

# Pressure Sensor

## 2 × Analog Output

# FX5Q101

Part Number

weFlux<sup>2</sup> InoxSens



- 2 analog outputs: 4 ... 20 mA
- Compact, laser-welded stainless steel 316L housing
- Pressure and temperature measurement with a single sensor
- Temperature-compensated pressure measurement

weFlux<sup>2</sup> pressure sensors measure the relative pressure of any desired media in closed systems. The pressure acting upon the sensor is converted to an electronic signal. The analog outputs read out the measured pressure and temperature values as 4 to 20 mA signals.



### 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  |

#### Environmental conditions

|                                            |                     |
|--------------------------------------------|---------------------|
| Temperature of medium                      | -40...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 analog outputs                    | 2            |
| Analog Output                               | 4...20 mA    |
| Signal source                               | Pressure     |
| Signal source                               | Temperature  |
| Resolution                                  | > 11 bit     |
| Current Output Load Resistance              | < 500 Ohm    |
| Short Circuit Protection                    | yes          |
| Reverse Polarity Protection                 | yes          |
| Protection Class                            | III          |

#### Mechanical Data

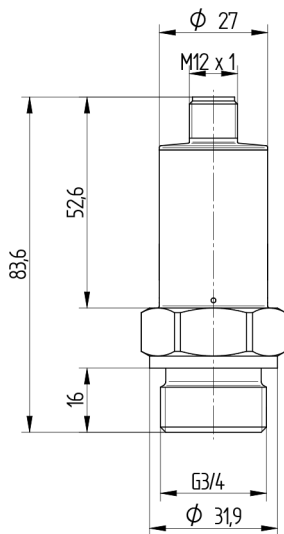
|                                |                      |
|--------------------------------|----------------------|
| Sensor element                 | Ceramic membrane     |
| Housing Material               | 1.4404               |
| Material in contact with media | 1.4404; FKM; ceramic |
| Degree of Protection           | IP65 *               |
| Connection                     | M12 × 1; 4-pin       |
| Process Connection             | G3/4"; front         |
| Seal material                  | Fluororubber, FKM    |

#### Safety-relevant Data

|                                   |           |
|-----------------------------------|-----------|
| MTTFd (EN ISO 13849-1)            | 1157,11 a |
| Analog Output                     | ●         |
| Connection Diagram No.            | 141       |
| Suitable Connection Equipment No. | 2         |
| Suitable Mounting Technology No.  | 920       |

\* Not UL certified

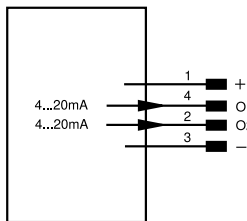
\*\* Sensors up to 125 °C medium temperature suitable. During installation, please ensure that the sensor housing is sufficiently cooled by the surroundings.



All dimensions in mm (1 mm = 0.03937 Inch)



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| 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)                | Ü         | Test Input inverted            | ENB                                    | Encoder B           |
| A         | Switching Output (NO)                      | W         | Trigger Input                  | AMIN                                   | Digital output MIN  |
| Ä         | 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   |
| Ÿ         | 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               |
| BL_D+/-   | Ethernet Gigabit bidirect. data line (A-D) | RES       | Input confirmation             | PK                                     | Pink                |
| ENo RS422 | Encoder 0-pulse 0/Ü (TTL)                  | EDM       | Contact Monitoring             | GNYE                                   | Green/Yellow        |
| PT        | Platinum measuring resistor                | ENARIS422 | Encoder A/A (TTL)              |                                        |                     |