

Pressure Sensor with IO-Link

FX1P003

Part Number

weFlux² InoxSens



- Compact, laser-welded V4A stainless steel housing
- Individual parameters configuration via IO-Link 1.1
- Outstanding measuring accuracy: $\pm 0.5\%$
- Quick sensor replacement thanks to data storage

weFlux² pressure sensors precisely measure the relative pressure of any desired media to an accuracy level of $\pm 0.5\%$. Depending on application requirements, either two switching outputs or one switching output and one analog output can be selected for the purpose of reading out measured values. Furthermore, weFlux² pressure sensors offer new dimensions in individual parameters configurability. Sensor parameters, filter and output functions, as well as the unit of measure of the measured values (bar, PSI or Pascal), can be flexibly adjusted.



Technical Data

Sensor-specific data

Measuring Range	-1...1 bar
Measurement Type	relative
Maximum overload pressure	5 bar
Bursting pressure	7,5 bar
Medium	Liquids, gases
Pressure Response Time (t90)	< 10 ms
Measuring error (total)	0,5 %
Hysteresis	< $\pm 0,1$ %
Linearity Deviation	< $\pm 0,5$ %
Zero-Point Error	< $\pm 0,1$ %
Repeat Accuracy	< $\pm 0,1$ %
Temperature Coefficient Zero-Point	< $\pm 0,15\%$ /10K
Temperature Coefficient Range	< $\pm 0,2\%$ /10K

Environmental conditions

Temperature of medium	-10...125 °C**
Ambient temperature	-10...80 °C
Storage temperature	-10...80 °C
EMC	DIN EN 61326-2-3
Shock resistance per DIN IEC 68-2-27	50 g / 11 ms
Vibration resistance per DIN IEC 60068-2-6	10 g (10...2000 Hz)

Electrical Data

Supply Voltage	12...32 V DC
Current Consumption (U _b = 24 V)	< 15 mA
Number of Switching Outputs	2
Switching Output/Switching Current	100 mA
Switching Output Voltage Drop	< 1,5 V
Analog Outputs	1
Analog Output	4...20 mA/0...10 V
Resolution	> 11 bit
Current Output Load Resistance	< 500 Ohm
Voltage output load resistance	> 1 kOhm
Interface	IO-Link V1.1
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III

Mechanical Data

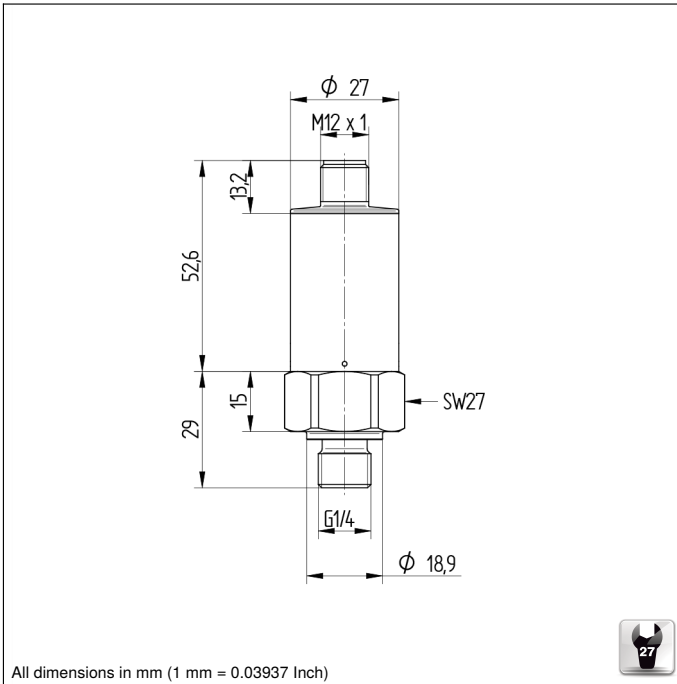
Setting Method	IO-Link
Sensor element	Ceramic diaphragm
Housing Material	1.4404
Material in contact with media	1.4404; FKM; Ceramic
Degree of Protection	IP65 *
Connection	M12 × 1; 4-pin
Process Connection	G 1/4"
{Dichtungsmaterial}	FKM

Safety-relevant Data

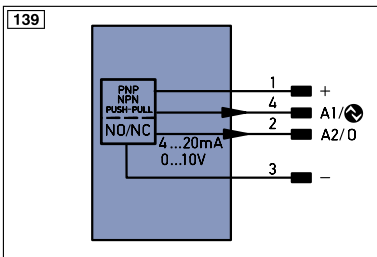
MTTFd (EN ISO 13849-1)	1157,11 a
Analog Output	●
IO-Link	●
Connection Diagram No.	139
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	919

* Not UL certified

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



All dimensions in mm (1 mm = 0.03937 Inch)



Legend

+	Supply Voltage +	PT	Platinum measuring resistor	EN ^A ES422	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	EN ^B ES422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN ^A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN ^B	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A _{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A _{MAX}	Digital output MAX
Ṽ	Contamination/Error Output (NC)	O	Analog Output	A _{OK}	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY _{in}	Synchronization In
T	Teach Input	BZ	Block Discharge	SY _{OUT}	Synchronization OUT
Z	Time Delay (activation)	A _{WV}	Valve Output	OL _T	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance reserved
RxD	Interface Receive Path	b	Valve Control Output 0 V	rsv	reserved
TxD	Interface Send Path	SY	Synchronization	Wire Colors according to IEC 60757	
RDY	Ready	SY-	Ground for the Synchronization	BK	Black
GND	Ground	E+	Receiver-Line	BN	Brown
CL	Clock	S+	Emitter-Line	RD	Red
E/A	Output/Input programmable	⊕	Grounding	OG	Orange
	IO-Link	S _n R	Switching Distance Reduction	YE	Yellow
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path	GN	Green
IN	Safety Input	Tx+/-	Ethernet Send Path	BU	Blue
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
Signal	Signal Output	L _a	Emitted Light disengageable	GY	Grey
Bl..D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN ⁰ ES422	Encoder 0-pulse 0-0 (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contactur Monitoring	GNYE	Green/Yellow

