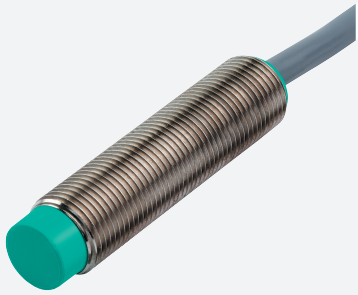


# Inductive sensor

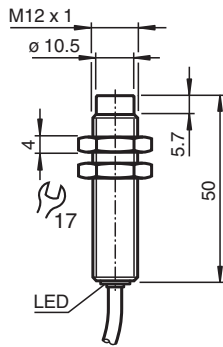
## NEN10-12GM50-E1



- Increased operating distance
- 10 mm non-flush



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally closed (NC)
Output type		NPN
Rated operating distance	$s_n$	10 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 8.1 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 30 mm x 30 mm x 1 mm
Reduction factor $r_{Al}$		0.45
Reduction factor $r_{Cu}$		0.4
Reduction factor $r_{304}$		0.75
Reduction factor $r_{Brass}$		0.45
Output type		3-wire

#### Nominal ratings

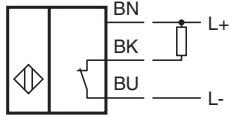
Installation conditions		
A		in steel 1.0037 (St37): 10 mm
B		12 mm
C		30 mm
F		42 mm
Operating voltage	$U_B$	10 ... 30 V DC

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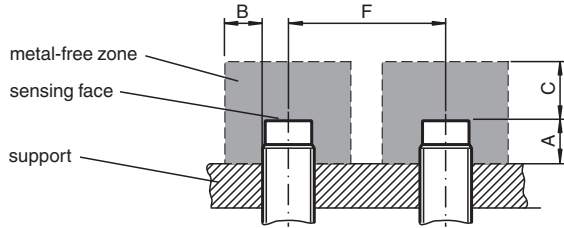
## Technical Data

Switching frequency	f	0 ... 600 Hz
Hysteresis	H	0.06 ... 1 mm
Reverse polarity protection		yes
Short-circuit protection		pulsing
Overload resistance		yes
Wire breakage protection		yes
Surge suppression		yes
Ripple		10 %
Voltage drop	$U_d$	$\leq 2$ V
Repeat accuracy	R	0.3 mm
Operating current	$I_L$	0 ... 200 mA , above 70°C max. 150 mA
Off-state current	$I_r$	$\leq 10$ $\mu$ A
No-load supply current	$I_0$	$\leq 15$ mA
Time delay before availability	$t_v$	$\leq 50$ ms
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1740 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		CCC approval / marking not required for products rated $\leq 36$ V
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		cable
Housing material		brass, nickel-plated
Sensing face		PBT
Degree of protection		IP67
<b>Cable</b>		
Wire end ferrules		yes
Cable diameter		4.3 mm $\pm$ 0.2 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	2 m
Mass		100 g
<b>Dimensions</b>		
Length		50 mm
Diameter		12 mm
Tightening torque		$\leq 10$ Nm

## Connection



## Installation



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