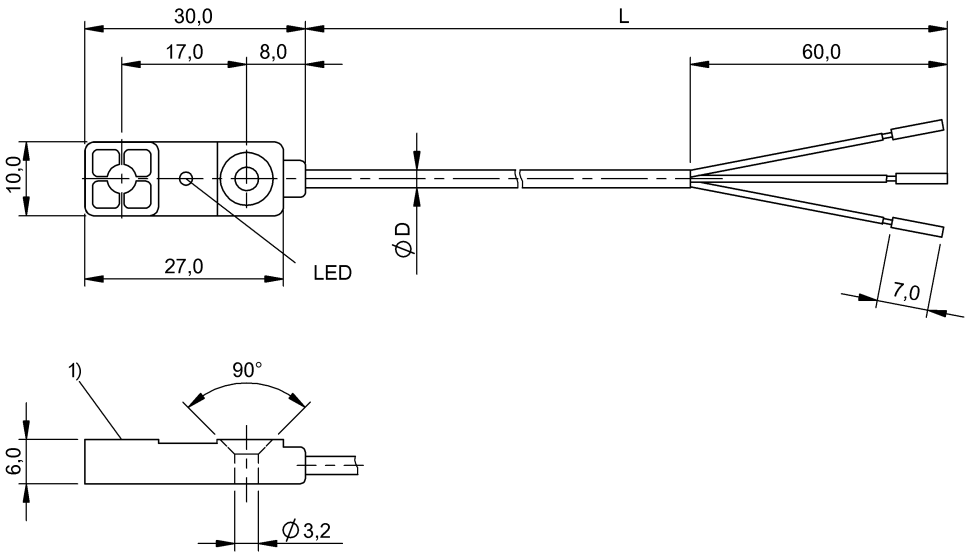
Inductive Sensors

BES R03KC-PSC20B-EV03-005
Order Code: BES01WN



1) Sensing surface

Basic features

Approval/Conformity	cULus CE EAC
Base type deviation	Housing material white
Basic standard	IEC 60947-5-2
Principle of operation	Inductive sensor

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Cable diameter D	3.00 mm
Cable length L	3 m
Conductor cross-section	0.14 mm²
Connection type	Cable, 3.00 m, PVC
Number of conductors	3
Polarity reversal protected	no
Protection against device mix-ups	no
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	0.04 µF
Min. operating current Im	0 mA
No-load current Io max., damped	6 mA
Operating voltage Ub	5...30 VDC
Output resistance Ra	Open collector
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	10 ms
Ripple max. (% of Ue)	10 %
Switching frequency	1000 Hz
Utilization category	DC -12
Voltage drop static max.	1.5 V

Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g_n, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Interface

Switching output	PNP normally open (NO)

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Material

Housing material	PA 6, GF30
Material jacket	PVC
Material sensing surface	PA 6, GF30/white

Mechanical data

Dimension	30 x 10 x 6 mm
Installation	for flush mounting
Size	30x10x6

Range/Distance

Assured operating distance Sa	1.6 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	2 mm
Real switching distance sr	2 mm
Repeat accuracy max. (% of Sr)	1.0 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

EMC: For operating conditions with noise sources
External protection circuit is required. Document 825345.
Flush: See installation instructions for inductive sensors with extended range 825357.
The sensor is functional again after the overload has been eliminated.
Installation: flush in steel: Sr = 1,15 x Sn, flush in aluminum: Sr = 0.95 x Sn.
When using an AC bridge, an electrolytic capacitor ≥10µF/40V parallel to Vs is recommended.

Wiring Diagrams (Schematic)