

Pressure Sensor

FM5P201

Part Number

InoxSens

- **Analog output: 4...20 mA**
- **Compact, laser-welded stainless steel 316L housing**
- **Very fast response time of < 1 s**
- **Very low weight at 13 g (without cable)**
- **Very small format at Ø 14 mm, SW13**

The weFlux²micro miniature pressure sensor with analog output is distinguished by its space-saving design and low weight. This enables precise pressure measurements in confined installation spaces and on moving plant components such as robot arms. The short response time (<1 ms) allows the sensor to be implemented in quick pressure measurement applications – for example, when monitoring pressure curves in hydraulic systems.



Technical Data

Sensor-specific data

Measuring Range	-1...10 bar
Measurement Type	relative
Maximum overload pressure	20 bar
Bursting pressure	30 bar
Medium	Liquids;** gases
Pressure response time (t90)	< 1 ms
Measuring error (total)	≤ ± 1 %
Hysteresis	< ± 0,5 %
Linearity Deviation	< ± 0,5 %
Zero-point error	< ± 1 %
Repeat Accuracy	< ± 0,1 %
Temperature coefficient zero-point	± 0,15% /10K
Temperature coefficient range	± 0,15% /10K

Environmental conditions

Temperature of medium	-25...125 °C*
Ambient temperature	-25...80 °C
Storage temperature	-25...80 °C
EMC	DIN EN 61326-2-3
Shock resistance per DIN IEC 68-2-27	30 g / 11 ms
Vibration resistance per DIN IEC 60068-2-6	20 g (10...2000 Hz)

Electrical Data

Supply Voltage	12...28 V DC
Current Consumption (U _b = 24 V)	≤ 30 mA
Number of analog outputs	1
Analog Output	4...20 mA
Current Output Load Resistance	< 500 Ohm
Short Circuit Protection	yes
Reverse Polarity Protection	no
Protection Class	III

Mechanical Data

Housing Material	Stainless steel, V4A (1.4404 / 316L)
Material in contact with media	Rubber, FKM
Material in contact with media	Stainless steel, V4A (1.4404 / 316L)
Degree of Protection	IP67/IP68
Connection	Cable, 2-wire, 2 m
Process Connection	M5 x 0.8
Seal material	Fluororubber, FKM
Bending radius (used in motion)	5 × d
Bending radius (fixed installation)	≥ 3 × d
Drag Chain Suitable	yes
Cable Jacket Material	PVC

Safety-relevant Data

MTTFd (EN ISO 13849-1)	3842,62 a
------------------------	-----------

Analog Output


Connection Diagram No.

* Sensors suitable up to temperature of medium of 125 °C. During installation, please ensure that the sensor housing is sufficiently cooled by the surroundings.

** The sensor is not suitable for highly viscous liquids and mixtures containing particles

Tightening torque = 1 Nm
All dimensions in mm (1 mm = 0.03937 Inch)



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ů	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	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 0/0 (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARIS422	Encoder A/A (TTL)		

