



AI-3500 Series Instruments

User Manual



1.Summary

- Yudian touch screen instruments include:
- AI-3556/3556P/3559/3559P series artificial intelligence temperature controller/industry regulator,
 - AI-35028/35048 multi-channel touch screen artificial intelligence temperature controller/industry regulator,
 - AI-3502M/3504M/3506M 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

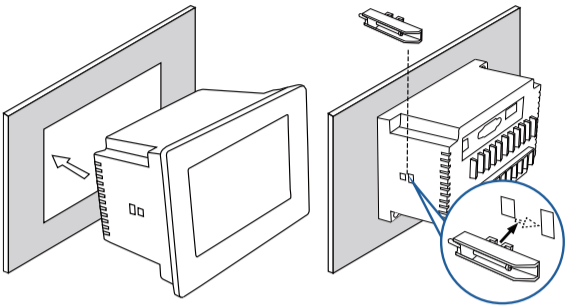
Electromagnetic compatibility (EMC) : ± 4KV/5KHz according to IEC61000-4-4;
4KV according to IEC61000-4-5.

-1-

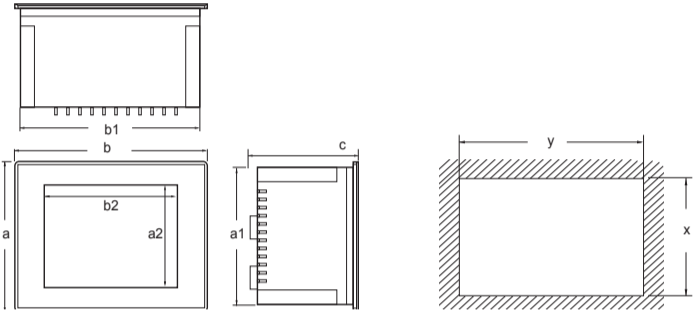
Isolation withstanding voltage :
Between power, relay contact or signal terminals ≥ 2300VDC;
between isolated Electroweak signal terminals ≥ 600VDC
Power supply: 100~240VAC,-15%~ +10%, 50-60Hz
Power consumption : ≤ 5W
Operating ambience: Temperature: -10℃ ~ + 60℃ ; Humidity: ≤ 90%RH
Storage temperature: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

3.Instrument Installation

3.1.Hook Installation Diagram



3.2.Dimensional Drawings

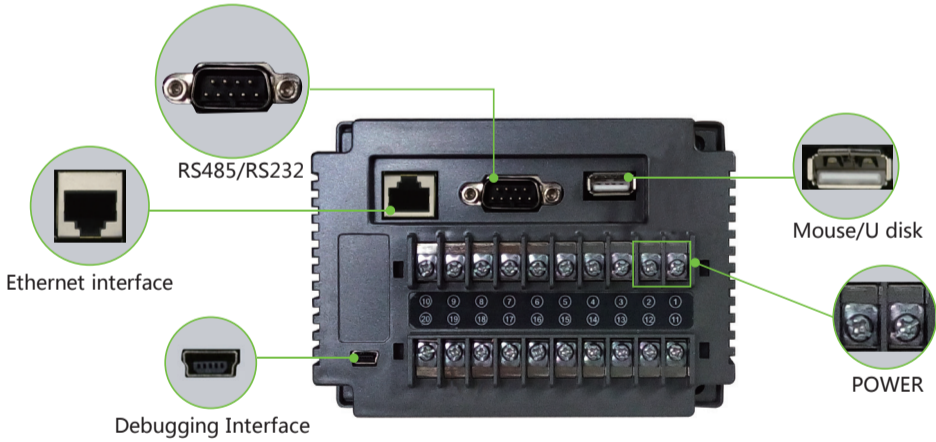


	Screen diagonal (mm)			Enclosure front (W × H × D) (mm)						Mounting Cutout (mm)	
		a2	b2	a	b	c	a1	b1	c1	x	y
3500 series	5inch	64	102	105	145	100	94	133	6	96	135

-2-

4.Instrument Wiring

4.1.Interface Type



4.2.Communication Wiring



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



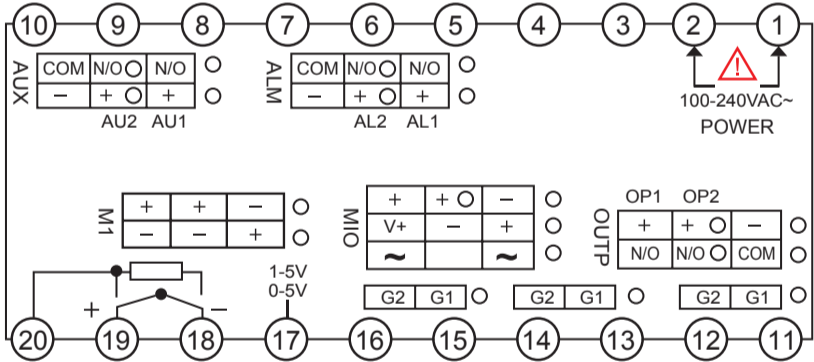
Interface	COM2(RS485)		COM3(RS232)		
PIN	1	6	2	3	5
PIN Definition	RS485+	RS485-	RS232 RXD	RS232 TXD	RS232 GND

Note 1: For AI-3500 series, no communication wire is required if there is no expanded function module.

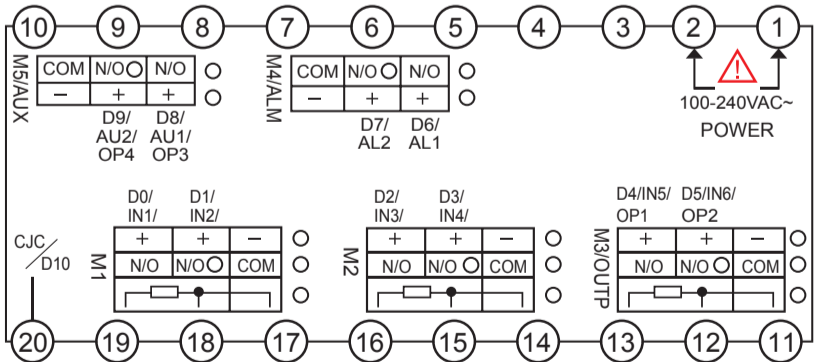
-3-

4.4.Input and Output Wiring

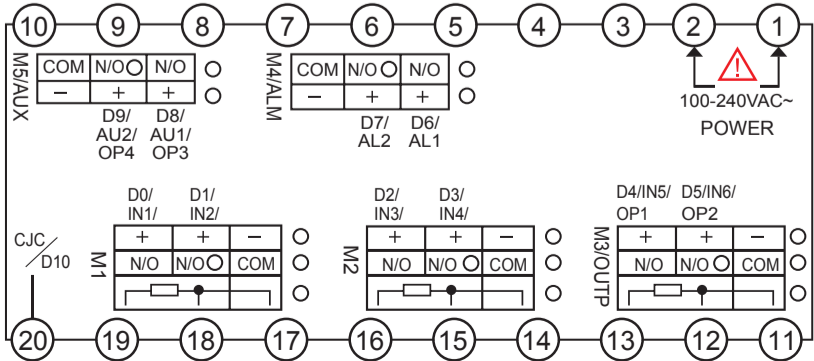
AI-3556/3556P/3559/3559P series artificial intelligence temperature controller/ industry regulator



AI-35028/35048 multi-channel touch screen Artificial intelligence temperature controller/ industry regulator



AI-3502M/3504M/3506M multi-channel touch screen indicator.



-4-

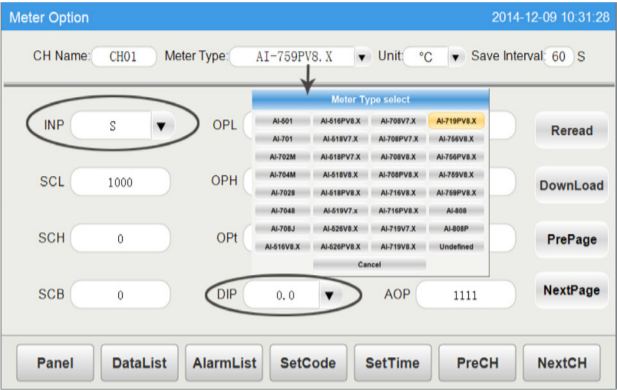
5.Operation Guidance

5.1 Instructions for First Time Operation:

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

At 【MeterOpt】 desktop:

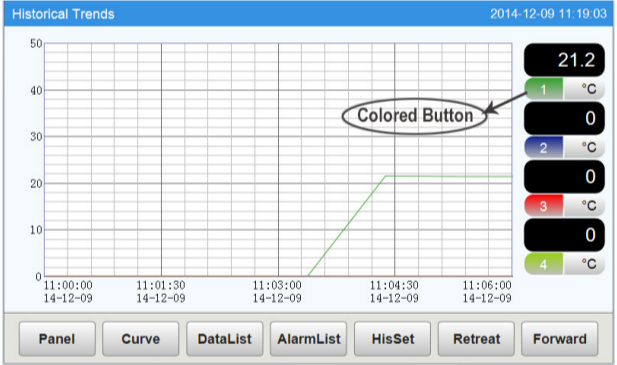
- 1) Click 【Reread】 【DownLoad】 to get default parameters or save new parameters.
Note 1: Select 【INP】 , 【DIP】 first, these two parameters are automatically saved when get modified, other parameters are affected when INP,DIP get modified.
Note 2: Once the other parameters are modified, the value will turn red unless 【DownLoad】 button is clicked.
- 2) Click 【PrePage】 【NextPage】 to view all parameters of current channel.
- 3) Click 【PreCH】 【NextCH】 to switch channels. (every channel should follow above 1),2) steps if more than one channel.)
- 4) 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:

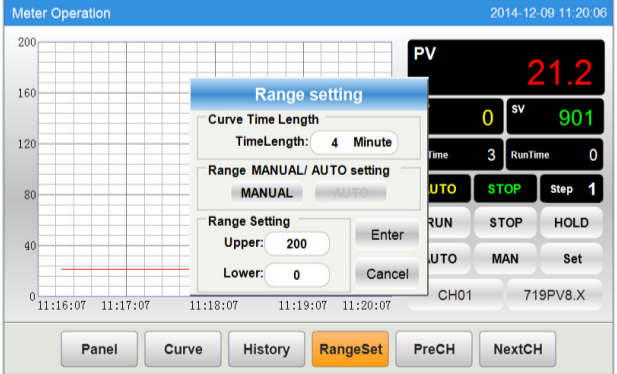
- 1) Click 【Panel】 , parameters 【PV】 , 【SV】 , 【MV】 etc will show up.
- 2) When the alarm is ON, Channel name shows in red, click 【AlarmList】 to get more details.
- 3) Click 【Channel name】 , detailed informations of each meter, like PV, SV, MV, Running state, Manual/Auto state etc will show up. (Programmable 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-



At 【RangeSet】 desktop:

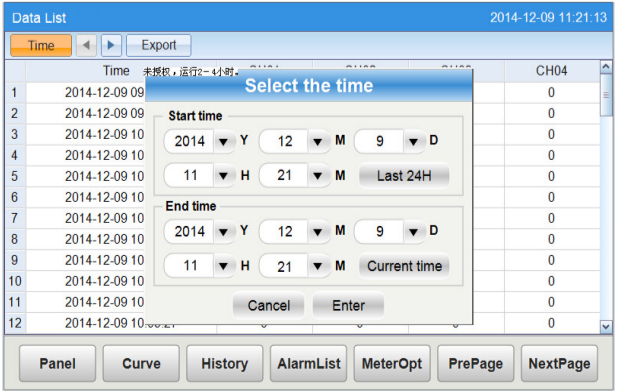
Click 【RangeSet】 to set time span and Upper / Lower Range(range setting can be modified



under manual state.)

At 【DataList】 desktop:

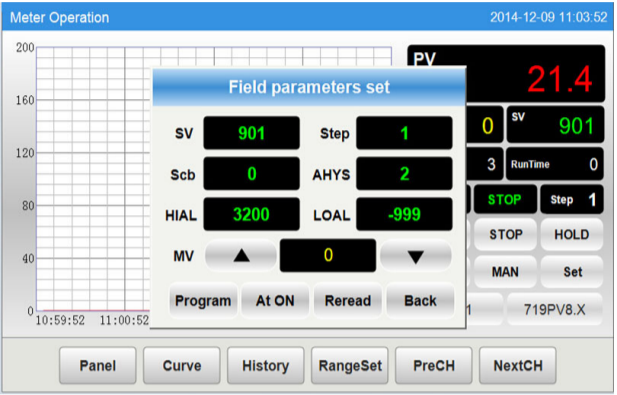
- 1) Click 【Time】 to set start / end time.
- 2) Click 【Last 24H】 to view data of last 24 hours.



-7-

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.

-6-

- 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.

