

# Pressure Sensor with IO-Link

## FX5Q011

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
- Temperature-compensated pressure reading

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	< ± 0,5 %
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	-40...125 °C**
Ambient temperature	-25...80 °C
Atmospheric humidity	100 % r.H.
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
Voltage output load resistance	> 1 kOhm
Interface	IO-Link V1.1
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III

#### Mechanical Data

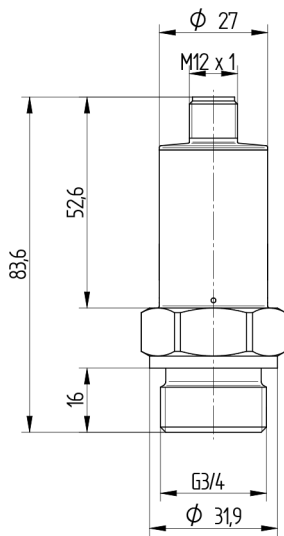
Setting Method	IO-Link
Sensor element	Ceramic diaphragm
Housing Material	1.4404
Material in contact with media	1.4404; EPDM; Ceramic
Degree of Protection	IP65 *
Connection	M12 × 1; 4-pin
Process Connection	G 3/4"; front
{Dichtungsmaterial}	EPDM

#### 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.	920

\* Not UL certified

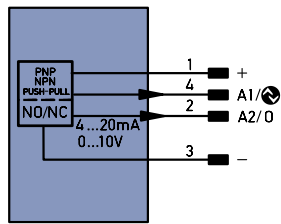
\*\* Sensors suitable up to 125 °C media temperature. During installation, please ensure that the sensor housing is adequately cooled by the surroundings.



All dimensions in mm (1 mm = 0.03937 Inch)



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#### Legend

+	Supply Voltage +	PT	Platinum measuring resistor	ENAR5422	Encoder A/Ä (TTL)
-	Supply Voltage 0 V	nc	not connected	ENB5422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	ENa	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	ENb	Encoder B
Ä	Switching Output (NC)	W	Trigger Input	AMIN	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
Ū	Contamination/Error Output (NC)	O	Analog Output	AOK	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)	AMV	Valve Output	OLT	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance
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	IO-Link	SnR	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	La	Emitted Light disengageable	GY	Grey
BI-D+/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN0.5422	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contacting Monitoring	GNYE	Green/Yellow

