

Free Chlorine/CLO₂/O₃ Controller



6000 Series



800 Series

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Unpacking instruction

Check for any damages on the content after unpacking.
Read the manual before installing and operating the instruments.
Confirm the wiring connections with the wiring diagram before switching on the power to avoid damages and injuries.

Safety precaution

1. The instrument must be operated by trained professional and technical personnel.
2. Avoid installing in a high humidity, high temperature, corrosive and in direct with sunlight environment.
3. Separate instrument signal cables from power lines and machine that produces high noise interference.

Instrument application

Widely used in industrial measuring of the temperature and Free Chlorine, such as drinking water, environmental monitoring, swimming pool, waterworks, food production process, etc.

Product content

1. 6000 series
1 meter, 1 operational manual, 1 quality check form, and four sets of mounting kits (Fixed box, fixed bar and screw).
2. 800 series
1 meter, 1 operational manual, 1 quality check form, and two sets of mounting kits

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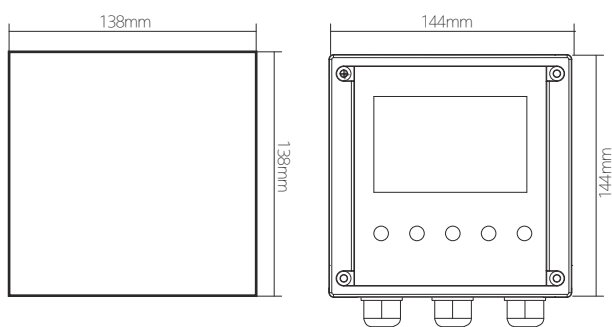
Specifications

Functions	FCL	CL02	O3
Measuring range	0.00 to 20.00 / 0.000 to 2.000 ppm(mg/L)		
Resolution	0.01 / 0.001 ppm(mg/L)		
Accuracy	±0.01 / ±0.001 ppm(mg/L)		
Temp. compensation	Pt 1000/NTC10K		
Temp. range	-10.0 to +130.0°C		
Temp. compensation range	-10.0 to +130.0°C		
Temp. resolution	0.1°C		
Temp. accuracy	±0.2°C		
Solution coefficient	0.0 to 9.99%		
Ambient temperature range	0 to +70°C		
Storage temp.	-20 to +70°C		
Display	Back light,dot matrix		
FCL current output1	Isolated, 4 to 20mA output , max. load 500Ω		
Temp. current output 2	Isolated, 4 to 20mA output , max. load 500Ω		
Current output accuracy	±0.05 mA		
RS485	Mod bus RTU protocol		
Baud rate	9600/19200/38400		
MAX.relay contacts capacity	5A/250VAC , 5A/30VDC		
Cleaning setting	ON: 1 to 1000 seconds, OFF: 0.1 to 1000.0 hours		
One multi-function relay	clean/period alarm/error alarm		
Relay delay	0-120 seconds		
Data logging capacity	500,000 data		
Language selection	English/ traditional Chinese/ simplified Chinese		
USB port(for 6000 series only)	Download records and update program		
IP Rating	IP65		
Power supply	From 90 to 260VAC, power consumption <5watts		
Installation	panel/wall/pipe installation		
Weight	6000 series:0.85Kg/ 800 series:0.55Kg		

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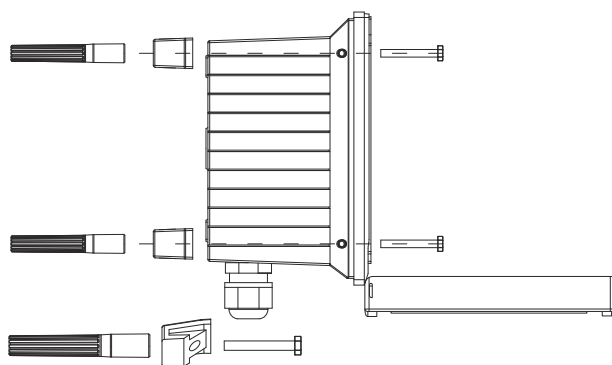
Instrument installation

6000series : The instrument can be panel, wall or pipe mounted installation.
Panel Installation: Make a 138x138 mm square cutout and insert the instrument.
Screw in the fixed block with the screws and fixed bar.



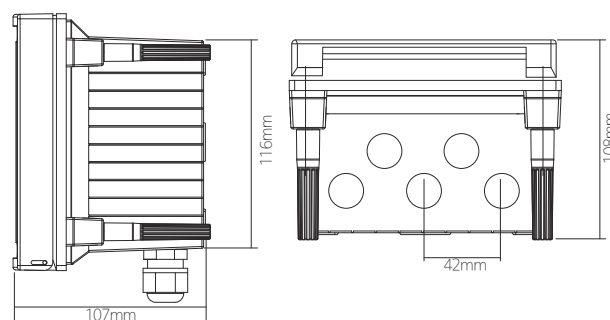
Cutout size - 6000 series

Front view - 6000 Series

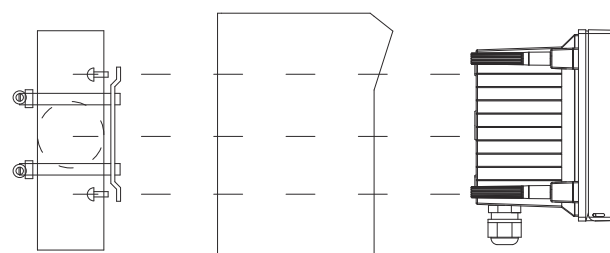


Exploded view - 6000 Series

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Side and bottom view - 6000 Series

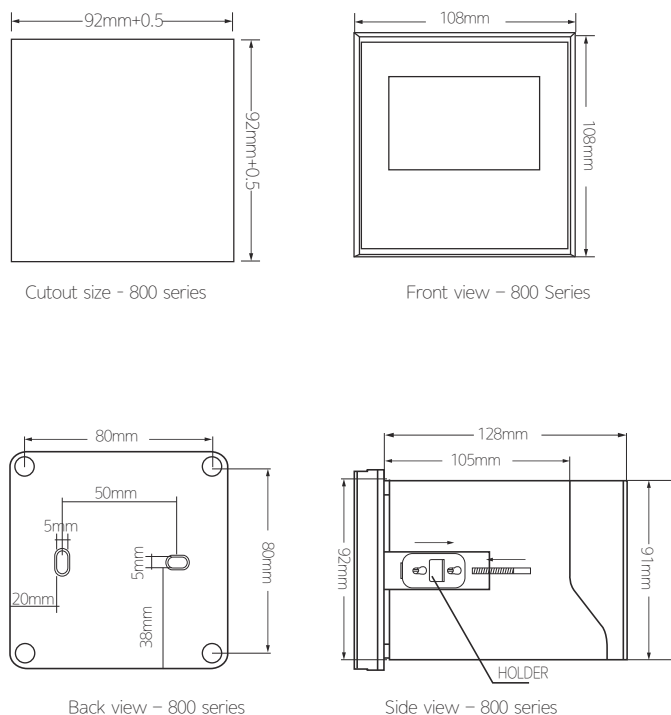


Wall and pipe installation - 6000 Series

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Instrument installation

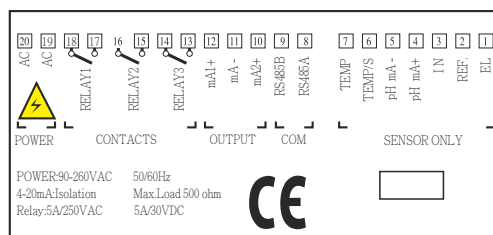
800 Series: The instrument can be panel, wall or pipe mounted installation. To install 800 series on panel, make a 92x92 mm square cutout and insert the instrument then screw in the fixed HOLDER.



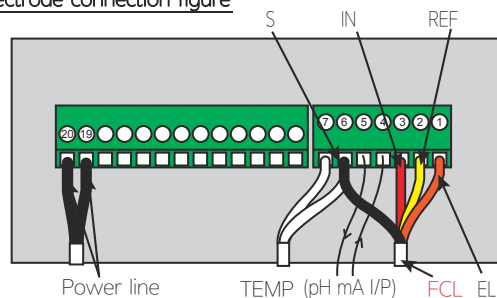
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Connection label

6000 Series

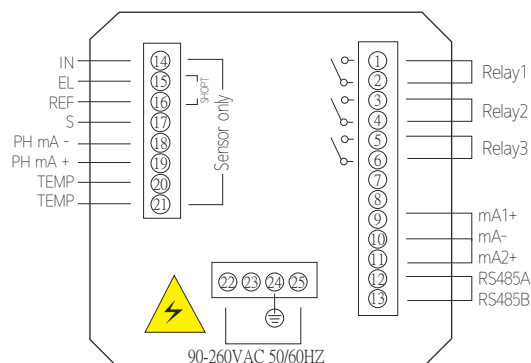


Electrode connection figure

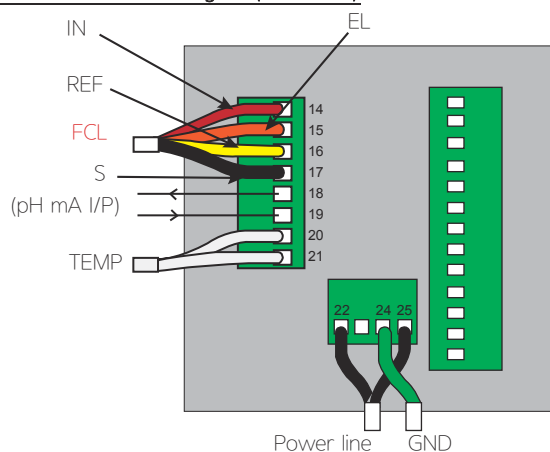


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Connection label (800 series)



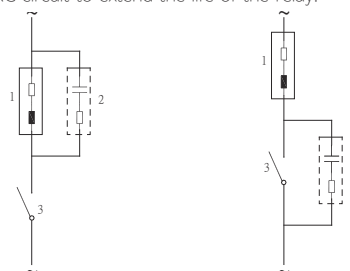
Electrode connection figure (800 series)



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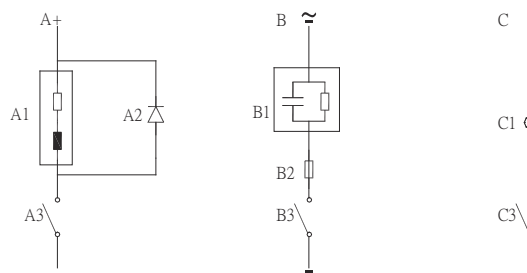
Relay contact protection

Electrical spark at the relay contact may affect the life of the relay, especially in an inductive and capacitive load. In order to inhibit the spark and arc, user should use an RC circuit to extend the life of the relay.



AC protection, use for inductive load

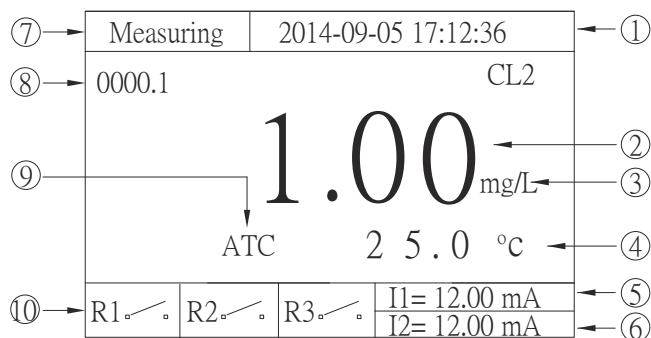
1. Load
2. RC eliminate spark, using in 220VAC, R=100 ohm1W,
3. Relay contact



DC protection: A1 - Inductive load || A2 - 1N4007 || A3 - Relay contact
AC/DC protection: B1 - Capacitive load || B2: 0.8 Ohm/1W (DC24V) || B3 - Relay contact
Resistive load: C1 - Lamp bulb || C3 - Relay contact

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Measurement display



1. Date and time
2. Main measurement display
3. Unit
4. Temperature and unit
5. Current output 1
6. Current output 2
7. Measurement status and error indicator (Does not show when meter is in keeping mode)
8. Count down timer - Cycle time/ clean time (Displays "delay" when relay3 has delay function enabled)
9. Temperature compensation (ATC - Automatic or MTC - Manual)
10. Relay status indicator

Note:

If the FCL readings are under or over the range, it will display 0.00/99.99 or 0.000/9.999.

If the temperature readings are under or over the range, it will display -99.9/999.9.

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Buttons



Key name	Meas. status	Setting status	Cal. status	Record status
MODE	Enter password	Exit	Exit	Exit
SHIFT	none	Move digit	Mode digit	Mode digit
UP	Enter record	Inc	Inc	Inc
DOWN	None	Dec	Dec	Dec
ENTER	ON/OFFback light	Enter	Enter	Enter

Keeping mode

1. Activates during startups, setting, calibration, record, and cleaning.
2. Relay will return to default status - All relays will not be energized (Inactive).
3. Current output:
 - a) Fixed current - Values set on output test
 - b) Last current - Hold the last output before entering Keeping mode.
4. Keeping mode will be deactivated 10 seconds after returning to measurement mode.

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Setting

Press MODE key to enter the password menu and then press UP/DOWN/SHIFT key to input password 1200 then press ENTER will enter to setting mode or press MODE key to exit. Controller will return to measurement mode after 10 minutes of inactivity.

PASSWORD	PASSWORD
0 0 0 0	1 2 0 0

Main display

Press UP/DOWN key to choose functions, press ENTER key enter the function.

CONF I GURATION	CONF I GURATION
■ Current1 Settings □ Current2 Settings □ Relay1 Settings □ Relay2 Settings □ Relay3 Settings □ Measurement Settings □ Temperature Settings □ pH Settings	■ RS485 Settings □ Date Settings □ Data Log Settings □ Output Test □ Language Settings □ Back Light Settings □ Reset Parameters
Page1	Page2

Note:

1. Error on measurement page indicates that input data is not in the correct range.
2. Press ENTER on setting pages to save any changed data.
3. Press MODE to return to the previous page.
4. Meter will return to measurement mode after 10 minutes of inactivity.

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Current 1 settings

CURRENT 1 SETTINGS	CURRENT 1 SETTINGS
4.00 mA = 0 0 . 0 0 ppm 20.00 mA = 0 1 . 0 0 ppm Offset = + 0 . 0 0 mA Filter Time = 0 0 0 SEC HOLD Type = ☐ Fixed 0 4 . 0 0 mA ☐ Last	4.00 mA = 0 0 . 0 0 mg/L 20.00 mA = 0 1 . 0 0 mg/L Offset = + 0 . 0 0 mA Filter Time = 0 0 0 SEC HOLD Type = ☐ Fixed 0 4 . 0 0 mA ☐ Last

1. Set the ppm value to the corresponding 4.00mA and 20.00mA point.
2. The minimum range between 4.00mA and 20.00 mA at least 0.100.
3. Set the offset current of ppm, the range is ± 1.00 mA.
4. The filter time range is 0-120 seconds, the low pass filter of software will be activated when the current from one point to another point if user sets the filter time.
5. Set the current 1 output mode(Fixed / Last) when instrument enter into keeping mode.

Current 2 settings

CURRENT 2 SETTINGS
4.00 mA = + 0 0 0 . 0 °C 20.00 mA = + 1 0 0 . 0 °C Offset = + 0 . 0 0 mA Filter Time = 0 0 0 SEC HOLD Type = ☐ Fixed 0 4 . 0 0 mA ☐ Last

1. Set the temperature value to the corresponding 4.00mA and 20.00mA point.
2. The minimum range between 4.00mA and 20.00 mA is 10.0°C.
3. Set the offset current of temperature (The maximum range is ± 1.00 mA).
4. The filter time range is 0-120 seconds. The low pass filter of software will be activated when the current from one point to another point if user sets the filter time.
5. Set the current 2 output mode (Fixed / Last) during keeping mode.

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Relay 1 settings

RELAY 1 SETTINGS	
ON/OFF	= ☒ ON = ☐ OFF
Close S.P.	= 0 1 . 0 0 ppm
Open S.P.	= 0 0 . 8 0 ppm
Delay Time	= 0 0 0 SEC

RELAY 1 SETTINGS	
ON/OFF	= ☒ ON = ☐ OFF
Close S.P.	= 0 1 . 0 0 mg/L
Open S.P.	= 0 0 . 8 0 mg/L
Delay Time	= 0 0 0 SEC

1. Press UP/DOWN key to ON/OFF (enable/disable) relay1.
 2. Close set point: Target value to activate relay.
 3. Open set point: Target value to deactivate relay.
 4. Delay time: Relay will only be activated when this timer time out. Timer range from 0 to 120 seconds.
- Ex: User targets to switch on the pump at 1.00ppm and switch off at 0.80ppm. Set close S.P. to 1.00ppm and open S.P. to 0.80ppm.

Relay 2 settings

RELAY 2 SETTINGS	
ON/OFF	= ☒ ON = ☐ OFF
Close S.P.	= 0 1 . 0 0 ppm
Open S.P.	= 0 0 . 8 0 ppm
Delay Time	= 0 0 0 SEC

RELAY 2 SETTINGS	
ON/OFF	= ☒ ON = ☐ OFF
Close S.P.	= 0 1 . 0 0 mg/L
Open S.P.	= 0 0 . 8 0 mg/L
Delay Time	= 0 0 0 SEC

1. Press UP/DOWN key to ON/OFF (enable/disable) relay2.
 2. Close set point: Target value to activate relay.
 3. Open set point: Target value to deactivate relay.
 4. Delay time: Relay will only be activated when this timer time out. Timer range from 0 to 120 seconds.
- Ex: User targets to switch on the pump at 0.80ppm and switch off at 1.00ppm. Set close S.P. to 0.80ppm and open S.P. to 1.00ppm.

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Relay 3 settings

RELAY 3 SETTINGS	
ON/OFF	= ☒ ON = ☐ OFF
Period Time	= 0 0 0 1 . 0 HOUR
Clean Time	= 0 0 1 0 SEC
Delay Time	= 0 0 0 SEC
Function	= ☐ Rinsing ☐ Interval Alarm ☐ Error Alarm

1. ON/OFF : Press UP/DOWN key to ON/OFF(enable/disable) relay 3.
2. Period time : Rinsing or interval function only.
3. Clean time : Relay operation period.
4. Delay time : Relay will only be activated when this timer time out.
5. Function : Press UP/DOWN key to select Rinsing/Interval/Error.

Notice:

1. Rinsing: Relay will be activated when period time out. Relay will remain activated throughout cleaning time. Period time will restart when cleaning is completed.
2. Interval alarm: Relay will be activated when period time out. Relay will remain activated until user resets the alarm. Period time will restart.
3. Error alarm: Relay will be activated when an error is detected. Timer is not available for this function.

Measurement settings

MEASUREMENT SETTINGS	
Mode	= ☒ CL2 = ☐ CL02 = ☐ 03
Unit	= ☒ mg/L = ☐ ppm
Meas. Range	= ☒ 20. 00 = ☐ 2. 000
CL02 Coeff.	= 2 . 6 3
Offset	= + 0 . 0 0 mg/L

MEASUREMENT SETTINGS	
Filter	= 0 1

1. Mode: select the measuring mode.
2. Unit: select the display unit.
3. Measuring range: select the measuring range.
4. CL02 Coefficient: The CL02 = CL2 / CLO2 Coefficient. It's no effect when it is in CL2 measuring mode.
5. Offset: offset for the readings.
6. Filter: average the readings.

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Temperature setting (Page 1)

TEMPERATURE SETTINGS	
Automatic	= ☒ Auto = ☐ Manual
Probe	= ☐ Pt 1000 = ☐ NTC 10K
Offset	= + 0 . 0 °C
Manual Meas.	= + 0 2 5 . 0 °C
Manual Cal.	= 2 5 . 0 °C

1. Automatic: Select ATC for automatic or MTC for manual temperature compensation.
2. Probe: Select temperature probe type.
3. Offset: Offset for the temperature reading.
4. Manual meas.: The temperature value set for measurement during MTC.
5. Manual calibration: The temperature value set for calibration during MTC.

Temperature setting(Page 2)

TEMPERATURE SETTINGS	
Display	= ☒ YES = ☐ NO

1. Display: Preference to display (YES) or hide temperature reading (NO).

pH setting

pH SETTINGS	
AUTO Comp.	= ☒ ON = ☐ OFF
Manual Meas.	= 0 5 . 0 0 pH

1. AUTO compensation: the free chlorine is compensated.
2. Manual measuring : User can use it to replace the pH reading.

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RS485 settings

RS485 SETTINGS	
ID Address	= 0 0 1
Baud Rate	= ☐ 9600 = ☐ 19200 = ☐ 34800

1. ID Address: 1-255
2. Baud Rate: Press UP/DOWN key to select preferred baud rate.

Date settings

DATE SETTINGS	
Year	= 2 0 1 5
Month	= 0 8
Day	= 1 5
Hour	= 1 3
Minute	= 3 6
Second	= 0 4

Press UP/DOWN key to set the date. Clock will continue to run for about 1 week after power down.

Data log settings

DATA LOG SETTINGS	
OFF/ON	= ☒ ON = ☐ OFF
Display Type	= ☐ Record = ☐ XY Chart
Reset Record	= ☐ Yes = ☐ No
Save Period	= 0 6 0 SEC

1. ON/OFF: Enable or disable data logging function.
2. Display Type: Select data logging display mode.
3. Reset Record: Erase all recorded data.
4. Saving Period: Recording interval.

Notice: Reset record will take around 10 seconds.

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Output test

OUTPUT	TEST
Current1	= 0 4 . 0 0 mA
Current2	= 0 4 . 0 0 mA
Relay1	= ☐ CLOSE ☐ OPEN
Relay2	= ☐ CLOSE ☐ OPEN
Relay3	= ☐ CLOSE ☐ OPEN

1. Current 1: Injects current ranging from 4.00-20.00mA to the output. Press UP/DOWN to set.
2. Current 2: Injects current ranging from 4.00-20.00mA to the output. Press UP/DOWN to set.
3. Relay 1: Open or close contact. Press UP/DOWN to select.
4. Relay 2: Open or close contact. Press UP/DOWN to select.

5. Relay 3: Open or close contact. Press UP/DOWN to select.

Notice: This function for testing the output only.

Language settings

LANGUAGE	SETTINGS
Language	= ☒ English ☐ 繁體中文 ☐ 简体中文

Language preference. Press UP/DOWN key to select the language.

Back light settings

BACK LIGHT SETTING	
Back Light	= ☒ 60 Seconds = ☐ Manual

60 seconds : The back light will turn off when no key is be pressed in 60 seconds.
Manual: User needs to press the ENTER key to turn on/off the back light in measuring mode

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Reset parameters

RESET	PARAMETERS
Reset Type	= ☒ Current ☐ Relay1 ☐ Relay2 ☐ Relay3 ☐ All

Reset all parameters. Press UP/DOWN key to select the targeted preference to reset.

Notice: The reset will not affect the calibrated parameters.

Record query

Press UP key at the measurement mode to enter record query mode.

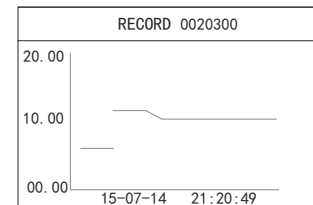
INPUT RECORD START NUMBER
0 1 0 3 0 0

Press UP/DOWN and SHIFT key to input record number then press ENTER key to confirm record number or press MODE key to exit.

Display (FCL/HOCL) data in detail view

RECORD 0020300		
15-08-14	01.00	ppm
21:20:49	025.0	°C
15-08-14	01.00	ppm
21:20:59	025.0	°C
15-08-14	01.00	mg/L
21:21:09	025.0	°C
15-08-14	01.00	mg/L
21:21:19	025.0	°C
15-08-14	01.00	mg/L
21:21:29	025.0	°C

Display (FCL/HOCL) data in XY chart view



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Calibration

Press MODE key to enter the password menu. Then, press UP/DOWN/SHIFT key to input password 1100. Pressing ENTER will proceed to calibration mode or press MODE to exit. If no key is pressed for over 10 minute, then it will go back to measurement mode.

PASSWORD
0 0 0 0

PASSWORD
1 1 0 0

Main display

CALIBRATION
☒ Parameters Settings ☐ Zero Calibration ☐ Slope Calibration ☐ Reset Parameters

Press UP/DOWN key to select the functions and then press ENTER key to confirm.

1. Parameters settings: set the parameters.
2. Zero calibration: calibrate the zero point.
3. Slope calibration: calibrate the slope.
4. Reset parameters: reset all of the calibrated parameters to default.

Parameters settings

PARAMETERS SETTINGS
Solution coeff.= 2 . 0 %

Solution coefficient range is from 0.01 to 9.99%.

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Zero calibration

ZERO CALIBRATION
0 0 . 1 0 mg/L 2 5 . 2 °C
Wait stable and press ENTER

1. Put the FCL electrode into the flow cell that with zero free chlorine water and the flow is 100-200ml/min.
2. Waiting for the current is stable then press ENTER to finish the calibration.

Notice:

1. The zero point reading needs to less than 0.1 , if the reading is over the range then make sure the FCL electrode is good.
2. If the temperature is over 0.0-60.0°C then it will display error message on the button of LCD.

Slope calibration

SLOPE CALIBRATION
0 1 . 0 2 mg/L 2 5 . 0 °C
Wait stable and press ENTER

1. Put the FCL electrode into the flow cell that with known free chlorine water and the flow is 100-200ml/min.
2. Waiting for the current is stable then press ENTER to go to next or Press MODE to exit

SATURATION CALIBRATION
0 1 . 0 2 mg/L 2 5 . 0 °C 0 1 . 0 0 mg/L
Input standard data

1. Input standard value, the range is form 0.1 to 20.00 ppm(mg/L).
2. Press ENTER to finish the calibration or press the MODE to exit.

Notice:

If the temperature is over 0.0-60.0°C then it will display error message on the button of LCD.

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Reset parameters

RESET PARAMETERS
RESET

This will reset all of the calibrated parameters to default.

USB function

Press MODE key to enter the password menu. Press UP/DOWN/SHIFT key to input password (1300). Press ENTER will proceed to USB setting or press MODE key to exit. If no key is be pressed for over 10 minutes, it will go back to measurement mode.

PASSWORD
0 0 0 0

PASSWORD
1 3 0 0

USB setting menu

Press UP/DOWN key to select the functions and then press ENTER key to proceed.

USB SETTINGS
■ Download records □ Update program

1. To download records, plug in a USB flash disk into the USB port and then download all of the records. It takes around 10 minutes to download 500,000 records or 1 minute to download 50,000 records.
2. To update program, save the correct file to the USB flash disk. Plug it to the USB port. Enter the update program function to update it.

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Default settings

CL20 20.00mA corresponding	1.00	ppm	range: 1.00 - 20.00
CL20 4.00mA corresponding	0.00	ppm	range: 0.00 - 19.00 difference : 1.00
CL2 20.00mA corresponding	0.100	ppm	range: 0.100 - 2.000
CL2 4.00mA corresponding	0.000	ppm	range: 0.000 - 1.900 difference : 0.100
Temp. 20.00mA corresponding	100.0	°C	range: 0.0 - 130
Temp. 4.00mA corresponding	0.0	°C	range: -10.0 - 120.0 difference : 10.0
Current 1 output offset	0.00	mA	range: +/- 1.00
Current 2 output offset	0.00	mA	range: +/- 1.00
Current 1 filter	0	second	range: 0 - 120
Current 2 filter	0	second	range: 0 - 120
Current 1 fixed output	4.00	mA	range: 4.00 - 20.00
Current 2 fixed output	4.00	mA	range: 4.00 - 20.00
Current 1 HOLD type	last		range: fixed/last
Current 2 HOLD type	last		range: fixed/last
Relay 1 CL20 close S.P.	1.00	ppm	range: 0.00 - 20.00
Relay 1 CL20 open S.P.	0.80	ppm	range: 0.00 - 20.00 difference : 0.01
Relay 1 CL2 close S.P.	0.100	ppm	range: 0.000 - 2.000
Relay 1 CL2 open S.P.	0.080	ppm	range: 0.000 - 2.000 difference : 0.001
Relay 1 delay time	0	second	range: 0 - 120
Relay 2 CL20 close S.P.	0.80	ppm	range: 0.00 - 20.00
Relay 2 CL20 open S.P.	1.00	ppm	range: 0.00 - 20.00 difference : 0.01
Relay 2 CL2 close S.P.	0.080	ppm	range: 0.000 - 2.000
Relay 2 CL2 open S.P.	0.100	ppm	range: 0.000 - 2.000 difference : 0.001
Relay 2 delay time	0	second	range: 0 - 120
Relay 3 period time	1.0	hour	range: 0 - 1000.0
Relay 3 clean time	10	second	range: 0 - 1000
Relay 3 delay time	0		range: 0 - 120
Relay 3 function	error alarm		range: clean/period alarm/ error alarm
Save time	60	second	range: 5 - 120
ID address	1		range: 1 - 255
Baudrate	9600		range: 9600,19200,38400

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CL20 offset	0.00	ppm	range: +/-1.00
CL2 offset	0.000	ppm	range: +/-0.100
Unit	mg/L		range: mg/L,ppm
Mode	CL2		range: CL2/CLO2/O3
Temp. Offset	0.0	°C	range: +/- 5.0
Manual Temp.for measurement	25.0	°C	range: -10.0 - 130.0
Manual Temp. for calibration	25.0	°C	range: 0.0 - 60.0
Language	English		range: English/traditional Chinese /simple Chinese
Filter	5		range: 0 - 10
Temp. compensation	MTC		range: ATC/MTC
Temp. probe	Pt1000		range: Pt1000, NTC10K
Record type	record		range: record/XY chart
Solution temperature coefficient	2	%	range: 0.01 - 9.99

Password

Press MODE key

1100: Calibration mode

1200: Setting mode

1300: USB mode

*If no key is be pressed within 10 minutes, it will return to measurement mode.

Error code

Error 01	Memory error
Error 02	Reading is over maximum
Error 03	Reading is under minimum
Error 04	Temperature is over maximum
Error 05	Temperature is under minimum
Error 06	Current 1 output is over 20.5 mA. The maximum is 22.00mA
Error 07	Current 1 output is under 3.8 mA. The minimum is 3.5mA
Error 08	Current 2 output is over 20.5 mA. The maximum is 22.00mA
Error 09	Current 2 output is under 3.8 mA. The minimum is 3.5mA
Error 10	Record error
Error 11	ADC damage
Error 99	Default parameters lost

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RS485 command

The instrument come in standard with Modbus-RTU protocol. All of the data are word type (2 bytes), the range is -32767 ~ 32767 ,16 system.

PC command

	ID address	command	Start address	Data number	CRC16
length	1 byte	1byte	2 byte	2 byte	2 byte
Ex.	0x01	0x03	0x0001	0x0001	0xD5CA

Instrument response

	ID address	command	Data number	data	CRC16
length	1 byte	1 byte	1byte	N byte	2 byte
Ex.	0x01	0x03	0x02	0x02 0xBC	0xB895

If response is 01, the command is wrong.

If response is 02, the address is not correct.

If response is 03, data number is not correct.

command 03: read the settings

command 04: read the readings

04:definition

address

(00) 0x00	CL20/CL2 reading	reading:X 0.01 , X0.001
(01) 0x01	CL20/CL2 current	reading:X 0.01
(02) 0x02	Temperature	reading:X 0.1
(03) 0x03	Temperature current	reading:X 0.01
(04) 0x04	Error code	reading:X 1
(05) 0x05		
(06) 0x06		
(07) 0x07		
(08) 0x08		
(09) 0x09	Model type	Fixed to 6

03:definition

Address

(00) 0x00	CL20 20.00mA corresponding	reading:X0.01
(01) 0x01	CL20 4.00mA corresponding	reading:X0.01
(02) 0x02	CL2 20.00mA corresponding	reading:X0.001
(03) 0x03	CL2 4.00mA corresponding	reading:X0.001

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(04) 0x04	Temp. 20.00mA corresponding	reading:X0.1
(05) 0x05	Temp. 4.00mA corresponding	reading:X0.1
(06) 0x06	Current 1 offset	reading:X0.01
(07) 0x07	Current 2 offset	reading:X0.01
(08) 0x08	Current 1 filter	reading:X1
(09) 0x09	Current 2 filter	reading:X1
(10) 0x0A	Current 1 fixed current	reading:X0.01
(11) 0x0B	Current 2 fixed current	reading:X0.01
(12) 0x0C	Current 1 HOLD type	reading:X1 0=fixed,1=last
(13) 0x0D	Current 2 HOLD type	reading:X1 0=fixed,1=last
(14) 0x0E	Relay1 CL20 close S.P.	reading:X0.01
(15) 0x0F	Relay1 CL20 open S.P.	reading:X0.01
(16) 0x10	Relay1 CL2 close S.P.	reading:X0.001
(17) 0x11	Relay1 CL2 open S.P.	reading:X0.001
(18) 0x12	Relay1 delay time	reading:X1
(19) 0x13	Relay2 CL20 close S.P.	reading:X0.01
(20) 0x14	Relay2 CL20 open S.P.	reading:X0.01
(21) 0x15	Relay2 CL2 close S.P.	reading:X0.001
(22) 0x16	Relay2 CL2 open S.P.	reading:X0.001
(23) 0x17	Relay2 delay time	reading:X1
(24) 0x18	Relay3 clean period	reading:X0.1
(25) 0x19	Relay3 clean time	reading:X1
(26) 0x1A	Relay3 delay time	reading:X1
(27) 0x1B	Relay3 function	reading:X1 0:clean,1:period alarm 2:Error alarm
(28) 0x1C	Record saving time	reading:X1
(29) 0x1D	Unit	reading:X1 0=ppm,1=mg/L
(30) 0x1E	Mode	reading:X1 0=FCL,1=CLO2,2=O3
(31) 0x1F	CL20 offset	reading:X0.01
(32) 0x20	CL2 offset	reading:X0.001
(33) 0x21	Temp. offset	reading:X0.1
(34) 0x22	Manual temp. for measurement	reading:X0.1
(35) 0x23	Manual temp. for calibration	reading:X0.1
(36) 0x24	Temp. compensation	reading:X1 0=Auto,1=manual
(37) 0x25	Temp. probe	reading:X1 0=Pt1000,1=NTC10K
(38) 0x26	Language	reading:X1 0=English ,1=traditional Chinese,2=simple Chinese
(39) 0x27	Filter	reading:X1
(40) 0x28	Solution temp. coefficient	redaing:X0.01