

Inductive sensor

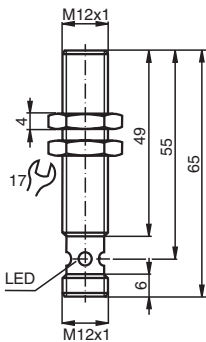
NBB4-12GM50-E2-V1-3G-3D



- Increased operating distance
- 4 mm flush
- ATEX-/IECEx-approvals for zone 2/22 (Ex ec/tc)
- Polarity reversal protected



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
Switching frequency	f	0 ... 1000 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing

Release date: 2025-02-26 Date of issue: 2025-02-26 Filename: 70126033_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

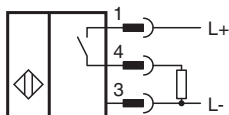
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

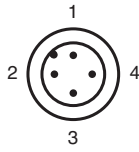
Technical Data

Voltage drop	U_d	$\leq 3 \text{ V}$
Operating current	I_L	0 ... 150 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.1 μA at 25 °C
Off-state current $T_U = 40 \text{ °C}$, switching element off		$\leq$
No-load supply current	I_0	$\leq 15 \text{ mA}$
Time delay before availability	t_v	$\leq 5 \text{ ms}$
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 IEC 60947-5-2
Approvals and certificates		
IECEX approval		
Equipment protection level Gc (ec)		IECEX TUR 21.0017X
Equipment protection level Dc (tc)		IECEX TUR 21.0018X
ATEX approval		
Equipment protection level Gc (ec)		TÜV 20 ATEX 8523 X
Equipment protection level Dc (tc)		TÜV 20 ATEX 8524 X
UL approval		cULus Listed, General Purpose
CCC approval		
Hazardous Location		2024322315005947 2024322315005860
Marine approval		DNVGL TAA0000160
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
Dimensions		
Length		49 mm
Diameter		12 mm
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)

Installation

Requirement for cable socket to achieve IP degree of protection

