



IQ20-07BNSDPOS

IQV

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|----------------|----------|
| IQ20-07BNSDP0S | 6042044 |

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



Detailed technical data

Features

| | |
|--|---------------------------------------|
| Housing | Rectangular |
| Dimensions (W x H x D) | 20 mm x 32 mm x 8 mm |
| Sensing range S_n | 7 mm |
| Safe sensing range S_a | 5.67 mm |
| Installation type | Flush |
| Switching frequency | 150 Hz |
| Connection type | Cable with connector M8, 3-pin, 0.3 m |
| Switching output | NPN |
| Switching output detail | NPN |
| Output function | NO |
| Electrical wiring | DC 3-wire |
| Enclosure rating | IP67 ¹⁾ |

¹⁾ According to EN 60529.

Mechanics/electronics

| | |
|--|--------------------------------------|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | ≤ 10 % ¹⁾ |
| Voltage drop | < 2.5 V ²⁾ |
| Time delay before availability | ≤ 20 ms |
| Hysteresis | 1 % ... 15 % |
| Reproducibility | ± 5 % ³⁾ ⁴⁾ |
| Temperature drift (of S_n) | ± 10 % |
| EMC | According to EN 60947-5-2 |

¹⁾ Of V_S .

²⁾ At I_a max.

³⁾ Supply voltage U_B and constant ambient temperature T_a .

⁴⁾ Of S_r .

| | |
|--|----------------------------------|
| Continuous current I_a | ≤ 200 mA |
| Cable material | PUR |
| Short-circuit protection | ✓ |
| Shock and vibration resistance | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| Ambient operating temperature | -25 °C ... +70 °C |
| Housing material | Zinc diecast, GD Zn |
| Sensing face material | Plastic, PA12 |

1) Of V_S .

2) At I_a max.

3) Supply voltage U_B and constant ambient temperature T_a .

4) Of S_r .

Safety-related parameters

| | |
|-------------------------------------|-------------|
| MTTF_D | 1,080 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. 0.7 |
| Aluminum (Al) | Approx. 0.4 |
| Copper (Cu) | Approx. 0.3 |
| Brass (Br) | Approx. 0.4 |

Installation note

| | |
|---------------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
| A | 0 mm |
| B | 20 mm |
| C | 20 mm |
| D | 21 mm |
| E | 0 mm |
| F | 60 mm |

Certificates

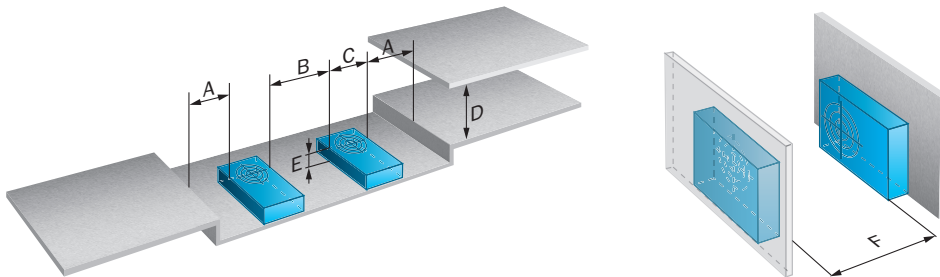
| | |
|-------------------------------------|---|
| EU declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |

Classifications

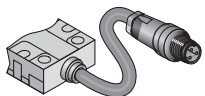
| | |
|---------------------|----------|
| ECLASS 5.0 | 27270101 |
| ECLASS 5.1.4 | 27270101 |
| ECLASS 6.0 | 27270101 |
| ECLASS 6.2 | 27270101 |
| ECLASS 7.0 | 27270101 |
| ECLASS 8.0 | 27270101 |

| | |
|-----------------------|----------|
| 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 |

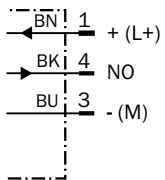
Installation note



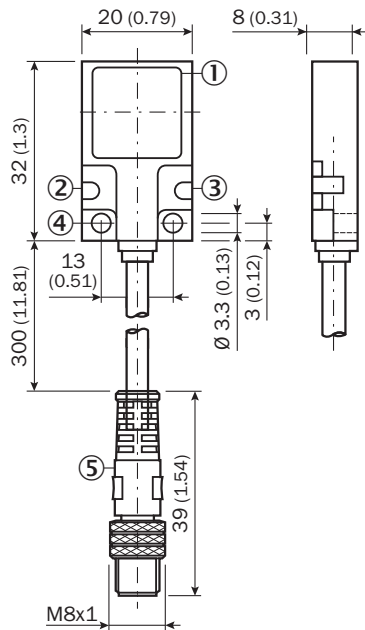
Connection type



Connection diagram Cd-002



Dimensional drawing IQ20, cable with M8 male connector, 3-pin





Dimensions in mm (inch)

- ① Sensing face
- ② operational status LED, green
- ③ LED output state, yellow
- ④ fixing hole
- ⑤ Connection

Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|--------------------|----------|
| connectors and cables | | | |
|  | <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: Uncontaminated zones, 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: 5 m, 3-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF8U13-050UA1XLEAX | 2094788 |

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:

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