

1) Sensing surface $\varnothing 20$



Basic features

Approval/Conformity	CE UKCA WEEE
Basic standard	IEC 60947-5-2
Version	Inductive

Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection type	1. Switch position: Screw terminals
Polarity reversal protected	yes
Protection against device mix-ups	no
Short-circuit protection	no

Electrical data

Load capacitance max. at U_e	1 μ F
No-load current I_o max., undamped	20 mA
Output resistance R_a	2.2 k Ω + 2D + LED/4.7 k Ω + 2D
Rated insulation voltage U_i	75 V DC
Rated operating current I_e	400 mA
Rated operating voltage U_e DC	24 V
Rated short circuit current	100 A
Ready delay t_v max.	10 ms
Residual current I_r max.	130 μ A
Ripple max. (% of U_e)	15 %
Utilization category	DC -13
Voltage drop static max.	1.5 V

Environmental conditions

Ambient temperature	-25...70 $^{\circ}$ C
Contamination scale	3
IP rating	IP67

Functional safety

MTTF (40 $^{\circ}$ C)	1255 a
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Interface

Cable fitting, thread size	M16x1.5
Switching output	PNP normally open/normally closed (NO/NC)

Mechanical Cam Switches
BES 516-161-H3-L
Order Code: **BES017M**

BALLUFF

Material

Housing material	Aluminium, Anodized
Housing material, surface protection	Anodized
Material sensing surface	PA 12

Mechanical data

Connection cross-section	2.5 mm ²
Dimension	74 x 28 x 60.5 mm
Installation	for flush mounting
Tightening torque	3...4 Nm (M16x1.5)
Tightening torque clamping screw	0.8 Nm

Range/Distance

Assured operating distance Sa	1. Switch position: 5.6 mm
Hysteresis H max. (% of Sr)	15.0 %
Range	7 mm
Rated operating distance Sn	1. Switch position: 7 mm
Real switching distance sr	7 mm
Repeat accuracy max. (% of Sr)	5.0 %
Temperature drift max. (% of Sr)	10 %

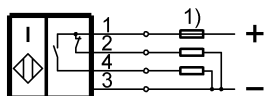
Remarks

Recommendation: After a short circuit check the device for proper function.

For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Wiring Diagrams



1) For SCP see electrical data