

# Capacitive sensor

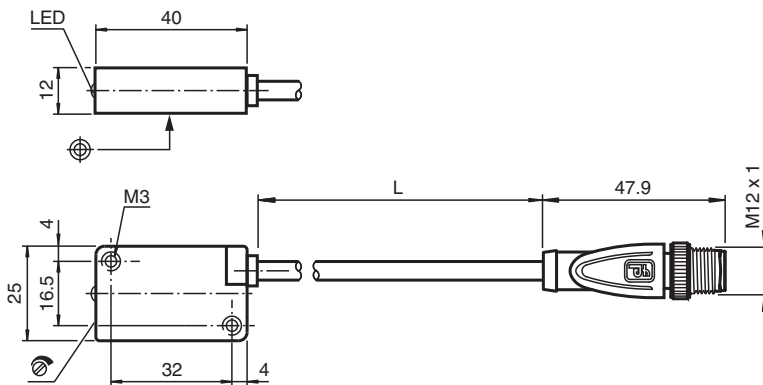
## CBN15-F64-A2-1M-V1



- 15 mm non-flush
- Flat housing
- Switching distance adjustable between 2 mm ... 15 mm



### Dimensions



### Technical Data

General specifications		
Switching function		complementary
Output type		PNP
Rated operating distance	$s_n$	15 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 10.8 mm
Actual operating distance	$s_r$	13.5 ... 16.5 mm
Output type		4-wire
Nominal ratings		
Installation conditions		
B		15 mm
C		30 mm
F		45 mm / 60 mm
Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 100 Hz
Hysteresis	H	1 ... 10 % typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing $I_{max} \leq 500$ mA

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## Technical Data

Voltage drop	$U_d$	$\leq 2 \text{ V}$
Repeat accuracy	R	$\leq 1.5 \text{ mm}$
Operating current	$I_L$	0 ... 100 mA
Off-state current	$I_r$	0 ... 50 $\mu\text{A}$ typ. 5 $\mu\text{A}$
No-load supply current	$I_0$	$\leq 15 \text{ mA}$
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		941 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
Potentiometer		sensitivity adjustment
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
UL approval		cULus Listed Enclosure Type Rating: Type 1 Supply/Switching Voltage: 30 V DC Output Switching Current: 100 mA
CCC approval		CCC approval / marking not required for products rated $\leq 36 \text{ V}$
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Pollution degree		3
<b>Mechanical specifications</b>		
Connection type		fixed cable with plug
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67
Connector		
Threading		M12 x 1
Number of pins		4
Cable		
Cable diameter		4.8 mm $\pm$ 0.2 mm
Bending radius		> 10 x cable diameter
Material		PUR
Color		grey
Number of cores		4
Core cross section		0.34 mm <sup>2</sup>
Length	L	1 m
Tightening torque, housing screws		$\leq 2 \text{ Nm}$
Dimensions		
Height		12 mm
Width		25 mm
Length		40 mm
Note		Screw-in depth of housing screws, max. 8 mm

**Connection Assignment**



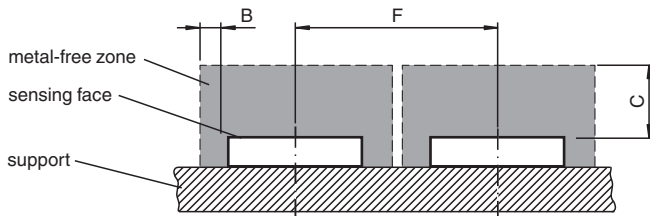
**Connection Assignment**



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

**Installation Conditions**



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