



IM04-01BPSVR8K

IMM

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|----------------|----------|
| IM04-01BPSVR8K | 6058031 |

Other models and accessories → www.sick.com/IMM

Illustration may differ



Detailed technical data

Features

| | |
|--|--|
| Housing | Cylindrical thread design |
| Housing | Short-body |
| Thread size | M4 x 0.5 |
| Diameter | Ø 4 mm |
| Sensing range S_n | 1 mm |
| Safe sensing range S_a | 0.81 mm |
| Installation type | Flush |
| Switching frequency | 8,000 Hz |
| Connection type | Cable with connector M8, 3-pin, 0.2 m ¹⁾ |
| Switching output | PNP |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP67 ²⁾ |
| Items supplied | Mounting nut, V2A stainless steel (2x) Washer, V2A stainless steel, with locking teeth (2x) |

¹⁾ Do not bend below 0 °C.

²⁾ According to EN 60529.

Mechanics/electronics

| | |
|---------------------------------------|----------------------|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | ≤ 20 % ¹⁾ |
| Voltage drop | ≤ 2 V ²⁾ |
| Time delay before availability | ≤ 10 ms |
| Hysteresis | 1 % ... 10 % |

¹⁾ Of V_S .

²⁾ With $I_a = 100$ mA.

³⁾ Supply voltage U_B and constant ambient temperature T_a .

| | |
|---|--|
| Reproducibility | ≤ 2 % ³⁾ |
| Temperature drift (of S_r) | ± 10 % |
| EMC | EN 60947-5-2 IEC 61000-4-2: (Testlevel 2) IEC 61000-4-4: (Testlevel 3) |
| Continuous current I_a | ≤ 100 mA |
| Cable material | PUR |
| Cable diameter | Ø 2.6 mm |
| Short-circuit protection | ✓ |
| Reverse polarity protection | ✓ |
| Shock and vibration resistance | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| Ambient operating temperature | -25 °C ... +70 °C |
| Housing material | Stainless steel V2A, DIN 1.4305 / AISI 303 |
| Sensing face material | Plastic, POM |
| Housing length | 12 mm |
| Thread length | 9 mm |
| Tightening torque, max. | ≤ 0.8 Nm |
| UL File No. | NRKH.E191603 |

¹⁾ Of V_S.

²⁾ With I_a = 100 mA.

³⁾ Supply voltage U_B and constant ambient temperature T_a.

Safety-related parameters

| | |
|-------------------------------------|-----------|
| MTTF_D | 186 years |
| DC_{avg} | 0% |
| T_M (mission time) | 20 years |

Reduction factors

| | |
|-----------------------------------|--|
| Note | The values are reference values which may vary |
| Stainless steel (V2A, 304) | Approx. 0.8 |
| Aluminum (Al) | Approx. 0.5 |
| Copper (Cu) | Approx. 0.45 |
| Brass (Br) | Approx. 0.6 |

Installation note

| | |
|---------------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
| A | 0.5 mm |
| B | 1 mm |
| C | 4 mm |
| D | 3 mm |
| E | 0 mm |
| F | 8 mm |

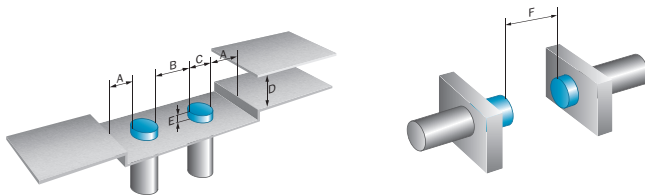
Classifications

| | |
|-------------------|----------|
| ECLASS 5.0 | 27270101 |
|-------------------|----------|

| | |
|-----------------------|----------|
| ECLASS 5.1.4 | 27270101 |
| ECLASS 6.0 | 27270101 |
| ECLASS 6.2 | 27270101 |
| ECLASS 7.0 | 27270101 |
| ECLASS 8.0 | 27270101 |
| ECLASS 8.1 | 27270101 |
| ECLASS 9.0 | 27270101 |
| ECLASS 10.0 | 27270101 |
| ECLASS 11.0 | 27270101 |
| ECLASS 12.0 | 27274001 |
| ETIM 5.0 | EC002714 |
| ETIM 6.0 | EC002714 |
| ETIM 7.0 | EC002714 |
| ETIM 8.0 | EC002714 |
| UNSPSC 16.0901 | 39122230 |

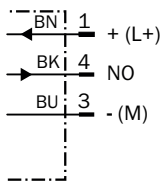
Installation note

Flush installation

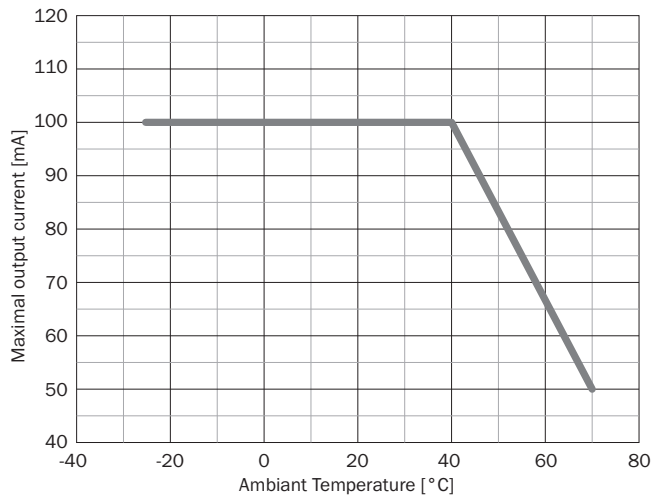


Connection diagram

Cd-002

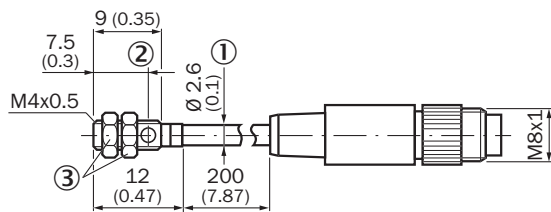


Temperature derating



Dimensional drawing (Dimensions in mm (inch))

Ultrashort, flush, cable with connector



- ① Connection
- ② Display LED
- ③ Fastening nuts (2 x); 6 mm hex, stainless steel

Recommended accessories

Other models and accessories → www.sick.com/IMM

| | Brief description | Type | Part no. |
|----------------------------|---|------------|----------|
| Plug connectors and cables | | | |
| | <ul style="list-style-type: none"> Connection type head A: Female connector, M8, 3-pin, straight Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm² | DOS-0803-G | 7902077 |
| | <ul style="list-style-type: none"> Connection type head A: Female connector, M8, 3-pin, angled Description: Unshielded Connection systems: Solder connection Permitted cross-section: ≤ 0.25 mm² | DOS-0803-W | 7902078 |
| | <ul style="list-style-type: none"> Connection type head A: Male connector, M8, 3-pin, straight Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0803-G | 6037322 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
| Terminal and alignment brackets | | | |
|  | Plastic (PA6), without mounting hardware | BEF-KH-M04 | 2101065 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U13-020VA1XLEAX | 2095860 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U13-050VA1XLEAX | 2095884 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U13-100VA1XLEAX | 2095885 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YG8U13-020VA1XLEAX | 2096165 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YG8U13-050VA1XLEAX | 2096166 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YG8U13-100VA1XLEAX | 2096209 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Male connector, M12, 3-pin, straight, A-coded • Signal type: Sensor/actuator cable • Cable: 2 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U13-020VA1M2A13 | 2096605 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M8, 3-pin, straight, A-coded • Connection type head B: Male connector, M12, 3-pin, straight, A-coded • Signal type: Sensor/actuator cable • Cable: 5 m, 3-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals | YF8U13-050VA1M2A13 | 2096606 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com