

# Fill-level Sensor with IO-Link

## FXPL003

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
- With status LEDs

LevelTech fill-level sensors work in accordance with the innovative frequency sweep principle. 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
Signal source	Change of medium
Leakage Current	< 100 µA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Interface	IO-Link V1.1

#### Mechanical Data

Setting Method	Teach-in/IO-Link
Housing Material	Plastic, PC
Housing Material	Stainless steel, V4A (1.4404/316L)
Material in contact with media	Plastic, PEEK
Degree of Protection	IP67/IP69K
Connection	M12 × 1; 4-pin
Connector Plug Material	Polycarbonate
Process Connection	G 1/2" hygienic

#### Safety-relevant Data

MTTFd (EN ISO 13849-1)	686 a
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#### Function

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

IO-Link	●
Push-Pull	●

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

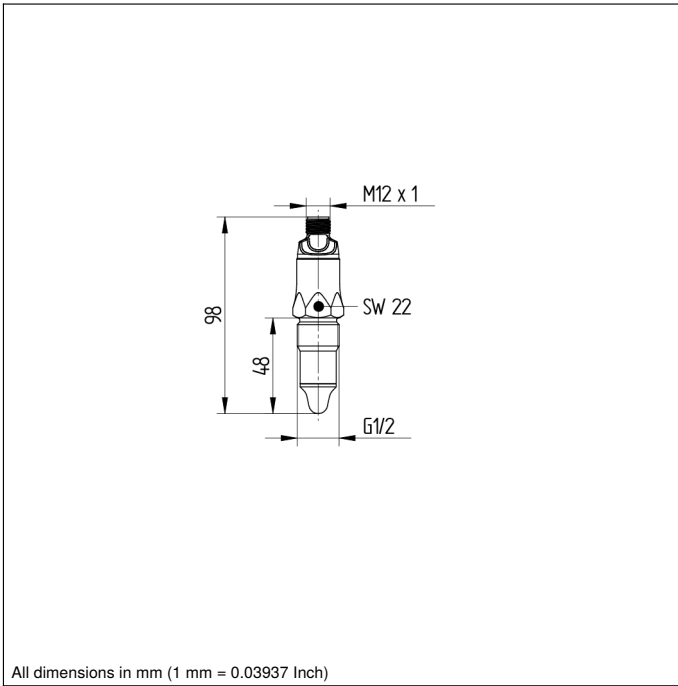
\* mounted in closed metal tank

\*\* TM= temperature of medium; TU= ambient temperature

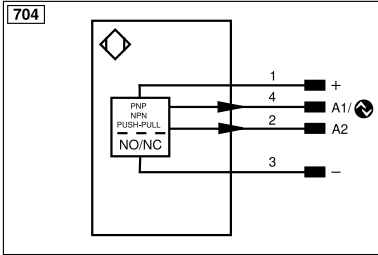
\*\*\* The relative dielectric constant of the medium to be detected must be greater than 1.5. (DC = dielectric constant)

### Complementary Products

IO-Link Master Software
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All dimensions in mm (1 mm = 0.03937 Inch)



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
⊕	IO-Link	Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contactor Monitoring
PT	Platinum measuring resistor	ENARs422	Encoder A/Ā (TTL)
			Encoder B/B̄ (TTL)
			Encoder A
			Encoder B
			Digital output MIN
			Digital output MAX
			Digital output OK
			Synchronization In
			Synchronization OUT
			Brightness output
			Maintenance
			Reserved
			Wire Colors according to DIN IEC 60757
			BK Black
			BN Brown
			RD Red
			OG Orange
			YE Yellow
			GN Green
			BU Blue
			VT Violet
			GY Grey
			WH White
			PK Pink
			GNYE Green/Yellow

