

# 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.



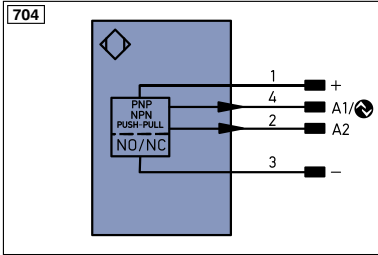
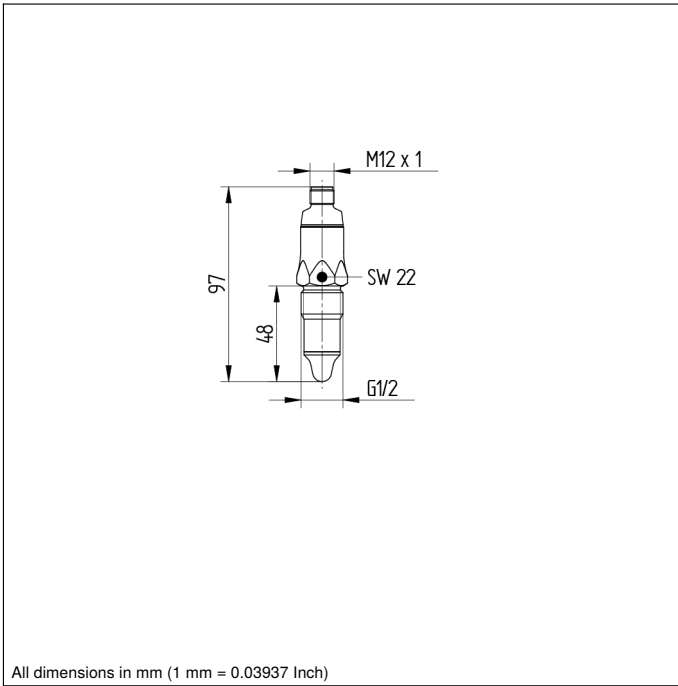
### Technical Data


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.	<b>704</b>
Suitable Connection Equipment No.	<b>2</b>
Suitable Mounting Technology No.	<b>918</b>

\* mounted in closed metal tank

### Complementary Products

IO-Link Master



Legend	
<b>+</b> Supply Voltage +	<b>PT</b> Platinum measuring resistor
<b>-</b> Supply Voltage 0 V	<b>nc</b> not connected
<b>~</b> Supply Voltage (AC Voltage)	<b>U</b> Test Input
<b>A</b> Switching Output (NO)	<b>Ū</b> Test Input inverted
<b>Ā</b> Switching Output (NC)	<b>W</b> Trigger Input
<b>V</b> Contamination/Error Output (NO)	<b>W-</b> Ground for the Trigger Input
<b>Ṽ</b> Contamination/Error Output (NC)	<b>O</b> Analog Output
<b>E</b> Input (analog or digital)	<b>O-</b> Ground for the Analog Output
<b>T</b> Teach Input	<b>BZ</b> Block Discharge
<b>Z</b> Time Delay (activation)	<b>AMV</b> Valve Output
<b>S</b> Shielding	<b>a</b> Valve Control Output +
<b>RxD</b> Interface Receive Path	<b>b</b> Valve Control Output 0 V
<b>TxD</b> Interface Send Path	<b>SY</b> Synchronization
<b>RDY</b> Ready	<b>SY-</b> Ground for the Synchronization
<b>GND</b> Ground	<b>E+</b> Receiver-Line
<b>CL</b> Clock	<b>S+</b> Emitter-Line
<b>E/A</b> Output/Input programmable	<b>±</b> Grounding
 <b>IO-Link</b>	<b>SnR</b> Switching Distance Reduction
<b>PoE</b> Power over Ethernet	<b>Rx+/-</b> Ethernet Receive Path
<b>IN</b> Safety Input	<b>Tx+/-</b> Ethernet Send Path
<b>OSSD</b> Safety Output	<b>Bus</b> Interfaces-Bus A(+)/B(-)
<b>Signal</b> Signal Output	<b>La</b> Emitted Light disengageable
<b>Bl_D+/-</b> Ethernet Gigabit bidirect. data line (A-D)	<b>Mag</b> Magnet activation
<b>EN0_0542</b> Encoder 0-pulse 0-0 (TTL)	<b>RES</b> Input confirmation
	<b>EDM</b> Contactor Monitoring
	<b>EN0_0542</b> Encoder A/Ā (TTL)
	<b>EN0_0542</b> Encoder B/B̄ (TTL)
	<b>ENa</b> Encoder A
	<b>ENb</b> Encoder B
	<b>AMIN</b> Digital output MIN
	<b>AMAX</b> Digital output MAX
	<b>OK</b> Digital output OK
	<b>SY_in</b> Synchronization In
	<b>SY_OUT</b> Synchronization OUT
	<b>OLt</b> Brightness output
	<b>M</b> Maintenance
	<b>rsv</b> reserved
	Wire Colors according to DIN IEC 757
	<b>BK</b> Black
	<b>BN</b> Brown
	<b>RD</b> Red
	<b>OG</b> Orange
	<b>YE</b> Yellow
	<b>GN</b> Green
	<b>BU</b> Blue
	<b>VT</b> Violet
	<b>GY</b> Grey
	<b>WH</b> White
	<b>PK</b> Pink
	<b>GNYE</b> Green/Yellow

