

# Pressure Sensor with IO-Link

## FX2Q121

Part Number

weFlux<sup>2</sup> InoxSens



- 2 analog outputs: 4 ... 20 mA
- Compact, laser-welded V4A stainless steel housing
- Pressure and temperature measurement with a single sensor
- Temperature-compensated pressure reading

weFlux<sup>2</sup> pressure sensors measure the relative pressure of any desired media in closed systems. 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                    | 0...0,25 bar   |
| Measurement Type                   | relative       |
| Maximum overload pressure          | 1 bar          |
| Bursting pressure                  | 1,5 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         |
| 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                |
| Analog Outputs                              | 2                      |
| Analog Output                               | 4...20 mA Press / Temp |
| Resolution                                  | > 11 bit               |
| Current Output Load Resistance              | < 500 Ohm              |
| Short Circuit Protection                    | yes                    |
| Reverse Polarity Protection                 | yes                    |
| Protection Class                            | III                    |

#### Mechanical Data

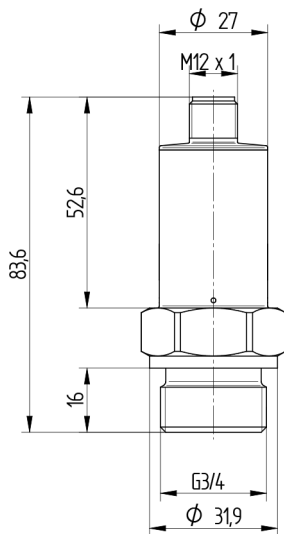
|                                |                      |
|--------------------------------|----------------------|
| Sensor element                 | Ceramic diaphragm    |
| Housing Material               | 1.4404               |
| Material in contact with media | 1.4404; FKM; Ceramic |
| Degree of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

#### 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

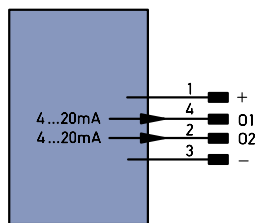
\*\* Sensors suitable up to 125 °C media temperature. During installation, please ensure that the sensor housing is adequately cooled by the surroundings.



All dimensions in mm (1 mm = 0.03937 Inch)



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#### Legend

|          |  |       |                                |                                    |                     |
|----------|--|-------|--------------------------------|------------------------------------|---------------------|
| +        | Supply Voltage +                           | PT    | Platinum measuring resistor    | ENaRS422                           | Encoder A/Ā (TTL)   |
| -        | Supply Voltage 0 V                         | nc    | not connected                  | ENBRS422                           | 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           |
| Ā        | 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                |
| BL-D+/-  | Ethernet Gigabit bidirect. data line (A-D) | Mag   | Magnet activation              | WH                                 | White               |
| EN0RS422 | Encoder 0-pulse 0-0̄ (TTL)                 | RES   | Input confirmation             | PK                                 | Pink                |
|          |  | EDM   | Contacting Monitoring          | GNYE                               | Green/Yellow        |

