



Display/Operation

Function indicator	yes
Power indicator	no

Electrical connection

Connection	M12x1-Male, 4-pole, A-coded
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at U_e	0.5 μ F
No-load current I_0 undamped max.	4 mA
Operating voltage U_b	10...30 VDC
Output resistance R_a	33.0 kOhm + D
Polarity reversal protected	yes
Protection class	II
Rated insulation voltage U_i	250 V DC
Rated operating current I_e	200 mA
Rated operating voltage U_e DC	24 V
Rated short circuit current	100 A
Ready delay t_v max.	15 ms
Repeat accuracy max. (% of S_r)	5.0 %
Residual current I_r max.	30 μ A
Residual ripple max. (% of U_e)	15 %
Switching frequency	5000 Hz
Utilization category	DC-13
Voltage drop static max.	2 V

Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms

Internet	www.balluff.com
Balluff Germany	+49 (0) 7158 173-0, 173-370
Balluff USA	1-800-543-8390
Balluff China	+86 (0) 21-50 644131

EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68

Functional safety

MTTF (40 °C)	830 a
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General data

Approval/Conformity	cULus CE EAC
Basic standard	IEC 60947-5-2

Material

Housing material	Brass
Material sensing surface	PBT
Surface protection	nickel plates

Mechanical data

Dimension	$\varnothing 12 \times 50$ mm
Installation	flush
Size	M12x1
Tightening torque	15 Nm

Output/Interface

Switching output	PNP normally open (NO)
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Range/Distance

Assured operating distance S_a	1.6 mm
Effective operating distance S_r	2 mm
Hysteresis H max. (% of S_r)	15.0 %

For definitions of terms, see main catalog Subject to change without notice [119765]	eCl@ss 9.1: 27-27-01-01 ETIM 6.0: EC002714 BES030K_0.2_2017-05-03	1(2)
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Inductive Sensors
BES 516-325-E5-Y-S4
Ordercode: BES030K



Rated operating distance S_n 2 mm
Temperature drift max. (% of S_r) 10 %

For further information about the 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.

Remarks

The sensor is functional again after the overload has been eliminated.

Connector view



Wiring Diagram

