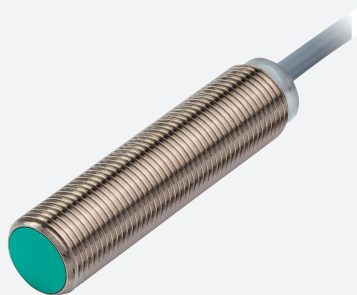


Inductive sensor

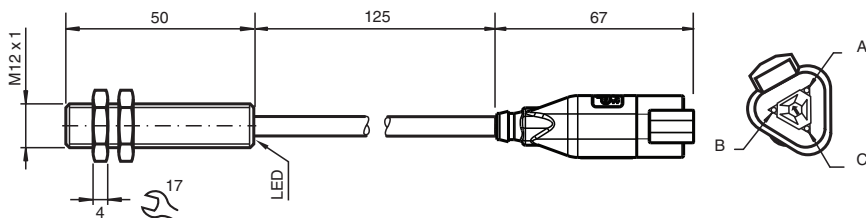
NBB4-12GM50-E0-M-150MM-3DT04



- 4 mm flush
- Extended temperature range
-40 ... +85 °C
- E1-Type approval
- Increased noise immunity 100 V/m
- With increased sealing, protection class
IP68 / IP69K
- Highly shock and vibration resistant
- 3-pin Deutsch connector (DT04)



Dimensions



Technical Data

General specifications		
Switching function		Normally open (NO)
Output type		NPN
Rated operating distance	s _n	4 mm
Installation		flush
Output polarity		DC
Assured operating distance	s _a	0 ... 3.24 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm
Reduction factor r _{Al}		0.45
Reduction factor r _{Cu}		0.35
Reduction factor r ₃₀₄		0.75
Reduction factor r _{Brass}		0.45
Output type		3-wire
Nominal ratings		
Operating voltage	U _B	5 ... 60 V
Switching frequency	f	0 ... 2500 Hz
Hysteresis	H	typ. 5 %

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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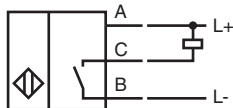
Singapore: +65 6779 9091
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PEPPERL+FUCHS

Technical Data

Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Inductive overvoltage protection		yes
Surge suppression		yes
Voltage drop	U_d	$\leq 2 \text{ V}$
Rated insulation voltage	U_{BIS}	60 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA typ. 6 μA at 25 °C
No-load supply current	I_0	$\leq 7 \text{ mA}$
Time delay before availability	t_v	$\leq 200 \text{ ms}$
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		1175 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
E1 Type approval		10R-04
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Cable connector Deutsch DT04 , 3-pin with PUR cable 125 mm
Core cross-section		3 x 0.75 mm ²
Housing material		brass, nickel-plated
Sensing face		PBT
Degree of protection		IP68 / IP69K
Connector		
Connection assembly		Deutsch connector DT04-3P-CE02 Deutsch wedge W3P Deutsch contact 1060-16-0622
Cable		
Length	L	L = 125 mm
Note		molded Connector

Connection



Wire colors

A	BN
B	BU
C	BK

Mounting

Interference immunity in accordance with
DIN ISO 11452-2: 100 V/m
Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO
7637-2: Pulse 1 2a 2b 3 a 3b 4 5
Severity level III III III III III III III
Failure criterion C A C A A A B

EN 61000-4-2: CD: 8 kV / AD: 15 kV
Severity level IV IV
EN 61000-4-3: 30 V/m (80...2500 MHz)
Severity level IV
EN 61000-4-4: 2 kV
Severity level III
EN 61000-4-6: 10 V (0.01...80 MHz)
Severity level III
EN 55011: Class A

Accessories

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

Release date: 2020-03-24 Date of issue: 2020-03-30 Filename: 916992_eng.pdf