

Inductive sensor

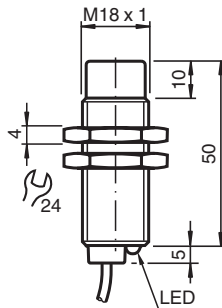
NBN12-18GM50-E3-M



- 12 mm non-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



Dimensions



Technical Data

General specifications		
Switching function		Normally closed (NC)
Output type		PNP
Rated operating distance	s_n	12 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	s_a	0 ... 9.72 mm
Reduction factor r_{Al}		0.5
Reduction factor r_{Cu}		0.4
Reduction factor r_{304}		0.7
Reduction factor r_{Brass}		0.5
Output type		3-wire
Nominal ratings		
Operating voltage	U_B	5 ... 60 V
Switching frequency	f	0 ... 1500 Hz
Hysteresis	H	type 5 %
Reverse polarity protection		reverse polarity protected

Release date: 2025-01-10 Date of issue: 2025-01-10 Filename: 240175_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

PF PEPPERL+FUCHS

Technical Data

Short-circuit protection		pulsing
Inductive overvoltage protection		yes
Surge suppression		yes
Voltage drop	U_d	≤ 2 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. 0.1 μ A at 25 °C
No-load supply current	I_0	≤ 7 mA
Time delay before availability	t_v	≤ 220 ms
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d		1085.5 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

UL approval		cULus Listed, General Purpose, Class 2 Power Source
CSA approval		cCSAus Listed, General Purpose, Class 2 Power Source
CCC approval		Certified by China Compulsory Certification (CCC)
E1 Type approval		10R-04

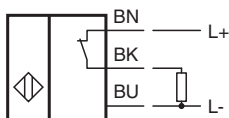
Ambient conditions

Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Connection type		cable
Housing material		brass, nickel-plated
Sensing face		PBT
Degree of protection		IP68 / IP69K
Cable		
Wire end ferrules		yes
Cable diameter		6 mm \pm 0.2 mm
Bending radius		> 6 x cable diameter
Material		PUR
Color		black
Number of cores		3
Core cross section		0.75 mm ²
Length	L	2 m
Mass		132 g
Dimensions		
Length		55 mm
Diameter		18 mm

Connection Assignment



Technical Features

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