



Level sensors  
Ultrasonic level sensor

UP56-212148



**Model Name** > [UP56-212148](#)  
**Part No.** > [6048943](#)



*Illustration may differ*

**At a glance**

- Ultrasonic level sensor with very high chemical resistance
- Non-contact measurement in immersion pipe of up to 1500 mm
- PTFE-coated membrane and GF D40 process connection made of PTFE
- Pressure resistant up to 6 bar, temperature resistant up to 85°C
- Different sizes available
- Analog output selectable between 4 mA to 20 mA and 0 V to 10 V
- Switching output for monitoring the maximum and minimum limit

**Your benefits**

- Non-contact and non-wearing measurement reduces maintenance and service cost
- Sensor replacement possible even with chemicals present, thus saving time and increasing availability
- Universally applicable with acidic and alkaline processes
- Flexible measurement system for different container sizes provides cost reductions
- High precision measurements, even in liquids with density fluctuations
- Faultless operation with very limited installation space in the container
- Switching and analog output in one sensor reduces amount of wiring, I/O and stocking costs
- Simple and time-saving configuration with Connect+



**Features**

Medium:	Fluids
Measurement:	Switch, Continuous
Process pressure:	0 bar ... 6 bar, gauge pressure
Process temperature:	-25 °C ... 85 °C
Measuring range in tank:	85 mm ... 350 mm
Measuring range immersion tube:	85 mm ... 1,500 mm

**Performance**

Resolution:	0.18 mm
Accuracy of sensor element:	≤ 1 % <sup>1)</sup>
Repeatability:	± 0.15 % <sup>2)</sup>
Response time:	≤ 84 ms

1) 2) Of final value

### Mechanical data

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Housing material: PP, PTFE  
Process connection: D40 GF connection  
Housing design: Standard

### Electrical data

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Ultrasonic frequency: 320 kHz  
Enclosure rating: IP 67  
Supply voltage: 9 V DC ... 30 V DC <sup>1)</sup>  
Ripple:  $\pm 10\%$   
Power consumption:  $\leq 80\text{ mA}$  <sup>2)</sup>  
Time delay before availability:  $\leq 300\text{ ms}$   
Output signal:: 1 x PNP + 4 mA ... 20 mA / 0 V ... 10 V <sup>3) 4)</sup>  
Hysteresis: 5 mm  
Signal voltage HIGH:  $U_v - 3\text{ V}$   
Connection type: Round connector M12 x 1, 5-pin  
Ultrasonic transducer: PTFE coating, FFKM

<sup>1)</sup> Reverse-polarity protected <sup>2)</sup> At 24 V DC without output load <sup>3)</sup> Short-circuit protected, reversible <sup>4)</sup> Automatic switching between voltage and current outputs  
dependet on load 4 mA ... 20 mA:  $RL \leq 100/$  at  $9\text{ V} \leq U_B \leq 20\text{ V}$ ;  $RL \leq 500/$  at  $U_B \geq 20\text{ V}$ ; 0 V ... 10 V:  $RL \geq 100\text{ k}/$  at  $U_B \geq 15\text{ V}$ , short-circuit protected

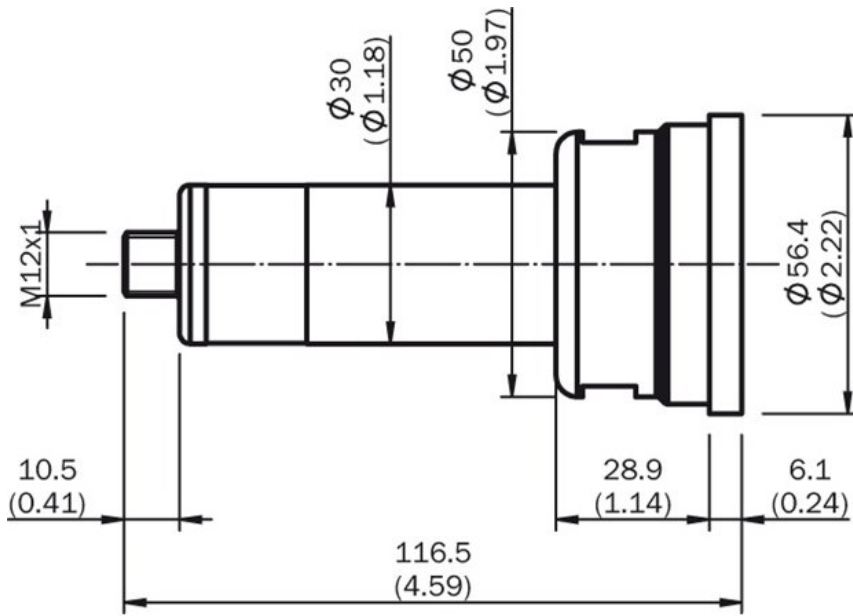
### Ambient data

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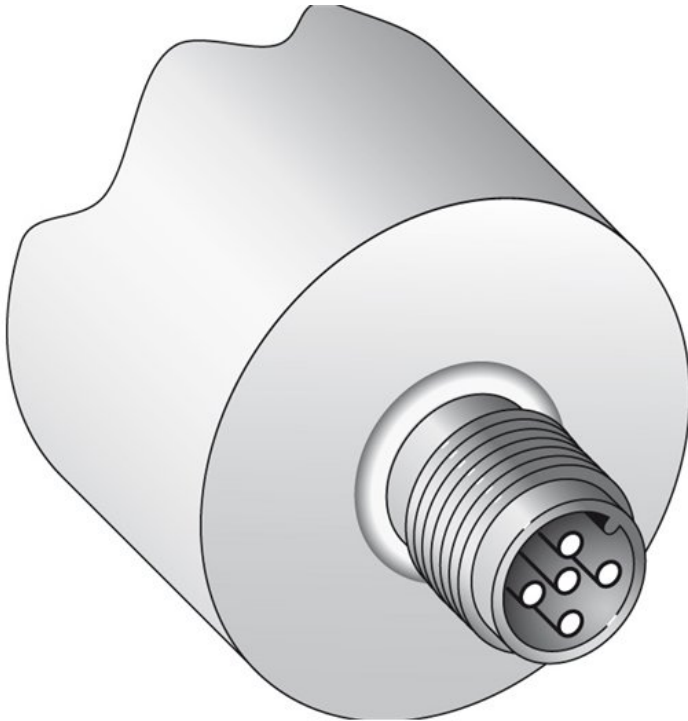
Ambient operating temperature:  $-25\text{ °C} \dots 60\text{ °C}$  <sup>1)</sup>  
Ambient storage temperature:  $-40\text{ °C} \dots 85\text{ °C}$

<sup>1)</sup> Temperature compensation at  $-25\text{ °C} \dots 50\text{ °C}$ , can be switched off

**Dimensional drawing**

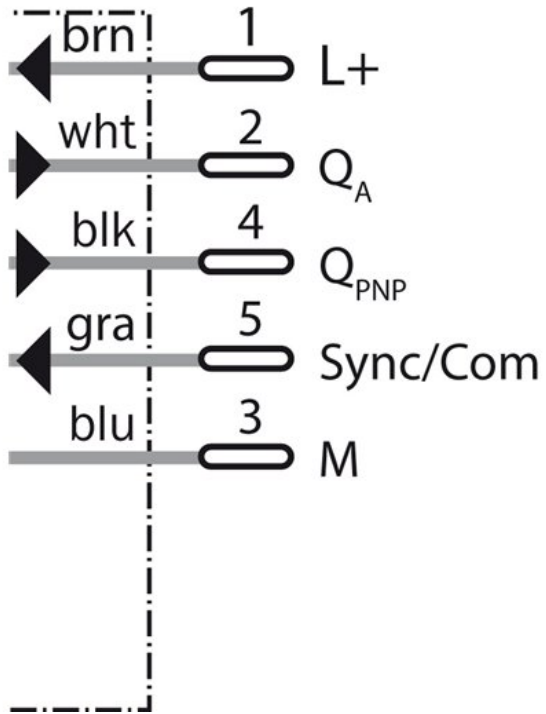


**Connection type**



Connection diagram

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