
WQ3000 Series Controller

User Manual

Version: 1.01

Product Overview

This user manual describes the installation, use and maintenance of WQ3000 series controllers, and introduces the instrument composition and characteristics of the product, which provides reference for technicians with relevant knowledge of operation and control of analytical instruments.

Warranty and maintenance

If the warranty period is exceeded or the following faults occur during the warranty period, the free warranty service will not be provided. The faults include but are not limited:

- Installation, operation or use not in accordance with this manual
- Improper use of products
- Failure to maintain the product as directed by the Company
- Repair products with parts not provided by our company
- Unauthorized modification or disassembly of the product

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This user manual does not bear legal responsibility for the user. Please refer to the corresponding contract for all legal terms.

1 Instrument introduction

1.1 Technical Indicators

WQ3000-S	WQ3000	WQ3000-F	WQ3000-M
4.3 inch touch screen (color)		5 inch touch screen (color)	
480*272		800*480	
188mm * 160mm * 134mm		182mm * 230mm * 110mm	
(85-260)V AC, (9-30)V DC			
(-20~70)°C			
(-10~60)°C			
PC, ABS			
IP65			
1 digital probe (only 5 parameter probes are supported)	1 digital probe (supports all probes)	4 digital probes (only 5 parameter probes are supported)	4 digital probes (supports all probes)
1 channel 0/4-20mA analog output, maximum load 500 ohms	2 0/4-20mA analog outputs, maximum load 500 ohms	6 0/4-20mA analog outputs, maximum load 500 ohms	6 0/4-20mA analog outputs, maximum load 500 ohms
1 SPDT relay (120VAC/1A, 24VDC/1A)	3 SPDT relays (120VAC/1A, 24VDC/1A)	6 SPDT relays (120VAC/1A, 24VDC/1A)	6 SPDT relays (120VAC/1A, 24VDC/1A)

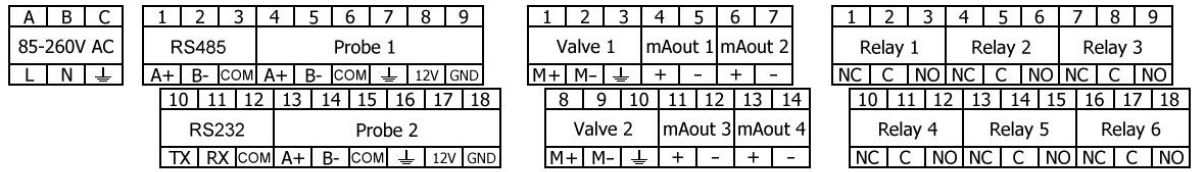
1.2 Features

- Support digital sensing probe automatic identification, plug and play;
- Sampling large-size touch screen as a human-computer interaction, can display up to 16 parameters;
- Support RS485 Modbus interface, can realize network monitoring;
- The unique lightning protection design is adopted to ensure the reliability of the equipment.
- Support software online upgrade, convenient maintenance.

2 Installation

2.1 Wiring Diagram

RISK OF ELECTRICAL SHOCK TO BE OPENED BY AUTHORIZED PERSONAL ONLY



Valve 1\Valve 2: 12V / 8W

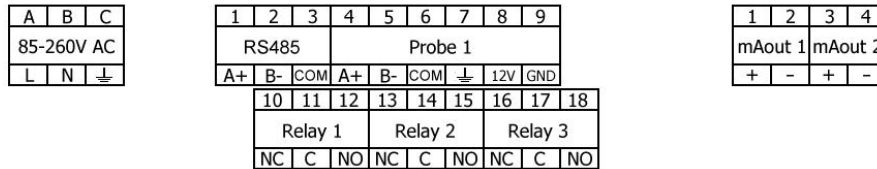
Relay 1\Relay 2\Relay 3\Relay 4\Relay 5\Relay 6 : 250V / 10A

mAOut 1\mAOut 2\mAOut 3\mAOut 4: 0/4-20 mA, resol. 12bit, galvanic isolation, max.load 500

A+ B-(RS485): galvanic isolation

WQ3000F Wiring Diagram

RISK OF ELECTRICAL SHOCK TO BE OPENED BY AUTHORIZED PERSONAL ONLY



Relay 1\Relay 2\Relay 3: 250V / 10A

mAOut 1\mAOut 2 : 0/4-20 mA, resol. 12bit, galvanic isolation, max.load 500

A+ B-(RS485): galvanic isolation

WQ3000 Wiring Diagram

3. Controller Operation

3.1 Controller Introduction

WQ3000 series universal controller can support all the company's digital water quality analysis sensors, and has a perfect external interface, which can easily realize sensor networking, remote control, fault diagnosis and other work.



WQ3000 Controller

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Controller
Menu

Turbidity
(0-500)NTU

259.7

OSA-Turb
Normal

Temperature
(0-50)°C

19.4

WQ3000 numerical display interface

Callout Name	Meaning
A	System Time
B	Measurement parameter type
C	Range and unit of measurement parameters
D	Controller Settings Menu
E	Sensor working status

3.3 Controller Settings

Click "controller menu" in the numerical display interface to enter the controller menu interface. The user may select a corresponding sub-menu in the controller setting interface to set parameters of the controller or acquire controller information.

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Communication
Settings

Auxiliary
Settings

Change
Password

Device
Information

Analog
output

Relay
Settings

Alarm
Settings

Alarm
Information

Historical
Log

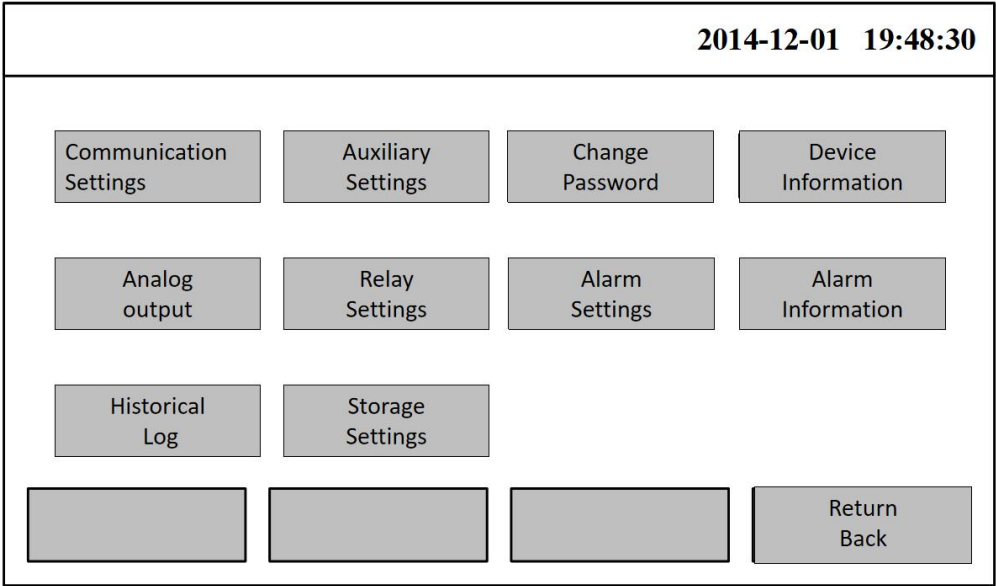
Storage
Settings

Solenoid
Valve

Device
Management

Return
Back

WQ3000T Controller Menu Interface



WQ3000 Controller Menu Interface

Controller Submenu (English)	Controller Submenu (Chinese)	Sub-menu function description
Comm. Setup	Communication Settings	Set the external communication mode, communication baud rate, communication address and communication baud rate to the sensor of the controller
Aux. Setup	Auxiliary Settings	Set system time, language, display mode, backlight mode
Password	Change Password	Modify operation password
Device Info.	Device Information	Displays information about the controller, including serial number, hardware version, software version, etc.
0/4-20mA	Analog output	Setting Analog Output Parameters
Relay	Relay	Setting relay output parameters
Alarm Setup	Alarm Settings	Set Alarm Upper and Lower Limit Values
Alarm Info.	Alarm information	Display controller alarm information
History	History Log	View sensor data logs and operation logs
Store Setup	Storage Settings	Setting storage-related parameters
Valve	Solenoid valve	Set parameters related to solenoid valve action (WQ3000 specific)
Device Management	Equipment Management	Add or remove sensors (WQ3000 specific)