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                  | $\leq 20$ 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                                          |

## Features

- Q6.5 power block with two connected sensors and LEDs
- Relocatable block 0°...90°, with cross drilling for flexible cable routing
- Plastic, PBT-GF20-V0
- Resistant to magnetic fields (weld-resistant), for DC and AC fields up to 100 mT
- 2 x NO contact, PNP output
- DC 4-wire, 10...30 VDC

## Wiring diagram



## Functional principle

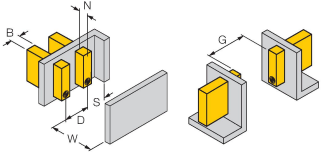
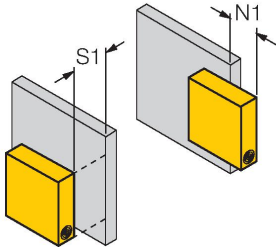
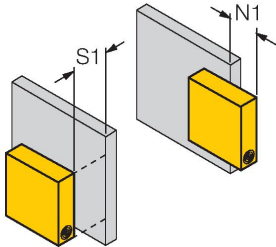
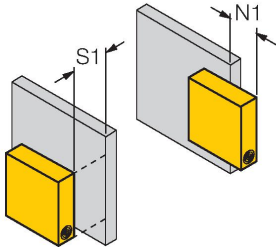
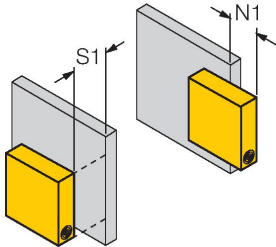
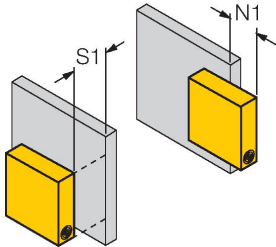
TURCK offers special monitoring kits, consisting of two miniature sensors, as a convenient solution for "Open/Closed" detection on pneumatic power clamps. This product line provides almost unlimited combination possibilities, comprising four different power

## Technical data

blocks and over 40 different modular sensor types.

|                                        |                                            |
|----------------------------------------|--------------------------------------------|
| Wire break/reverse polarity protection | Complete                                   |
| Output function                        | 4-wire, NO contact, PNP                    |
| Smallest operating current             | $\geq 1$ mA                                |
| Switching frequency                    | 0.03 kHz                                   |
| <b>Mechanical data</b>                 |                                            |
| Design                                 | Monitoring kit for power clamps, Q6,5      |
| Dimensions                             | 47 x 18 x 18 mm                            |
| Housing material                       | Plastic, PBT-GF20-V0                       |
| Active area material                   | Plastic, PP GR-15                          |
| Electrical connection                  | Connector, M12 x 1                         |
| Cable quality                          | Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.15 m       |
| Core cross-section                     | 3 x 0.08 mm <sup>2</sup>                   |
| Litz wire                              | 40 x 0.05 mm                               |
| <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 |
| Power-on indication                    | LED, Green                                 |
| Switching state                        | 2 x LEDs, Yellow/red                       |
| Included in delivery                   | Screw M5 x 25 DIN 912                      |

## Mounting instructions

| Mounting instructions/Description                                                                                                                                                                                                              |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
|                                                                                                                                                             | 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              |
|                                                                                                                                                             | Width active area B |
|                                                                                                                                                                                                                                                | 6.5 mm              |
| <p>Please note, non-flush mounting of this sensor is obligatory.</p> <p>The following conditions allow semi-flush mounting:</p> <p>N1 = 0 mm and S1 = 1 mm or<br/>N1 = 1 mm and S1 = 0 mm<br/>These values apply for mounting in aluminium</p> |                     |

N1 = 0 mm and S1 = 5 mm or  
N1 = 5 mm and S1 = 0 mm  
These values apply for mounting in St37.

Wiring accessories

| Dimension drawing | Type          | ID      |  |
|-------------------|---------------|---------|--|
|                   | RKC4.4T-2/TEL | 6625013 |  |

Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

