

# Inductive sensor

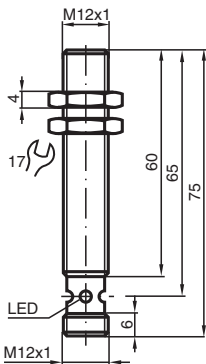
## NCB4-12GM60-B3-V1



- 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".

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

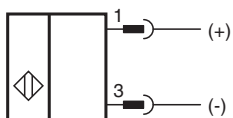
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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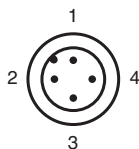
## Technical Data

Hysteresis	H	1 ... 15 typ. 5 %
Reverse polarity protection		reverse polarity protected
Voltage drop at $I_L$		
Voltage drop $I_L = 20$ mA, switching element on	$U_d$	3.4 ... 5 V typ. 4.3 V
No-load supply current	$I_0$	$\leq 25$ mA
Time delay before availability	$t_v$	$\leq 1000$ 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 ( $T_M$ )		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
CCC approval		CCC approval / marking not required for products rated $\leq 36$ 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

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

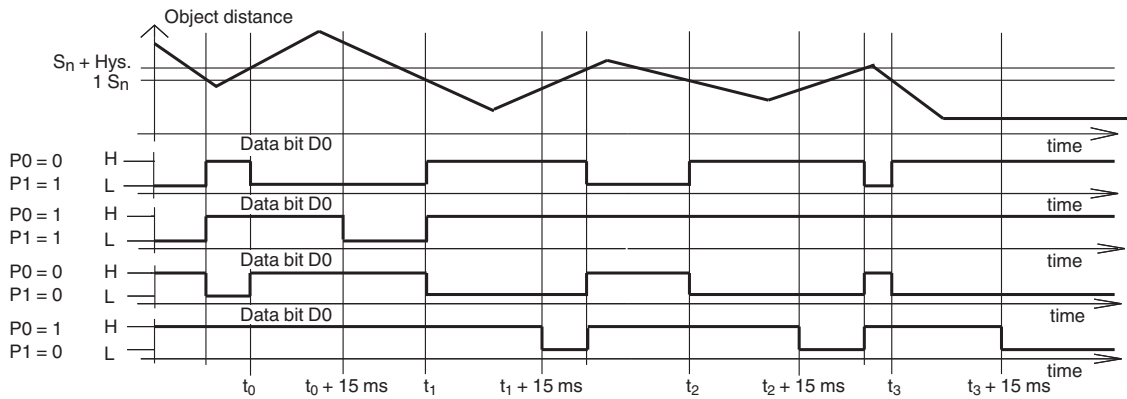
### Parameter bit

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

\*Standard setting

**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).