

Lowcost
induNCDT

INDUCTIVE PRINCIPLE INDU NCDT

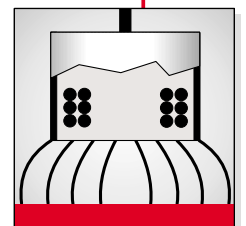
integrated
signal conditioning

harsh environment
compatible

highest
performance/price
ratio



Non-Contact
inductive displacement
measurement



DC-DC displacement sensors
induNCDT

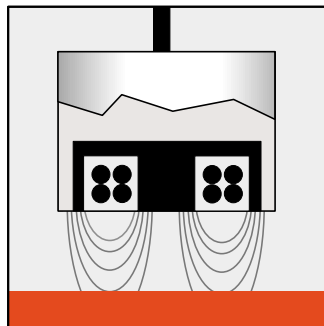
induNCDT

inductive DC/DC displacement sensors



Non-contact inductive displacement sensors

induNCDT displacement sensors are specially designed for non-contact displacement and distance measurements against ferromagnetic materials. For the defined measurement range the linearity is better than $\pm 2\%$. Measurements against non-ferromagnetic materials, e.g. aluminum, are possible with the same sensor dimensions within a reduced measurement range. These very economic sensor systems are mainly used in applications for industrial production and machinery equipment.



Inductive principle

Inductive displacement sensors are optimized for ferromagnetic materials. induNCDT is preferred for OEM-use because of its excellent performance/price ratio.

features

- **integrated electronics (DC/DC)**
- **harsh environment compatible**
- **optimized for ferromagnetic materials**
- **also available for non-ferromagnetic materials**

Technical data

Model		IWS-4-M-CA3-U	IWS-8-M-CA3-U	IWS-16-M-CA3-U	IWS-3-A-CA3-U	IWS-4-A-CA3-U	IWS-8-A-CA3-U
Target		ferromagnetic			non-ferromagnetic		
Measuring range	mm (inch)	4 (0.16)	8 (0.31)	16 (0.63)	3 (0.12)	4 (0.16)	8 (0.31)
Start measuring range	mm (inch)	0.5 (0.02)	1 (0.04)	2 (0.08)	0.5 (0.02)	0.5 (0.02)	1 (0.04)
End measuring range	mm (inch)	4.5 (0.18)	9 (0.35)	18 (0.71)	3.5 (0.14)	4.5 (0.18)	9 (0.35)
Analog output, Voltage		0.5 - 4.5 V	1 - 9 V	1 - 9 V	0.5 - 3.5 V	0.5 - 4.5 V	1 - 9 V
Sensitivity, V/mm		1 V / mm		0.5 V / mm	1 V / mm		
Linearity		± 2 % FSO			± 2 % FSO		
	mm (inch)	± 0.08 (0.003)	± 0.16 (0.006)	± 0.32 (0.013)	± 0.06 (0.002)	± 0.08 (0.003)	± 0.16 (0.006)
Dynamic resolution		0.5 % FSO			0.5 % FSO		
	mm (inch)	0.02 (0.0008)	0.04 (0.002)	0.08 (0.003)	0.015 (0.0006)	0.02 (0.0008)	0.04 (0.002)
Frequency response		100 Hz (-3dB)			100 Hz (-3dB)		
Power supply		24 VDC (20-28 VDC) / 7 mA			24 VDC (20-28 VDC) / 7 mA		
Load resistance		> 5 kOhm			> 5 kOhm		
Temperature stability		0.06%/°C (0.033 % FSO / °F)			0.06%/°C (0.033 % FSO / °F)		
		2.4 µm / °C	4.8 µm / °C	9.6 µm / °C	1.8 µm / °C	2.4 µm / °C	4.8 µm / °C
Operating temperature		-18 to +82°C (0 to 180 °F)			-18 to +82°C (0 to 180 °F)		
Protection class		IP 67			IP 67		
Electromagn. compatibility	CE	EN 50081-2 and En 50082-2			EN 50081-2 and En 50082-2		
Head diameter	mm (inch)	10.7 (0.42)	25 (0.98)	52 (2.05)	10.7 (0.42)	25 (0.98)	52 (2.05)
Mounting thread		M12x1	M16x1		M12x1	M16x1	
Thread length	mm (inch)	53 (2.09)	72 (2.83)		53 (2.09)	72 (2.83)	
Nut - WS / height		SW19/H6	SW24/H8		SW19/H6	SW24/H8	
Housing material		brass galvanised / 1.4305			brass galvanised / 1.4305		
Weight incl. 2 nuts		140 g	220 g	430 g	140 g	220 g	430 g

FSO = Full Scale Output; Reference material Steel 1.0037 / ferromagnetic (M) and aluminium / non-ferromagnetic (A)

Wire code	
ground	black
supply (+)	red
signal out	brown
shield	green-yellow

Accessories

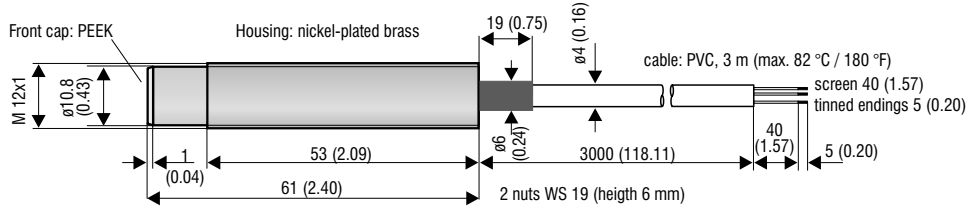
DD800/10-32 digital readout, programmable, supply 10 - 32 Vdc

DD800/90-265 digital readout, programmable, supply 90 - 265 Vac

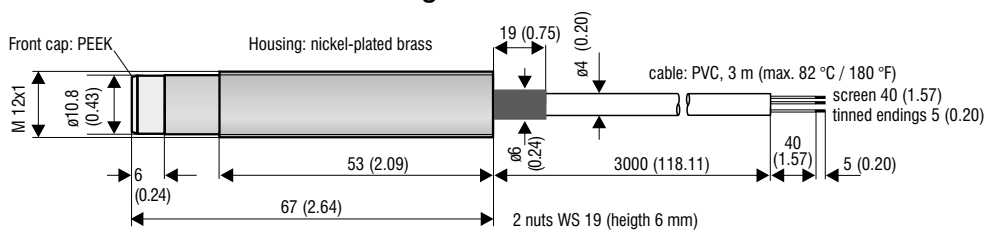
DD800/90-265/RS digital readout, programmable, with 2 relays, supply 90 - 265 Vac

induNCDT Dimensions in mm (inch), not to scale

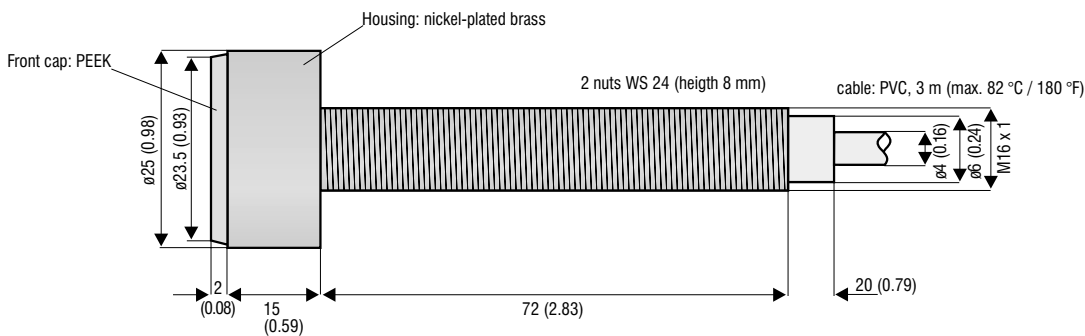
Sensor IWS-4-M-CA3-U for ferromagnetic targets



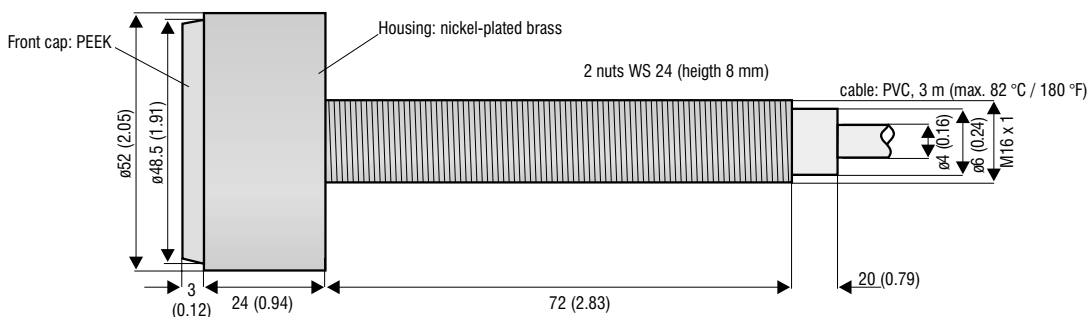
Sensor IWS-3-A-CA3-U for aluminium targets



Sensor IWS-4-A-CA3-U and IWS-8-M-CA3-U



Sensor IWS-8-A-CA3-U and IWS-16-M-CA3-U



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