Inductive Sensors

BES M05ED-NSD08B-ES01-GS49-T
Order Code: BES05RJ

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	LED yellow
Power indicator	Green LED

Electrical connection

Cable diameter D	3.15 mm
Cable length L	1 m
Conductor cross-section	0.15 mm²
Connection	M8x1
Connection type	Cable with connector, 1 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 Ue	0.5 µF
No-load current Io max., damped	10 mA
No-load current Io max., undamped	10 mA
Operating voltage Ub	10...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.	50 ms
Residual current Ir max.	50 µA
Ripple max. (% of Ue)	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)

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°C≤Ta≤110°C: 100mA, 110°CPower indicator and function indicator in connector.
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.

Connector Drawings

Wiring Diagrams (Schematic)