

Inductive Sensor

Welding Field Resistant with Correction Factor 1

I1QA001

Part Number



- **Extended temperature range**
- **Greatest possible switching distances with correction factor 1**
- **Very good magnetic and electromagnetic immunity**
- **Very high switching frequency**

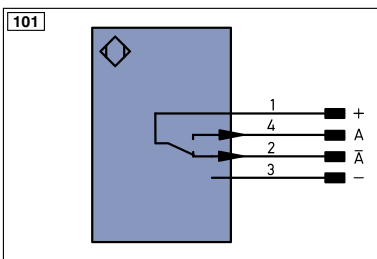
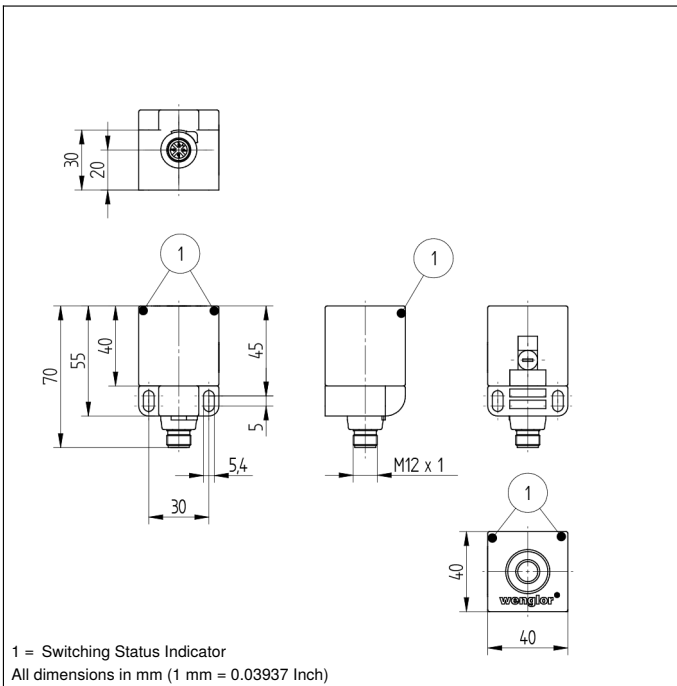
Welding field resistant inductive sensors with correction factor 1 offer a unique combination of technical performance features: increased switching distances for reliable object detection, high switching frequencies for applications with high process speeds and an extended temperature range for use under various ambient conditions. A switching status LED for diagnosis functions reduces system downtime. In order to simplify integration, all housing designs are available in flush or non-flush mounting variants.

Technical Data

Inductive Data	
Switching Distance	20 mm
Correction Factors Stainless Steel V2A/CuZn/Al	1,04/1,04/1,04
Mounting	flush
Mounting A/B/C/D in mm	0/15/60/0
Switching Hysteresis	< 15 %
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 15 mA
Switching Frequency	1500 Hz
Temperature Drift (-25 °C < Tu < 60 °C)	10 %
Temperature Drift (Tu < -25 °C, Tu > 60 °C)	20 %
Temperature Range	-40...80 °C
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	200 mA
Resistant to Magnetic Fields	200 mT
Short Circuit Protection	yes
Reverse Polarity and Overload Protection	yes
Protection Class	II
Mechanical Data	
Housing Material	Plastic, ABS
Sensor Cap	Plastic PBT, PTFE
Welding Field Resistant	yes
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	2099,41 a
Function	
Error Indicator	yes
PNP NO/NC antivalent	●
Connection Diagram No.	101
Suitable Connection Equipment No.	2

Complementary Products

PNP-NPN Converter BG2V1P-N-2M



Legend			
+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ū	Test Input inverted
Ā	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input
ṽ	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O-	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	AWV	Valve Output
S	Shielding	a	Valve Control Output +
RxD	Interface Receive Path	b	Valve Control Output 0 V
TxD	Interface Send Path	SY	Synchronization
RDY	Ready	SY-	Ground for the Synchronization
GND	Ground	E+	Receiver-Line
CL	Clock	S+	Emitter-Line
E/A	Output/Input programmable	⊕	Grounding
	IO-Link	S _n R	Switching Distance Reduction
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path
IN	Safety Input	Tx+/-	Ethernet Send Path
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)
Signal	Signal Output	L _a	Emitted Light disengageable
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation
EN0 _{RS422}	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation
		EDM	Contacting Monitoring
		EN _{AS422}	Encoder A/Ā (TTL)
		EN _{BS422}	Encoder B/B̄ (TTL)
		EN _A	Encoder A
		EN _B	Encoder B
		A _{MIN}	Digital output MIN
		A _{MAX}	Digital output MAX
		A _{OK}	Digital output OK
		SY _{in}	Synchronization In
		SY _{OUT}	Synchronization OUT
		OL _T	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
		GN _{YE}	Green/Yellow

Mounting

