



Capacitive Proximity Sensors Cylindrical threaded housing, CM12

CM12-08EBP-KC1



Model Name > **CM12-08EBP-KC1**
Part No. > **6051030**



At a glance

- High electromagnetic compatibility
- Compact sensor with long sensing range of up to 8 mm
- Teach-button for teaching in the background and/or the object (also possible via an external cable)
- Dynamic Teach for teaching in the background and/or the object
- Automatic detection of NPN output or PNP output load
- Teach-in procedure allows you to switch between the NO and NC functions

Your benefits

- Its high electromagnetic compatibility prevents switching errors and increases machine availability
- Its long sensing range and compact design allow the sensor to be used in a number of different applications
- The compact sensor design saves installation space
- Fast sensor configuration possible using Teach-in pushbutton or external control cable
- The Dynamic Teach function can be used to familiarize the sensor with the object/medium. This enables more reliable detection and thus increases the machine's throughput
- Less variants (NO/NC, NPN/PNP, flush/non-flush) means that fewer parts need to be stored
- Since measurements can also be made through the wall of the tank or container, there is no need to drill holes, reducing installation time



Features

| | |
|---------------------------|-------------------------------|
| Design: | Cylindrical |
| Thread size: | M12 x 1 |
| Sensing range Sn: | 8 mm |
| Assured sensing range Sa: | 5.76 mm |
| Installation type: | Non-flush/flush ¹⁾ |
| Switching frequency: | Ca. 15 Hz |
| Output type: | NPN, PNP |
| Output function: | Programmable |
| Electrical wiring: | DC 4-wire |
| Enclosure rating:: | IP 68 ^{2) 3)} |
| Electrical connection: | Connector M12, 4-pin |
| Output characteristic: | Wire configurable |

Adjustment: Single teach-in button, Sensitivity cable

1) For flush mounting, Teach-in necessary 2) According to EN 60529 3) 1.3 m water depth/60 min

Mechanics/electronics

Housing material: Plastic
Supply voltage: 10 V DC ... 36 V
Residual ripple: $\leq 10\%$ ¹⁾
Voltage drop: $\leq 2.5\text{ V DC}$ ²⁾
Power consumption: $\leq 12\text{ mA}$ ³⁾
Time delay before availability: $\leq 120\text{ ms}$
Hysteresis: 3 % ... 20 %
Repeatability: $\leq 5\%$ ^{4) 5)}
EMC: According to EN 60947-5-2 ⁶⁾
Output current I_a : $\leq 200\text{ mA}$
Short-circuit protection: ✓
Reverse polarity protection: ✓
Power-up pulse protection: ✓
Shock and vibration resistance: 30 g, 11 ms/10 ... 55 Hz, 1 mm
Ambient temperature operation: $-20\text{ °C} \dots +85\text{ °C}$
Ambient storage temperature: $-40\text{ °C} \dots +85\text{ °C}$
Housing length: 84.7 mm
Thread length: 46.5 mm
Tightening torque, max.: $\leq 1\text{ Nm}$

1) Of U_b 2) At $I_a \text{ max}$ 3) Without load 4) Of S_r 5) U_b and T_a constant 6) For non-flush installation min. 1 x S_n and sensor grounded

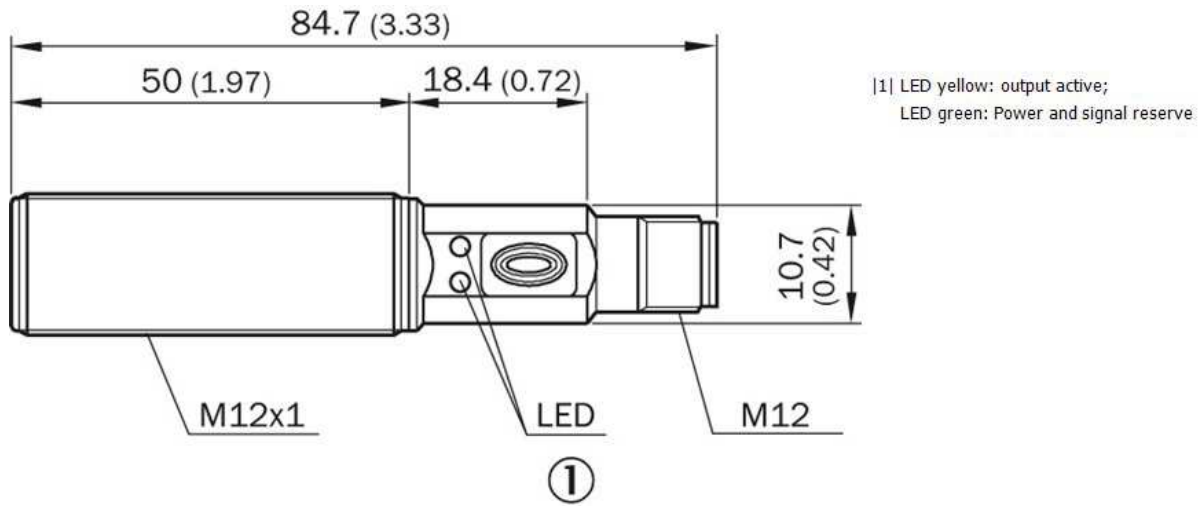
Reduction factors

Note: The values are reference values which may vary
Metal: 1
Water: 1
PVC: Ca. 0.4
Oil: Ca. 0.25

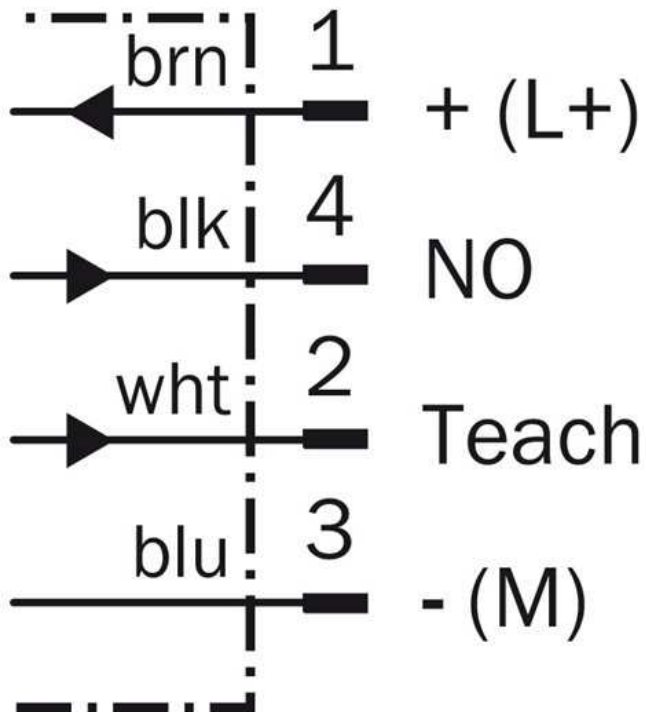
Installation note

Remark: Associated graphic see "Installation"

Dimensional drawing



Connection diagram



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