

Inductive sensor

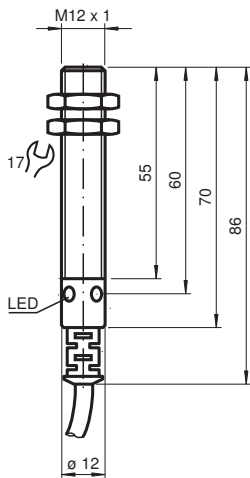
NCB4-12GM70-E3-M



- Comfort series
- 4 mm flush
- Increased operating distance
- Extended temperature range -40 ... +85 °C
- E1-Type approval
- Increased noise immunity 100 V/m



Dimensions



Technical Data

General specifications		
Switching function		Normally closed (NC)
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 _{Al}		0.45
Reduction factor r _{Cu}		0.4
Reduction factor r ₃₀₄		0.75
Nominal ratings		
Operating voltage	U _B	10 ... 60 V
Switching frequency	f	0 ... 1000 Hz

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

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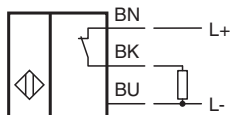
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Technical Data

Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	$\leq 3 \text{ V}$
Rated insulation voltage	U_{BIS}	60 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.1 μA
No-load supply current	I_0	$\leq 10 \text{ mA}$
Time delay before availability	t_v	$\leq 5 \text{ ms}$
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		1090 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		
Protection class		II
Rated insulation voltage	U_i	60 V
Rated impulse withstand voltage	U_{imp}	800 V
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
E1 Type approval		10R-04
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		cabl PUR , 2 m
Core cross-section		0.75 mm ²
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		PBT
Degree of protection		IP69K
Mass		120 g

Connection Assignment



Mounting

Emitted interference and interference immunity in accordance with motor vehicle directive 2006/28/EG (e1 Type approval)
Interference immunity in accordance with DIN ISO 11452-2:
Severity IV 100 V/m
Frequency band 200 MHz up to 2 GHz
Interference immunity to DIN ISO 11452-3:
Severity IV 200 V/m
Frequency band 0.15 MHz to 200 MHz
Mains-borne interference in accordance with ISO 7637-2:
Pulse 1 2a 2b 3a 3b 4 5
Severity level IV IV IV IV IV IV IV
Failure criterion C A C A A A C
EN 61000-4-2: CD: 8 kV / AD: 15 kV
 Severity level IV IV
EN 61000-4-3: 10 V/m (80...1000 MHz)
 Severity level III
EN 61000-4-4: 2 kV
 Severity level III
EN 61000-4-5: Supply line to line 0.5 kV
 Severity level I
EN 61000-4-6: 10 V (0.15...80 MHz)
 Severity level III
EN 55011: Class B

Accessories

	BF 12	Mounting flange, 12 mm
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