

DR6458 Submersible Water Level Data Logger

Battery-Powered Water Level & Pressure Data Logger with Optional RS485 Communication



Product Overview

The DR6458 Submersible Water Level Data Logger is a compact, battery-powered instrument designed for long-term monitoring of water level, pressure, and temperature in groundwater, wells, rivers, reservoirs, lakes, tanks, and other water management applications. Combining a high-accuracy pressure sensor, temperature sensor, and large-capacity data logger in a rugged stainless steel housing, the DR6458 provides reliable and maintenance-friendly operation in harsh environments.



The logger stores measurement data internally and supports flexible recording intervals from 1 second to 255 hours, making it suitable for both short-term testing and long-term environmental monitoring. With a storage capacity of up to 50,000 records and ultra-low power consumption, the device delivers years of unattended operation.

To meet different application requirements, the DR6458 is available in three configurations: a standalone data logger for autonomous monitoring, an RS485 communication version with a replaceable battery, and an RS485 communication version with a sealed primary battery for maintenance-free operation. The optional RS485 interface enables easy integration with supervisory computers, data acquisition systems, and remote monitoring platforms using the Modbus RTU protocol.

Manufactured with a 316L stainless steel diaphragm, an IP68 waterproof enclosure, and excellent long-term stability, the DR6458 is an ideal solution for hydrological monitoring, groundwater observation, water resource management, environmental monitoring, irrigation systems, and industrial liquid level measurement.

Key Features

- High-accuracy water level, pressure, and temperature measurement
- Integrated data logger with up to 50,000 records storage
- Ultra-low power consumption for long-term deployment
- Adjustable logging interval from 1 second to 255 hours
- Optional RS485 Modbus RTU communication
- Available with replaceable or sealed battery options
- Rugged 316L stainless steel construction
- IP68 waterproof protection for continuous submersible operation
- Suitable for groundwater, rivers, reservoirs, tanks, and environmental monitoring applications

Applications

- Groundwater monitoring
- River monitoring
- Reservoirs

- Water supply
- Wastewater treatment
- Hydrology
- Flood monitoring
- Aquaculture
- Agriculture irrigation
- Environmental monitoring

Configuration Options

OPTION A	OPTION B	OPTION C
Standalone Data Logger	Data Logger with RS485 Interface (Replaceable Battery)	Data Logger with RS485 Interface (Sealed Battery, ~2-Year Battery Life)
		
 No Output  No Cable  Replaceable Battery	 RS485 Output  With Communication Cable  Replaceable Battery	 RS485 Output  With Communication Cable  Non-replaceable Battery Typical Battery Life: ~2 Years
Use Output Code: N	Use Output Code: R	Use Output Code: R

Option A

Standalone Data Logger

Option B

Data Logger with RS485 Interface
(Replaceable Battery)

Option C

Data Logger with RS485 Interface
(Sealed Battery, Typical Battery Life 2 Years)

Technical Specifications

Pressure

Item	Specification
Measuring Range	1, 2, 5, 10, 20, 50, 100, 200 mH ₂ O
Pressure Type	Absolute
Accuracy	±0.25%FS Typical
Maximum Accuracy	±0.5%FS
Resolution	0.01%FS
Long-term Stability	±0.2%FS/year
Overpressure	150%FS

Temperature

Item	Specification
Measuring Range	-30...80°C
Resolution	0.1°C
Accuracy	±0.1°C

Data Logging

Item	Specification
Logging Interval	1 second to 255 hours 59 minutes 59 seconds
Storage Capacity	50,000 records
Recorded Data	Time, Date, Pressure, Temperature

Communication

Item	Specification
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Output	None / RS485
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Protocol	Modbus RTU
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Interface	RS485
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Power Supply

Item	Option A	Option B	Option C
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Battery	Replaceable	Replaceable	Sealed Primary Battery
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Typical Battery Life	Up to 3 Years	Up to 3 Years	Approx. 2 Years
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Environmental

Item	Specification
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Operating Temperature	-30...80°C
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Protection	IP68
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Storage Temperature	-30...80°C
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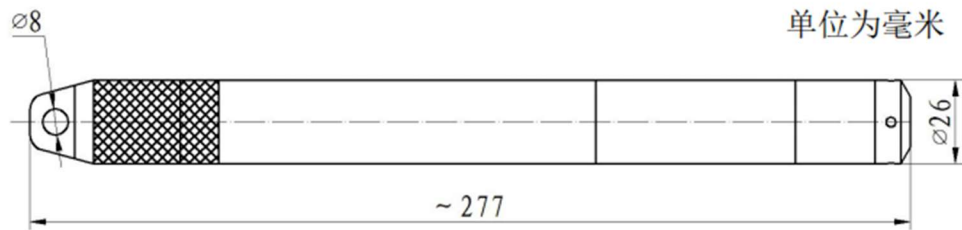
Construction

Item	Material
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Wetted Diaphragm	SS316L
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Housing	SS304 or SS316L
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O-ring	NBR / FKM
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Wiring (RS485 Version)

Pin 1 RS485 A

Pin 2 RS485 B

Pin 6 Power +

Pin 7 Power –

Ordering Guide

Item	Code	Description
Model	DR6458	Submersible Level Data Logger
Measuring Range	[0~X]mH ₂ O X = 1, 2, 5, 10, 20, 50, 100, 200 mH ₂ O	
Output Signal	N	No Output
	R	RS485
Construction Material	M1	SS316L Diaphragm, SS304 Housing
	M2	SS316L Diaphragm, SS316L Housing
Configuration	A	Data Logger Only – No output signal and no cable. The user suspends the logger using their own stainless steel wire or rope. Powered by a user-replaceable battery. (Use

Item	Code	Description
		<i>with Output Code: N)</i>
	B	RS485 + Cable (Replaceable Battery) – Equipped with an RS485 communication cable for connection to a host computer or monitoring system. Powered by a user-replaceable battery. <i>(Use with Output Code: R)</i>
	C	RS485 + Cable (Sealed Battery) – Equipped with an RS485 communication cable for connection to a host computer or monitoring system. Powered by a sealed, non-replaceable primary battery with a typical service life of approximately 2 years (depending on sampling interval and operating conditions). <i>(Use with Output Code: R)</i>

DR6458-[Range]-[Output]-[Material]-[Configuration]

Ordering Examples

Example Model	Description
DR6458-[0~10]mH₂O-N-M1-A	Data logger only, no output, no cable, replaceable battery
DR6458-[0~10]mH₂O-R-M1-B	RS485 with cable, replaceable battery
DR6458-[0~10]mH₂O-R-M1-C	RS485 with cable, sealed non-replaceable battery (typical battery life: 2 years)

Ordering Information

Item	Code
Output	N / R
Material	M1 / M2
Configuration	A / B / C

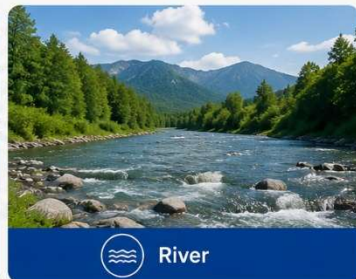
Accessories

- Suspension Wire
- Stainless Steel Rope
- USB-RS485 Converter
- Configuration Software
- Replacement Battery
- Protective Installation Tube

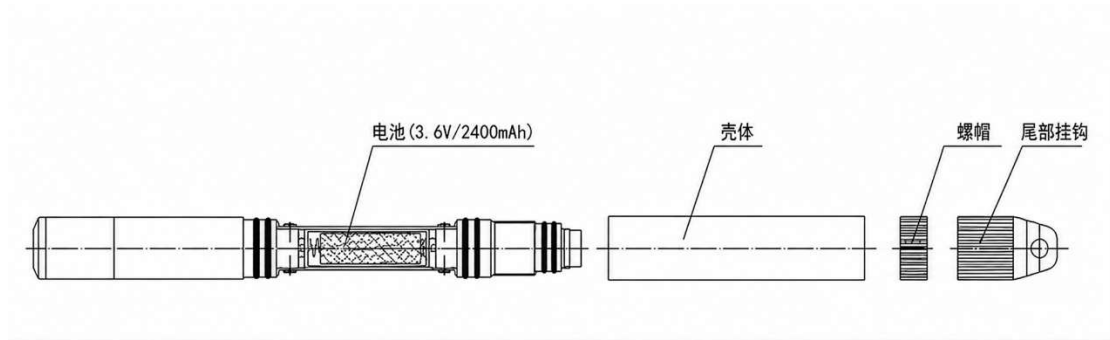
Typical Applications

10. TYPICAL APPLICATIONS

The DR6458 Submersible Water Level Data Logger is ideal for a wide range of water level and pressure monitoring applications.



Battery Replacement



The DR6458 data logger is powered by a **primary lithium battery** with a rated voltage of **3.6 V** and a capacity of **2400 mAh**. The battery specification is **Ø14.5 mm × 50.5 mm**. Users may purchase a compatible replacement battery locally or contact Fandee Electronics for an original replacement.

To replace the battery, first remove the **hanging hook end cap**, and then unscrew the **retaining cap** of the data logger. Hold the pressure sensing end of the logger firmly with one hand while pulling the battery compartment assembly outward with the other hand. This will remove the waterproof protective sleeve and expose the battery for replacement.

After installing the new battery, reassemble the logger by following the above steps in the reverse order. Refer to the exploded view shown above for the internal structure and assembly sequence.

Note: Ensure that all sealing O-rings are correctly installed and free from damage before reassembly to maintain the IP68 waterproof rating.

Company Information

Fandee Electronics Co., Ltd.

Website: www.fandesensor.com

Email: Sales@fandesensor.com