

# Inductive sensor

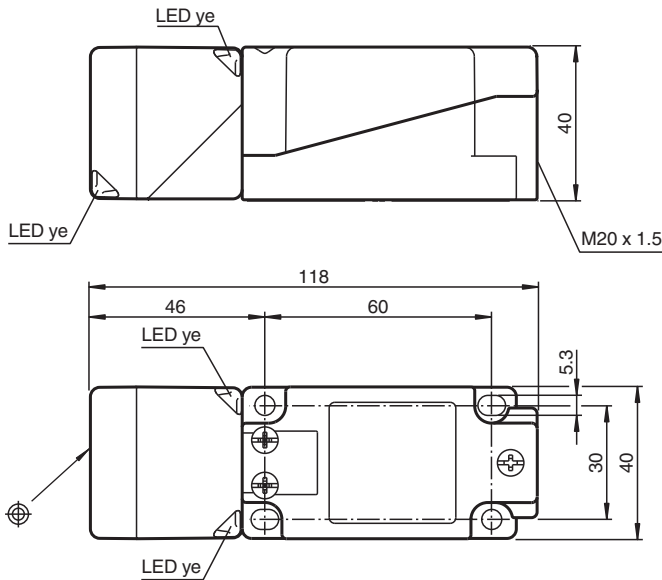
## NBN30-U1K-N0



- 30 mm non-flush
- NAMUR output
- Polarity reversal protected
- Sensor head bidirectional and rotatable



### Dimensions



### Technical Data

#### General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	$s_n$	30 mm
Installation		non-flush
Assured operating distance	$s_a$	0 ... 24.3 mm
Actual operating distance	$s_r$	27 ... 33 mm typ.
Reduction factor $r_{Al}$		0.45
Reduction factor $r_{Cu}$		0.42
Reduction factor $r_{304}$		0.79
Output type		2-wire

#### Nominal ratings

Nominal voltage	$U_o$	8.2 V ( $R_i$ approx. 1 k $\Omega$ )
Switching frequency	$f$	0 ... 150 Hz

Release date: 2025-06-12 Date of issue: 2025-06-15 Filename: 70133136\_eng.pdf

## Technical Data

Hysteresis	H	1 ... 15 % typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Current consumption		
Measuring plate not detected		min. 3 mA
Measuring plate detected		≤ 1 mA
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1660 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
NAMUR		EN 60947-5-6:2000 IEC 60947-5-6:1999
Electromagnetic compatibility		NE 21:2007
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
IECEX approval		
Equipment protection level Ga		IECEX PTB 11.0021X
Equipment protection level Gb		IECEX PTB 11.0021X
Equipment protection level Da		IECEX PTB 11.0021X
Equipment protection level Mb		IECEX PTB 11.0021X
ATEX approval		
Equipment protection level Ga		PTB 00 ATEX 2032 X
Equipment protection level Gb		PTB 00 ATEX 2032 X
Equipment protection level Da		PTB 00 ATEX 2032 X
UL approval		
Ordinary Location		E87056
Hazardous Location		E501628
Control drawing		116-0451
CCC approval		
Hazardous Location		2020322315002303
NEPSI approval		
NEPSI certificate		GYJ16.1394X
CML approval		on request
ANZEx		19.3001X
Marine approval		DNVGL TAA00001A5
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 100 °C (-13 ... 212 °F)
Storage temperature		-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>		
Connection type		screw terminals
Information for connection		A maximum of two conductors with the same core cross section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross section		up to 2.5 mm <sup>2</sup> , stripped insulation length: 7 mm
Minimum core cross-section		without wire end ferrules 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>
Maximum core cross-section		without wire end ferrules 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>
Connection (system side)		screw terminals, M20 x 1.5 cable gland, usable thread length 9.1 mm, screw-in depth max. 9.1 mm
Housing material		PA
Sensing face		PA
Degree of protection		IP66 / IP68 / IP69K

## Technical Data

Mass	225 g
Dimensions	
Height	40 mm
Width	40 mm
Length	118 mm
Note	Tightening torque: 1.8 Nm (housing)
<b>General information</b>	
Use in the hazardous area	see instruction manuals

## Connection Assignment

