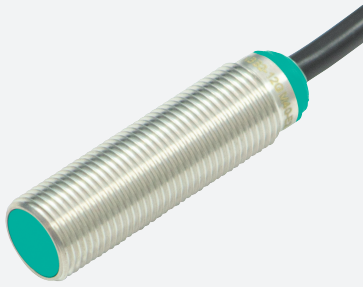


# Inductive sensor

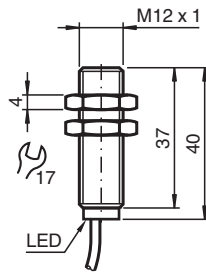
## NBB4-12GM40-EU-M1



- 4 mm flush
- 0.5 / 4.5 VDC switching output for mobile equipment controls
- Raised EMC resistance 30 V/m
- Extended temperature range  
-40 ... +85 °C
- Highly shock and vibration resistant
- With increased sealing, protection class  
IP68 / IP69K



### Dimensions



### Technical Data

General specifications			
Output type			Digital voltage output
Rated operating distance	$s_n$		4 mm
Installation			flush
Output polarity			DC
Assured operating distance	$s_a$		0 ... 3.24 mm
Actuating element			mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm
Reduction factor $r_{Al}$			0.4
Reduction factor $r_{Cu}$			0.3
Reduction factor $r_{304}$			0.7
Reduction factor $r_{Brass}$			0.45
Output type			3-wire
Nominal ratings			
Operating voltage	$U_B$		7 ... 30 V DC
Switching frequency	$f$		0 ... 2200 Hz
Hysteresis	$H$		2 ... 15 %

Release date: 2022-07-19 Date of issue: 2022-07-19 Filename: 70128598\_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

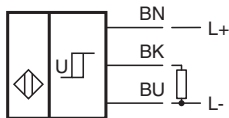
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

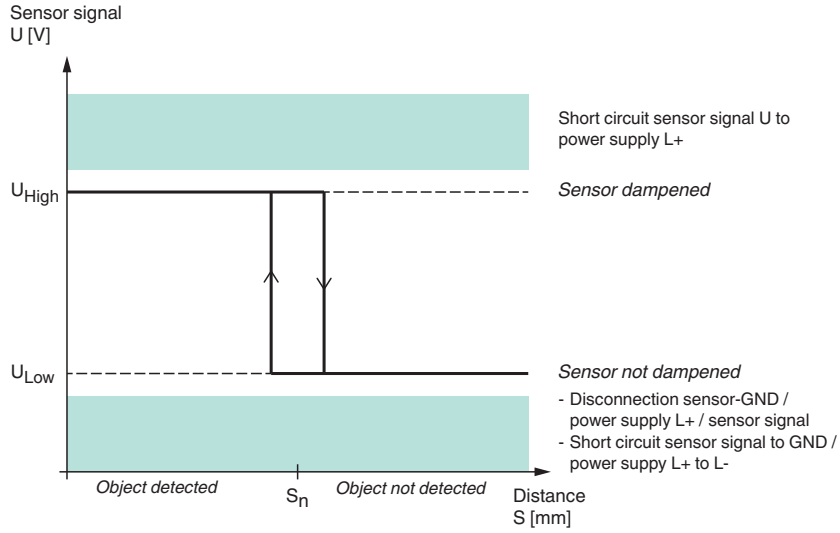
## Technical Data

Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Temperature drift		≤ 10 %
No-load supply current	$I_0$	≤ 15 mA
Time delay before availability	$t_v$	≤ 100 ms
Load resistor		min. 20 kΩ
Switching state indicator		LED, yellow
<b>Digital output</b>		
Output value		object detected: 4.5 V ± 0.2 V object not detected: 0.5 V ± 0.2 V
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
<b>Ambient conditions</b>		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		cable
Housing material		brass , white bronze coated
Sensing face		PBT , green
Degree of protection		IP68 / IP69K
<b>Cable</b>		
Cable diameter		6 mm ± 0.2 mm
Bending radius		> 10 x cable diameter
Material		TPE
Color		black
Number of cores		3
Core cross section		0.75 mm <sup>2</sup>
Length	L	2 m
<b>General information</b>		
Scope of delivery		2 self locking nuts in scope of delivery

## Connection



**Operation**



**Technical Features**

Mains-borne interference in accordance with ISO 7637-2:

Pulse	1	2a	2b	3a	3b	4
Severity level	III	III	III	III	III	III
Failure criterion	A	A	C	A	A	C

EN 61000-4-2: CD: 8 kV / AD: 15 kV  
Severity level IV IV

EN 61000-4-3: 36 V/m (80...2500 MHz)  
Severity level IV

EN 61000-4-4: 2 kV  
Severity level III

EN 61000-4-6: 30 V (0.01...80 MHz)  
Severity level III

EN 55011: Class A

**Accessories**

	<b>BF 12</b>	Mounting flange, 12 mm
---	--------------	------------------------

Release date: 2022-07-19 Date of issue: 2022-07-19 Filename: 70128598\_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