

## DATASHEET

## Level

## Self-contained Water Level Recorder Level&Temperature Model PWL755

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### Description

PWL755 Self-contained Water Level Recorder is a groundwater monitoring instrument powered by an internal battery. It can be used to record water depth (pressure) and temperature for a long time. The housing material is made of stainless steel or titanium alloy. The water level recorder includes water level and temperature sensors, built-in large-capacity FLASH memory and high-capacity long-life lithium battery. All functions are integrated in the instrument with a diameter of 26mm. It is suitable for water level and water temperature measurement in surface water, groundwater and marine environment.

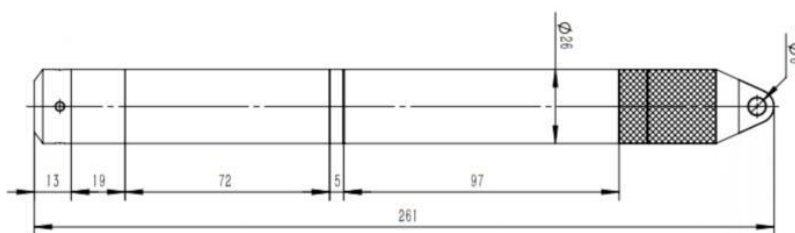
## Application

- Groundwater level and temperature monitoring
- Flood control level monitoring in coastal cities
- Reservoir and dam water level
- Lake and surface runoff water level monitoring
- Unmanned hydrological monitoring stations
- Real-time monitoring of liquid level in tanks
- On-site liquid level monitoring of industrial control systems

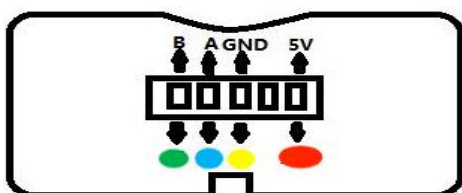
## Features

- Self-contained: no cable lead-out, strong underwater sealing
- High-quality and high-stability sensing elements
- High accuracy: Level 0.05%F.S., resolution 1mm; Temperature  $\pm 0.5^{\circ}\text{C}$ , resolution  $0.1^{\circ}\text{C}$
- Low consumption: Energy-saving design, standby power consumption  $< 5\mu\text{A}$ , acquisition power consumption 3mA
- Multi-parameters at one time: Water depth, water temperature, water pressure, battery leftover, time...
- RS485 Modbus RTU standard communication protocol
- Temperature compensation: Digital calibration and temperature compensation for full temperature range
- Reverse polarity protection and over-voltage protection
- Anti-surge and anti-electromagnetic interference circuit board
- Internal intelligent linear correction and temperature compensation
- IP68 protection level

## Dimensions (mm)



## Electrical Connection



Number	Wire Color	Definition
1	Red	Vcc+(24V+)
2	Blue	RS485 +
3	Green	RS485 -
4	Yellow	GND

## Specifications

Main Characteristics	
Sensing Element	High-stability, no drift for a long time
Level Range	0~10mH <sub>2</sub> O...0~200mH <sub>2</sub> O
Water level accuracy	±0.05%F.S. (0~50℃)
Resolution	1mm
Pressure Type	Absolute Pressure
Long stability	<0.05%F.S./year
Safe Overload	≤200%FS
Temperature Accuracy	±0.5℃
Temperature Resolution	0.1℃
Built-in Battery Life	10 years ( Record once/60 minutes)
Storage Capacity	>40000 pieces record ( Water level+water temperature+water pressure+battery leftover+time)
Real-time Clock	<±5 minutes/year
Electrical Characteristics	
Compensation Temperature	0~50℃
Operating Temperature	-10~80℃
Power Supply	External voltage: DC5~30V (Typical 24V)
	Internal battery: 2.7~3.6VDC
Power Protection	Reverse polarity protection and over-voltage protection, Anti surge 2KV
Communication	RS485 Modbus RTU, via a data reader to download data to computer
Structure Characteristics	
Measurable Medium	Compatible with 316L stainless steel and Viton
Housing Material	316L stainless steel or titanium(optional)
Lifting Wire	SUS304 stainless steel or 316L(optional)
Environmental Characteristics	
IP Rating	IP68
Weight	About 300g (excluding cable)
Environmental Vibration	Withstand the vibration test specified in GB/T9359
Drop Test	Withstand the drop test specified in GB/T9359
Electromagnetic Environment	In accordance with GB/T17626.8 Level 3
Meantime Between Failures	Not less than 30,000 hours

*\*\*Tell us medium / which application / measuring range / working temperature / signal output / what you wanna to realize, our sales engineer will recommend suitable model for you.*