

# Inductive sensor

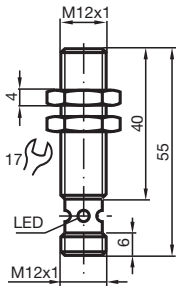
## NCB4-12GM40-N0-V1



- 4 mm flush
- Usable up to SIL 2 acc. to IEC 61508



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
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.
Reduction factor $r_{Al}$		0.41
Reduction factor $r_{Cu}$		0.39
Reduction factor $r_{304}$		0.78
Output type		2-wire

#### Nominal ratings

Nominal voltage	$U_o$	8.2 V ( $R_i$ approx. 1 k $\Omega$ )
Switching frequency	f	0 ... 1500 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
Short-circuit protection		yes
Suitable for 2:1 technology		yes , Reverse polarity protection diode not required
Current consumption		
Measuring plate not detected		min. 2.2 mA
Measuring plate detected		≤ 1 mA
Switching state indicator		Multihole-LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		3010 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
NAMUR		EN 60947-5-6:2000 IEC 60947-5-6:1999
Electromagnetic compatibility		NE 21:2007
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>Approvals and certificates</b>		
IECEx approval		
Equipment protection level Ga		IECEx PTB 11.0037X
Equipment protection level Gb		IECEx PTB 11.0037X
Equipment protection level Da		IECEx PTB 11.0037X
Equipment protection level Mb		IECEx PTB 11.0037X
ATEX approval		
Equipment protection level Ga		PTB 00 ATEX 2048 X
Equipment protection level Gb		PTB 00 ATEX 2048 X
Equipment protection level Gc (ic)		PF13CERT2895 X
Equipment protection level Da		PTB 00 ATEX 2048 X
Equipment protection level Dc (tc)		PF15CERT3774X
EAC conformity		TR CU 012/2011
FM approval		
Control drawing		116-0165
UL approval		
Ordinary Location		E87056
Hazardous Location		E501628
Control drawing		116-0452
CSA approval		cCSAus Listed, General Purpose
CCC approval		
Hazardous Location		2020322315002255
NEPSI approval		
NEPSI certificate		GYJ16.1393X
Marine approval		DNVGL TAA00001A5
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 100 °C (-13 ... 212 °F)
Storage temperature		-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>		
Connection type		Connector plug M12 x 1 , 4-pin
Core cross-section		-
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		PBT

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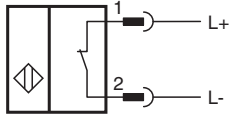
Pepperl+Fuchs Group  
www.pepperl-fuchs.comUSA: +1 330 486 0001  
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fa-info@sg.pepperl-fuchs.com

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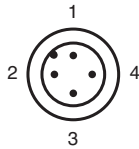
**Technical Data**

Degree of protection	IP66 / IP67
<b>General information</b>	
Scope of delivery	2 self locking nuts in scope of delivery
Use in the hazardous area	see instruction manuals

**Connection**








**Connection Assignment**



Wire colors in accordance with EN 60947-5-6

1	BN	(brown)
2	BU	(blue)

**Accessories**

	<b>BF 12</b>	Mounting flange, 12 mm
	<b>V1-G-N-2M-PUR</b>	Female cordset single-ended M12 straight A-coded, 2-pin, PUR cable blue, NAMUR
	<b>V1-W-N-2M-PUR</b>	Female cordset single-ended M12 angled A-coded, 2-pin, PUR cable blue, NAMUR
	<b>KCD2-SR-Ex1.LB</b>	24 V DC
	<b>KCD2-E2L</b>	Sensor output interface terminal with lead breakage monitoring

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