

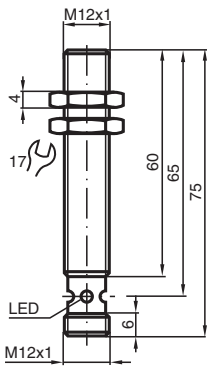


Inductive sensor NCB4-12GM60-B3-V1

- Comfort series
- Cylindrical
- NO/NC selectable
- On/Off delay (disconnectable)



Dimensions



Technical Data

General specifications

Switching function		Normally open/closed (NO/NC) programmable
Output type		AS-Interface
Rated operating distance	s_n	4 mm
Installation		flush
Assured operating distance	s_a	0 ... 3.24 mm
Actual operating distance	s_r	3.6 ... 4.4 mm typ. 4 mm
Reduction factor r_{AI}		0.23
Reduction factor r_{Cu}		0.21
Reduction factor r_{304}		0.7
Node type		Standard node
AS-Interface specification		V2.1
Required gateway specification		$\geq$ V2.1
Output type		2-wire

Nominal ratings

Operating voltage	U_B	26.5 ... 31.9 V via AS-i bus system
Switching frequency	f	0 ... 500 Hz

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

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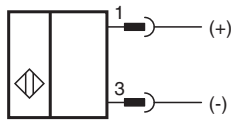
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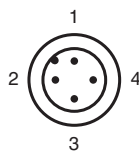
Technical Data

Hysteresis	H	1 ... 15 % typ. 5 %
Reverse polarity protection		reverse polarity protected
Voltage drop at I_L		
Voltage drop $I_L = 20 \text{ mA}$, switching element on	U_d	3.4 ... 5 V typ. 4.3 V
No-load supply current	I_0	$\leq 25 \text{ mA}$
Time delay before availability	t_v	$\leq 1000 \text{ ms}$
Switching state indicator		dual-LED, yellow
Error indicator		dual-LED, red
Functional safety related parameters		
MTTF _d		2140 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
CCC approval		CCC approval / marking not required for products rated $\leq 36 \text{ V}$
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Connector plug
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		PBT
Degree of protection		IP67
Connector		
Threading		M12 x 1
Number of pins		4
Dimensions		
Length		60 mm
Diameter		12 mm

Connection



Connection Assignment



Additional Information

Programming Instructions

Adress 00 preset, alterable
 via Busmaster
 or programming units
IO-Code 1
ID-Code 1

Data bit

Bit	Function
D0	Switching state
D1	not used
D2	not used
D3	not used

Parameter bit

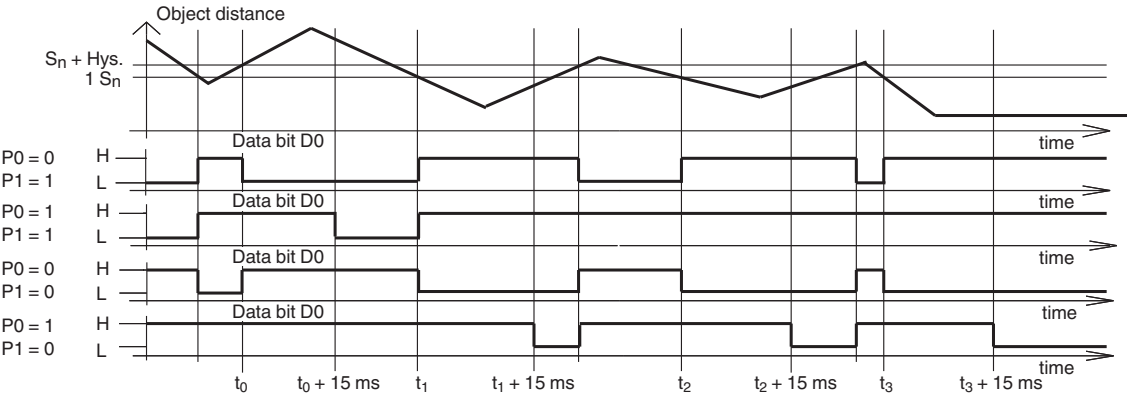
Bit	Function
P0	ON / Off delay activated* / deactivated
P1	Switching element function NO* / NC
P2	not used
P3	not used

*Standard setting

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Characteristic Curve

On/off delay:



The on/off delay is preset and switched on (P0=1). On delay approx.15 ms, when P0=1 and NO function (P1=1). Off delay approx.15 ms, when P0=1 and NC function (P1=0).