

AIP7/AIP9/AI-3170/3190 Series Instruments

User Manual



1.Summary

Yudian touch screen instruments include:

- AI-3170S/3170W/3190S/3190W split-type paperless recorder,
- AIP7-756/756P/759/759P, AIP9-756/756P/759/759P series artificial intelligence temperature controller/industry regulator,
- AIP7-7028/7048, AIP9-7028/7048 multi-channel touch screen artificial intelligence temperature controller/industry regulator,
- AIP7-702M/704M/706M, AIP9-702M/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 $\geq 2300\text{VDC}$;

between isolated Electroweak signal terminals $\geq 600\text{VDC}$

Power supply: 100~240VAC,-15%~+10%, 50-60Hz

Power consumption: $\leq 5\text{W}$

Operating ambience: Temperature: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$; Humidity: $\leq 90\%\text{RH}$

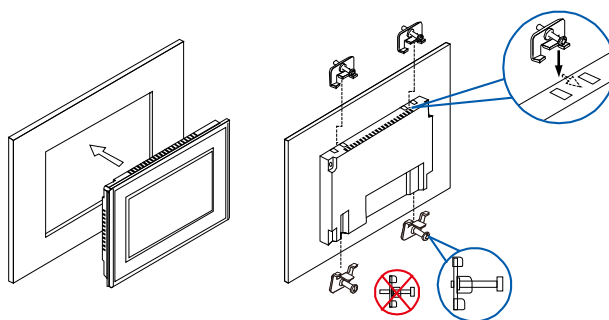
Storage temperature: $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$

Net weight: 0.7kg

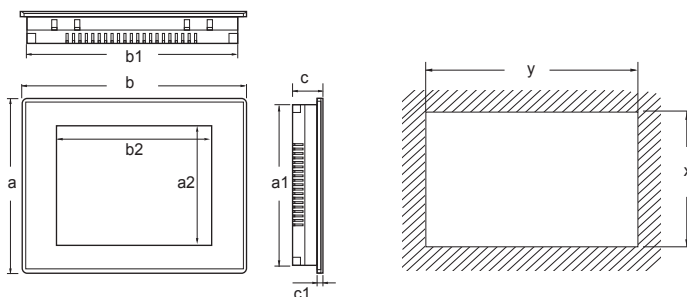
Cooling: Natural

3.Instrument Installation

3.1.Hook Installation Diagram



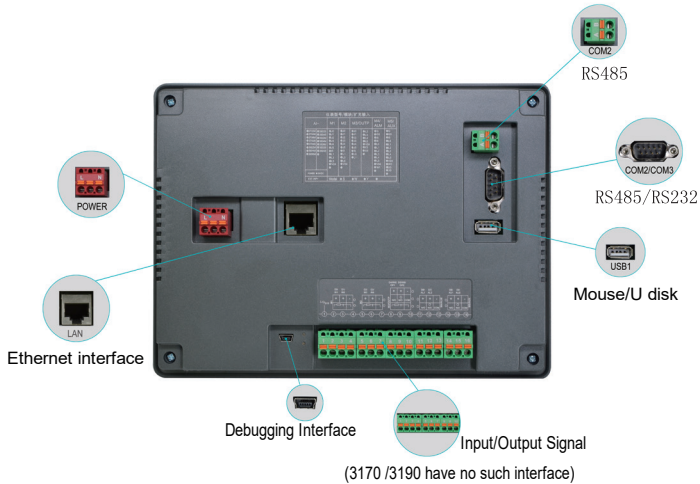
3.2.Dimensional Drawings



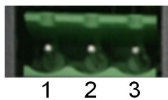
	Screen diagonal (mm)			Enclosure front (W×H×D) (mm)						Mounting Cutout (mm)	
		a2	b2	a	b	c	a1	b1	c1	x	y
AIP7 series (3170)	7inch	86	154	150	203	40	137	190	6	139	192
AIP9 series (3190)	9inch	112	198	170	231	38	158	219	6	160	221

4. Instrument Wiring

4.1. Interface Type

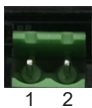


4.2. Power Wiring



Interface	POWER		
PIN	1	2	3
PIN Definition	-	Blank	+

4.3. Communication Wiring



Interface	COM2(RS485)	
PIN	1	2
PIN Definition	RS485+	RS485-



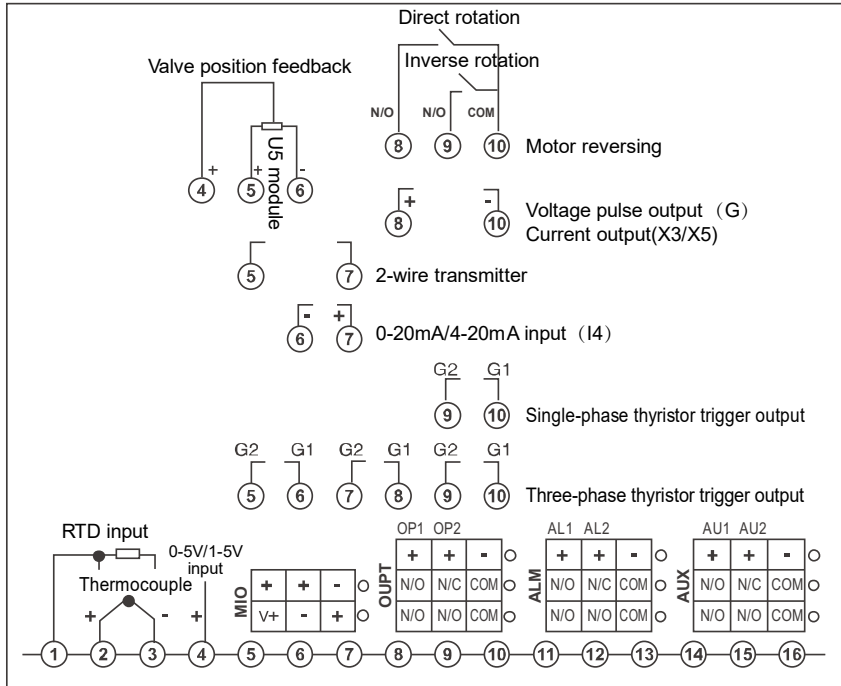
Interface	COM2(RS485)		COM3(RS232)		
PIN	1	6	2	3	5
PIN Definition	RS485+	RS485-	RS232 RXD	RS232 TXD	RS232 GND

Note 1: AI-3170S/3170W/3190S/3190W series must use COM2 interface, both COM2 and COM2/COM3 interfaces are available.

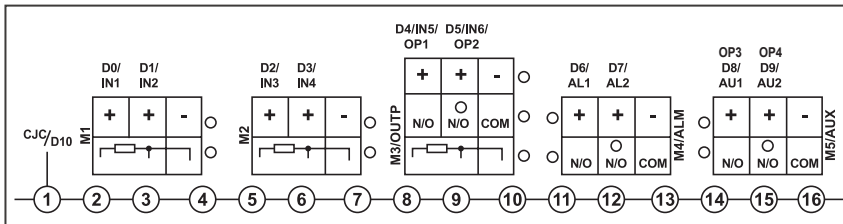
Note 2: For AIP7/AIP9 series, no communication wire is required if there is no expanded function module.

4.4.Input and Output Wiring

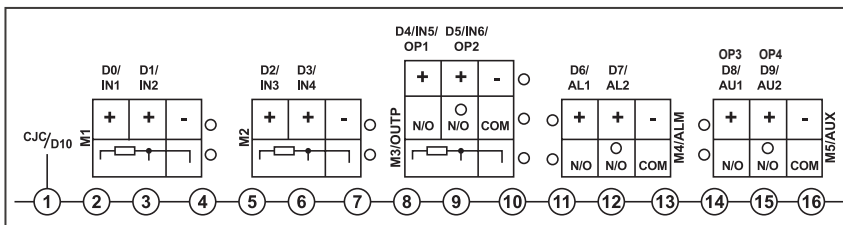
AIP7-756/756P/759/759P, AIP9-756/756P/759/759P series artificial intelligence temperature controller/ industry regulator



AIP7-7028/7048, AIP9-7028/7048 multi-channel touch screen Artificial intelligence temperature controller/industry regulator



AIP7-702M/704M/706M, AIP9-702M/704M/706M multi-channel touch screen indicator.



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-3170S/3170W/3190S/3190W, please select the model type. AIP7/AIP9 series get model type itself.

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

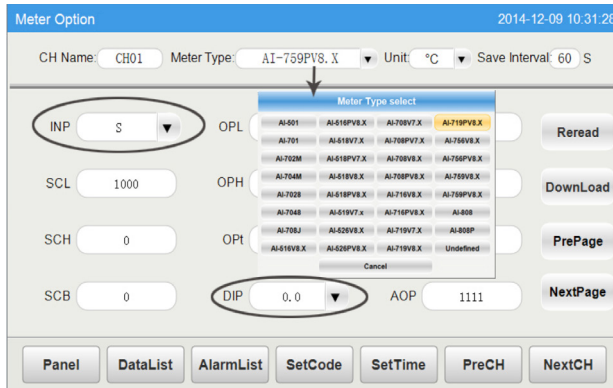
Note 1: Select **【INP】** , **【DIP】** first, these two parameters are automatically saved when get modified, other parameters are affected when INP,DIP get modified.

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),3) 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.

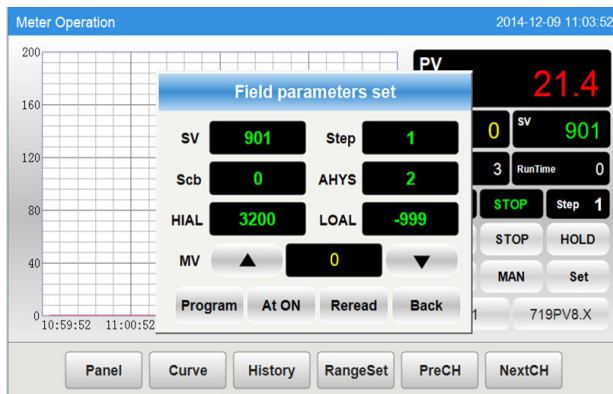
2) When the alarm is ON, Channel name shows in red, click **【AlarmList】** to get more details.

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.



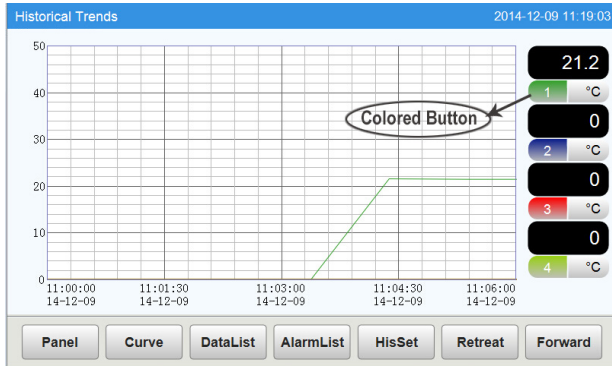
5.4 Instructions for Other Desktops Operation:

At **【Curve】** desktop:

- 1) Click colored button to show / hide real time curve.
- 2) Click **【CurveSet】** to set time and Upper / Lower range.

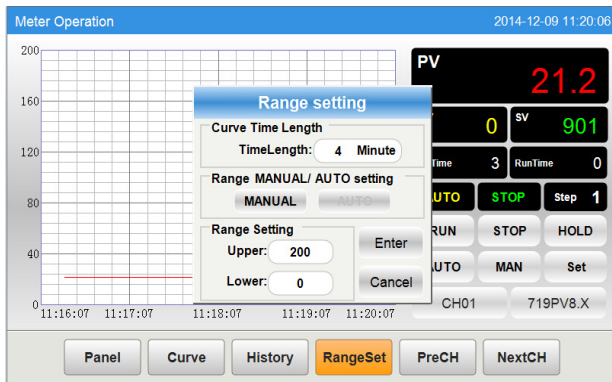
At **【History】** desktop:

- 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.



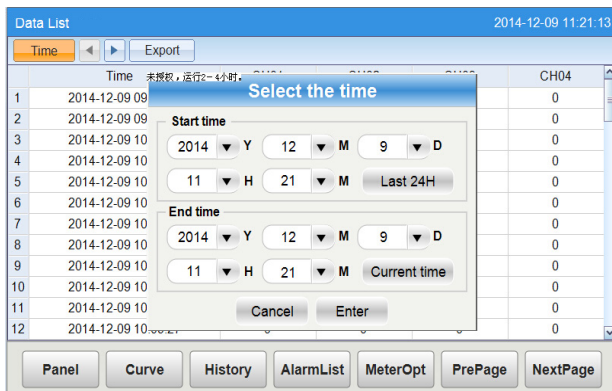
At 【RangeSet】 desktop:

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 “alldata.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.