

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 $\mu$ F
No-load current $I_0$ max., undamped	20 mA
Output resistance $R_a$	2.2 k $\Omega$ + 2D + LED/4.7 k $\Omega$ + 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 $\mu$ 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 <sup>2</sup>
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 %

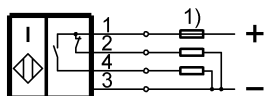
**Remarks**

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