ULTRASONIC LEVEL MEASUREMENT / DATA SHEET

SS402-02
Compact Ultrasonic Liquid Level Meter

Compact waterproof ultrasonic sensing for distance and liquid-level measurement.

Overview

- SS402-02 is a compact ultrasonic liquid level meter for distance and level measurement.
- A waterproof ultrasonic transducer, high-performance processor and special speaker support stable, reliable measurement and larger detection-range requirements.
- The compact commercial-grade sensor is designed for easy operation and offers multiple output modes.
- Controlled output mode can minimize power consumption according to the actual application.
- The source lists a 28-750 cm plane-ranging span with UART, RS-485, PWM and customizable switching-value options.



Range	Accuracy	Output	Resolution
28-750 cm	±(1 cm + S × 0.3%)	UART / RS-485	1 mm
Supply	**Response**	**Temperature**	**Protection**
3.3-5 VDC	100-500 ms	-15 to +60 °C	IP67

Key Advantages

- High protection level and waterproof ultrasonic transducer.
- Strong anti-interference, antistatic performance and high measurement accuracy.
- Automatic and controlled output modes support different application requirements.

Application Scenarios

- Horizontal ranging and liquid level measurement.
- Intelligent waste-bin management and sewer or well-bottom water-level monitoring.
- Robot obstacle avoidance, automatic control and object presence awareness.

Measurement Principle

SS402-02 uses ultrasonic sensing technology for distance measurement. A waterproof ultrasonic transducer emits and receives ultrasonic signals; the source describes the product as using high-performance processors and high-quality components for stable and reliable measurement. The supplied source does not provide a more detailed signal-processing diagram.

Technical Specifications

Parameter	Specification	Parameter	Specification
Measuring range	28-750 cm when measuring distance on a plane	**Signal output**	UART; RS-485 (PWM and switching value can be customized)
Power supply	3.3-5 VDC; 5-12 VDC for RS-485 type	**Accuracy**	±(1 cm + S × 0.3%); S is the measured value
Average power consumption	<10 mA; standby current can be lower than 10 μA	**Resolution**	1 mm

Parameter	Specification	Parameter	Specification
Operating temperature	-15 to +60 °C	**Response time**	100-500 ms
Protection level	IP67		

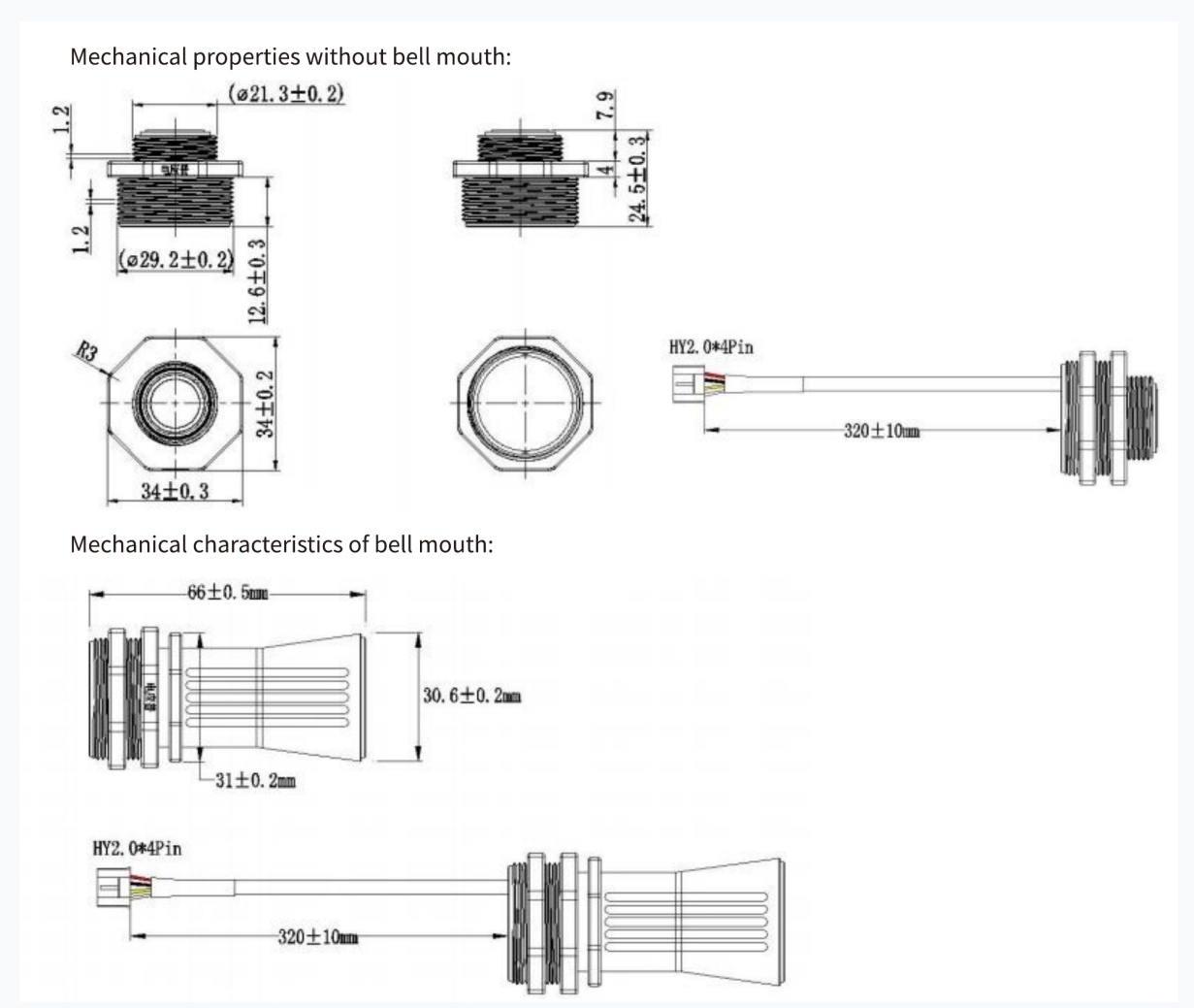
Output and Communication

Interface	Source-listed configuration
UART	Source-listed serial output
RS-485	Source-listed digital output
PWM	Switching value can be customized

The source lists UART and RS-485 outputs; PWM and switching value can be customized.

Mechanical Dimensions / Installation

Dimensions



Source dimension drawing: sensor assemblies with and without bell mouth. Dimensions are shown in millimetres; the source lists a cable length of 320 ± 10 mm.

Electrical Connection

Wire color	Definition
Red	VCC
Black	GND
White	RS-485 A / TXD
Yellow	RS-485 B / RXD

Product Selection / Ordering Information

Selection	Configuration
Base model	SS402-02 — Compact Ultrasonic Liquid Level Meter
Measuring range	28-750 cm on a plane
Output selection	UART; RS-485; PWM or customized switching value
Power supply	3.3-5 VDC; 5-12 VDC for RS-485 type
Accuracy	±(1 cm + S × 0.3%)
Resolution / response	1 mm; 100-500 ms
Protection / temperature	IP67; -15 to +60 °C

Specify SS402-02 with the required output and power-supply configuration. Final configuration remains subject to the source-listed options.

CONTACT / SUPPORT

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