

Inductive Sensor for Extreme Temperature Ranges

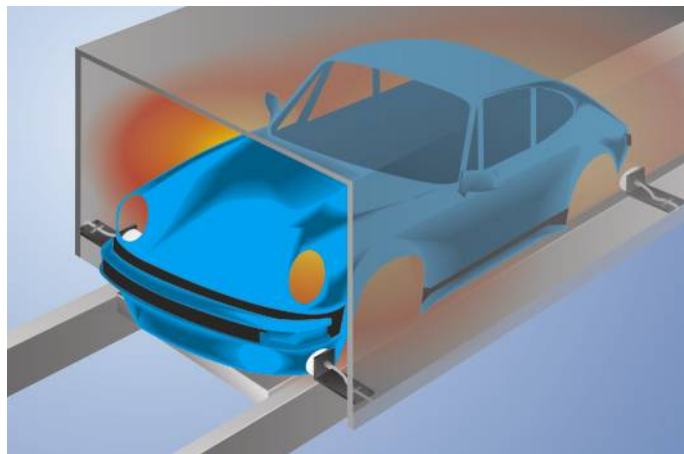
INTT311

Part Number



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

The high temperature inductive sensor can, with cable lengths of 1 to 30 meters, be positioned as needed in hot areas of systems and machines. Installation is also easy due to the ultra-compact design, as the evaluation unit is integrated into the M12 sensor connector. The sensor thus takes up far less space and is highly compatible thanks to its standardised design. The we-proTec 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.

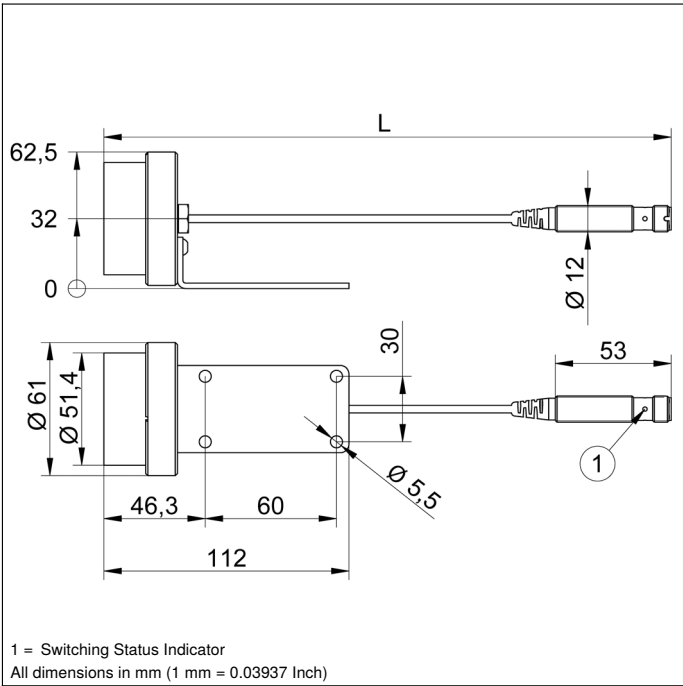


Technical Data

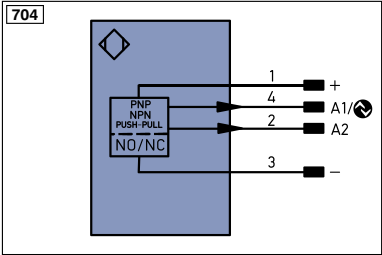
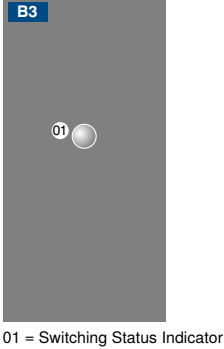
Inductive Data	
Switching Distance	40 mm
Standard Target	120 × 120 mm
Correction Factors Stainless Steel V2A/CuZn/Al	1,10/0,65/0,58
Mounting	non-flush
Mounting A/B/C/D in mm	60/120/80/20
Mounting B1 in mm	0...80
Switching Hysteresis	< 10 %
Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with 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, 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	IP65
Connection	M12 × 1; 4-pin
Cable Length (L)	20 m
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
IO-Link	●
Switchable to NC/NO	●
Configurable as PNP/NPN/Push-Pull	●
Error Output	●
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



Legend

+	Supply Voltage +
-	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
V̄	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
IO-Link	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)
EN0.5S4Z	Encoder 0-pulse 0-0 (TTL)

PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
W-	Ground for the Trigger Input
O	Analog Output
O-	Ground for the Analog Output
BZ	Block Discharge
AWV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY-	Ground for the Synchronization
E+	Receiver-Line
S+	Emitter-Line
±	Grounding
SnR	Switching Distance Reduction
Rx+/-	Ethernet Receive Path
Tx+/-	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(-)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contact Monitoring

EN0.5S4Z	Encoder A/Ā (TTL)
EN0.5S4Z	Encoder B/B̄ (TTL)
ENa	Encoder A
ENb	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY in	Synchronization In
SY OUT	Synchronization OUT
OLt	Brightness output
M	Maintenance
rsv	reserved
Wire Colors according to 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

