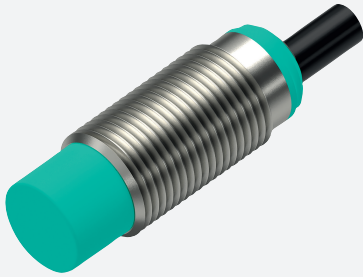


# Inductive sensor

## NAN7-12GM30-E2-IO

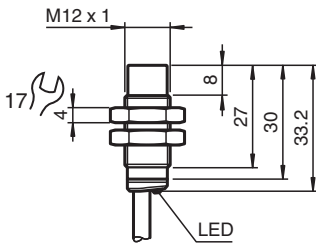


- Parameterization and diagnosis via IO-Link
- Measuring range 0 ... 7 mm
- Non-flush mountable
- Flexible use with versatile mounting opportunities
- Extensive maintenance functions for condition monitoring
- Determining of speed and acceleration of the damping element

Inductive distance sensor with IO-Link interface



### Dimensions



### Technical Data

#### General specifications

Switching function	Normally open/closed (NO/NC) programmable	
Output type	PNP	
Installation	non-flush	
Output polarity	DC	
Actuating element	mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 24 mm x 24 mm x 1 mm	
Measuring range	0 ... 7 mm	
Output type	3-wire	

#### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V (SIO mode) 18 ... 30 V (IO-Link)
Switching frequency	$f$	SIO mode: 1400 Hz (high speed filter)
Hysteresis	$H$	1 ... 20 % ( factory setting: 5 % )
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 1$ V
Linearity error		$\pm 3$ % of full-scale value
Temperature drift		$\pm 10$ % of full-scale value
Repeat accuracy		$\pm 1$ % of full-scale value
Speed measuring range		1 ... 2100 mm/s
Speed measurement accuracy		$\pm 20$ % of the full-scale value
Speed measurement repeat accuracy		$\pm 5$ % of the full-scale value
Operating current	$I_L$	0 ... 100 mA

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## Technical Data

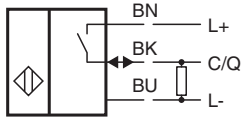
Off-state current	$I_r$	max. 30 $\mu$ A
No-load supply current	$I_0$	17 mA
Time delay before availability	$t_v$	max. 100 ms
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1465 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Interface</b>		
Interface type		IO-Link ( via C/Q = pin 4 )
IO-Link revision		1.1
Device profile		Identification and Diagnosis - I&D Smart Sensor - SSP 0 Smart Sensor - SSP 4.1.1
Process data		Input: 32 Bit - measurement value 16 Bit - scaling 8 Bit - Diagnosis signals 3 Bit - switching signals 2 Bit
Vendor ID		1 (0x0001)
Device ID		2098948 (0x200704)
Transfer rate		COM2 (38.4 kBit/s)
Min. cycle time		3.2 ms
SIO mode support		yes
Compatible master port type		Class A , Class B
<b>Conformity</b>		
PWIS conformity		VDMA 24364-C1/T100°C-W
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2 EN IEC 60947-5-7
<b>Approvals and certificates</b>		
Protection class		II
Rated insulation voltage	$U_i$	30 V
Rated impulse withstand voltage	$U_{imp}$	500 V
UL approval		cULus Listed, General Purpose, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated $\leq 36$ V
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		cable
Housing material		brass , white bronze coated
Sensing face		PBT , green
Degree of protection		IP65 / IP67
Cable		
Wire end ferrules		yes
Cable diameter		4.3 mm $\pm$ 0.15 mm
Bending radius		> 10 x cable diameter
Material		PVC
Color		black
Number of cores		3
Core cross section		0.34 mm <sup>2</sup>
Length	L	2 m
Mass		76 g
Dimensions		

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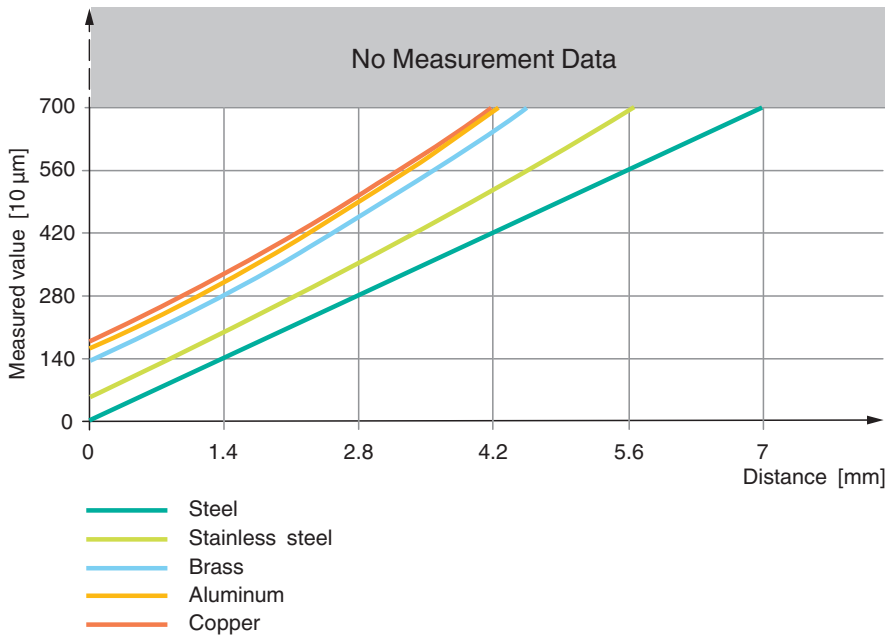
## Technical Data

Length	33 mm
Diameter	12 mm
Mounting	with nuts, M12
Tightening torque	≤ 10 Nm
<b>General information</b>	
Scope of delivery	2 self locking nuts in scope of delivery

## Connection



## Characteristic Curve



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