

# Inductive Sensor

## Welding Field Resistant with Correction Factor 1

# I18A002

Part Number



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

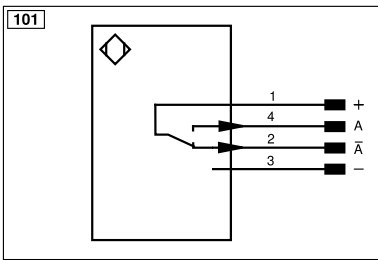
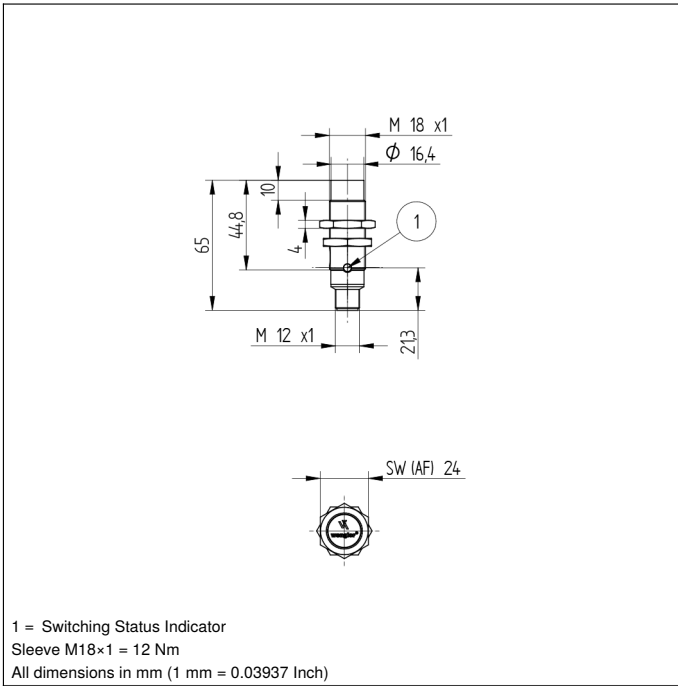
Welding field resistant inductive sensors with correction factor 1 offer a unique combination of technical performance features: increased switching distances for reliable object detection, high switching frequencies for applications with high process speeds and an extended temperature range for use 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	15 mm
Correction Factors Stainless Steel V2A/CuZn/Al	1,05/1,05/1,06
Mounting	non-flush
Mounting A/B/C/D in mm	20/40/45/20
Switching Hysteresis	< 15 %
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 15 mA
Switching Frequency	3500 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
Protective Insulation, Rated Voltage	100 V
Mechanical Data	
Housing Material	CuZn; 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)	2165,44 a
Function	
Error Indicator	yes
PNP NC, PNP NO	●
Connection Diagram No.	101
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	150   153

### Complementary Products

PNP-NPN Converter BG2V1P-N-2M



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted	ENb	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		

## Mounting

