



## Inductive sensor

### NBB2-12GM30-E2-5M-PUR

- 2 mm flush
- Extended temperature range  
-40 ... +85 °C
- Extended operating voltage range
- Flexible use with versatile mounting opportunities



## Technical Data

### General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	$s_n$	2 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 1.62 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm
Reduction factor $r_{Al}$		0.29
Reduction factor $r_{Cu}$		0.23
Reduction factor $r_{304}$		0.78
Reduction factor $r_{Brass}$		0.42
Output type		3-wire

### Nominal ratings

Operating voltage	$U_B$	5 ... 36 V
Switching frequency	$f$	0 ... 3500 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 1$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	max. 20 $\mu$ A
No-load supply current	$I_0$	$\leq 10$ mA
Time delay before availability	$t_v$	$\leq 10$ ms
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>		1721 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %

### Conformity

PWIS conformity		VDMA 24364-A1/B2/C1/T100°C-W
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### Compliance with standards and directives

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

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## Technical Data

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>		
Protection class	II	
Rated insulation voltage	$U_i$	36 V
Rated impulse withstand voltage	$U_{imp}$	500 V
UL approval	cULus Listed, General Purpose, Class 2 Power Source	
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V	
Marine approval	DNVGL TAA00003AK	
<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	IP65 / IP66 / IP67 / IP68	
<b>Cable</b>		
Wire end ferrules	yes	
Cable diameter	4.3 mm $\pm$ 0.15 mm	
Bending radius	> 10 x cable diameter	
Material	PUR	
Color	black	
Number of cores	3	
Core cross section	0.34 mm <sup>2</sup>	
Length	L	5 m
Mass	158 g	
<b>Dimensions</b>		
Length	33 mm	
Diameter	12 mm	
Mounting	with nuts, M12	
Tightening torque	0 ... 10 Nm	
<b>General information</b>		
Scope of delivery	2 self locking nuts in scope of delivery	

## Connection

