



Inductive sensor NAN30-L2-E2-IO-V1

- Parameterization and diagnosis via IO-Link
- Measuring range 0 ... 30 mm
- Non-flush mountable
- 4-way LED indicator
- Sensor head bidirectional and rotatable
- Quick mounting bracket
- Extensive maintenance functions for condition monitoring
- Determining of speed and acceleration of the damping element

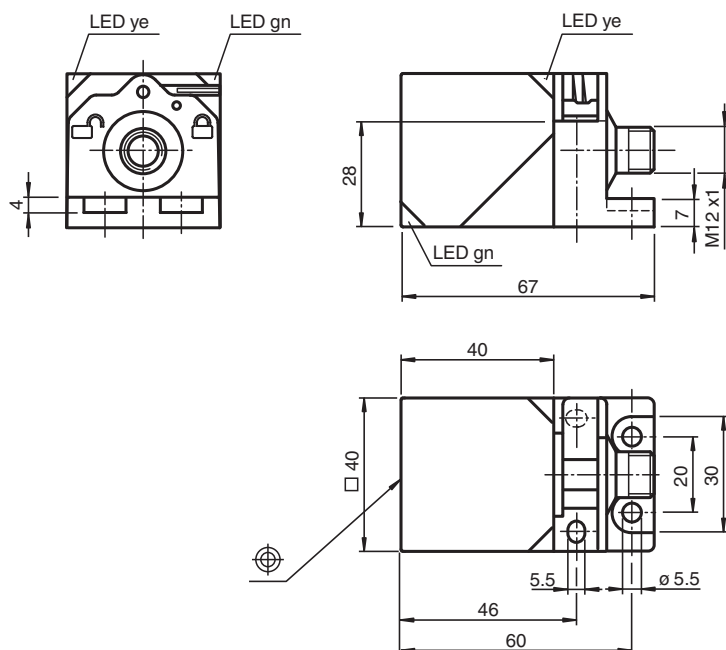
Inductive distance sensor with IO-Link interface



Function

The inductive distance sensors with IO-Link offer a wide range of functions. In addition to continuous distance measurement, 2 switch points or windows can be parameterized in different operating modes. The additional determination of the speed and acceleration of the damping element also allows monitoring options for special braking and acceleration processes or for opening and closing processes. Adjustable filters allow the measurement speed and accuracy to be adapted to the application requirements. All this comprehensive additional data and parameterizable limit values enable perfect condition monitoring of the application/machine, for example for temperature, operating times, counters and also symptoms of wear. Process and service data can be transferred via IO-Link, enabling easy integration into Industry 4.0 applications.

Dimensions



Technical Data

General specifications

Switching function	Normally open/closed (NO/NC) programmable
Output type	PNP

Technical Data

Installation		non-flush
Output polarity		DC
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 90 mm x 90 mm x 1 mm
Measuring range		0 ... 30 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: 250 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	≤ 1 V
Linearity error		± 3 % of full-scale value
Temperature drift		± 10 % of full-scale value
Repeat accuracy		± 1 % of full-scale value
Speed measuring range		1 ... 3000 mm/s
Speed measurement accuracy		± 20 % of the full-scale value
Speed measurement repeat accuracy		± 5 % of the full-scale value
Operating current	I_L	0 ... 100 mA
Off-state current	I_r	max. 30 µA
No-load supply current	I_0	22 mA
Time delay before availability	t_v	max. 100 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow permanently on: switching output active permanently off: switching output inactive fast flashing (10 Hz): fault state
Safety-relevant product characteristics		
MTTF _d		1266 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Interface		
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		2098953 (0x200709)
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
Conformity		
PWIS conformity		VDMA 24364-A1/B2/C1/T100°C-W
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2 EN IEC 60947-5-7
Approvals and certificates		

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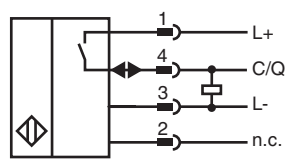
Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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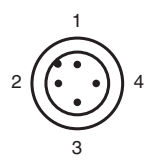
Technical Data

Protection class		II
Rated insulation voltage	U _i	30 V
Rated impulse withstand voltage	U _{imp}	500 V
UL approval	cULus Listed Load Type: General Purpose Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 30 V DC Output Switching Current: 100 mA	
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Connector plug
Housing material		PA
Sensing face		PA
Degree of protection		IP65 / IP67
Connector		
Threading		M12 x 1
Number of pins		4
Mass		145 g
Dimensions		
Height		40 mm
Width		40 mm
Length		67 mm

Connection Assignment



Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

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Characteristic Curve

