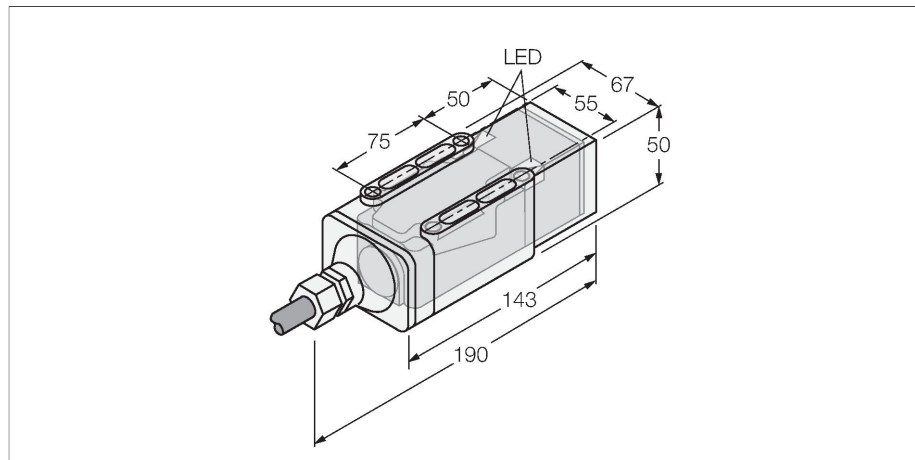


# NI35-CP40-VP4X2/S369-F 30M

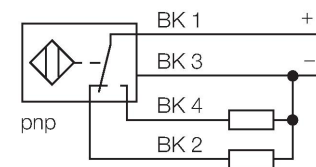
## Inductive Sensor – For Underwater Applications



### Features

- Rectangular, height 67 mm
- UV and ozone resistance
- Plastic, Ultem
- Sensor potted in the housing
- Protection class IP68, 50 m water column
- DC 4-wire, 10...65 VDC
- Changeover 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

|                                           |                                                                                                                                             |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                      | NI35-CP40-VP4X2/S369-F 30M                                                                                                                  |
| ID                                        | 1569425                                                                                                                                     |
| Special version                           | S369 corresponds to:<br>Ni / Bi...-CP40-.../S369-F o. T: with XX<br>m ÖLFLEX rugged 215C 4x0,5 sw1-sw4<br>in SG40/2 potted (F=Front; T=Top) |
| <b>General data</b>                       |                                                                                                                                             |
| Rated switching distance                  | 35 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;<br>Ms = 0.4                                                                                      |
| Repeat accuracy                           | $\leq 2$ % of full scale                                                                                                                    |
| Temperature drift                         | $\leq \pm 10$ %                                                                                                                             |
| Hysteresis                                | 3...15 %                                                                                                                                    |
| <b>Electrical data</b>                    |                                                                                                                                             |
| Operating voltage                         | 10...65 VDC                                                                                                                                 |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                                                                                                        |
| DC rated operational current              | $\leq 200$ mA                                                                                                                               |
| No-load current                           | 15 mA                                                                                                                                       |
| Residual current                          | $\leq 0.1$ mA                                                                                                                               |
| Isolation test voltage                    | $\leq 0.5$ kV                                                                                                                               |
| Short-circuit protection                  | yes / Cyclic                                                                                                                                |
| Voltage drop at $I_o$                     | $\leq 1.8$ V                                                                                                                                |
| Wire breakage/Reverse polarity protection | yes / Complete                                                                                                                              |
| Output function                           | 4-wire, Complementary contact, PNP                                                                                                          |
| Insulation class                          | □                                                                                                                                           |
| Switching frequency                       | 0.15 kHz                                                                                                                                    |

Technical data

| Mechanical data          |                                         |
|--------------------------|-----------------------------------------|
| Design                   | Rectangular, CP40                       |
| Dimensions               | 190 x 67 x 50 mm                        |
| Housing material         | Plastic, Ultem                          |
| Active area material     | Plastic, Ultem                          |
| Electrical connection    | Cable                                   |
| Cable quality            | Ø 6.6 mm, Ölflex rugged 215C, TPE, 30 m |
| Core cross-section       | 4 x 0.5 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         | IP68                                    |
| Power-on indication      | 2 × LEDs, Green                         |
| Switching state          | 2 × LEDs, Yellow                        |

Mounting instructions

# Mounting instructions/Description

The image contains two isometric diagrams illustrating the mounting of the CP40 sensor. The top diagram shows the sensor (a yellow cube with a circular logo) mounted on a grey L-shaped bracket. Dimensions are indicated: 'N' is the distance from the top edge of the bracket to the top of the sensor; 'D' is the distance between the two sensors; 'S' is the distance from the front edge of the bracket to the front of the sensor; and 'W' is the distance from the side edge of the bracket to the side of the sensor. The bottom diagram shows the sensor mounted in a grey U-shaped channel. Dimensions are indicated: 'G' is the distance from the side edge of the channel to the side of the sensor; and 'B' is the width of the channel at the base.

|            |         |
|------------|---------|
| Distance D | 4.5 x B |
|------------|---------|

|            |        |
|------------|--------|
| Distance W | 3 x Sn |
|------------|--------|

|            |         |
|------------|---------|
| Distance S | 1.5 x B |
|------------|---------|

|            |        |
|------------|--------|
| Distance G | 6 x Sn |
|------------|--------|

|            |       |
|------------|-------|
| Distance N | 1 x B |
|------------|-------|

|                   |       |
|-------------------|-------|
| Width active area | 40 mm |
| B                 |       |