



Illustration may differ



Ordering information

| Type | Part no. |
|----------------|----------|
| CQ28-10NPO-KW1 | 6084806 |

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

Detailed technical data

Features

| | |
|--|----------------------------------|
| Housing | Rectangular |
| Dimensions (W x H x D) | 28 mm x 46 mm x 5.5 mm |
| Sensing range S_n | 1 mm ... 10 mm |
| Safe sensing range S_a | 7.2 mm |
| Installation type | Non-flush |
| Switching frequency | 10 Hz |
| Connection type | Cable, 4-wire, 2 m ¹⁾ |
| Switching output | PNP |
| Output function | NC |
| Electrical wiring | DC 4-wire |
| Adjustment | |
| | Teach-in button |
| | Wire/pin |
| | Sensitivity |
| | Sensitivity |
| Enclosure rating | IP68 ²⁾ |

¹⁾ Do not bend below 0 °C.

²⁾ According to EN 60529.

Mechanics/electronics

| | |
|----------------------------|--------------------------|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | ≤ 10 % |
| Voltage drop | ≤ 2.5 V DC ¹⁾ |
| Current consumption | 12 mA ²⁾ |

¹⁾ At I_a max.

²⁾ Without load.

³⁾ Of S_r .

⁴⁾ Supply voltage U_B and constant ambient temperature T_a .

⁵⁾ In EMC critical applications, conducted interference levels may lie within the frequency range of the oscillator. This can cause changes to the output signal. (See operating instructions.).

| | |
|---|---|
| Time delay before availability | ≤ 300 ms |
| Reproducibility | ≤ 5 % ^{3) 4)} |
| Temperature drift (of S_r) | ± 10 % |
| EMC | According to EN 60947-5-2 ⁵⁾ |
| Continuous current I_a | ≤ 200 mA |
| Cable material | PVC |
| Conductor size | 0.14 mm ² |
| Short-circuit protection | ✓ |
| Shock and vibration resistance | 30 g, 11 ms / 10 ... 55 Hz, 1 mm |
| Ambient operating temperature | -20 °C ... +85 °C |
| Ambient temperature, storage | -40 °C ... +85 °C |
| Housing material | Plastic, PBT |
| Sensing face material | Plastic |
| UL File No. | NRKH.E191603 |

¹⁾ At I_a max.

²⁾ Without load.

³⁾ Of S_r.

⁴⁾ Supply voltage U_B and constant ambient temperature T_a.

⁵⁾ In EMC critical applications, conducted interference levels may lie within the frequency range of the oscillator. This can cause changes to the output signal. (See operating instructions.).

Safety-related parameters

| | |
|-------------------------------------|-------------|
| MTTF_D | 1,112 years |
| DC_{avg} | 0 % |
| T_M (mission time) | 20 years |

Reduction factors

| | |
|-----------------|--|
| Note | The values are reference values which may vary |
| Metal | 1 |
| Water | 1 |
| PVC | Approx. 0.4 |
| Oil | Approx. 0.25 |
| Glass | 0.6 |
| Ceramics | 0.5 |
| Alcohol | 0.7 |
| Wood | 0.2 ... 0.7 |

Installation note

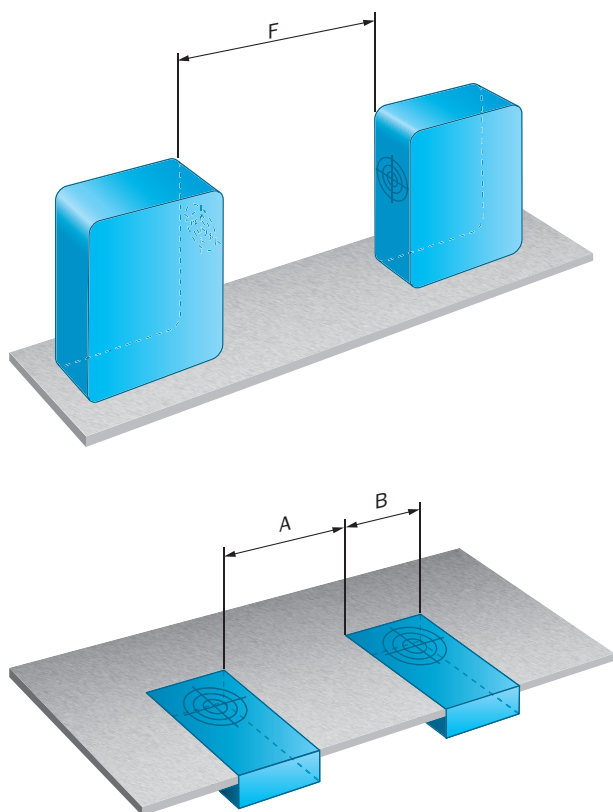
| | |
|---------------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
| A | 27.6 mm |
| B | 27.6 mm |
| F | 6 x S _n (max. 60 mm) |

Classifications

| | |
|-------------------|----------|
| ECLASS 5.0 | 27270102 |
|-------------------|----------|

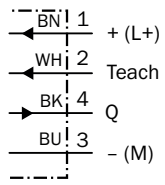
| | |
|-----------------------|----------|
| ECLASS 5.1.4 | 27270102 |
| ECLASS 6.0 | 27270102 |
| ECLASS 6.2 | 27270102 |
| ECLASS 7.0 | 27270102 |
| ECLASS 8.0 | 27270102 |
| ECLASS 8.1 | 27270102 |
| ECLASS 9.0 | 27270102 |
| ECLASS 10.0 | 27270102 |
| ECLASS 11.0 | 27270102 |
| ECLASS 12.0 | 27274201 |
| ETIM 5.0 | EC002715 |
| ETIM 6.0 | EC002715 |
| ETIM 7.0 | EC002715 |
| ETIM 8.0 | EC002715 |
| UNSPSC 16.0901 | 39122230 |

Installation note

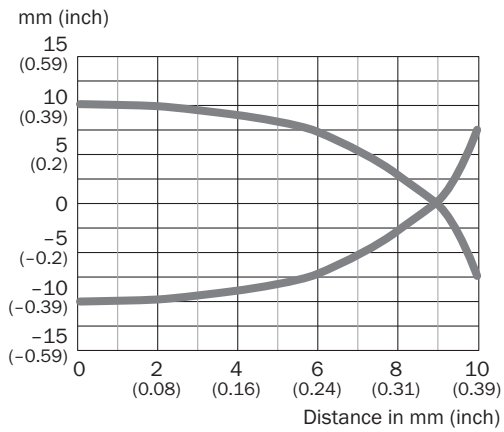


Connection diagram

Cd-023

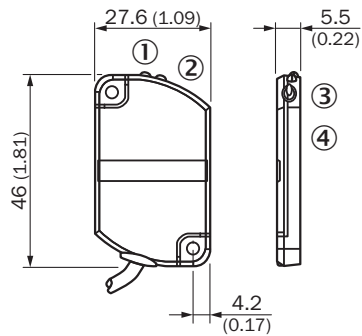


Response diagram



Dimensional drawing (Dimensions in mm (inch))

CQ28, cable



- ① LED indicator green
- ② LED indicator yellow
- ③ Teach-in button
- ④ Sensing face

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