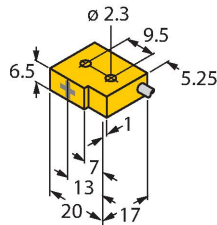


# NI2-Q6.5-AP6/S34 Inductive Sensor – Resistant to Magnetic Fields



## Features

- Rectangular, height 6.5 mm
- Active face, lateral
- Plastic, PP GR-20
- Resistant to magnetic fields (weld resistant), for DC and AC fields
- 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 purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Magnetic field sensors incorporate a special ferrite core making them immune to magnetic AC and DC fields. Hence, they can be applied in welding systems.

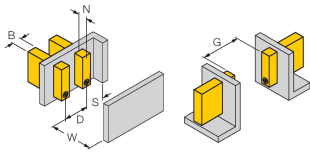
## Technical data

|                                        |                                                       |
|----------------------------------------|-------------------------------------------------------|
| Type                                   | NI2-Q6.5-AP6/S34                                      |
| ID                                     | 1650023                                               |
| Special version                        | S34 Corresponds to:Resistant to magnetic fields       |
| <b>General data</b>                    |                                                       |
| 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 %                                              |
| <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                        | 3-wire, NO contact, PNP                               |
| Switching frequency                    | 0.03 kHz                                              |
| <b>Mechanical data</b>                 |                                                       |
| Design                                 | Rectangular, Q6,5                                     |
| Dimensions                             | 20.2 x 17.2 x 6.5 mm                                  |

Technical data

|                          |                                            |
|--------------------------|--------------------------------------------|
| Housing material         | Plastic, PP GR-20                          |
| Active area material     | PP GR-20                                   |
| Electrical connection    | Cable                                      |
| Cable quality            | Ø 2 mm, Gray, Lif9Y-11Y, PUR, 2 m          |
| Core cross-section       | 3 x 0.08 mm <sup>2</sup>                   |
| Litz wire                | 40 x0.05 mm                                |
| 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 |

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  |
|                                                                                     |                     |         |