



PID+Fuzzy Temperature Controller

PRODUCT INTRODUCTION

PRODUCT INTRODUCTION

The 83 series PID+Fuzzy Temperature controller is FineTek's highest-end controller. Equipped with a 24 bit analog/digital converter core processor and with Fuzzy, improved PID calculation microprocessor. The controller is capable of fast and accurate performance with reliable results. Double row of 4 digit large LED of 7 segments displays indicates Present Value and Set Value, enables user friendly readings and coupled with 4 button operation, it makes parameters setting and operating the controller very convenient.

Ramp Soak function: PT-83 has 8 pattern selection, every pattern can perform 8 steps of temperature control. Each procedure can set the SV 1 ~ SV 8, the Ramp time and Soak time are provided link, it depends on different models in order to programmed. Via link pattern, 64 steps of temperature control can be performed.

For each pattern, it will be repeatable executed by the setting value of RPT. For example, RPT=0 will execute one time and RPT=1 for two times, vice verse.

Analog Input Convert

User can be easy to display the physical value from 0-10 V or 4-20 mA input by setting the linear scale transformation.

High accuracy, high sampling rate

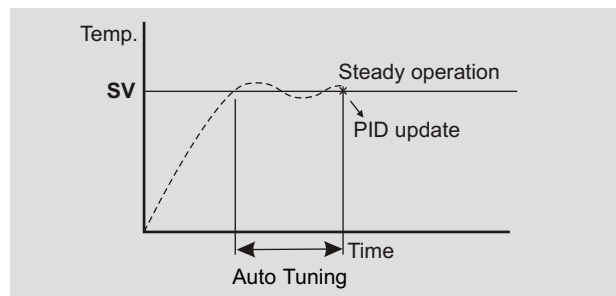
High Sampling Rate, High Accuracy compatible with RSP / CT, sampling rate of 4 times per second, it enables the controller to achieve high accuracy readings and accurate operations.

PID+Fuzzy Control

Addition of Fuzzy technology to PID control enables the controller to use the shortest time required as well as the smallest transients in order to achieve stability at the set value required by the user.

Auto-Tuning

Artificial intelligence technology enables the controller to calculate the most efficient parameters to suit each and every application, it does not calculating by manual and it compatible with auto-tuning programmed, it avoid the damage by over heating, so it increasing the efficiency of the process to the maximum.



Digital Filter

Built in digital filter in the unit, the digital filter can only affect PV value time update kept in steady display.



PT-8320
(48x48)



PT-8330
(96x48)



PT-8340
(72x72)



PT-8331
(48x96)



PT-8350
(96x96)



Sensor Break Alarm

If the temperature sensor malfunctions/breaks, an alarm figure will be displayed on the panel to notify users in job site.

Lock Protection for Control Parameters

It provided lock protection available should the user choose to lock the parameters in case of parameters programming changed by accident.

Heating / Cooling Bi-directional Control

Enables the user to select between both heating and cooling processes, reduces inconveniences of single direction control methodology and reduces inventory.

Multi-inputs Function

Accepts 8 types of thermocouple inputs, DC voltage input and 2 types of RTD inputs and it's widely use for variety application. mA DC, Voltage DC inputs are optional.

Switching Power Supply

Accepts widely power supply 85~265VAC, 50/60Hz and it able to prevent controller from being affected by interferences due to ripples in power supply.

RS485 (ModBus) Communication

Both RTU and ASCII communication modes for selection, The Ramp Soak and all of parameters are good for communication programmed.

Other features

- Bar-graph display
- Re-transfer PV and SV setting
- Default the factory value
- Standby Timer

PRODUCT SPECIFICATIONS

CONTROL FUNCTION

Control Method	ON/OFF, PID+Auto Tuning, PID+Auto Tuning+Fuzzy
Fraction Value	0~999.9
Integral time	0~9999
Differential time	0~9999
Alarm / Output Hysteresis setting	0~9999
Sampling Interval	0.4s
Output Control Cycle	0.1~50.0s

SIGNAL INPUT

Signal Input		Range	Accuracy
Thermocouple	K Type	-200~1370°C	± 0.3% ± 1digit
	J Type	-210~1200°C	± 0.3% ± 1digit
	R Type	-50~1760°C	± 0.3% ± 1digit
	S Type	-50~1760°C	± 0.3% ± 1digit
	B Type	250~1820°C	± 8°C ± 1digit
	E Type	-200~1000°C	± 0.3% ± 1digit
	N Type	-200~1300°C	± 0.3% ± 1digit
	T Type	-200~400°C	± 2°C ± 1digit
RTD	PT100 Type	-200~850°C	± 0.3% ± 1digit
	JPT100 Type	-200~850°C	± 0.3% ± 1digit
Direct Voltage	0~230mV	-1999~9999	± 0.3% ± 1digit
	0~10V	-1999~9999	± 0.3% ± 1digit
Direct Current	4~20mA	-1999~9999	± 0.3% ± 1digit

- Accuracy ± 9°C for R and S in 0~500°C range
- For 0~400°C range, it does not guarantee accuracy on B type.

ALARM FUNCTION

Alarm Types	Absolute Value Alarm, Discrepancy Alarm, Area Alarm,
Set Value	0~99s
Alarm Output	SPST-ON, 5A-250VAC (Resistance Load)
Action Method	Alarm Activation / De-Activation delay / Alarm locking
Signal Output	Relay Output

MAIN CONTROL OUTPUT / SECOND CONTROL OUTPUT

Specifications / Model	8320	8330	8331	8340	8350
Relay	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac
Pulse Output (SSR)	12Vdc (NPN), Max. 20mA				
Analog Output	4~20 mA dc (Max. 600Ω)				
	0~10Vdc (Max. 600Ω)				

FIRST AUXILIARY CONTROL OUTPUT / SECOND AUXILIARY CONTROL OUTPUT

Specifications / Model	8320	8330	8331	8340	8350
Relay	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac
Pulse Output (SSR)	12Vdc (NPN), Max. 20mA				
Analog Output	4~20 mA dc (Max. 600Ω)				
	0~10Vdc (Max. 600Ω)				

PRODUCT SPECIFICATIONS

STANDARD SPECIFICATIONS

Power Supply	100~240Vac, 50/60Hz
Power Consumption	7VA Maximum
Input Resistance	>1MΩ
Input Compensation	-1999~9999
Digit Filter	1~100 time
International Standard	CE
Settings Range	-1999~9999

DISPLAY

4 digit of 7 segment display, 10 segment Bar graph display, Accuracy $\pm 0.3\% \pm 1$ digit

Digit Size \ Model	8320	8330/8331	8340	8350
Display				
PV (red)	12.5mm	13mm	17.5mm	21mm
SV (green)	10.6mm	11mm	14mm	14mm

BREAKOUT PROTECTION

Memory Retention	EEPROM
------------------	--------

OPERATING & STORAGE ENVIRONMENT

Operation Temperature	0~50°C
Operation Humidity	20~85%RH
Storage Temperature	-20°~60°C

STRUCTURE

Installation	Panel Mounted using 2 locking clips				
Casing Material	Plastic				
Dimensions	Refer to page 4 and 5				
Colour	Black				
Protection Rating	8320	8330	8331	8340	8350
	IP-65	IP-65	IP-65	IP-65	IP-65

COMMUNICATIONS

Communication Interface	RS-485
Communication Protocol	Modbus RTU or ASCII
Data Format	8 bits, Bit check: odd/even/none. Stop Bit: 1 or 2bits
Communication Speed	2400, 4800, 9600, 19200, 38400 bps
Address	0~255

OTHER FUNCTIONS

Temperature Sensor Break Detection	Error signal display
Heater Feedback Irregularities Detection	Alarm current (0~55A)
Remote Setting (RSP)	Remote setting voltage/current signal in order to change SV value
Parameters Lock	Manu selection (as follow), Password lock

STANDARD FUNCTION

parameter \ level	LB00	LB01	LB02	LB03
PV/SV	●	●	●	●
LV-1	●	●	●	
LV-2	●	●		
ALM	●	●		
StUP	●			
EXPA	●			
CoMM	●			
LoCK	●	●	●	●
CALI	●			
MANU	●	●	●	●

RAMP SOAK FUNCTION

parameter \ level	LB00	LB01	LB02	LB03	LB04
PV/SV	●	●	●	●	●
LV-0	●	●		●	
LV-1	●	●	●		
LV-2	●	●	●		
Prog	●	●		●	
ALM	●	●	●		
StUP	●				
EXPA	●				
CoMM	●				
LoCK	●	●	●	●	●
CALI	●				
MANU	●	●	●	●	●

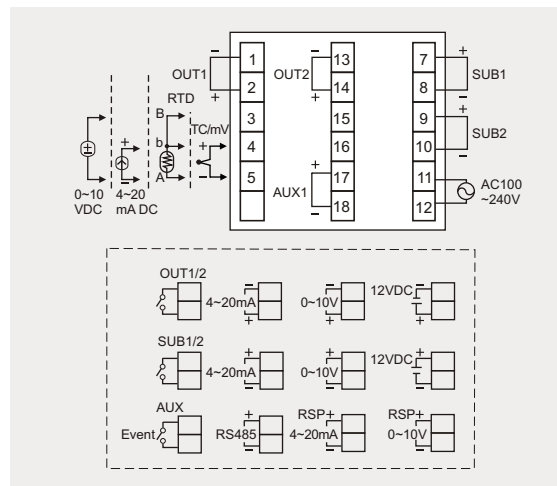
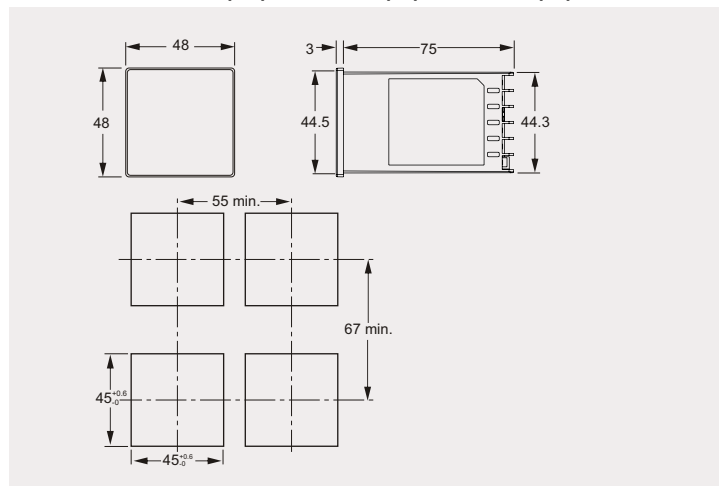
CALI: Calibration selection

MANU: Manual operating selection

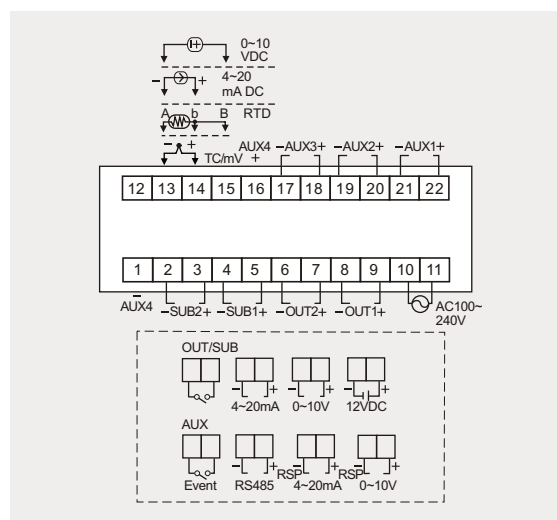
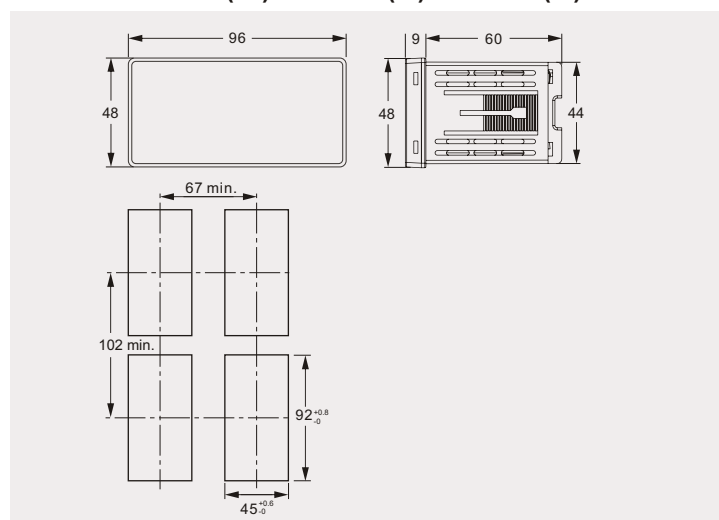
DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

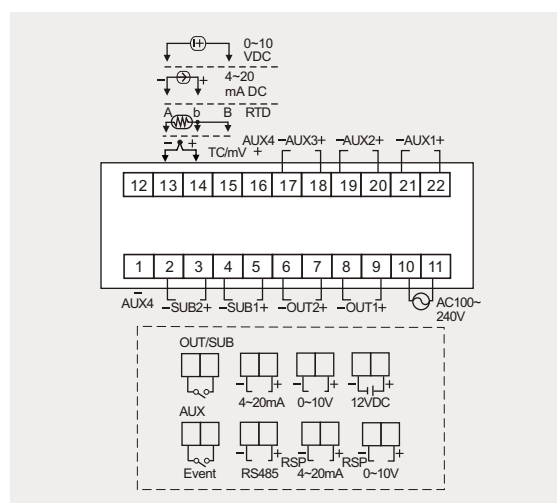
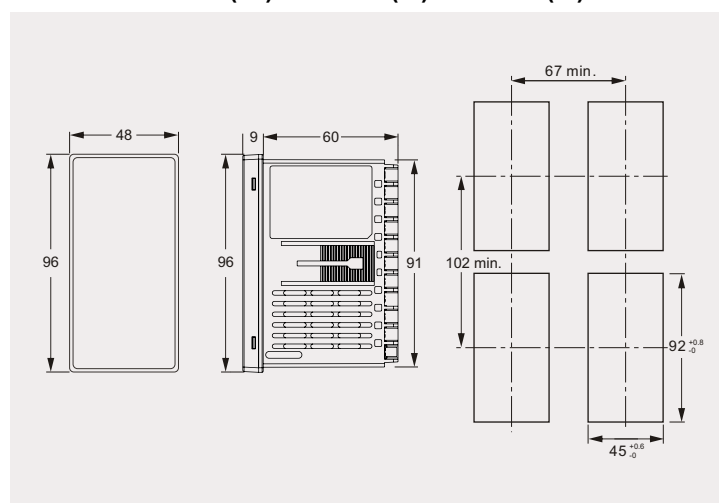
PT-8320 48mm(W) x 48mm(H) x 78mm(D)



PT-8330 96mm(W) x 48mm(H) x 69mm(D)



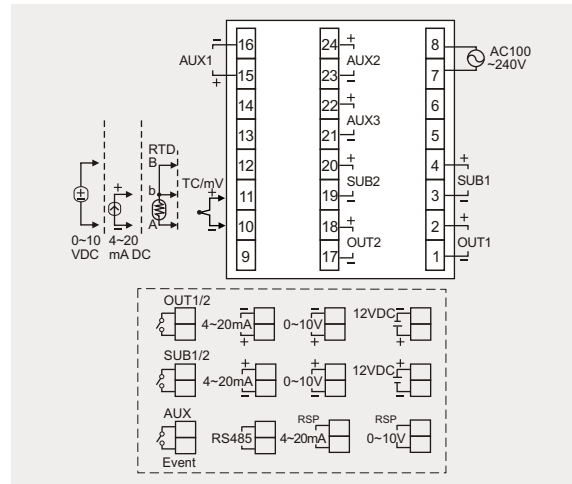
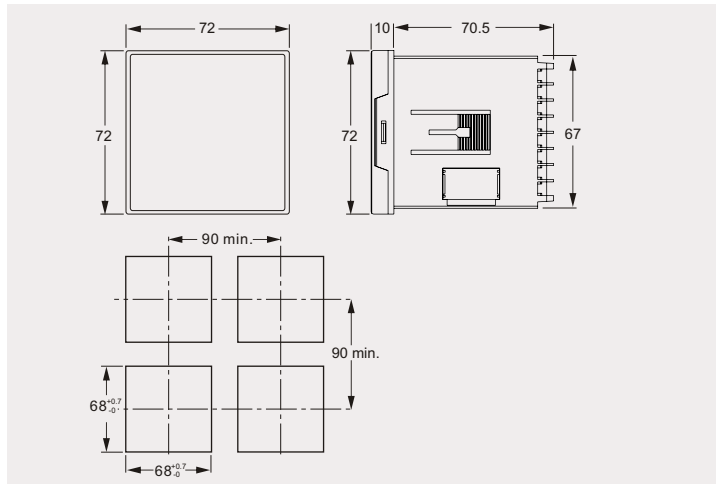
PT-8331 48mm(W) x 96mm(H) x 69mm(D)



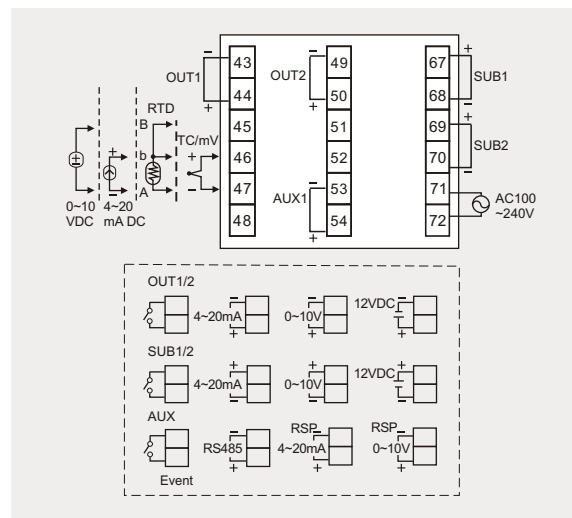
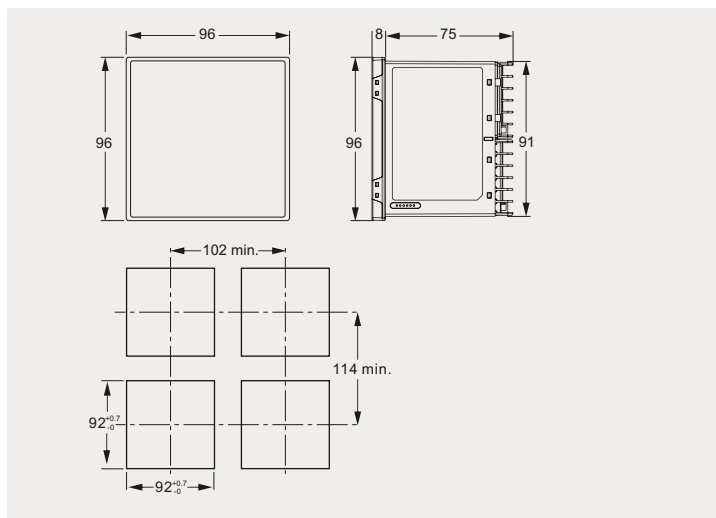
DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

PT-8340 72mm(W) x 72mm(H) x 80.5mm(D)



PT-8350 96mm(W) x 96mm(H) x 83mm(D)



PT-83□□-S □-□□□□-(□□□□)-(P)

[illegible]

★ Please call for customized specifications

PRODUCT INTRODUCTION

PRODUCT INTRODUCTION

The 76 series programmable temperature controller is FineTek's high-end controller. Equipped with a 14 bit analog/ digital converter core processor and with FUZZY and improved PID calculation microprocessor, the controller is capable of fast and accurate performance with reliable results. Double row of 4 digit displays indicates Present Value and Set Value (except PT7610), enables user friendly readings and coupled with 3 buttons operation, it makes operating the controller very convenient.

High Sampling Rate, High Accuracy

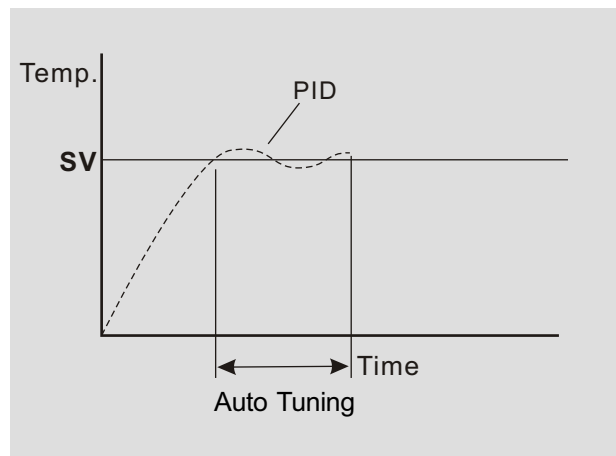
Sampling rate of 4 times per second (equivalent to 0.25sec per sampling) enables the controller to achieve high accuracy readings and accurate operations.

PID + FUZZY Control

Addition of FUZZY technology to PID control enables the controller to use the shortest time required as well as the smallest transients in order to achieve stability at the set value required by the user.

Auto-tuning

Artificial intelligence technology enables the controller to calculate the most efficient parameters to suit each and every application, thereby increasing the efficiency of the process to the maximum.



Sensor Break Alarm:

If the temperature sensor malfunctions / breaks, an alarm figure will be displayed on the panel to notify users.



Lock Protection for Control Parameters

Provides 3 levels of lock protection available should the user choose to lock the parameters in case of parameters change by accident.

Heating / Cooling Bi-directional Control

Enables the user to select between both heating and cooling processes, reduces inconveniences of single direction control methodology and reduces inventory.

Universal Input

Support the input signal of industry measurement, program setting through software, facility in installation and operation.

Switching Power Supply

Accepts 100 ~ 240VAC, 50/60Hz power supply, able to prevent controller from being affected by interferences due to ripples in power supply.

RS485 (Modbus) Communication:

Both RTU and ASCII communication modes for selection

PRODUCT SPECIFICATIONS

CONTROL FUNCTION

Control Method	ON/OFF, PID+Auto Tuning, PID+Auto Tuning+Fuzzy
Fraction Value	0~9999
Integral time	0~9999
Differential time	0~9999
Alarm / Output Hysteresis setting	0~9999
Sampling Interval	0.25s
Output Control Cycle	0.1~999.9s

ALARM FUNCTION

Alarm Types	Absolute Value Alarm, Discrepancy Alarm, Area Alarm
Set Value	0~99s
Alarm Output	SPST- ON, 3A-250VAC (Resistance Load)
Action Method	Alarm Activation / De-Activation delay
Signal Output	Relay Output

SIGNAL INPUT

Signal Input	Range	Accuracy
Thermocouple	K Type	-200~1370°C ±0.3% ±1digit
	K Type	-128.0~500.0°C ±0.3% ±1digit
	J Type	-200~1200°C ±0.3% ±1digit
	J Type	-128.0~500.0°C ±0.3% ±1digit
	T Type	-200~400°C ±0.3% ±1digit
	T Type	-128.0~400.0°C ±0.3% ±1digit
	E Type	-200~800°C ±0.3% ±1digit
	R Type	0~1760°C ±0.3% ±1digit
	S Type	0~1760°C ±0.3% ±1digit
	B Type	0~1820°C ±0.3% ±1digit
RTD	N Type	-200~1300°C ±0.3% ±1digit
	PT Type	-200~850°C ±0.2% ±1digit
	PT Type	-199.9~850.0°C ±0.2% ±1digit
	JPT Type	-200~500°C ±0.2% ±1digit
Direct Voltage	JPT Type	-199.9~500.0°C ±0.2% ±1digit
	0~50mV	-1999~9999 ±0.3% ±1digit
	0~1V	-1999~9999 ±0.3% ±1digit
	0~5V	-1999~9999 ±0.3% ±1digit
	1~5V	-1999~9999 ±0.3% ±1digit
	0~10V	-1999~9999 ±0.3% ±1digit
Direct Current	2~10V	-1999~9999 ±0.3% ±1digit
	0~20mA	-1999~9999 ±0.3% ±1digit
	4~20mA	-1999~9999 ±0.3% ±1digit

- Accuracy $\pm 8^{\circ}\text{C}$ for R and S in 0~500°C range
- For 0~600°C range, it does not guarantee accuracy on B type.

MAIN CONTROL OUTPUT

Specifications / Model	7610	7620	7630	7631	7640	7650
Relay	SPST-ON 3A/250Vac	SPST-ON 3A/250Vac	SPDT 5A/250Vac	SPDT 5A/250Vac	SPST-ON 5A/250Vac	SPDT 5A/250Vac
Pulse Output (SSR)	0/12Vdc (NPN), Max.20 mA					
Analog (Re-transmission)	4~20 mA					
	0~10Vdc Max.600Ω					

2nd CONTROL OUTPUT

Specifications / Model	7610	7620	7630	7631	7640	7650
Relay		SPST-ON 3A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac	SPST-ON 5A/250Vac
Pulse Output (SSR)	0/12Vdc (NPN), Max.20 mA					
Analog (Re-transmission)	4~20 mA					
	0~10Vdc Max.600Ω					

PRODUCT SPECIFICATIONS

STANDARD SPECIFICATIONS

Power Supply	100~240Vac, 50/60Hz
Power Consumption	7VA
Input Resistance	>1MΩ
Input Compensation	-1999~9999
Digit Filter	1~50 Times
International Standard	CE
Settings Range	-1999~9999

DISPLAY

4 digit of 7 segment display, Accuracy $\pm 0.3\% \pm 1$ digit

Digit Size \ Model	7610	7620	7630	7631	7640	7650
Display						
PV (red)	0.31"	0.36"	0.39"	0.36"	0.56"	0.56"
SV (green)		0.28"	0.28"	0.36"	0.36"	0.36"

LED Indicators

Digit Size \ Model	7610	7620	7630	7631	7640	7650
Display						
Control Output	X 1	X 2	X 2	X 2	X 2	X 2
Alarm Output	X 1	X 1	X 2	X 2	X 2	X 2
Celsius Display	X 1	X 1			X 1	X 1
Fahrenheit Display	X 1				X 1	X 1

BREAKOUT PROTECTION

Memory Retention	EEPROM
-------------------------	--------

OPERATING & STORAGE ENVIRONMENT

Operation Temperature	0~50°C
Operation Humidity	20~85%RH
Storage Temperature	-20°~60°C

STRUCTURE

Installation	Panel Mounted using 2 locking clips					
Casing Material	Plastic					
Dimensions	Refer to page 10 and 11					
Colour	Black					
Protection Rating	7610	7620	7630	7631	7640	7650
	IP-54	IP-65	IP-54	IP-54	IP-65	IP-65

COMMUNICATIONS

Communication Interface	RS-485
Communication Protocol	Modbus RTU or ASCII
Data Format	8 bits, Bit check: odd/even/none. Stop Bit: 1 or 2bits
Communication Speed	600, 1200, 2400, 4800, 9600, 19200 bps
Address	1~255

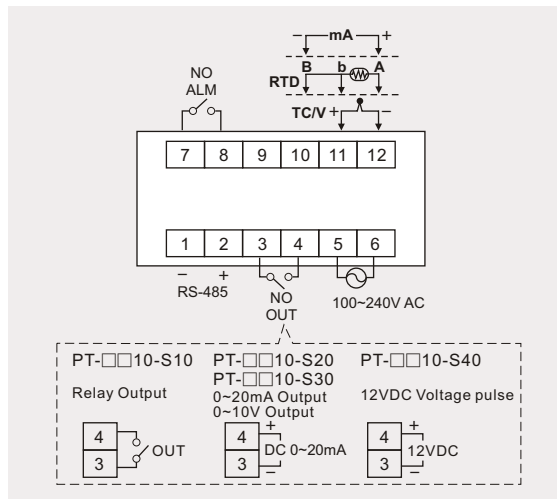
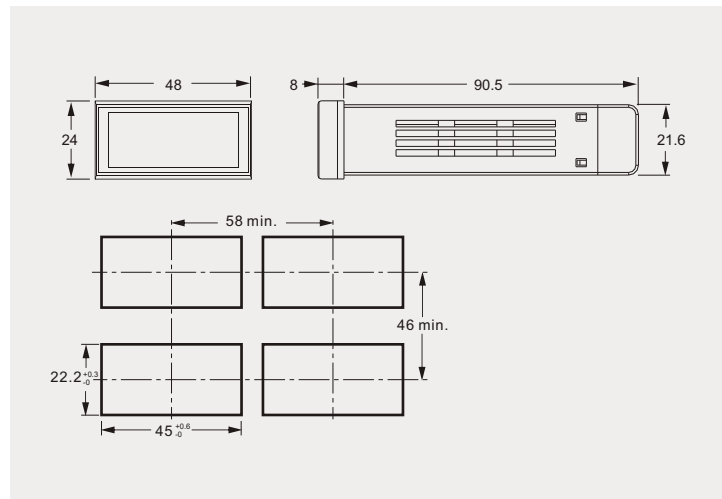
OTHER FUNCTIONS

Temperature Sensor Break Detection	Error display on panel
Parameters Lock	3 tier protection
1st Tier	Adjustable: Input signal, alarm setpoint, set values, control type (All parameters)
2nd Tier	Adjustable: alarm setpoint, set values, control type (Auto-tuning)
3rd Tier	Fully lock

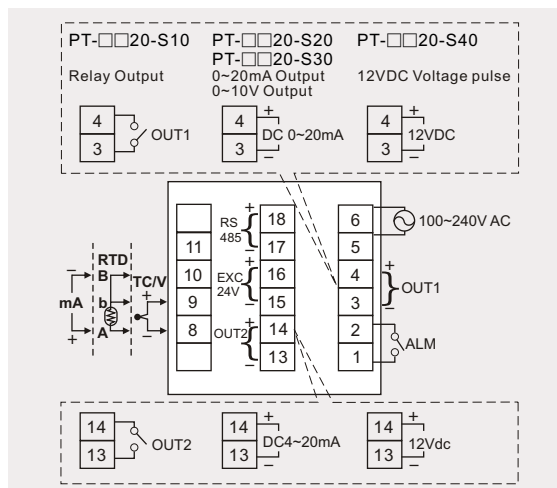
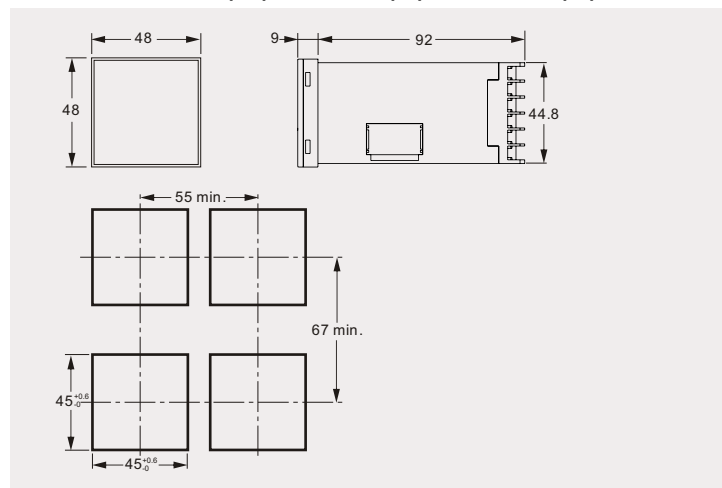
DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

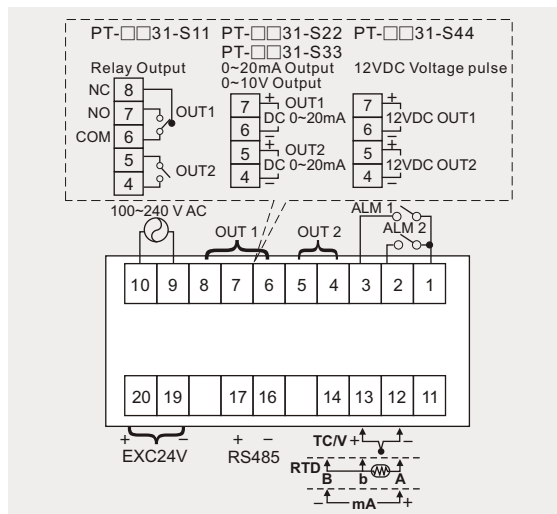
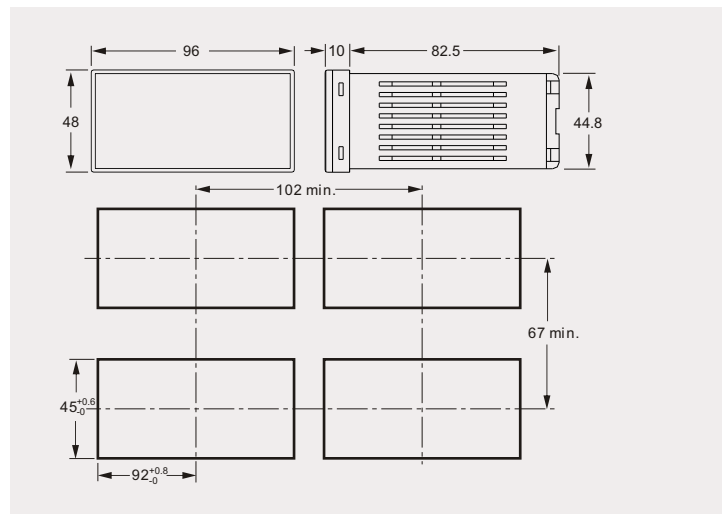
PT-7610 48mm(W) x 24mm(H) x 98.5mm(D)



PT-7620 48mm(W) x 48mm(H) x 101mm(D)



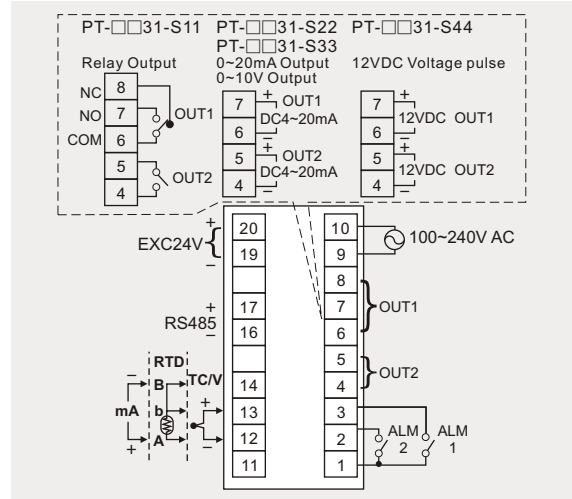
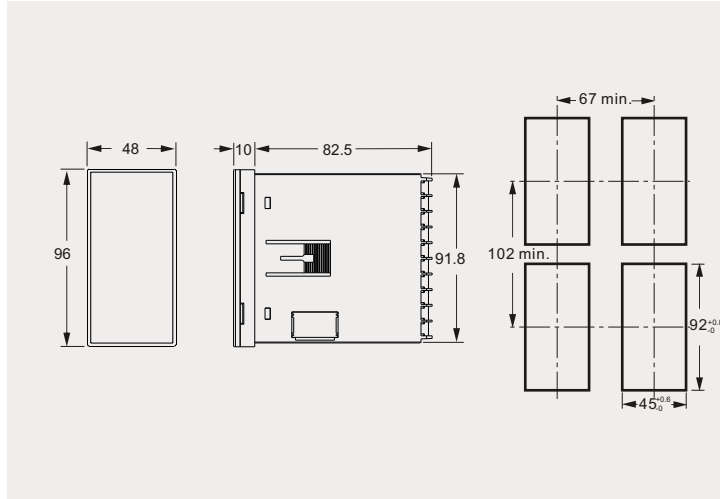
PT-7630 96mm(W) x 48mm(H) x 92.5mm(D)



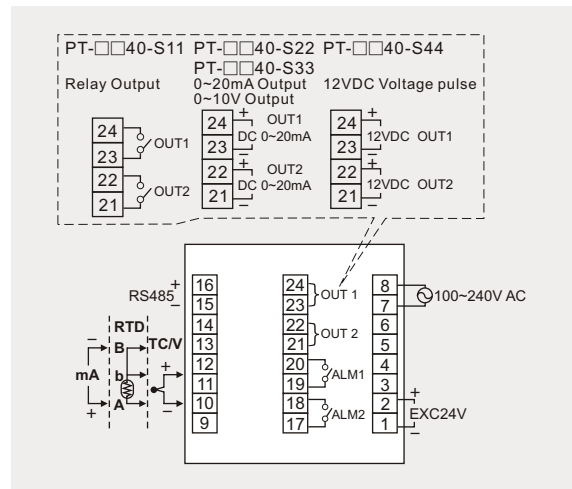
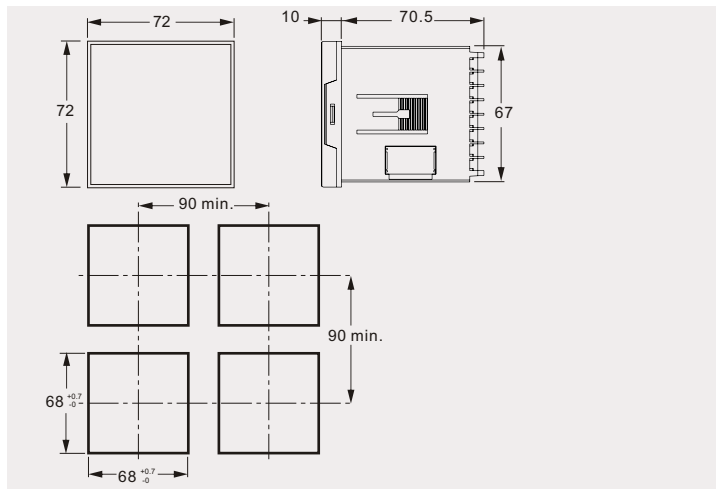
DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

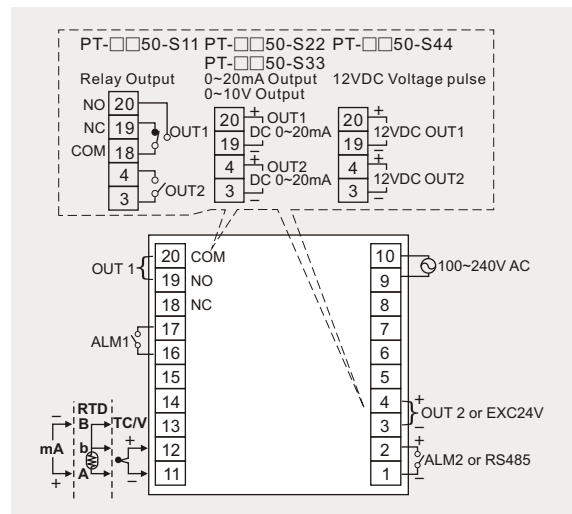
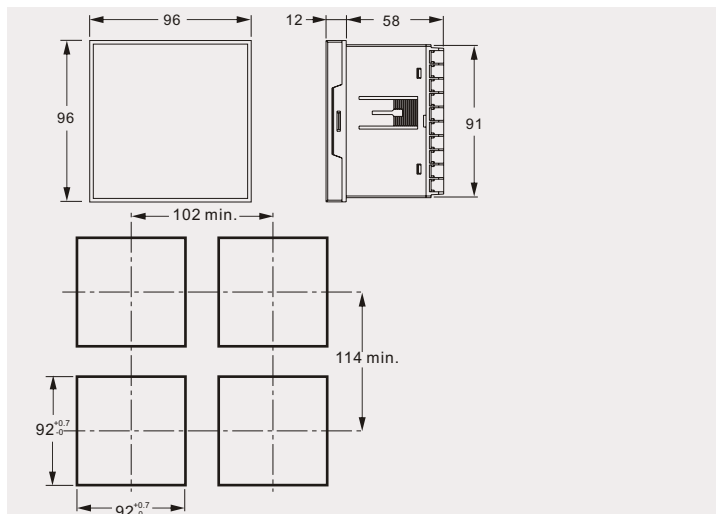
PT-7631 48mm(W) x 96mm(H) x 92.5mm(D)



PT-7640 72mm(W) x 72mm(H) x 80.5mm(D)



PT-7650 96mm(W) x 96mm(H) x 70mm(D)



PT-76 - - [illegible]

*1: For 50---96x96 dimension, it will be limited that the “output 2” and “auxiliary power” share the same terminals, user can only choose either function (output 2 or auxiliary power) at operation.

Similarly, the “Alarm Output 2” and “communication” share the same terminals, user can only choose either function (alarm output 2 or communication) at operation.

For Example:

PT-7620-S101-00

48x48mm, one relay output and one alarm output

★ Please call for customized specifications

PRODUCT INTRODUCTION

PRODUCT INTRODUCTION

53 Series programmable temperature controller is FineTek's mid-range series of controllers. It uses a 12bit analog / digital converter core processor for fast performance and provide reliable and stable results. Dual rows of 3 digits LED display gives clear and simple read outs of present value and set value. Operating by 4 buttons platform and user have ease of usage and user-friendly interface

High Accuracy, High Sampling Rate

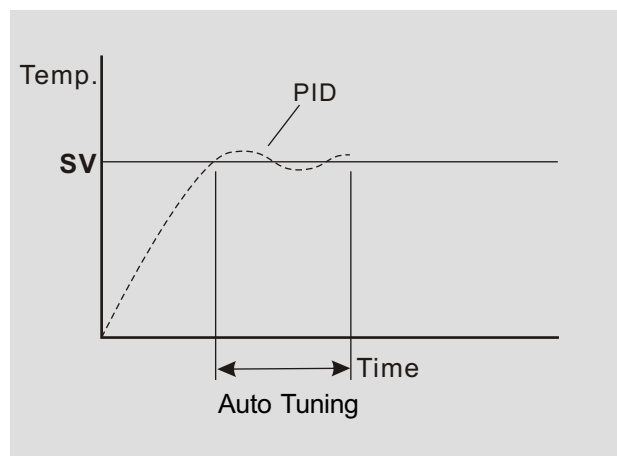
Sampling rate of 5 times per second (equivalent to 0.2sec per sampling) enables the controller to achieve high accuracy readings and accurate operations.

PID Control

PID control provides fast and stable process control that minimizes the transition period and overshoot. Thereby, enhancing the effectiveness of the temperature control process.

Auto-tuning

Artificial intelligence technology enables the controller to calculate the most efficient parameters to suit each and every application, thereby increasing the efficiency of the process to the maximum.



Digital Filter

Embedded digital filter function eliminates from interference signals to approach stabilizes control.



Sensor Break Alarm:

If the temperature sensor malfunction / break, an alarm figure will be displayed on the panel to notify users.

Heating / Cooling Bi-directional Control

Enables the user to select between both heating and cooling processes, reduces inconveniences of single direction control methodology and reduces inventory

Multi-inputs Function

Accept 2 types of thermocouple inputs and 1 type of RTD input. Convenience of usage.

Switching Power Supply

Accepts 85 ~ 265VAC, 50/60Hz power supply, able to prevent controller from being affected by interferences due to ripples in power supply.

PRODUCT SPECIFICATIONS

CONTROL FUNCTION

Control Method	ON/OFF, PID
Fraction Value	0~999
Integral time	0~999
Differential time	0~999
Alarm / Output Hysteresis setting	0~999°C
Sampling Interval	0.2s

SIGNAL INPUT

Signal Input		Range	Accuracy
Thermocouple	K	-99~999°C	± 0.5% ± 1digit
	J	-99~999°C	± 0.5% ± 1digit
RTD	PT100	-99~850°C	± 0.5% ± 1digit

ALARM FUNCTION

Alarm Types	Absolute Value Alarm
Set Value	0~99s
Alarm Output	SPDT, 5A-250Vac (Resistance Load) (PT-5320, 3A)
Action Method	Alarm Activation / De-Activation delay
Signal Output	Alarm Relay Output

MAIN CONTROL OUTPUT

Specifications \ Model	5320	5330	5331	5340	5350
Relay	SPST-ON 3A/250Vac	SPDT 5A/250Vac	SPDT 5A/250Vac	SPDT 5A/250Vac	SPDT 5A/250Vac
Pulse Output (SSR)	0/12Vdc (NPN), Max.20 mA				
Analog (Re-transmission)	4~20 mA				
	0~10Vdc Max.600Ω				

PRODUCT SPECIFICATIONS

STANDARD SPECIFICATIONS

Power Supply	100~240Vac, 50/60Hz
Power Consumption	7VA
Input Resistance	>1MΩ
Input Compensation	-99~999°C
Digit Filter	10~100 Times
International Standard	CE
Settings Range	-99~999°C

DISPLAY

3 digit of 7 segment display, Accuracy $\pm 0.5\% \pm 1$ digit

Digit Size \ Model	5320	5330	5331	5340	5350
Display					
PV (red)	0.36"	0.39"	0.41"	0.56"	0.56"
SV (green)	0.28"	0.28"	0.36"	0.36"	0.36"

LED Indicators

Digit Size \ Model	5320	5330	5331	5340	5350
Display					
Control Output	X 1	X 1	X 1	X 1	X 1
Alarm Output	X 2	X 2	X 2	X 2	X 2
Celsius Display	X 1	X 1	X 1	X 1	X 1
Fahrenheit Display	X 1	X 1	X 1	X 1	X 1

BLACKOUT PROTECTION

Memory Retention	EEPROM
------------------	--------

OPERATING & STORAGE ENVIRONMENT

Operation Temperature	0~50°C
Operation Humidity	20~85%RH
Storage Temperature	-20°~60°C

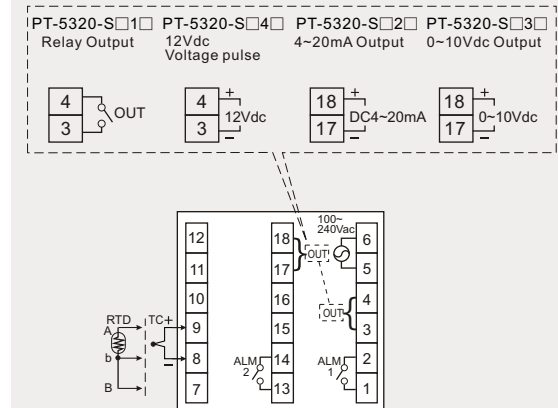
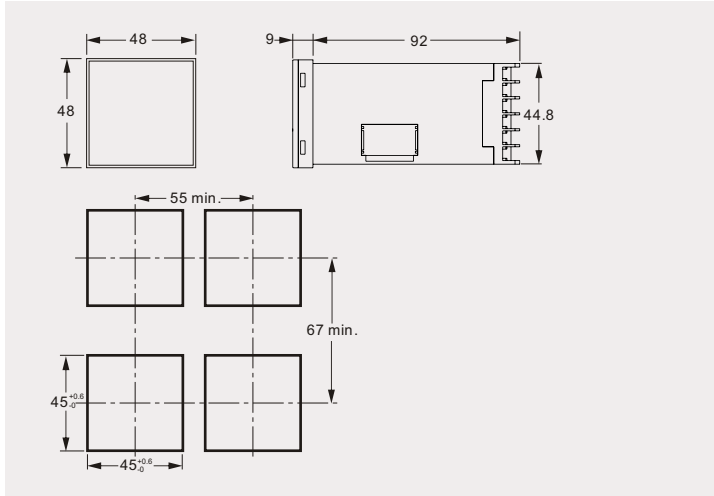
STRUCTURE

Installation	Panel mounted using 2 locking clips				
Casing Material	Plastic				
Dimensions	Refer to page 16 and 17				
Colour	Black				
Protection Rating	5320	5330	5331	5340	5350
	IP-65	IP-54	IP-54	IP-65	IP-65

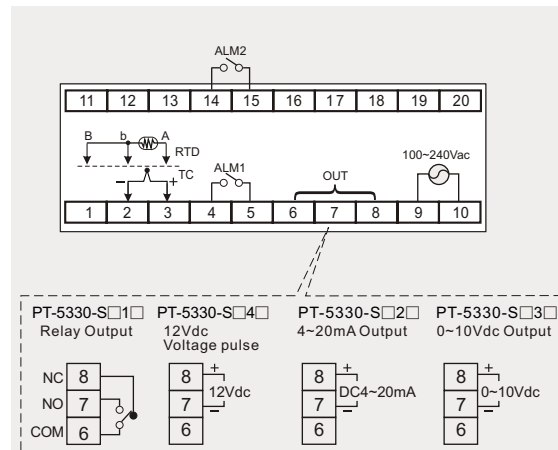
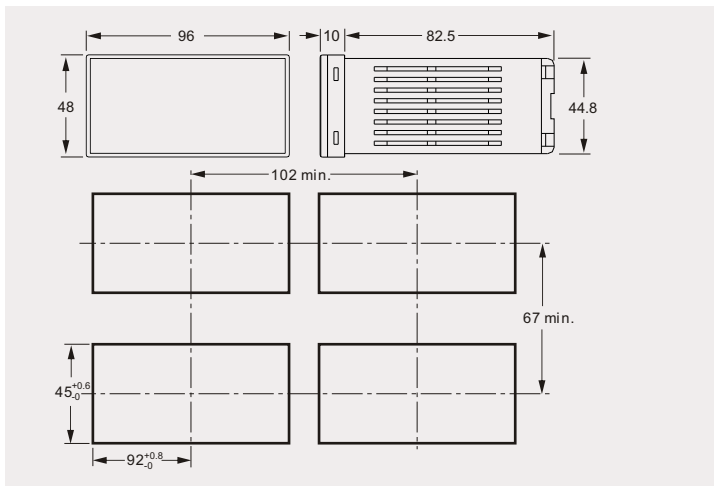
DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

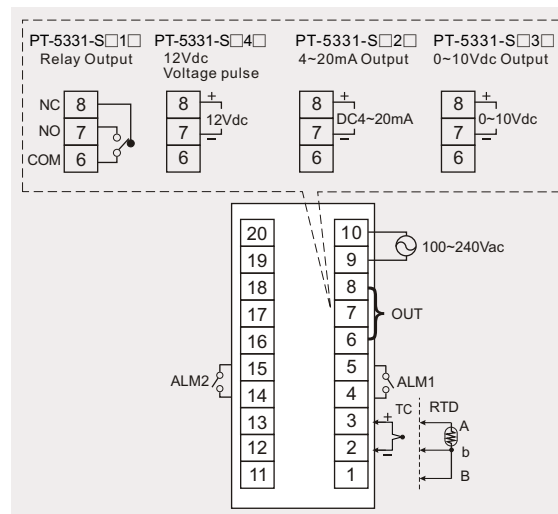
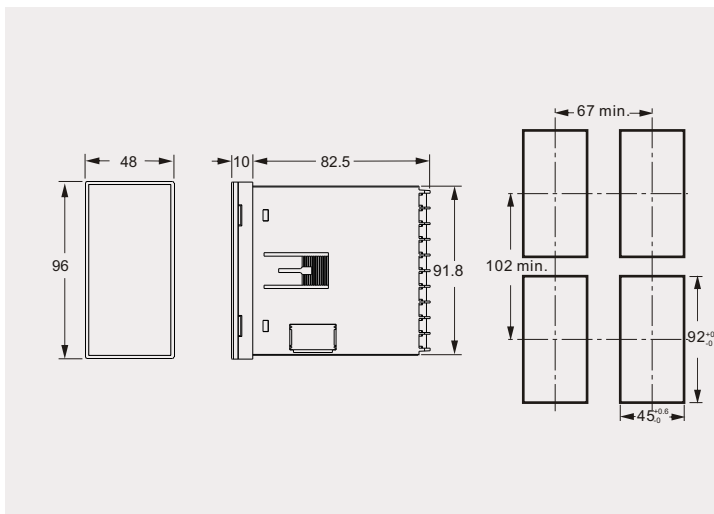
PT-5320 48mm(W) x 48mm(H) x 101mm(D)



PT-5330 96mm(W) x 48mm(H) x 92.5mm(D)



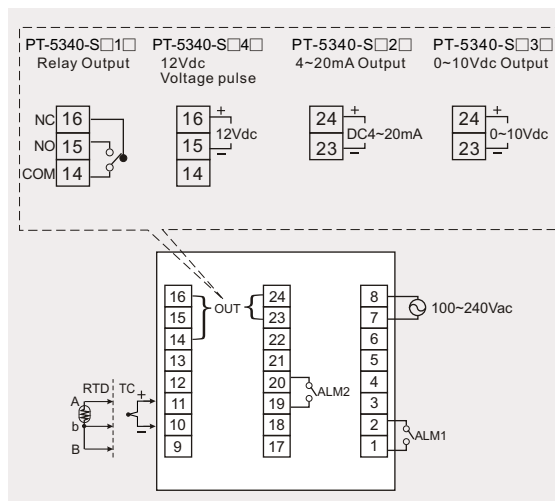
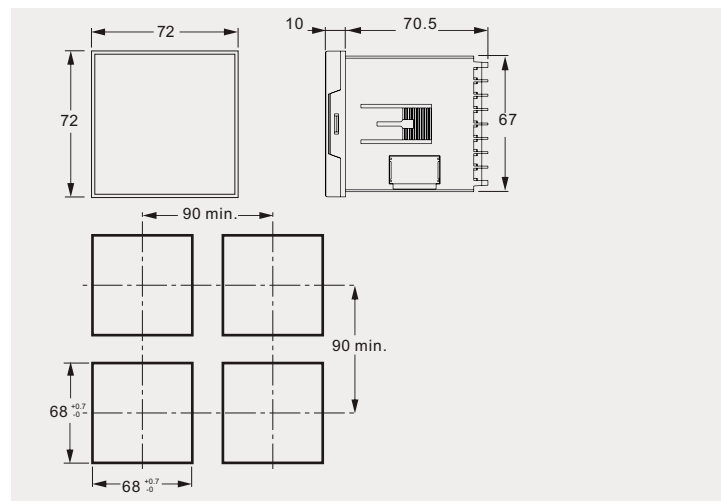
PT-5331 48mm(W) x 96mm(H) x 92.5mm(D)



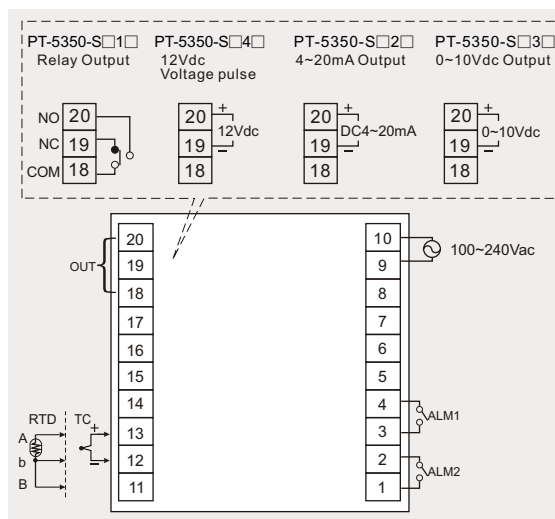
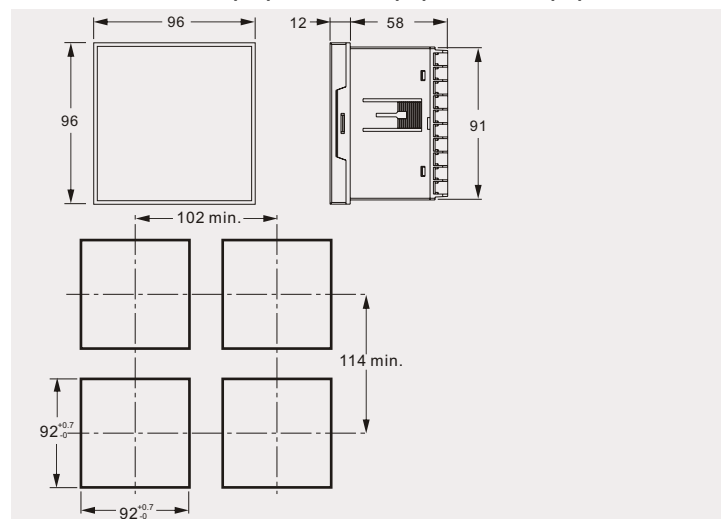
DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

DIMENSION / PANEL CUTOUT & WIRING DIAGRAM

PT-5340 72mm(W) x 72mm(H) x 80.5mm(D)



PT-5350 96mm(W) x 96mm(H) x 70mm(D)





Model / Features	PT-53XX		PT-76XX		PT-83XX	
						
Available Dimension DIN (mm)	1/16 DIN (48*48), 1/8 DIN (48*96), 1/8 DIN (96*48), 3/16 DIN (72*72), 1/4 DIN (96*96)		1/32 DIN (48*24), 1/16 DIN (48*48), 1/8 DIN (48*96), 1/8 DIN (96*48), 3/16 DIN (72*72), 1/4 DIN (96*96)		1/16 DIN (48*48), 1/8 DIN (48*96), 1/8 DIN (96*48), 3/16 DIN (72*72), 1/4 DIN (96*96)	
Color	Black		Black		Black	
Control Method	On/Off, PID+Auto Tuning+Fuzzy (A16)		On/Off, PID+Auto Tuning+Fuzzy		On/Off, PID+Auto Tuning+Fuzzy	
Panel		for confirmation or go info subdirectory		for addition and mode change		for mode selection
		for hundred or abort from subdirectory or hot key for control setting		for position shift		for function programmed setting
		for ten or hot key alarm 1 setting		for confirmation		for change mode
		for one or hot key alarm 2 setting				for addition and mode change
PV Display	3 Digits in red color 0.36" for PT-5320, 0.39" for PT-5330, 0.41" for PT-5331, 0.56" for PT-5340, PT-5350		4 Digits in red color 0.31" for PT-7610, 0.36" for PT-7620, 0.39" for PT-7630, 0.36" for PT-7631, 0.56" for PT-7640 & PT-7650		4 Digits in red color 0.49" for PT-8320, 0.51" for PT-8330, PT-8331, 0.69" for PT-8340, 0.83" for PT-8350	
SV Display	3 Digits in green color 0.28" for PT-5320 & PT-5330, 0.36" for PT-5331 & PT-5340 & PT-5350		4 Digits in green color 0.28" for PT-7620 & PT-7630, 0.36" for PT-7631 & PT-7640 & PT-7650		4 Digits in green color 0.42" for PT-8320, 0.43" for PT-8330 & PT-8331, 0.55" for PT-8340 & PT-8350	
Power Supply	100 ~ 240 VAC		100 ~ 240 VAC		100 ~ 240 VAC	
Operation Temperature	0 ~ 50°C		0 ~ 50°C		0 ~ 50°C	
Storage Temperature	-20 ~ 60°C		-20 ~ 60°C		-20 ~ 60°C	
Protection Rating	IP65 for PT-5320, PT-5340, PT-5350 IP54 for PT-5330, PT-5331		IP65 for PT-7620, PT-7640, PT-7650 IP54 for PT-7610, PT-7630, PT-7631		IP65	
Installation	Panel Mounted		Panel Mounted		Panel Mounted	
Memory Retention	EEPROM		EEPROM		EEPROM	
Signal Input	Thermocouple K, J, PT100, JPT100		Thermocouple K, J, R, S, B, E, N, T, PT100, JPT100, linear current, voltage		Thermocouple K, J, R, S, B, E, N, T, PT100, JPT100, linear current, 0-10V	
Accuracy	0.5%FS ± 1 digit		0.3%FS ± 1 digit		0.3%FS ± 1 digit	
Input Compensation	-99 ~ 999°C		-1999 ~ 9999°C		-1999 ~ 9999°C	

Model / Features	PT-53XX	PT-76XX	PT-83XX
Setting Range	-99 ~ 999°C	-1999 ~ 9999°C	-1999 ~ 9999°C
Digit Filter	30 times Fixed	1 ~ 50 times	1 ~ 100 times
CONTROL FUNCTION			
Fraction Value	0 ~ 999	0 ~ 9999	0 ~ 9999
Integral Time	0 ~ 999	0 ~ 9999	0 ~ 9999
Differential Time	0 ~ 999	0 ~ 9999	0 ~ 9999
Alarm / Output Hysteresis setting	0 ~ 999	0 ~ 9999	0 ~ 9999
Sampling Interval	0.2 second	0.25 second	400 ms
Output Control Cycle	0 ~ 999 second	0.5 ~ 999.9 second	0.1 ~ 999.9 second
ALARM FUNCTION			
Alarm Types	Absolute Value Alarm, Deviation Alarm Alarm1 Mode: Alarm1 Operation $A1 \geq 0$: $A1 < 0$ Absolute-value upper-limit ED1=0; A1H=HI Absolute-value lower-limit ED1=0; A1H=LO Upper-limit(deviation) ED1=1; A1H=HI Lower-limit(deviation) ED1=1; A1H=LO	Absolute Value Alarm, Deviation Alarm, Area Alarm ▲: SV ▲: Alarm Setting Value ▼: Hysteresis Setting Value (P.S.) (H.S.) Deviation high alarm (S.Y.1) OFF ON Deviation high alarm (S.Y.2) OFF ON Deviation low alarm (S.Y.3) ON OFF Deviation low alarm (S.Y.4) ON OFF Deviation high/low alarm (S.Y.5) ON OFF ON Band alarm (S.Y.6) OFF ON OFF Process high alarm (S.Y.7) OFF ON Process low alarm (S.Y.8) ON OFF	Absolute Value Alarm, Deviation Alarm, Area Alarm ▲: SV ▲: Alarm Setting Value ▼: Hysteresis Setting Value (P.S.) (H.S.) Deviation high alarm (S.Y.1) OFF ON Deviation high alarm (S.Y.2) OFF ON Deviation low alarm (S.Y.3) ON OFF Deviation low alarm (S.Y.4) ON OFF Deviation high/low alarm (S.Y.5) ON OFF ON Band alarm (S.Y.6) OFF ON OFF Process high alarm (S.Y.7) OFF ON Process low alarm (S.Y.8) ON OFF Sensor error alarm (S.E.T) Set alarm while sensor break or out of measuring range.
Delay Time	0 ~ 99 second	0 ~ 99 second	0 ~ 99 second
Alarm Output	SPST – ON, 250VAC/5A (Resistance load) x 2 Max.	SPST – ON, 250VAC/5A (Resistance load) x 2 Max.	SPST – ON, 250VAC/5A (Resistance load) x 4 Max. Include in Main and Auxiliary Output
Action Method	Direct / Reverse	Direct / Reverse	Direct / Reverse
CONTROL OUTPUT			
Main Control Output x 2 Max.	Relay Output (SPDT for PT-5330, PT-5331, PT-5350 OUT1) Pulse Output, Analog	Relay Output (SPDT for PT-7630, PT-7631, PT-7650 OUT1) Pulse Output, Analog (Re-transmission)	Relay Output(All SPST) Pulse Output, Analog (Re-transmission)
Modulize Output	None	None	Yes
Auxiliary Control Output x 2 Max.	None	None	Relay Output(All SPST) Pulse Output, Analog (Re-transmission)

Model / Features	PT-53XX	PT-76XX	PT-83XX
OTHER FUNCTIONS			
Temperature Sensor Break detection	Yes	Yes	Yes
Heater Feedback Irregularities Detection	No	No	Yes
SV Remote Setting	No	No	Yes
Parameters Lock	Password Protection	Yes	Yes
Bar graph Display	No	No	Yes
Ramp Soak Setting	No	No	Yes
Event Function	No	No	Yes
Communication Interface	No	RS485	RS485
Communication Protocol	No	ModBus RTU or ASCII	ModBus RTU or ASCII
Approval	CE	CE, UL pending	CE, UL pending

Microprocessor Instruments

Bargraph/ Digital display Panel Meter

- Switching power supply 85~265 Vac or 18~36 Vdc
- Wide range of user definable scaling ratio.
- SIM (Signal Input Module) available for different application.
- Isolation in Analog / Relay output.
- Support Non-Linear tank volume conversion.
- RS485 ModBus communication.



Microprocessor Based Counter

- Switching power supply 85~265 Vac
- Counting Speed: 20 K cps (Solid-state), 30 cps (Contact)
- Decimal point setting
- Timer display (user set h/min. min/s or s/0.1s)
- Adjustable output delay timing
- Speed units: Second, Minute, Hour
- Includes multi-parameters for Counter, Timer, Batch-counter, Chronometer, Tachometer
- Data retention & RS485 ModBus communication

Digital Panel Indicator

- 0.56" Large 7-Segment LED Display
- Low Cost and Accurate Panel Indicator
- Support all process signals, AC Voltage, DC Voltage, AC Current and DC Current Measurement.
- IP-65 Class Front Panel



PID+Fuzzy Temperature Controller

- ON/OFF, PID+Fuzzy Control
- Auto-tuning, High Accuracy
- Sensor Break Alarm
- Switching Power Supply 85~265 Vac or 18~36 Vdc
- Lock Protection for Variety Parameters Heating / Cooling Bi-directional Control
- Multi-Input Signals Function
- Heater Break Detection
- RS485 ModBus communication



Microprocessor Based Power Quality Meter

- 0.2 grade electrical calibration as well as CE approval
- Monitoring RMS Voltage, Current, Frequency, Power Factor
- Monitoring Active Power (Watts), Reactive Power (Vars), Apparent Power (VA)
- Monitoring Active Energy (Mwh), Reactive Energy (MVarh), Apparent Energy (MVAh)
- Power Quality Harmonics: THD Voltage, THD Current Harmonic distortion
- Password protection on parameters setting
- Provides RS485 ModBus communication interface

 **FineTek**
Your Made-To-Order Solutions

Distributor: