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Capacitive Proximity Sensors
Cylindrical threaded housing, CM12

CM12-08EBP-KW1



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Cylindrical threaded housing, CM12

Model Name > CM12-08EBP-KW1
Part No. > 6051029





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:	Cable, 4-wire, 2 m [4)]
Output characteristic:	Wire configurable

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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 [4] Do not bend below 0 °C

Mechanics/electronics

Housing material:	Plastic
Supply voltage:	10 V DC ... 36 V
Residual ripple:	≤ 10 % [1]
Voltage drop:	≤ 2.5 V DC [2]
Power consumption:	≤ 12 mA [3]
Time delay before availability:	≤ 120 ms
Hysteresis:	3 % ... 20 %
Repeatability::	≤ 5 % [4] [5]
EMC:	According to EN 60947-5-2 [6]
Output current Ia:	≤ 200 mA
Cable material:	PVC
Conductor cross-section:	0.34 mm²
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 °C ... +85 °C
Ambient storage temperature:	-40 °C ... +85 °C
Housing length:	84.7 mm
Thread length:	46.5 mm
Tightening torque, max.:	≤ 1 Nm

[1] Of Ub [2] At I_a max [3] Without load [4] Of Sr [5] Ub and Ta constant [6] For non-flush installation min. 1 x Sn and sensor grounded

Reduction factors

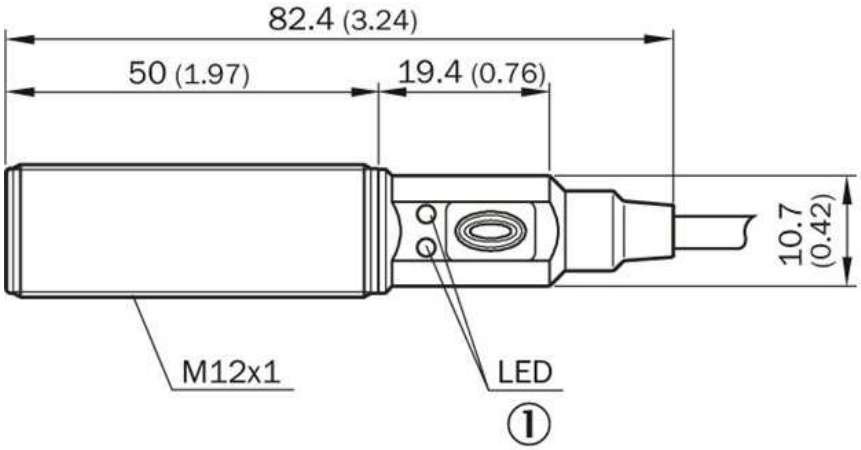
Note:	The values are reference values which may vary
Metal:	1
Water:	1
PVC:	Ca. 0.4
Oil:	Ca. 0.25

Installation note

Remark:	Associated graphic see "Installation"

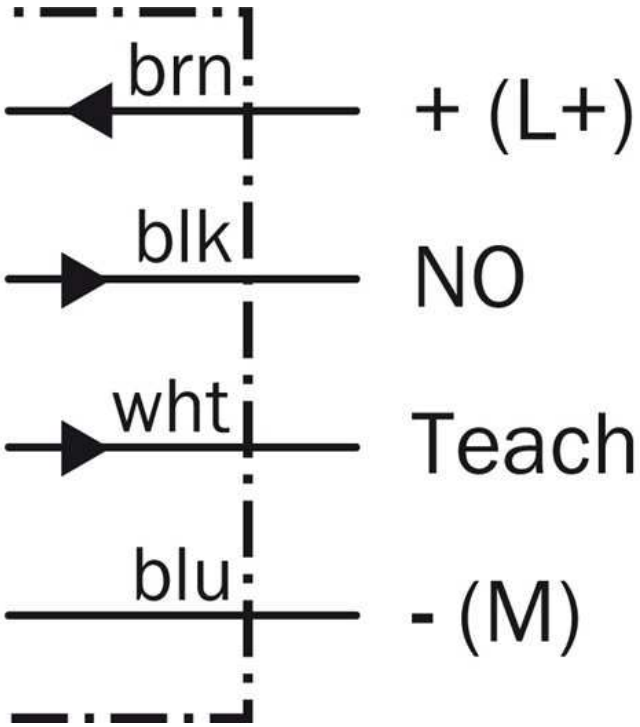
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Dimensional drawing



|1| LED yellow: output active;
LED green: Power and signal reserve

Connection diagram



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