



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

Housing:	Cylindrical
Thread size:	M12 x 1
Sensing range Sn:	8 mm
Assured sensing range Sa:	5.76 mm
Installation type:	Non-flush/flush ¹⁾
Sensitivity adjustment:	Teach-in button External Teach-in
Switching frequency:	Ca. 15 Hz
Output type:	NPN, PNP
Output function:	Programmable
Electrical wiring:	DC 4-wire
Enclosure rating::	IP 68 ^{2) 3)}
Connection type:	Connector M12, 4-pin

Output characteristic:

Wire configurable

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

Mechanics/electronics

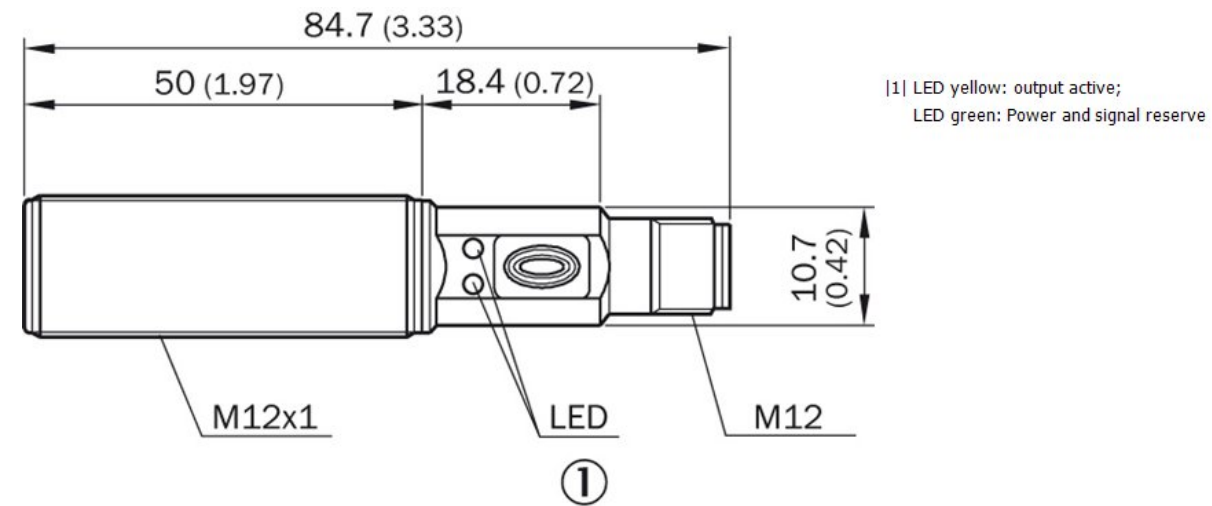
Supply voltage:	10 V DC ... 40 V DC
Ripple:	$\leq 10\%$ ¹⁾
Voltage drop:	$\leq 2.5\text{ V DC}$ ²⁾
Power consumption:	$\leq 12\text{ mA}$ ³⁾
Time delay before availability:	$\leq 120\text{ ms}$
Hysteresis:	3 % ... 20 %
Repeatability:	$\leq 5\%$ ⁴⁾ ⁵⁾
EMC:	According to EN 60947-5-2 ⁶⁾
Output current I_a :	$\leq 200\text{ mA}$
Short-circuit protection:	✓
Reverse polarity protection:	✓
Power-up pulse protection:	✓
Shock/vibration:	30 g, 11 ms/10 ... 55 Hz, 1 mm
Ambient operating temperature:	-20 °C ... 85 °C
Ambient storage temperature:	-40 °C ... 85 °C
Housing material:	PBT
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

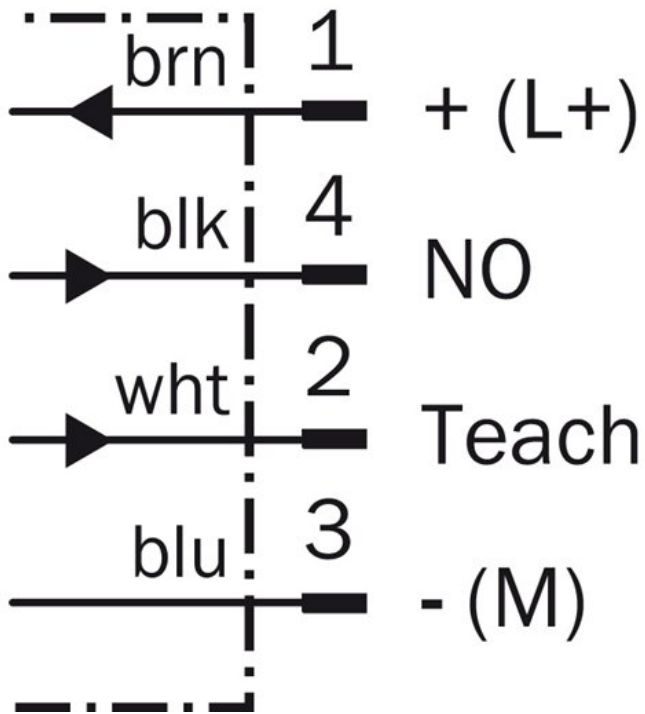
Reduction factors

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

Dimensional drawing



Connection diagram



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