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# UR Residual Chlorine Monitoring System

Smart · Reliable · Multi-Parameter



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# UR-DC2000 Digital Analyzer Controller

Smart · Reliable · Multi-Parameter

## Overview

The **UR-DC2000** is a precision-engineered digital controller designed for real-time monitoring of multiple water quality parameters. With modular connectivity, it seamlessly integrates with UR Series digital sensors, including Residual Chlorine, pH, ORP, Conductivity, Dissolved Oxygen, Turbidity, and Sludge Concentration probes.

Engineered for performance and flexibility, the **UR-DC2000** ensures accurate measurement, stable signal transmission, and easy communication with SCADA or other control systems. It is the ideal solution for water treatment, industrial process monitoring, and environmental analysis.



## Key Features:

- Universal digital input supporting multiple UR sensors
- Isolated 4–20 mA and RS485 (Modbus-RTU) outputs
- Dual alarm relays with sound and light indication
- 2.8" LCD display with user-friendly interface
- AC (220 V) or DC (24 V) power options
- Compact and durable housing for panel installation
- Compatible with UR-ADI7000 Residual Chlorine Sensor

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### UR-ADI7000 Digital Residual Chlorine Sensor:

The UR-ADI7000 sensor uses a three-electrode constant potential measurement principle, delivering accurate chlorine readings without the need for reagents or membrane replacement. Equipped with a built-in ARM processor and intelligent filtering algorithm, it provides rapid, interference-free results even under variable water conditions.

#### Key Features:

- Membrane-less operation – no consumables or electrolyte
- High-precision digital measurement with fast response
- Built-in temperature compensation (NTC 10 K)
- RS485 Modbus-RTU digital output
- Compact design for flow-through installation
- Stable and maintenance-free performance

#### Applications:

- Drinking water treatment and distribution
- Secondary water supply systems
- Swimming pools and recreational water facilities
- Industrial disinfection and process monitoring



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## Single Parameter Monitoring Panel (SPMP):

### Compact, Ready-to-Use Monitoring Solution

For simplified installation, the UR SPMP provides a complete plug-and-play system, integrating the UR-DC2000 Controller and the chosen UR Sensor (e.g., UR-ADI7000) into a pre-wired, factory-tested panel. This ready-to-use configuration saves time, reduces installation errors, and ensures immediate, reliable operation.

### Key Features:

- Factory-calibrated and fully wired
- Wall-mount or panel-mount design
- Durable industrial enclosure
- Ideal for field monitoring stations or laboratories

### Applications:

- Municipal and industrial water treatment
- Drinking and secondary supply monitoring
- Swimming pool and recreational water quality
- Industrial process and cooling systems
- Environmental and laboratory applications



### Why Choose the UR-DC2000?

- Multi-parameter compatibility with digital sensors
- Stable, isolated signal outputs for reliable control
- Real-time display with dual alarm protection
- SCADA-ready communication (RS485 Modbus-RTU)
- Smart, compact, and cost-effective design

## Technical Specifications

Parameter	UR-ADI7000 Sensor	UR-DC2000 Controller
Measurement Principle	Three-electrode constant potential	Digital multi-parameter controller
Measuring Range	0–5 mg/L (standard), 0–20 mg/L (optional)	Supports Residual Chlorine input
Accuracy	±5 % or ±0.05 mg/L (whichever is greater)	±0.2 % FS (output)
Sensitivity	0.001 mg/L	—
Output Signal	RS485 Modbus-RTU	4–20 mA and RS485 Modbus-RTU
Power Supply	9–24 VDC	100–240 VAC or 24 VDC
Power Consumption	≤0.5 W	≤3 W
Temperature Compensation	NTC 10 K	—
Medium Temperature	0–50 °C	0–60 °C
Process Pressure	≤0.1 MPa	—
Recommended Flow Rate	0.5–1 L/min (stable flow)	—
Alarm	—	2 relay channels (AC 250 V / 3 A)
Display	—	2.8" monochrome LCD (128×64)
Communication Protocol	Modbus-RTU	Modbus-RTU
Installation	Flow-through cell	Panel mount (92.5×92.5 mm cutout)
Cable Length	2 m (standard, customizable)	—

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