

Inductive sensor

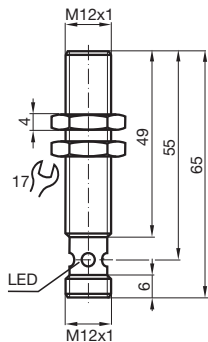
NBB4-12GM50-E2-V1-3G-3D



- Increased operating distance
- 4 mm flush
- ATEX-approval for zone 2 and zone 22



Dimensions



Technical Data

General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	s_n	4 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 3.24 mm
Reduction factor r_{AI}		0.45
Reduction factor r_{Cu}		0.35
Reduction factor r_{304}		0.7
Output type		3-wire

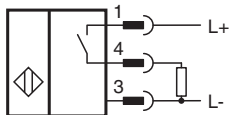
Nominal ratings

Operating voltage	U_B	10 ... 30 V DC
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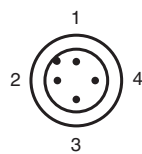
Technical Data

Switching frequency	f	0 ... 1000 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Operating current	I_L	0 ... 150 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.1 μ A at 25 °C
Off-state current $T_U = 40$ °C, switching element off		$\leq$
No-load supply current	I_0	≤ 15 mA
Time delay before availability	t_v	≤ 5 ms
Switching state indicator		Multihole-LED, yellow
Functional safety related parameters		
MTTF _d		1820 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
Standards		EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
Approvals and certificates		
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated ≤ 36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
Connection type		Connector plug M12 x 1 , 4-pin
Cable version		PBT
Housing material		brass, nickel-plated
Sensing face		PBT
Degree of protection		IP67
Equipment protection level Dc (tc)		
Special conditions		
Maximum permissible ambient temperature T_{Umax}		dependant of the load current I_L and the max. operating voltage U_{Bmax} Information can be taken from the following list.
General information		
Use in the hazardous area		see instruction manuals

Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Accessories

	BF 12	Mounting flange, 12 mm
	EXG-12	Quick mounting bracket with dead stop

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