

pXG-2085pro

Online Ion Automatic analyzer Manual

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Product Introduction

pXG-2085Pro online Ion automatic analyzer is a new online intelligent analog meter independently developed and manufactured by our company. Complete functions, stable performance, easy operation, low power consumption, safety and reliability are the outstanding advantages of this instrument.

This instrument uses matching analog ion electrodes, which can be widely used in industrial occasions such as thermal power generation, chemical industry, metallurgy, environmental protection, pharmacy, biochemistry, food and tap water.

Product Specification Sheet

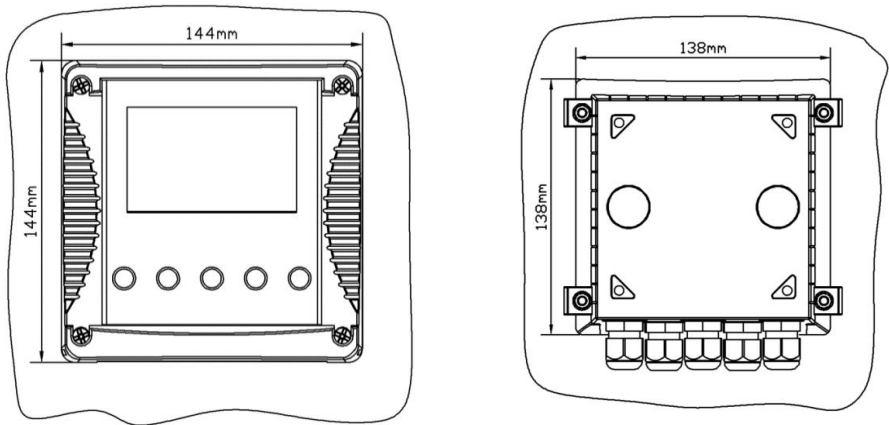
Items	details
Name	online Ion automatic analyzer
Housing material	ABS
Power supply	90 V – 260V AC 50/60Hz
Consumption	4W
Output	2*4-20mA output ,RS485
Relay capacity	5A/250V AC 5A/30V DC
Dimension	144mm×144mm×144mm
Weight	0.9kg
Communication	Modbus RTU
Measuring rang	0.0 ppm -99999ppm
Accuracy	±0.01ppm、±0.1ppm、±1ppm
Temp compensation	Pt1000/NTC10k
Temp range	-30.0℃-130.0℃
Language	English/Chinese
Protection grade	IP65

Installation	panel installation/wall mounting installation/pipeline installation
Working temperature	0℃-45℃
Store temperature	-20℃-70℃

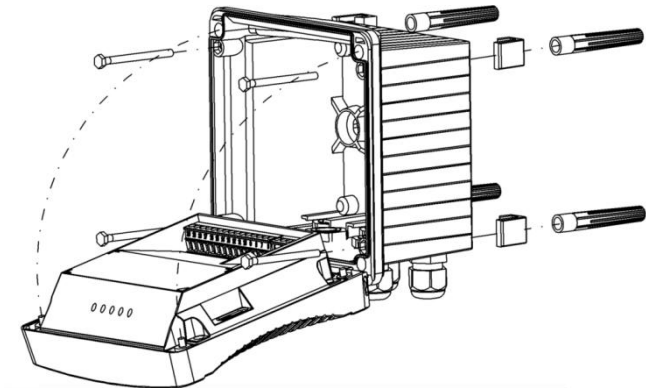
*The measuring range is the range that the ion meter can display, and the specific measuring range is mainly connected to the electrode.

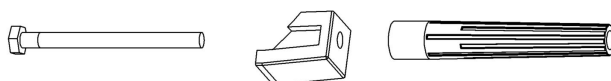
Installation and wiring

Panel size drawing

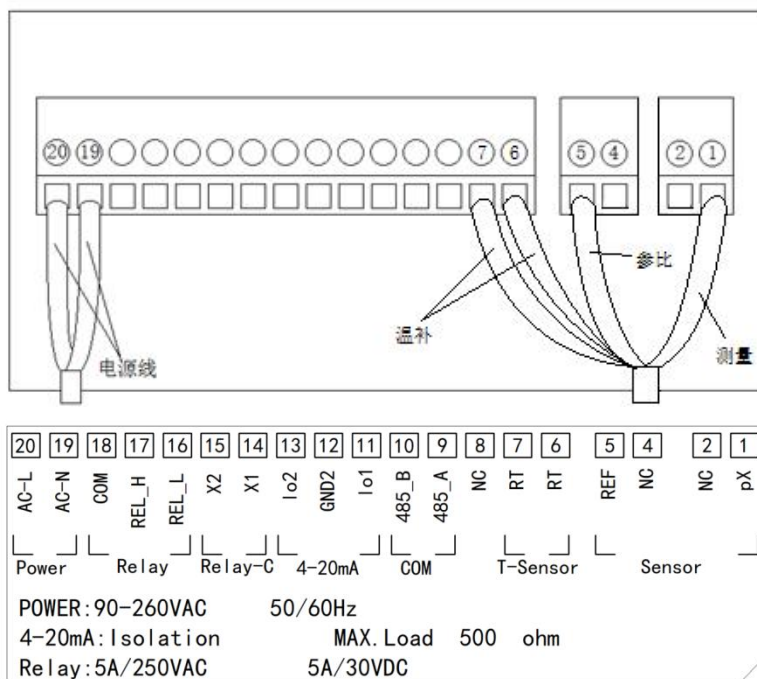


Embedded installation diagram:





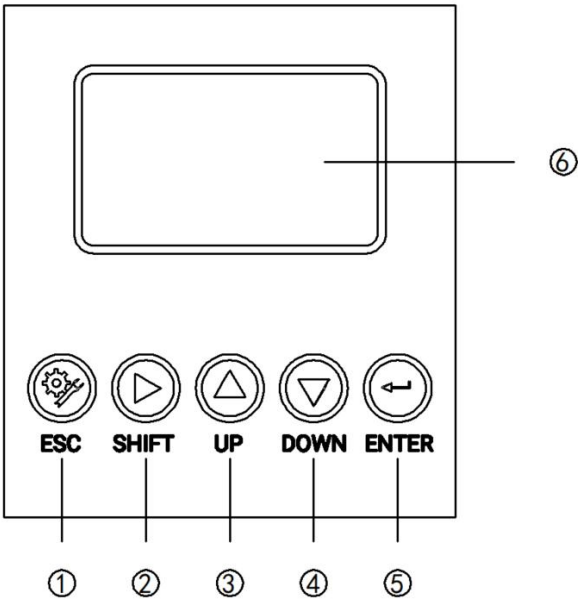
Insertion diagram:



1.Operating panel

The main panel of the controller consists of two modules: LED LCD module and key module.

Users can set and adjust the parameters of the instrument through 5 keys on the panel.

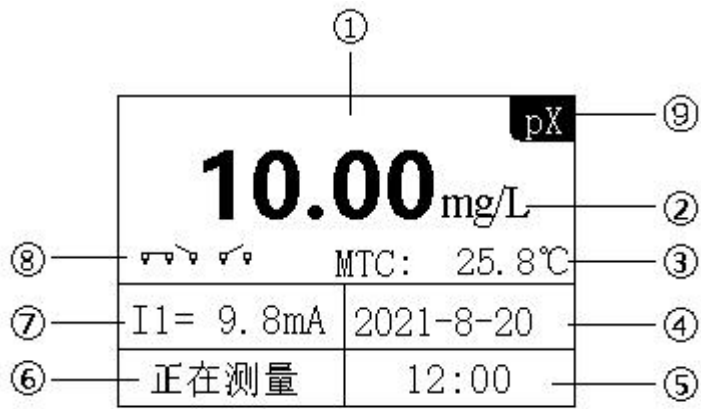


Picture 1 operating panel

2.Measuring

Enter the main measurement interface after the startup animation ends.

When the instrument works normally, the LED screen displays as follows:



Picture 2 main inference of the display screen

- ① Measuring value
- ② unit
- ③ Temperature
- ④ date
- ⑤ time
- ⑥ state
- ⑦ Matched value of 4-20 mA
- ⑧ Open/off of the relay
- ⑨ mode

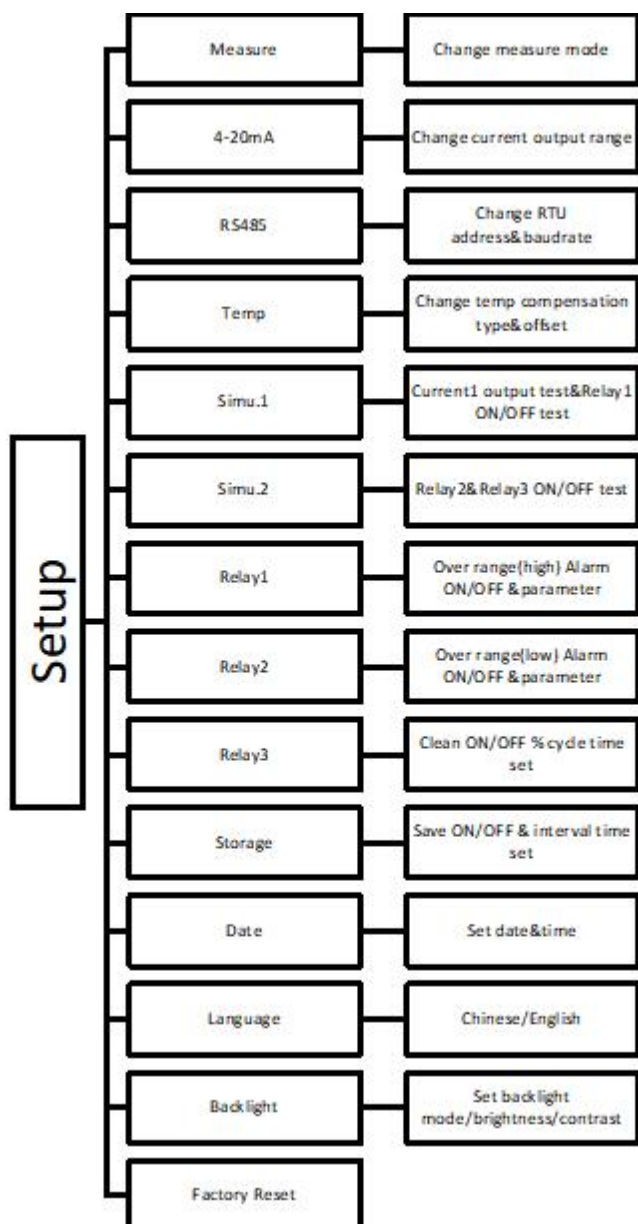
Press UP or DOWN button to switch the display mode, as shown below:



Picture 3 Potential display interface

3.Setting

Press the "Set/Exit button" to enter the password input interface. Enter the password "3700" to enter the settings.



4. Calibration

Press the "Set/Exit button" to enter the password input interface.

PASSWORD
0000

Entering calibration:

Enter the password "3900" to enter the calibration menu. In the two-point calibration, the calibration point of high and low concentration is preferably 10 times the relationship.

CALIBRATION
1. Cal Param
2. Zero Cal
3. Saturated Cal
4. Given Value Cal
5. Factory Reset

4.1 Low concentration calibration menu

In this menu, users can calibrate the low-concentration points with known concentrations.

低浓度	1
1. 00mg/L 375. 2mV 25. 0℃	01000. 00 mg/L
请按确认键	

Picture 4.1 Calibrating in low-concentration environment

4.2 High concentration calibration menu

In this menu, users can calibrate the known solution concentration points by themselves.

高浓度		2
160.00mg/L 586.6mV 25.0℃	0000.00 mg/L	.
请按确认键		

Picture 4.2 Calibrating in high-concentration environment

Single point calibration can also be carried out. In low concentration calibration, click "OK" and press "MODE" to return. At this point, single point calibration is performed, and the previous slope is not changed, but the bias value is only changed.

4.3 Electrode status menu

Check the current slope of the probe.

电极状态
斜率: 56.00mV/Dec

Picture 4.3 Electrode statue

4.4 Select restore factory Settings

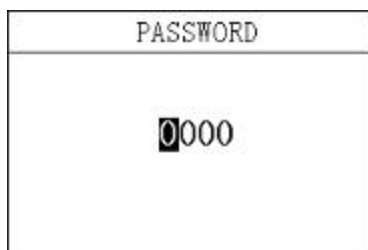
Calibration parameters can be initialized to factory parameters.

Factory Reset
► YES
NO

Picture 4.4 Restore factory settings

5. History data

Press the "Set/Exit button" to enter the password input interface.



Picture 8 password input

Reading history data:

Enter the password 1300 to enter the historical data menu.

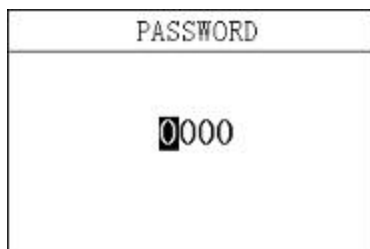
Press the up and down keys to switch the display. A maximum of 1000 records can be stored, and the excessive amount will be automatically overwritten

Record		1/1000
2020-01-09	12:48:28	
6.00	mg/L	
2020-01-09	12:43:28	
6.00	mg/L	
2020-01-09	12:38:28	
6.00	mg/L	
2020-01-09	12:33:28	
6.00	mg/L	

Picture 8 history data

6. Waveform display

Press "Setup/Exit button" to enter the password input interface.

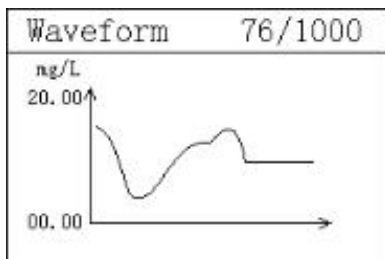


Picture 10 input password

Entering waveform display:

Enter the password 1400 to enter the waveform display menu.

Press up and down to switch the display.



Appendix:

1.Communication protocol

Communication Item:

Baud rate: 4800、9600、19200(The default is9600)

Serial data format: 8N1(8 data bits, no parity, 1 stop bit)

function code: 03

Device address: pX controller defaults to 12

Register definition:

Register Site	Register definition	R/W	instruction
0-1	Temp	R	Floating point (℃)
2-3	Ion concentration	R	Floating point (mg/L)
26-27	mV	R	Floating point (mV)

*Default decoding order: ABCD

Detailed example of communication format:

Temperature data read instruction:

Site+function code+Register start address+Register read number+CRC calibrating code
(Hexadecimal)

Example : 0C 03 00 00 00 01 85 17

Site	function code	Register start address	Number of read registers	CRC calibrating code
12	03	0000	0001	8517

•

Temperature data return instruction:

Site+function code+Data length+Data+CRC calibrating code (hexadecimal)

Example:Rx:0C 03 02 41 C8 A4 43

Site	function code	Data length	pX value	CRC calibrating code
12	03	02	41C8	A443

Ion concentration data reading instruction:

Site+function code+Register start address+ Number of registers read+CRC calibrating code (hexadecimal)

Example Tx:0C 03 00 02 00 01 24 D7

Site	function code	Register start address	Number of registers read	CRC calibrating code
12	03	0002	0001	24D7

Ion concentration data return instruction:

Site+function code+Data length+Data +CRC calibrating code (hexadecimal)

Example: Rx:0C 03 02 0D 32 10 C0

Site	function code	Data length	pX value	CRC calibrating code
12	03	02	0D32	10C0

mV Data reading order:

Site+function code+Register start address+Number of registers+CRC calibrating code (hexadecimal)

Example: Tx:0C 03 00 1A 00 01 A4 D0

Site	function code	Register start address	Number of registers read	CRC calibrating code
12	03	001A	0001	A4D0

mV data return instruction:

Site +function code+Data length+data +CRC calibrating code (Hexadecimal)

Example: Rx:0C 03 02 45 09 67 13

Site	function code	Data length	pX value	CRC calibrating code
12	03	02	4509	6713

II、Online Ion analyzer probe specification

Item	Cl- probe	F- probe
Model	CL2085	F2085
Measuring range	0-20000mg/L	
Protection grade	IP68	
Theoretical slope	50-70mV/Dec	