AIP5/AI-3150 Series Instruments
User Manual

1.Summary

Yudian touch screen instruments include:

● AI-3150S/3150Wsplit-type paperless recorder,

● AIP5-756/756P/759/759P series artificial intelligence temperature controller/industry regulator,

● AIP5-7028/7048 multi-channel touch screen artificial intelligence temperature controller/industry regulator,

● AIP5-702M/704M/706M multi-channel touch screen indicator.

2.Technical Specifications

2.1.Display

Color: TFT true color

Resolution (W×H): 800×480 pixels

Backlight: Long- lifespan LED

Operation method: Touch Screen

2.2.Memory

Usable memory for application data: 150 MB

Recording interval: interval with unit one second (1,2, 3 or 4 etc)

2.3.Communication

Interface type: RS232, RS485, Ethernet interface (10 / 100M adaptive Ethernet nterface)

Baud rate: 1200-19200 bps

2.4.General Parameters

Electromagnetic compatibility (EMC) : ±4KV/5KHz according to IEC61000-4-4;
4KV according to IEC61000-4-5.

Isolation withstanding voltage：
Between power, relay contact or signal terminals ≥ 2300VDC;
between isolated Electroweak signal terminals ≥ 600VDC
Power supply： 100~240VAC,-15%~ +10%, 50-60Hz
Power consumption： ≤ 5W
Operating ambience： Temperature： -10℃ ~ + 60℃ ; Humidity： ≤ 90%RH
Storage temperature： -20℃ ~ + 80℃
Net weight： 0.55kg
Cooling： Natural

3.Instrument Installation

3.1.Hook Installation Diagram
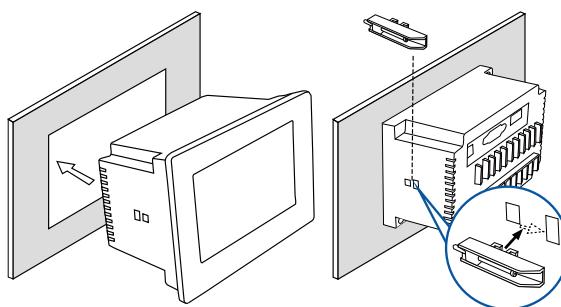
3.2.Dimensional Drawings
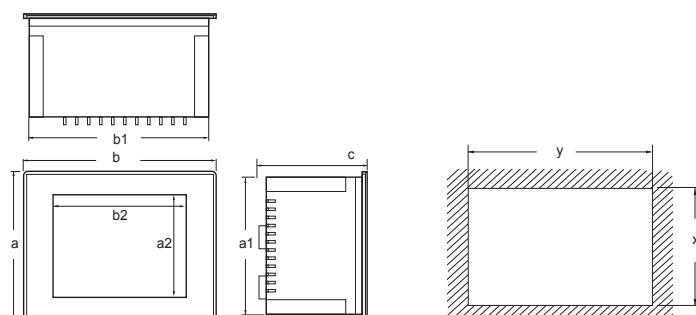
	Screen diagonal (mm)			Enclosure front (W × H × D) (mm)						Mounting Cutout (mm)	
		a2	b2	a	b	c	a1	b1	c1	x	y
AIP5 series (3150)	5inch	64	102	105	145	100	94	133	6	96	135

4.Instrument Wiring

4.1.Interface Type

RS485/RS232

Ethernet interface

Debugging Interface

Mouse/U disk

POWER
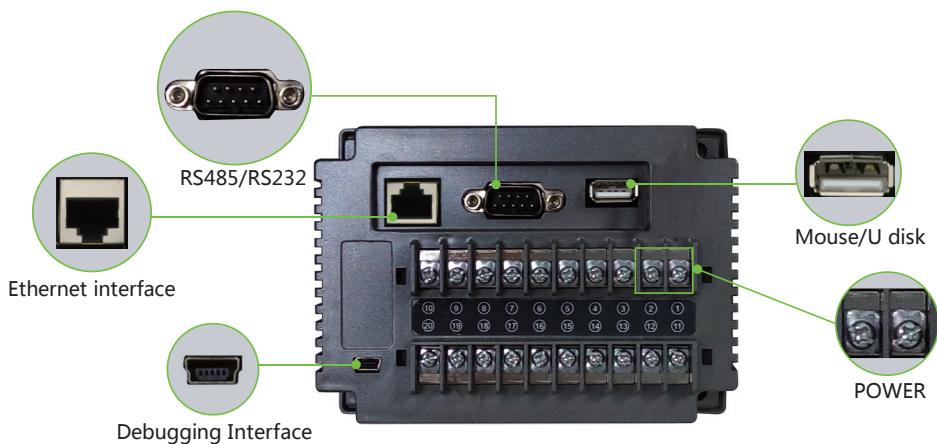
(3150 have no such interface)

4.2.Communication Wiring
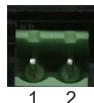
Interface	COM2(RS485)	
PIN	1	2
PIN Definition	RS485+	RS485-

Interface	COM2(RS485)		COM3(RS232)		
PIN	1	6	2	3	5
PIN Definition	RS485+	RS485-	RS232 RXD	RS232 TXD	RS232 GND

Note 1: AI-3150S/3150W series must use COM2 interface, both COM2 and COM2/COM3 interfaces are available.

Note 2: For AIP5 series, no communication wire is required if there is no expanded function module.

4.4.Input and Output Wiring

AIP5-756/756P/759/759P series artificial intelligence temperature controller/ industry regulator

10	9	8	7	6	5	4	3	2	1

AUX COM N/O N/O — + + AU2 AU1
ALM COM N/O N/O — + + AL2 AL1
⚠ 100-240VAC~ POWER

M1 + + − / − − +   1-5V 0-5V
MIO + + − / V+ − + / ~ ~ / G2 G1 / G2 G1
OUTP OP1 OP2 + + − / N/O N/O COM / G2 G1
+ −

20	19	18	17	16	15	14	13	12	11

AIP5-7028/7048 multi-channel touch screen Artificial intelligence temperature controller/ industry regulator

10	9	8	7	6	5	4	3	2	1

M5/AUX COM N/O N/O — + + D9/AU2/OP4 D8/AU1/OP3
M4/ALM COM N/O N/O — + + D7/AL2 D6/AL1
⚠ 100-240VAC~ POWER

CJC/D10
M1 D0/IN1/ D1/IN2/ + + − / N/O N/O COM
M2 D2/IN3/ D3/IN4/ + + − / N/O N/O COM
M3/OUTP D4/IN5/OP1 D5/IN6/OP2 + + − / N/O N/O COM

20	19	18	17	16	15	14	13	12	11

AIP5-702M/704M/706Mmulti-channel touch screen indicator.

10	9	8	7	6	5	4	3	2	1

M5/AUX COM N/O N/O — + + D9/AU2/OP4 D8/AU1/OP3
M4/ALM COM N/O N/O — + + D7/AL2 D6/AL1
⚠ 100-240VAC~ POWER

CJC/D10
M1 D0/IN1/ D1/IN2/ + + − / N/O N/O COM
M2 D2/IN3/ D3/IN4/ + + − / N/O N/O COM
M3/OUTP D4/IN5/OP1 D5/IN6/OP2 + + − / N/O N/O COM

20	19	18	17	16	15	14	13	12	11
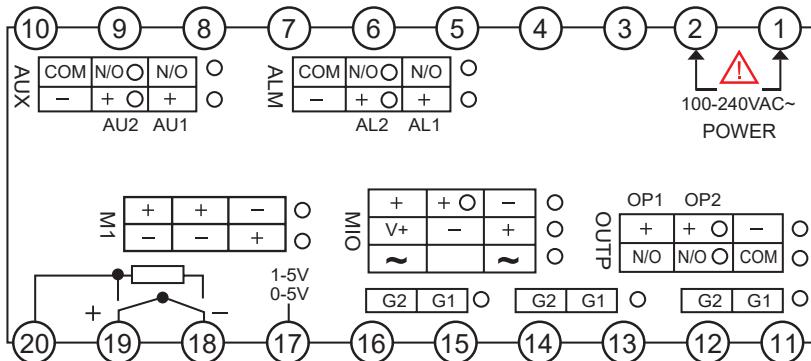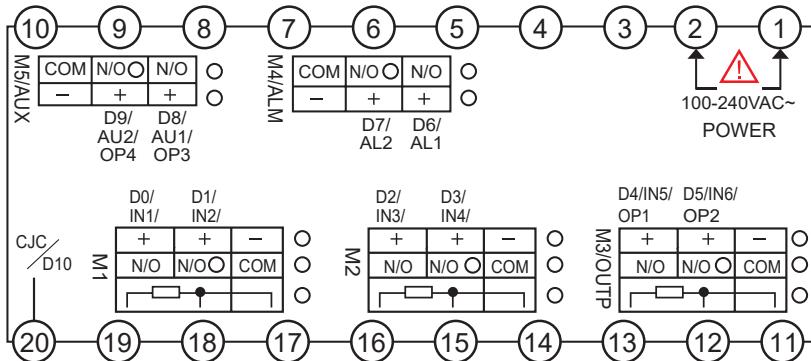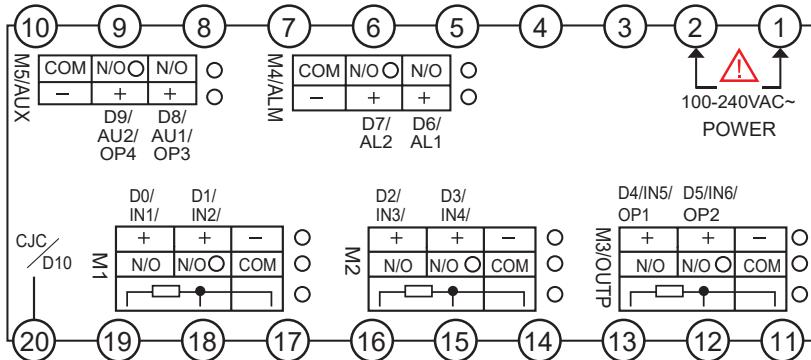
5.Operation Guidance

5.1 Instructions for First Time Operation:

When power is on, click 【MeterOpt】, enter initial passcode 111.

At 【MeterOpt】 desktop:

1) Select the meter type corresponding to the channel name.

Note : For AI-3150S/3150W, please select the model type. AIP5 series get model type itself.

2) Click 【Reread】 【DownLoad】 to get default parameters or save new parameters.

Note 1: Select 【INP】, 【DIP】 first, these two parameters are automatically saved when get modified, other parameters are affected when INP,DIP get modified.

Note 2: Once the other parameters are modified, the value will turn red unless 【DownLoad】 button is clicked.

3) Click 【PrePage】 【NextPage】 to view all parameters of current channel.

4) Click 【PreCH】 【NextCH】 to switch channels. (every channel should follow above 1),2) steps if more than one channel.)

5) Click 【SetTime】 to reset current time. If the time is set backward, data recorded later will be erased, then the system will reboot itself.)
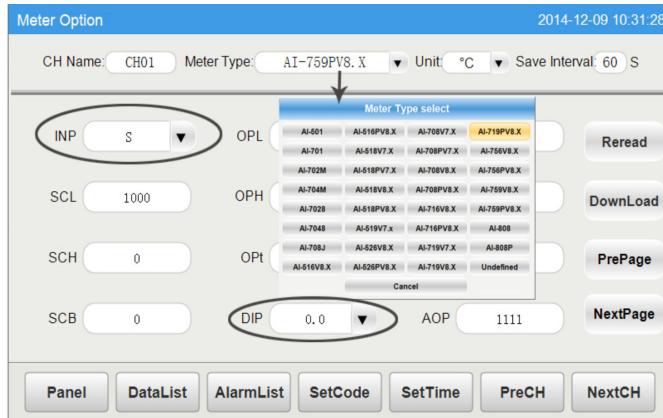
5.2 Instructions for Panel Desktop Operation:

1) Click 【Panel】, parameters 【PV】, 【SV】, 【MV】 etc will show up.

2) When the alarm is ON, Channel name shows in red, click 【AlarmList】 to get more details.

3) Click 【Channel name】, detailed informations of each meter, like PV, SV, MV, Running state, Manual/Auto state etc will show up. (Programmable meter shows further the Running time and Step time.)

a.Curve graph shows 【PV】 in red while 【SV】 in green.

b.Click 【RUN】, 【STOP】 to switch running state, entering initial passcode 111 for the first time.

5.3 Instructions for Field Parameter Setting:

1) Click 【Panel】-【Channel Name】-【Set】, field parameters 【SV】【Step】【Scb】【AHYS】【HIAL】 【LOAL】 【MV】 will show up.

   Note 1: 【MV】 can be set under Manual state.

   Note 2: For programmable meters, click 【Program】-【Program Setting】 to set 【SV】.

2) Click 【At ON】 【At OFF】 to switch Auto-tuning state.

3) Click 【Program】 to go into program settings.

4) Click 【Reread】 【DownLoad】 to get default programs and save new programs.

5) Click 【Select】 to the formulation, you can modify, add ,delete, save or apply programs.

   Note : Once programs are modified, the value will turn red unless 【DownLoad】 button is clicked.
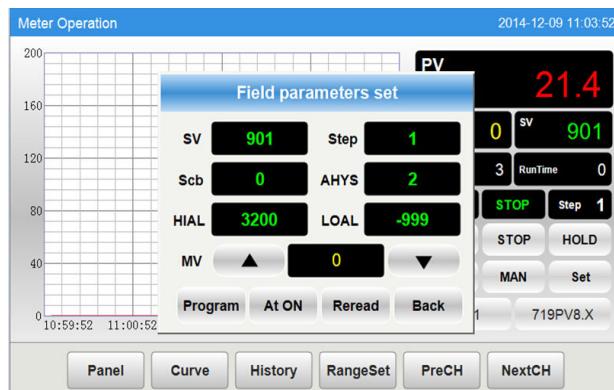
5.4 Instructions for Other Desktops Operation:

At 【Curve】 desktop:

1) Click colored button to show / hide real time curve.

2) Click 【CurveSet】 to set time and Upper / Lower range.

At 【History】 desktop:

1) Click colored button to show/hide history curve.

2) Click 【HisSet】 to set time and Upper/Lower range.

3) Click 【Retreat】 【Forward】 to backward or forward 3/4 time axis.
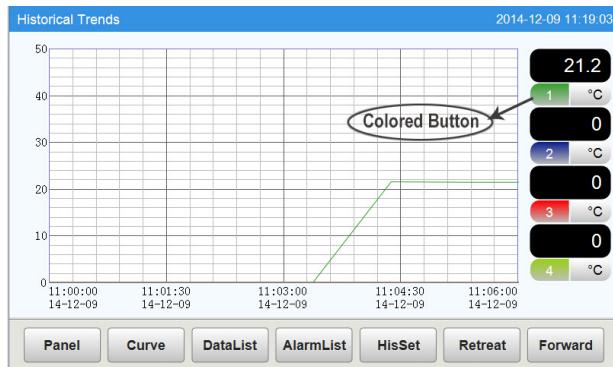
**At 【RangeSet】 desktop:**

Click 【RangeSet】 to set time span and Upper / Lower Range(range setting can be modified
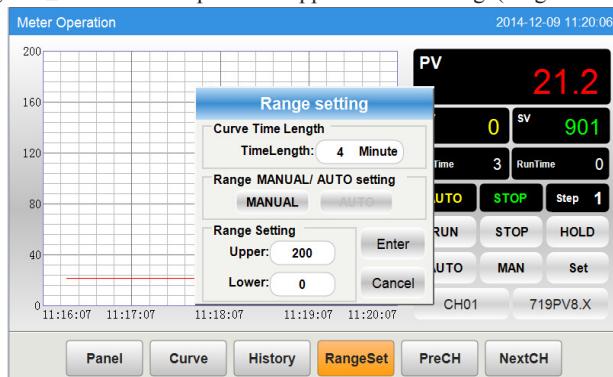
under manual state.)

At 【DataList】 desktop:

1) Click 【Time】 to set start / end time.

2) Click 【Last 24H】 to view data of last 24 hours.
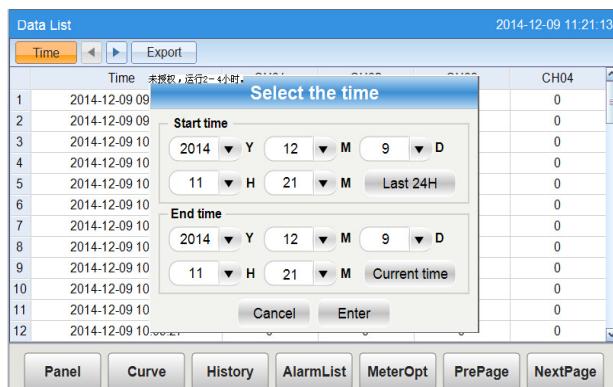
3) Click 【Current】 to view data from the start time to the current time.

DataList Export:

Insert USB disk and wait for a while for hardware recognition. Clicking 【Export】 will export the data tables in a file named "hisdata.csv" in the USB disk.

At 【AlarmList】 desktop:

1) Click 【Real】 【His.】 to switch real(time) / history alarm list.

2) Click 【Options】 to select alarm type and display mode.

AlarmList Export:

Insert USB disk and wait for a while for hardware recognition. Clicking 【Export】 will export the data tables in a file named "almdata.csv" in the USB disk.

At 【MeterOpt】 desktop:

1) Select the meter type.

2) Select the unit.

3) Set record interval.(data recorded per 30S if you set "Save interval 30S".)

4) Click 【SetPasscode】 to change initial passcode 111 to a new 3-digit one.

5) Click 【SetTime】 to set the current time.

 If the time is set backward,, data recorded later will be erased, then the system will reboot itself.

6) Click 【Reread】 【DownLoad】 to get default parameters or save new parameters.

7) Click 【PreCH】 【NextCH】 to switch channels.