

Inductive sensor

NAN7-12GM30-E2-IO-V1

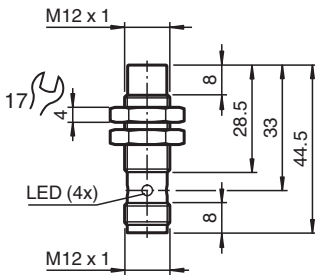


- Parameterization and diagnosis via IO-Link
- Measuring range 0 ... 7 mm
- Non-flush mountable
- Flexible use with versatile mounting opportunities
- Extensive maintenance functions for condition monitoring
- Determining of speed and acceleration of the damping element

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 ≤ 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 ... 2100 mm/s
Speed measurement accuracy	± 20 % of the full-scale value
Speed measurement repeat accuracy	± 5 % of the full-scale value

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Technical Data

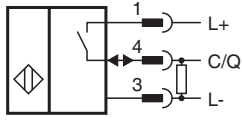
Operating current	I_L	0 ... 100 mA
Off-state current	I_r	max. 30 μ A
No-load supply current	I_0	17 mA
Time delay before availability	t_v	max. 100 ms
Switching state indicator		Multihole-LED, yellow
Functional safety related parameters		
MTTF _d		1465 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		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		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
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		
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
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		brass , white bronze coated
Sensing face		PBT , green
Degree of protection		IP65 / IP67
Connector		
Threading		M12 x 1
Number of pins		3
Mass		20 g
Dimensions		
Length		44.5 mm
Diameter		12 mm
Mounting		with nuts, M12
Tightening torque		\leq 10 Nm
General information		

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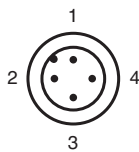
Technical Data

Scope of delivery	2 self locking nuts in scope of delivery
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Connection



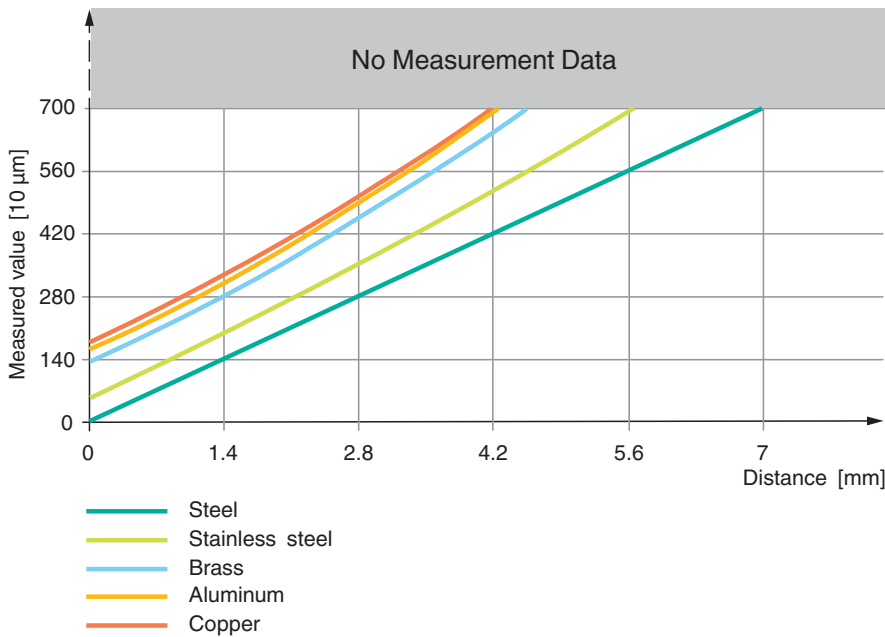
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Characteristic Curve



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