

Inductive Sensor for Extreme Temperature Ranges

INTT311

Part Number



- Analysis module integrated into M12 sensor connector
- Easy to replace sensors with data storage feature
- Highly efficient with an average service life of 5 years
- Three configurable switching distances: 30/35/40 mm

The high temperature inductive sensor with cable lengths of 1 to 30 meters can be positioned as needed in hot areas of systems and machines. Installation is also easy due to the ultra-compact design, as the analysis module is integrated into the M12 sensor connector. The sensor thus takes up far less space and is highly compatible thanks to its standardized design. The weproTec technology makes it possible to install the sensors directly next to or across from one another. In addition, sensor parameters like switching distance and output functions can be configured individually via IO-Link.



Technical Data

Inductive Data	
Switching Distance	40 mm
Standard Target	120 × 120 mm
Correction Factors Stainless Steel V2A/CuZn/Al	1,10/0,65/0,58
Mounting	non-flush
Mounting A/B/C/D in mm	60/120/80/20
Mounting B1 in mm	0...80
Switching Hysteresis	< 10 %

Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U _b = 24 V)	< 15 mA
Switching Frequency	50 Hz
Temperature Drift	< 10 %
Sensor head temperature range	-10...250 °C
Temperature range of the plug	0...70 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 1 V
Switching Output/Switching Current	100 mA
Residual Current Switching Output	< 100 μA
Short Circuit Protection	yes
Reverse Polarity and Overload Protection	yes
Interface	IO-Link V1.1
Protection Class	III
Service Life (T = +200 °C)	100000 h
Service Life (T = +250 °C)	60000 h

Mechanical Data	
Sensor head material	Stainless steel V2A; PEEK; PTFE
Plug material	CuZn, nickel-plated
Degree of protection, sensor head	IP65
Degree of protection of the plug	IP65
Connection	M12 × 1; 4-pin
Cable Length (L)	20 m
Outer diameter cable	3,4 mm
PWIS-free	yes

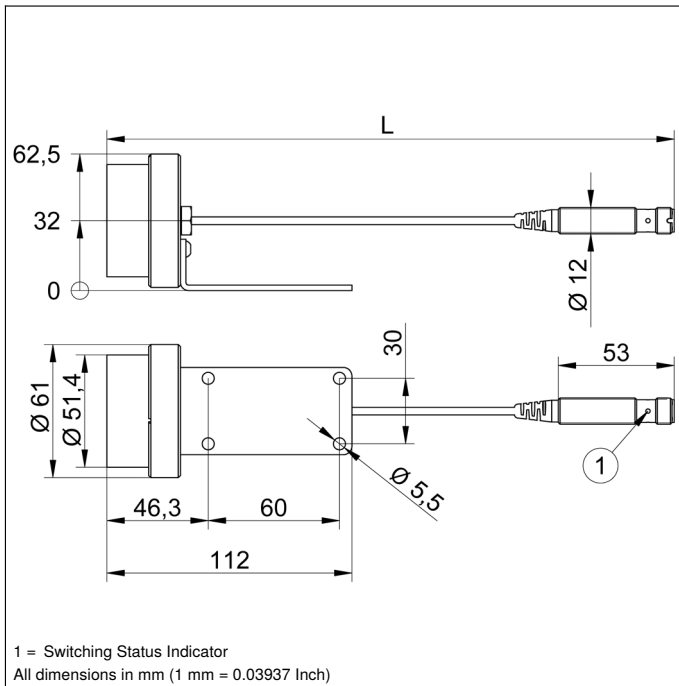
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	3706,54 a

Function	
Error Indicator	yes
Programmable switching distance	30/35/40 mm

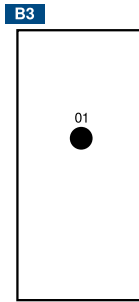
PNP	●
Connection Diagram No.	704
Control Panel No.	B3
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	170 172

Complementary Products

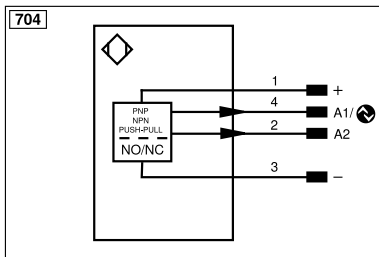
IO-Link Master



Ctrl. Panel



01 = Switching Status Indicator



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link		Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring
PT	Platinum measuring resistor	ENARs422	Encoder A/Ā (TTL)
			Encoder B/B̄ (TTL)
			ENA Encoder A
			ENb Encoder B
			AMIN Digital output MIN
			AMAX Digital output MAX
			Ack Digital output OK
			SY In Synchronization In
			SY OUT Synchronization OUT
			OLT Brightness output
			M Maintenance
			rsv Reserved
			Wire Colors according to DIN IEC 60757
			BK Black
			BN Brown
			RD Red
			OG Orange
			YE Yellow
			GN Green
			BU Blue
			VT Violet
			GY Grey
			WH White
			PK Pink
			GNYE Green/Yellow

Mounting

