

# Inductive sensor

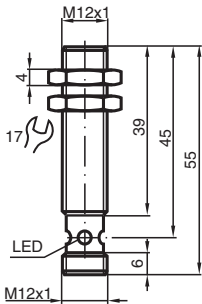
## NBB2-12GM40-Z3-V1



- 2 mm flush
- 2-wire DC



### Dimensions



### Technical Data

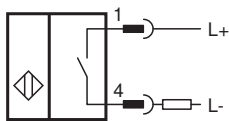
General specifications		
Switching function		Normally open (NO)
Output type		Two-wire
Rated operating distance	$s_n$	2 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 1.62 mm
Actual operating distance	$s_r$	1.8 ... 2.2 mm typ.
Reduction factor $r_{Al}$		0.18
Reduction factor $r_{Cu}$		0.12
Reduction factor $r_{304}$		0.67
Output type		2-wire
Nominal ratings		
Operating voltage	$U_B$	5 ... 60 V
Switching frequency	$f$	0 ... 1000 Hz
Hysteresis	$H$	1 ... 10 % typ. 5 %
Reverse polarity protection		reverse polarity tolerant

Release date: 2025-06-06 Date of issue: 2025-06-06 Filename: 089212\_eng.pdf

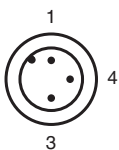
## Technical Data

Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 5$ V
Operating current	$I_L$	2 ... 100 mA
Lowest operating current	$I_m$	2 mA
Off-state current	$I_r$	0 ... 0.5 mA typ.
Switching state indicator		Multihole-LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		2250 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose
CCC approval		Certified by China Compulsory Certification (CCC)
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
<b>Mechanical specifications</b>		
Connection type		Connector plug
Housing material		brass, nickel-plated
Sensing face		PBT
Degree of protection		IP67
Connector		
Threading		M12 x 1
Number of pins		3
Mass		24 g
Dimensions		
Length		40 mm
Diameter		12 mm

## Connection



## Connection Assignment



## Connection Assignment

Wire colors in accordance with EN 60947-5-2

1		BN	(brown)
3		BU	(blue)
4		BK	(black)