

Fill-level Sensor with IO-Link

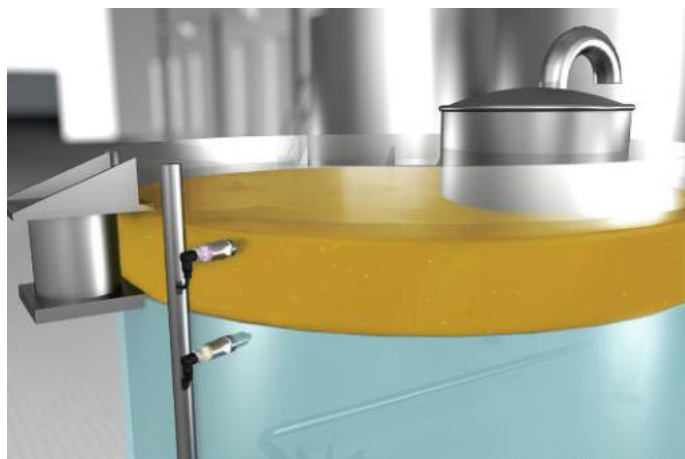
FXSL003

Part Number



- Fill-level measurement in all media: liquid, pasty, sticky or solid
- Process optimization with IO-Link 1.1
- Quick sensor replacement with data storage
- Two adjustable switching outputs

LevelTech fill-level sensors work in accordance with the innovative frequency sweep principal. With the help of this functional principle, the sensors detect any desired medium on the basis of the measured resonant frequency. With their two adjustable switching outputs, the sensors are capable of differentiating between foam and liquid or two different media. Sensor parameters, as well as filter and output functions, can be individually configured via IO-Link. The stainless steel housing is FDA compliant and can be installed in the tightest of spaces thanks to its compact design.



Technical Data

Sensor-specific data

| | |
|---------------------|----------------------------|
| Measuring principle | Frequency sweep |
| Measuring Range | DK > 1,5 |
| Medium | Liquids, granulate, powder |
| Response Time | 0,04 s |

Environmental conditions

| | |
|--|---|
| Media temperature TM (TU < 50 °C) | -40...115 °C |
| Media temperature TM brief (TU < 50 °C, t < 1 h) | -40...130 °C |
| Ambient temperature | -40...85 °C |
| Storage temperature | -40...85 °C |
| Pressure Resistance | 10 bar |
| EMC | DIN EN 61326 * |
| Vibration resistance per DIN IEC 60068-2-6 | 1,6 mm p-p (2...25 Hz), 4 g (25...100 Hz) |

Electrical Data

| | |
|------------------------------------|--------------|
| Supply Voltage | 8...36 V DC |
| Current Consumption (Ub = 24 V) | < 35 mA |
| Number of Switching Outputs | 2 |
| Power-up Time | < 3 s |
| Switching Output/Switching Current | 100 mA |
| Switching Output Voltage Drop | < 0,7 V |
| Leakage Current | < 100 µA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Interface | IO-Link V1.1 |

Mechanical Data

| | |
|--------------------------------|--------------------|
| Setting Method | IO-Link |
| Housing Material | 1.4404 |
| Material in contact with media | PEEK Natura 1.4404 |
| Degree of Protection | IP67/IP69K |
| Connection | M12 × 1; 4-pin |
| Connector Plug Material | Stainless Steel |
| Process Connection | G 1/2" hygienic |

Safety-relevant Data

| | |
|------------------------|-------|
| MTTFd (EN ISO 13849-1) | 686 a |
|------------------------|-------|

Function

| | |
|----------------------------------|----------|
| Attenuation (adjustable) | 0...10 s |
| Selective fill-level measurement | yes |

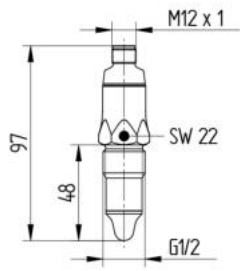
| | |
|-----------------------------------|---|
| Configurable as PNP/NPN/Push-Pull | ● |
| Switchable to NC/NO | ● |
| IO-Link | ● |

| | |
|-----------------------------------|-----|
| Connection Diagram No. | 704 |
| Suitable Connection Equipment No. | 2 |
| Suitable Mounting Technology No. | 918 |

* mounted in closed metal tank

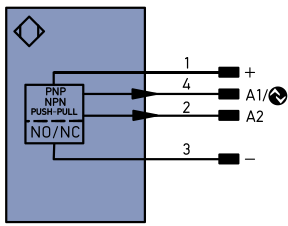
Complementary Products

IO-Link Master



All dimensions in mm (1 mm = 0.03937 Inch)

704



Legend

| | | | | | |
|----------|--|-------|--------------------------------|--------------------------------------|---------------------|
| + | Supply Voltage + | PT | Platinum measuring resistor | ENAR5422 | Encoder A/Ä (TTL) |
| - | Supply Voltage 0 V | nc | not connected | ENBR5422 | Encoder B/B (TTL) |
| ~ | Supply Voltage (AC Voltage) | U | Test Input | ENa | Encoder A |
| A | Switching Output (NO) | Ü | 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 |
| Ṽ | Contamination/Error Output (NC) | O | Analog Output | AOx | 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 DIN IEC 757 | |
| 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 |
| EN0R5422 | Encoder 0-pulse 0-0 (TTL) | RES | Input confirmation | PK | Pink |
| | | EDM | Contacting Monitoring | GNYE | Green/Yellow |

