

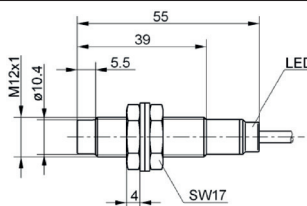
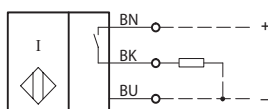
## Inductive Proximity Switch

### Series M12

Description **KIN-M12PS/004-KL2I**

Article number **6532904002**

#### Wiring Diagram



#### Identifying characteristics in accordance with EN 60947-5-2

| Electrical data                           |           |                                                                                                    |
|-------------------------------------------|-----------|----------------------------------------------------------------------------------------------------|
| <b>Sensor operation (delivery status)</b> |           |                                                                                                    |
| Rated operating distance                  | $S_n$     | 4 mm                                                                                               |
| Standard target                           |           | 12 mm x 12 mm, t = 1 mm, material: FE360                                                           |
| Real sensing distance                     | $S_r$     | 3,6 ... 4,4 mm                                                                                     |
| Assured operating distance                | $S_a$     | 0 ... 3,2 mm                                                                                       |
| Switching element function                |           | DC, N.O.                                                                                           |
| Repeat accuracy                           | R         | ≤ 5 %                                                                                              |
| Differential travel (hysteresis)          | H         | ≈ 8 %                                                                                              |
| Rated operational voltage                 | $U_e$     | 12 - 24 V DC                                                                                       |
| Operational voltage range                 | $U_B$     | 10 - 30 V DC                                                                                       |
| Rated insulation voltage                  | $U_i$     | 75 V DC                                                                                            |
| Rated impulse withstand voltage           | $U_{imp}$ | 500 V                                                                                              |
| Voltage drop                              | $U_d$     | ≤ 2 V specification                                                                                |
| Utilization category                      |           | DC 13                                                                                              |
| Rated operational current                 | $I_e$     | 200 mA ±10 %                                                                                       |
| Minimum operating current                 | $I_m$     | 1 mA                                                                                               |
| Off-state current                         | $I_r$     | < 0,1 mA                                                                                           |
| No-load supply current                    | $I_o$     | < 10 mA                                                                                            |
| Switching element                         |           | permanent overload and s.c.p.                                                                      |
| Short-circuit protection                  |           | pulsed, current-limited and thermal                                                                |
| Frequency of operating cycles             | f         | 450 Hz                                                                                             |
| Mounting                                  |           | non flush                                                                                          |
| False polarity protection                 |           | yes                                                                                                |
| Time delay before availability            | $t_v$     | < 300 ms                                                                                           |
| <b>IO-Link operation</b>                  |           |  <b>IO-Link</b> |
| Rated operating voltage range             | $U_B$     | 18 - 30 V DC (typ. 24 V DC)                                                                        |
| Output                                    |           | IO-Link                                                                                            |
| Switching element function                |           | N.O. / N.C. parameterizable                                                                        |
| Repeat accuracy                           | R         | ≤ 5 % from the end value, $U_B$ and temperature at a constant level                                |
| No-load supply current                    | $I_o$     | < 15 mA                                                                                            |
| Serial output                             |           | Short-circuit proof                                                                                |
| False polarity protection                 |           | yes                                                                                                |

| IO-Link specification      |                        |
|----------------------------|------------------------|
| IO-Link Spec V 1.1         | compliant (yellow LED) |
| Speed                      | COM 2 38,4 kBaud       |
| Process data Device→Master | 8 bit                  |
| cycle time                 | 10 ms                  |

| Electromagnetic compatibility (EMC)     |               |
|-----------------------------------------|---------------|
| Sensor operation                        |               |
| Electromagnetic field test              | IEC 61000-4-3 |
| Electrostatic discharge test            | IEC 61000-4-2 |
| Electrical fast transient immunity test | IEC 61000-4-4 |
| Radiated disturbance field strength     | EN 55011      |
| IO-Link operation                       |               |
| acc. to EN 60947-5-7, EN 61131-9        |               |

| Mechanical Data         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| Front cap               | LCP, black                                                           |
| Enclosure               | brass, nickel plated                                                 |
| End cap                 | PA12, transparent                                                    |
| Ambient air temperature | -25 °C ... +70 °C                                                    |
| Type of protection      | IP67 / NEMA Type 1                                                   |
| Function indication     | LED, yellow                                                          |
| Degree of pollution     | 3 (Pollution of the sensing surface may decrease operating distance) |
| Termination type        | Cable 3 x 0,14 mm <sup>2</sup> x 2 m ±5 %, PUR - Outer jacket, black |
| For attachment          | 2 x hexagon nut (tightening torque ≤ 10 Nm) and 2 x toothed washer   |

| Product reliability (in acc. with DIN EN 61709 (SN 29500)) |             |
|------------------------------------------------------------|-------------|
| MTTF (at 40 °C)                                            | >1150 years |

| EU Conformity                                |  |
|----------------------------------------------|--|
| acc. to directive 2014/30/EU (EMC-Directive) |  |

| Approvals                                                                           |  |
|-------------------------------------------------------------------------------------|--|
|  |  |

| Notes                                                                                                 |  |
|-------------------------------------------------------------------------------------------------------|--|
| To be used with a class 2 power supply according to UL approval.                                      |  |
| Further data and information can be found at <a href="http://www.bernstein.eu">www.bernstein.eu</a> . |  |