

# Inductive sensor

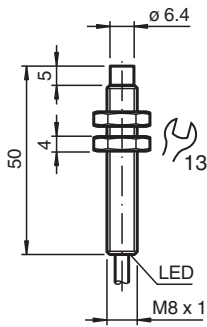
## NBN3-8GM50-A0



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



### Dimensions



### Technical Data

General specifications		
Switching function		complementary
Output type		NPN
Rated operating distance	$s_n$	3 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 2.43 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 8 mm x 8 mm x 1 mm
Reduction factor $r_{Al}$		0.5
Reduction factor $r_{Cu}$		0.45
Reduction factor $r_{304}$		0.75
Reduction factor $r_{Brass}$		0.55
Output type		3-wire
Nominal ratings		
Operating voltage	$U_B$	5 ... 30 V
Switching frequency	$f$	0 ... 4500 Hz
Hysteresis	$H$	typ. 5%
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 1.5$ V
Operating current	$I_L$	0 ... 100 mA

Release date: 2025-02-27 Date of issue: 2025-02-27 Filename: 304615-0127\_eng.pdf

## Technical Data

Off-state current	$I_r$	0 ... 0.2 mA
No-load supply current	$I_0$	≤ 10 mA
Time delay before availability	$t_v$	≤ 100 ms
Switching state indicator		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 IEC 60947-5-2
<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 ≤36 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		cable
Housing material		brass, nickel-plated
Sensing face		LCP
Degree of protection		IP65 / IP66 / IP67
<b>Cable</b>		
Wire end ferrules		yes
Cable diameter		3.3 mm ± 0.1 mm
Bending radius		> 10 x cable diameter
Material		PVC
Color		black
Number of cores		4
Core cross section		0.14 mm <sup>2</sup>
Length	L	2 m
Mass		41 g
<b>Dimensions</b>		
Length		50 mm
Diameter		8 mm
<b>General information</b>		
Scope of delivery		2 hex nuts included

## Connection

