

# Pressure Sensor with IO-Link

## FX5Q001

Part Number

weFlux<sup>2</sup> InoxSens



- Compact, laser-welded V4A stainless steel housing
- Individual parameters configuration via IO-Link 1.1
- Pressure and temperature measurement with a single sensor
- Quick sensor replacement thanks to data storage

weFlux<sup>2</sup> pressure sensors are equipped with an innovative measuring cell which includes an integrated temperature element. This makes it possible for the sensors to measure relative pressure as well as the temperature of any desired medium. 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, weFlux<sup>2</sup> 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...10 bar
Measurement Type	relative
Maximum overload pressure	20 bar
Bursting pressure	30 bar
Medium	Liquids, gases
Temperature Measurement Range	-40...125 °C
Response time (t90) Temp	< 1 s
Pressure Response Time (t90)	< 10 ms
Temperature Measurement Accuracy	< ± 1 °C
Measuring error (total)	0,5 %
Hysteresis	< ± 0,1 %
Linearity Deviation	< ± 0,2 %
Zero-Point Error	< ± 0,1 %
Repeat Accuracy	< ± 0,1 %
Temperature Coefficient Zero-Point	<± 0,05% /10K
Temperature Coefficient Range	<± 0,05% /10K
Long-term stability	< ± 0,1 %

#### 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	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 <sub>b</sub> = 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...10V Press / Temp
Resolution	> 11 bit
Current Output Load Resistance	< 500 Ohm
Interface	IO-Link V1.1
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III

#### Mechanical Data

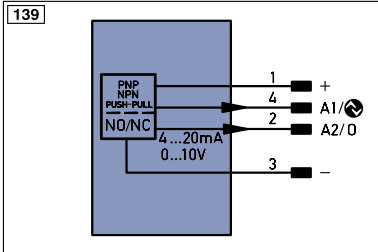
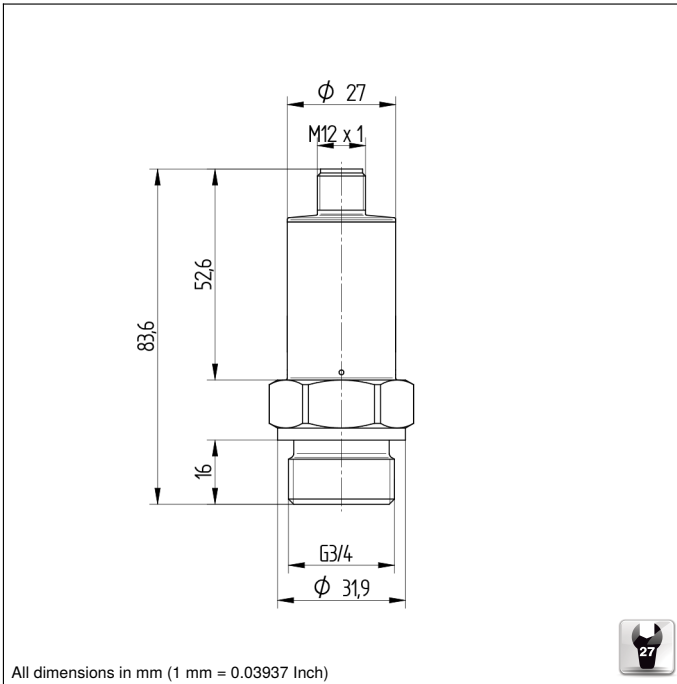
Setting Method	IO-Link
Sensor element	Ceramic diaphragm
Housing Material	1.4404
Material in contact with media	1.4404; FKM; Ceramic
Degree of Protection	IP65 *
Connection	M12 × 1; 4-pin
Process Connection	G 3/4"; front

#### Safety-relevant Data

MTTFd (EN ISO 13849-1)	1157,11 a
Analog Output	●
IO-Link	●
Connection Diagram No.	<b>139</b>
Suitable Connection Equipment No.	<b>2</b>
Suitable Mounting Technology No.	<b>920</b>

\* Tested by wenglor

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


**Legend**

+	Supply Voltage +	nc	not connected	EN <sup>A/RS422</sup>	Encoder A/ $\bar{A}$ (TTL)
-	Supply Voltage 0 V	U	Test Input	EN <sup>B/RS422</sup>	Encoder B/ $\bar{B}$ (TTL)
~	Supply Voltage (AC Voltage)	$\bar{U}$	Test Input inverted	EN <sup>A</sup>	Encoder A
A	Switching Output (NO)	W	Trigger Input	EN <sup>B</sup>	Encoder B
$\bar{A}$	Switching Output (NC)	W-	Ground for the Trigger Input	A <sup>MIN</sup>	Digital output MIN
V	Contamination/Error Output (NO)	O	Analog Output	A <sup>MAX</sup>	Digital output MAX
$\bar{V}$	Contamination/Error Output (NC)	O-	Ground for the Analog Output	A <sup>OK</sup>	Digital output OK
E	Input (analog or digital)	BZ	Block Discharge	SY <sup>In</sup>	Synchronization In
T	Teach Input	A <sup>WV</sup>	Valve Output	SY <sup>OUT</sup>	Synchronization OUT
Z	Time Delay (activation)	a	Valve Control Output +	O <sup>Lt</sup>	Brightness output
S	Shielding	b	Valve Control Output 0 V	M	Maintenance
RxD	Interface Receive Path	SY	Synchronization	rsv	reserved
TxD	Interface Send Path	SY-	Ground for the Synchronization	Wire Colors according to IEC 60757	
RDY	Ready	E+	Receiver-Line	BK	Black
GND	Ground	S+	Emitter-Line	BN	Brown
CL	Clock	$\pm$	Grounding	RD	Red
E/A	Output/Input programmable	S <sup>nR</sup>	Switching Distance Reduction	OG	Orange
	IO-Link	Rx+/-	Ethernet Receive Path	YE	Yellow
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	GN	Green
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	BU	Blue
OSSD	Safety Output	L <sup>a</sup>	Emitted Light disengageable	VT	Violet
Signal	Signal Output	Mag	Magnet activation	GY	Grey
Bl..D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	WH	White
EN <sup>0/RS422</sup>	Encoder 0-pulse 0-0 (TTL)	EDM	Contactur Monitoring	PK	Pink
				GNYE	Green/Yellow

