

# Inductive sensor

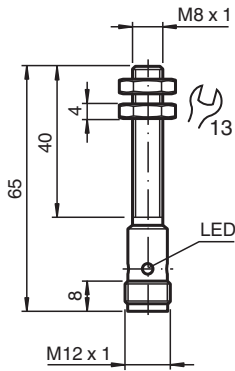
## NBB2-8GS40-E2-V1-Y



- 2 mm flush
- Increased operating distance
- Extended temperature range  
-40 ... +85 °C



### Dimensions



### 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) 8 mm x 8 mm x 1 mm
Reduction factor $r_{Al}$		0.2
Reduction factor $r_{Cu}$		0.1
Reduction factor $r_{304}$		0.55
Reduction factor $r_{Brass}$		0.25
Output type		3-wire
Nominal ratings		
Operating voltage	$U_B$	5 ... 30 V
Switching frequency	$f$	0 ... 6000 Hz
Hysteresis	$H$	typ. 5%
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing

Release date: 2024-04-23 Date of issue: 2024-04-24 Filename: 304615-0204\_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

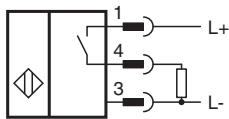
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

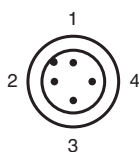
## Technical Data

Voltage drop	$U_d$	$\leq 1.5 \text{ V}$
Operating current	$I_L$	0 ... 100 mA
Off-state current	$I_r$	0 ... 0.2 mA
No-load supply current	$I_0$	$\leq 10 \text{ mA}$
Time delay before availability	$t_v$	$\leq 100 \text{ ms}$
Switching state indicator		Multihole-LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		960 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 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated $\leq 36 \text{ V}$
<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		4-pin, M12 x 1 connector
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		LCP
Degree of protection		IP65 / IP66 / IP67
<b>Dimensions</b>		
Length		40 mm
Diameter		8 mm
<b>General information</b>		
Scope of delivery		2 hex nuts included

## Connection



## Connection Assignment



## Connection Assignment

Wire colors in accordance with EN 60947-5-2

1		BN	(brown)
2		WH	(white)
3		BU	(blue)
4		BK	(black)