

# Inductive sensor

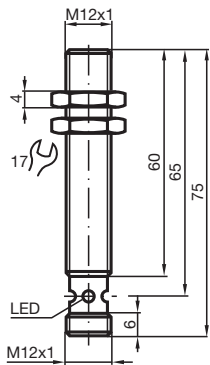
## NCB2-12GM60-B3-V1



- Comfort series
- NO/NC selectable



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally open/closed (NO/NC) programmable
Output type		AS-Interface
Rated operating distance	$s_n$	2 mm
Installation		flush
Assured operating distance	$s_a$	0 ... 1.62 mm
Actual operating distance	$s_r$	1.8 ... 2.2 mm typ.
Reduction factor $r_{Al}$		0.23
Reduction factor $r_{Cu}$		0.21
Reduction factor $r_{304}$		0.7
Slave type		Standard slave
AS-Interface specification		V2.1
Required master specification		$\geq$ V2.1

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

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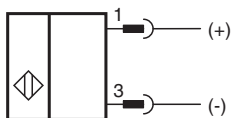
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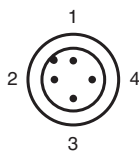
## Technical Data

Output type	2-wire	
<b>Nominal ratings</b>		
Operating voltage	$U_B$	26.5 ... 31.9 V via AS-i bus system
Switching frequency	f	0 ... 500 Hz
Hysteresis	H	1 ... 10 typ. 5 %
Reverse polarity protection		reverse polarity protected
No-load supply current	$I_0$	≤ 25 mA
Time delay before availability	$t_v$	≤ 1000 ms
Switching state indicator		dual-LED, yellow
Error indicator		dual-LED, red
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		2140 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated ≤36 V
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		Connector plug M12 x 1 , 4-pin
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		PBT
Degree of protection		IP67

## Connection



## Connection Assignment



## Additional Information

### Programming Instructions

Address 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

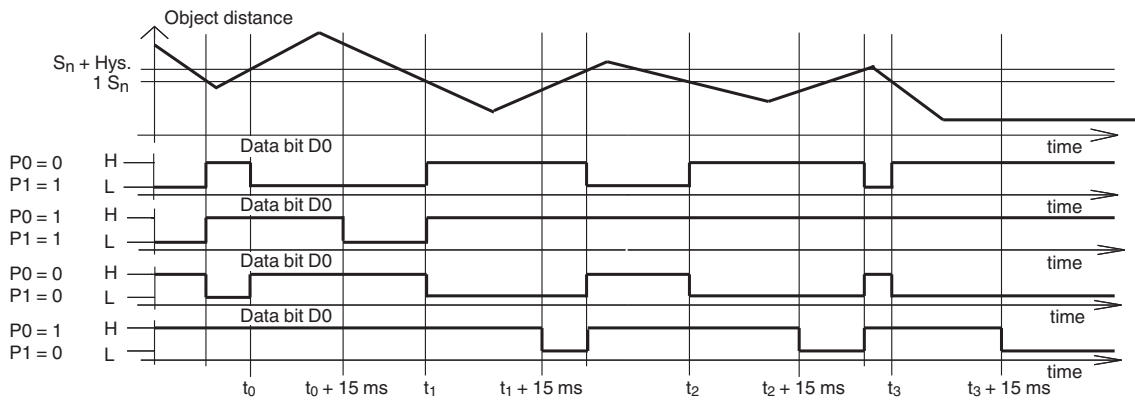
\*Standard setting

## Accessories

	<b>BF 12</b>	Mounting flange, 12 mm
	<b>V1-G-2M-PUR</b>	Female cordset, M12, 4-pin, PUR cable
	<b>EXG-12</b>	Quick mounting bracket with dead stop
	<b>V1-W-2M-PUR</b>	Female cordset, M12, 4-pin, PUR cable

## 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).

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