



ENGLISH

**Datasheet**

# RS PRO INDUCTIVE PROXIMITY SENSORS

Stock No: 2066143





## Detailed technical data

### Features

|                          |   |
|--------------------------|---|
| Housing                  | Cylindrical thread design   |
| Housing                  | Short-body  |
| Thread size              | M18 x 1   |
| Diameter                 | Ø 18 mm   |
| Sensing range $S_n$      | 8 mm  |
| Safe sensing range $S_a$ | 6.48 mm   |
| Installation type        | Quasi-flush <sup>1)</sup>   |
| Switching frequency      | 1,000 Hz  |
| Connection type          | Cable, 3-wire, 2 m  |
| Switching output         | PNP   |
| Output function          | NO  |
| Electrical wiring        | DC 3-wire   |
| Enclosure rating         | IP68 <sup>2)</sup><br>IP69K <sup>3)</sup>   |
| Special features         | Resistant against coolant lubricants, Visual adjustment indicator                     |
| Special applications     | Zones with coolants and lubricants, Mobile machines, Difficult application conditions |

<sup>1)</sup> When installed in conductive materials, the sensors must protrude by distance E (E = 2 mm).

<sup>2)</sup> According to EN 60529.

<sup>3)</sup> According to ISO 20653:2013-03.

### Mechanics/electronics

|                               |                                   |
|-------------------------------|-----------------------------------|
| Supply voltage                | 10 V DC ... 30 V DC               |
| Ripple                        | ≤ 10 %                            |
| Voltage drop                  | ≤ 2 V <sup>1)</sup>               |
| Current consumption           | 10 mA <sup>2)</sup>               |
| Hysteresis                    | 3 % ... 20 %                      |
| Reproducibility               | ≤ 2 % <sup>3)</sup> <sup>4)</sup> |
| Temperature drift (of $S_r$ ) | ± 10 %                            |

|                                   |  |
|-----------------------------------|--|
| EMC                               | According to EN 60947-5-2  |
| Continuous current I <sub>a</sub> | ≤ 200 mA   |
| Cable material                    | PUR  |
| Short-circuit protection          | ✓  |
| Reverse polarity protection       | ✓  |
| Power-up pulse protection         | ✓  |
| Shock and vibration resistance    | 100 g / 2 ms / 500 cycles; 150 g / 1 Mio cycles; 10 Hz ... 55 Hz / 1 mm; 55 Hz ... 500 Hz / 60 g |
| Ambient operating temperature     | -40 °C ... +100 °C   |
| Housing material                  | Stainless steel V2A, DIN 1.4305 / AISI 303   |
| Sensing face material             | Plastic, LCP   |
| Housing length                    | 40 mm  |
| Thread length                     | 35 mm  |
| Tightening torque, max.           | Typ. 90 Nm <sup>5)</sup>   |
| Items supplied                    | Mounting nut, V2A stainless steel, with locking teeth (2x)                                       |
| Protection class                  | II <sup>6)</sup>   |
| UL File No.                       | E181493  |

1) At I<sub>max</sub>.

2) Without load.

3) U<sub>b</sub> and T<sub>a</sub> constant.

4) Of S<sub>r</sub>.

5) Valid if toothed side of nut is used.

6) Reference voltage DC 50 V.

### Safety-related parameters

|                   |             |
|-------------------|-------------|
| MTTF <sub>D</sub> | 1,971 years |
| DC <sub>avg</sub> | 0%          |

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### Reduction factors

|                            |  |
|----------------------------|--|
| Note                       | The values are reference values which may vary |
| St37 steel (Fe)            | 1  |
| Stainless steel (V2A, 304) | Approx. 0.55                                   |
| Aluminum (Al)              | Approx. 0.24                                   |
| Copper (Cu)                | Approx. 0.19                                   |
| Brass (Br)                 | Approx. 0.24                                   |

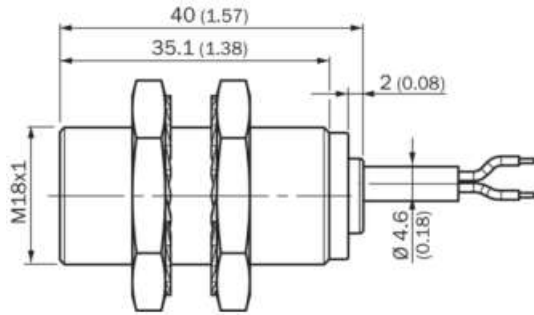
### Installation note

|        |                                       |
|--------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
| A      | 9 mm                                  |
| B      | 18 mm                                 |
| C      | 18 mm                                 |
| D      | 24 mm                                 |
| E      | 2 mm                                  |
| F      | 64 mm                                 |



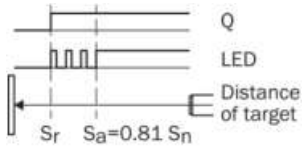
## Dimensional drawing (Dimensions in mm (inch))

Short-body housing, cable, flush



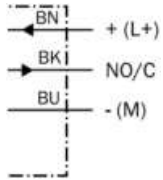
## Adjustments

Installation aid



## Connection diagram

Cd-452



## Instruction for installation

Quasi-flush installation



## Operating reserve

Response diagram

Distance in mm (inch)

