



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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CM30-25NPP-EC1

CM

CAPACITIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|----------------|----------|
| CM30-25NPP-EC1 | 6058157 |

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

Detailed technical data

Features

| | |
|---|--|
| Housing | Cylindrical thread design |
| Thread size | M30 1.5 |
| Diameter | Ø 30 mm |
| Sensing range S_n | 4 mm ... 25 mm |
| Safe sensing range S_a | 19.13 mm ¹⁾ |
| Installation type | Non-flush |
| Switching frequency | 50 Hz |
| Connection type | Male connector M12, 4-pin |
| Switching output | PNP |
| Output function | Complementary |
| Output characteristic | Wire configurable |
| Electrical wiring | DC 4-wire |
| Adjustment | Potentiometer (Sensitivity) |
| Enclosure rating | IP68, IP69K ²⁾ |
| Authorizations | Ecolab, CE-conformity, cULus ³⁾ |

¹⁾ For flush mounting in electrically conductive materials $S_a = 0.8 \times S_r$ at temperatures $<0 \text{ }^\circ\text{C}$ and $>60 \text{ }^\circ\text{C}$.

²⁾ 1 m water depth / 60 min.

³⁾ P3-topax 19, P3-topax 56, P3-topax 66, P3-topactive DES.

Mechanics/electronics

| | |
|---|---------------------------------|
| Supply voltage | 10 V DC ... 36 V DC |
| Ripple | ≤ 10 % ¹⁾ |
| Voltage drop | ≤ 2 V DC ²⁾ |
| Current consumption | ≤ 12 mA ³⁾ |
| Time delay before availability | ≤ 200 ms |
| Hysteresis | 3 % ... 20 % |
| Reproducibility | ≤ 5 % ^{4) 5)} |
| Temperature drift (of S_r) | ± 10 % |
| EMC | According to EN 60947-5-2 |
| Continuous current I_a | ≤ 200 mA |
| Short-circuit protection | ✓ |
| Reverse polarity protection | ✓ |
| Power-up pulse protection | ✓ |
| Shock and vibration resistance | According to EN 60068 |
| Ambient operating temperature | -30 °C ... +85 °C ⁶⁾ |
| Ambient storage temperature | -40 °C ... +85 °C |
| Housing material | Plastic, PBT |
| Housing length | 74 mm |
| Thread length | 45.5 mm |
| Tightening torque, max. | ≤ 7.5 Nm |
| Items supplied | Mounting nuts (plastic) |
| UL File No. | NRKH.E191603 |

¹⁾ Of U_b.

²⁾ At I_a max.

³⁾ Without load.

⁴⁾ Of S_r.

⁵⁾ U_b and T_a constant.

⁶⁾ +120 °C short time, at the front of the sensor.

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

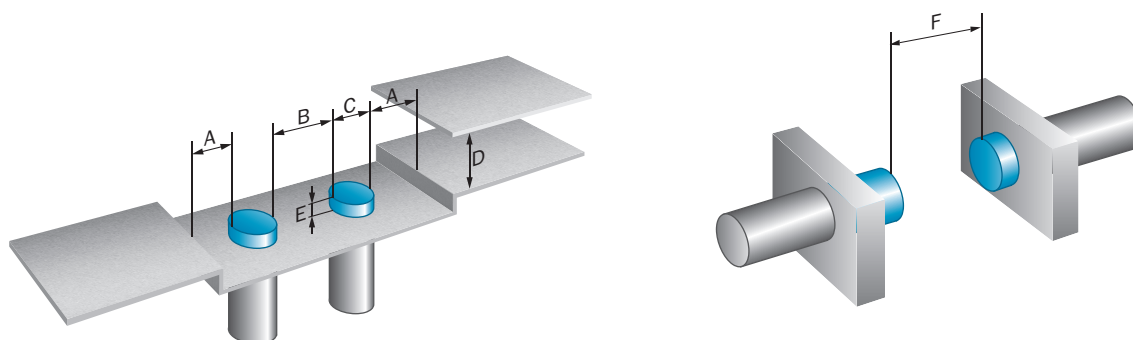
| | |
|---------------|---------------------------------------|
| Remark | Associated graphic see "Installation" |
|---------------|---------------------------------------|

| | |
|----------|---|
| A | 30 mm |
| B | 60 mm |
| C | 30 mm |
| D | 75 mm |
| E | 50 mm In critical distances, the sensor should be tested in the application |

Classifications

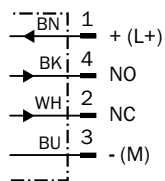
| | |
|-----------------------|----------|
| ECl@ss 5.0 | 27270102 |
| ECl@ss 5.1.4 | 27270102 |
| ECl@ss 6.0 | 27270102 |
| ECl@ss 6.2 | 27270102 |
| ECl@ss 7.0 | 27270102 |
| ECl@ss 8.0 | 27270102 |
| ECl@ss 8.1 | 27270102 |
| ECl@ss 9.0 | 27270102 |
| ETIM 5.0 | EC002715 |
| ETIM 6.0 | EC002715 |
| UNSPSC 16.0901 | 39122230 |

Installation note



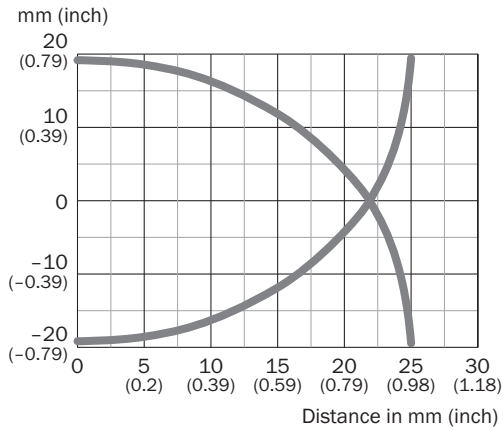
Connection diagram

cd-006



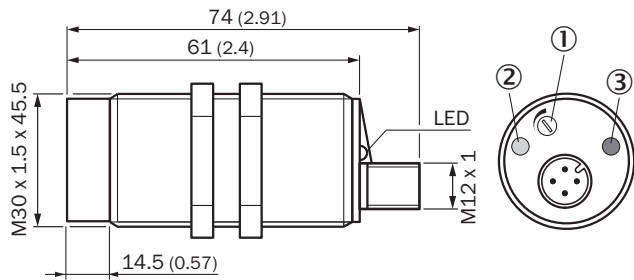
Characteristic curve

CM30, Non-flush installation



Dimensional drawing (Dimensions in mm (inch))



CM30, non-flush, connector



- ① Sensitivity control
- ② LED yellow: output active
- ③ LED green: operating indicator

Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|------------|----------|
| Mounting brackets and plates | | | |
|  | Mounting plate for M30 sensors, steel, zinc coated, without mounting hardware | BEF-WG-M30 | 5321871 |
|  | Mounting bracket for M30 sensors, steel, zinc coated, without mounting hardware | BEF-WN-M30 | 5308445 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
| Plug connectors and cables | | | |
|  | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF2A14-020UB3XLEAX | 2095607 |
|  | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF2A14-020VB3XLEAX | 2096234 |
|  | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YF2A14-050UB3XLEAX | 2095608 |
|  | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14-050VB3XLEAX | 2096235 |
|  | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YG2A14-020UB3XLEAX | 2095766 |
|  | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YG2A14-020VB3XLEAX | 2095895 |
|  | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YG2A14-050UB3XLEAX | 2095767 |
|  | Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YG2A14-050VB3XLEAX | 2095897 |
|  | Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded | DOS-1204-G | 6007302 |
|  | Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded | DOS-1204-W | 6007303 |
|  | Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded | STE-1204-G | 6009932 |
|  | Head A: male connector, M12, 4-pin, angled Head B: - Cable: unshielded | STE-1204-W | 6022084 |

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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.”

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