



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
Scope of delivery	Lockwashers D9x0.5 (2x), Nut M5x0.5 (2x)

Display/Operation

Function indicator	no
Power indicator	no

Electrical connection

Cable diameter D	3.15 mm
Cable length L	5 m
Conductor cross-section	0.15 mm ²
Connection type	Cable, 5 m, Silicone
Electrical version	3-wire
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at U _e	0.5 µF
No-load current I _o max., damped	5 mA
No-load current I _o max., undamped	5 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	Open collector
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	100 mA
Rated operating voltage U _e DC	24 V
Rated short circuit current	100 A
Ready delay t _v max.	50 ms
Residual current I _r max.	50 µA
Ripple max. (% of U _e)	10 %
Switching frequency	1.5 kHz
Utilization category	DC -13
Voltage drop static max.	2 V

Environmental conditions

Ambient temperature	0...135 °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 55 Hz, amplitude 2 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	2280 a
--------------	--------

Interface

Switching output	NPN normally open (NO)
------------------	------------------------

Inductive Sensors
BES M05ED-NSD08B-ES05-T
Order Code: BES05RL

BALLUFF

Material

Housing material	1.4104 stainless steel
Material jacket	Silicone
Material sensing surface	Ceramic

Mechanical data

Dimension	Ø 5 x 27 mm
Installation	for flush mounting
Pressure rating max.	10 bar
Pressure rating, note	oil pressure rated
Size	M5x0.5
Tightening torque	1.5 Nm

Range/Distance

Assured operating distance Sa	0.58 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	0.8 mm
Repeat accuracy max. (% of Sr)	10 %
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

Derating $0^{\circ}\text{C} \leq T_a \leq 110^{\circ}\text{C}$: 100mA, 110°C Sealing of the thread with a sealing tape made of PTFE.

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

Correction factor for damping material cast iron: 0.89...1.05

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

