



ISO 9001:2008

CONOTEC
CONOTEC CO., LTD.

www.conotec.co.kr

Instruction manual

CNT-FDP CNT-FDC



◆ **OUT2(FAN) OFF delay time**

※ Thank you for purchasing CONOTEC product.

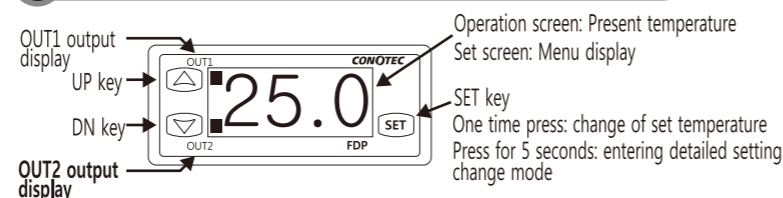
We distribute this manual to prevent damage and breakdown of product by carelessness and inform you of exact method of use. Please keep it well and refer to it when you have any question during use.

Regarding the English - language manual, please download it at our homepage.

3 Specification of product

Input power	100~240VAC 50/60Hz	
Display	7 segment 3.5 Digit 0.51 Inch	
Sensor	PT100, CA(K)	
Accuracy	PT100	: ±1% dg ± 1 digit
	CA(K)	: ±1%rdg ± 1 digit
Outputs	Out1(Relay)	: Temperature control output (250Vac 2A Max, 1a relay)
	Out2(Relay)	: FAN control output (250Vac 2A Max, 1a relay)
Correction of error	PT100	: -30.0~30.0°C
	CA(K)	: -50~50°C
Ambient condition	0~55°C, 35~80%Rh (There should be no freezing or dew condensation)	
	Time limit of memory: Approx. 10years (Non-volatile)	

4 Front operation and name of display unit



Change of user mode and setting of installer mode function
Change of user mode (Temperature setting)

Set If pressing this key once, 'SET' letter flickers and if pressing it one more time, set temperature flickers.

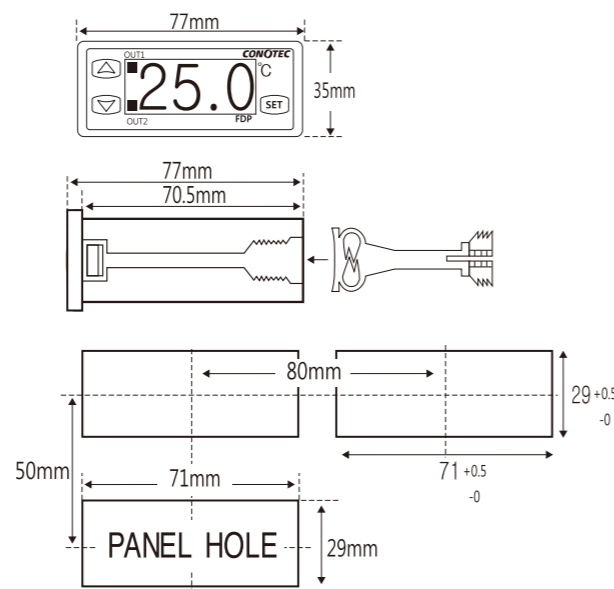
Change set value by pressing these keys.

Set Set value is memorized if pressing this key one more time. Setting of installer mode function

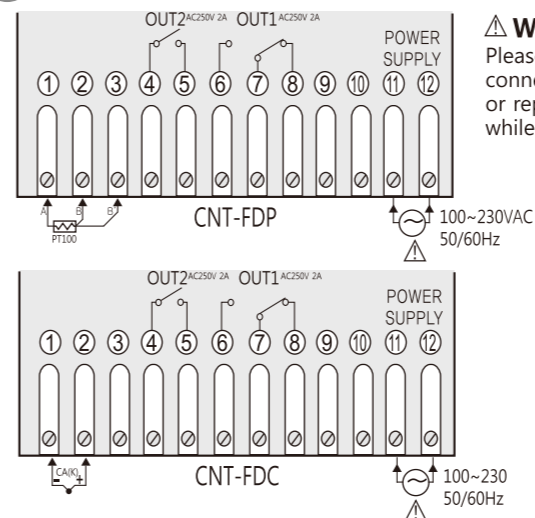
Set If pressing this key for more than 5 seconds, you can set various items on display panel in the order of user set maximum temperature, user set minimum temperature, C/H selection, delay time, deviation temperature and temperature correction etc., and set by each mode can be changed by Set keys. If pressing keys, you can go on to next mode.

※ After all set value is inputted and **O-k** message is displayed, it is restored to present temperature.

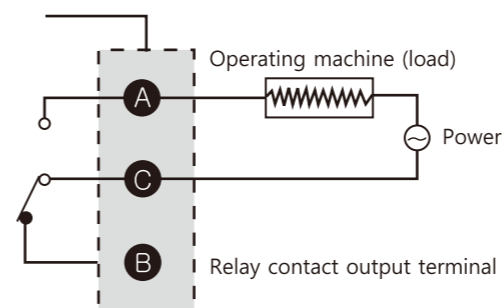
5 Outer shape standard of product and panel processing dimension



6 Terminal connection diagram



Warning
Please carry out connection work or replacing work while power is OFF.



Relay connection capacity is less than 250VAC 2A. Be careful that if load which exceeds contact capacity is used, it may result in contact deposition, faulty contact and breakage of relay.

7 How to set program

Function	Factory set value	Function	Factory set value
SET	30.0	SET	30
TYP	H	TYP	H
DLT	0.00	DLT	0.00
DIF	1.0	DIF	1
FOD	0.10	FOD	0.10
COR	0.0	COR	0

※ How to set FAN ON

If switch is pressed to make delay time below 0.00, it is set to ON. (When FOD ON is set, FAN output is ON continuously.)

8 How to set program

Change of set temperature

CNT-FDP

25.0

SET

30.0

set temperature

SET

25.0

present temperature

CNT-FDC

25

SET

30

set temperature

SET

25

present temperature

Program setting

Set menu shift Change of set value

CNT-FDP

25.0 present temperature

SET press for 5 seconds

1 TYP output type

SET

H

SET

2 DLT temperature output delay time

SET

0.00

SET

3 DIF output deviation temperature

SET

1.0

SET

4 FOD Fan(Out2) off Delay time

SET

1.0

SET

5 COR present temperature correction

SET

0.0

SET

CNT-FDC

25 present temperature

SET press for 5 seconds

1 TYP output type

SET

H

SET

2 DLT temperature output delay time

SET

0.00

SET

3 DIF output deviation temperature

SET

1

SET

4 FOD Fan(Out2) off Delay time

SET

1.0

SET

5 COR present temperature correction

SET

0

SET

Warning

1. Please use this product after attaching two-tier safety system definitely when it is used to control the equipment which may cause deadly consequence or serious damage to peripheral device and serious property damage, because this product is not manufactured as safety equipment.
2. Do not connect, check or repair it while power is supplied.
3. When connecting power source, please check terminal number without fail.
4. Never dismantle, process, improve or repair this device.

Caution

1. Please be well-acquainted with method of use, safety regulation and warning before installing this device, and use it definitely within the scope of defined specification and relevant capacity.
2. Do not wire line or install in a motor or solenoid where inductive load is large.
3. Use shielding wire when extending sensor and do not make it long more than needs.
4. Do not use component at same power source or close to it, which may generate arc when directly 'making and breaking' circuit.
5. Keep power line away from high voltage line and do not install where there is lots of water, oil and dust.
6. Do not install in the place of direct sun-light or exposed to rain.
7. Do not install where there is strong magnetism, noise, vibration or impact.
8. Please avoid place where strong alkaline or acid substance is directly generated, and use independent pipe.
9. Do not pour water directly to it for cleaning when it is installed in kitchen.
10. Do not install where temperature/humidity exceeds rating.
11. Use this device so as for sensor line not to be cut or scratched.
12. Please keep sensor line away from signal line, power source, power and load line, and use independent pipe.
13. Please be advised that A/S is not provided when this product is dismantled or revised arbitrarily.
14. Mark in terminal connection diagram is a safety words for warning or caution.
15. Do not use this product near the device which generates strong high-frequency noise (high frequency welding machine, high frequency sewing machine, high frequency radio set, high-capacity SCR controller)
16. If this product is used in other way than specified by manufacturer, it may cause injury or loss of property.
17. Keep out of reach of children because it is not a toy.
18. Installation work should be done by related specialist or qualified person only.
19. We are not responsible for any damage caused by non-compliance of above -mentioned warning or caution words, or fault of consumer.

Danger

■ Caution, Danger of electric shock

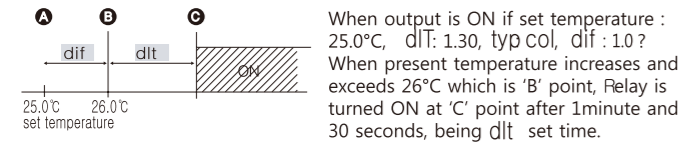
1. Electric shock- Do not touch AC terminal while electric power flows. You may get electric shock.
2. When checking input power source, please cut off input power source definitely.

1 typ Output type setting

Heater : **HET** setting Cooling : **COL** setting
control control

2 dLT Output delay time setting: Applicable to Relay ON/OFF control only

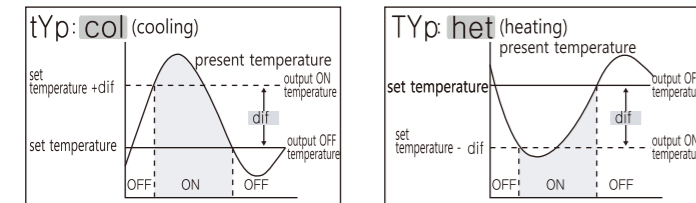
It is used in case that object to be controlled repeats ON/OFF frequently and causes problem. (Refrigerator or compressor, etc.)
It has function to protect operating machine at the time of instantaneous power failure or re-input of power.



3 dif Output deviation temperature setting: Applicable to Relay ON/OFF control only

*Direction of deviation: One direction (+ direction) *Output is OFF at set point.

If Relay output repeats too frequent ON/OFF, output contact is damaged quickly or hunting occurs by external noise (Oscillation, chattering).
To prevent this kind of phenomenon, it has function to protect contact of device by setting a certain interval between output movement of ON and OFF.



4 FOD Out2 (Fan) output OFF delay time setting

Out2 (FAN) is OFF after FOD set time elapses after OUT1 output is OFF.
(When FOD is set as ON, OUT2 is ON continuously regardless of OUT1.)

5 COR Sensor correction

When there is any difference between displayed value of present temperature and temperature actually measured by precise measuring instrument, displayed value can be adjusted to the temperature actually measured.

Example 1) Displayed value: 5°, Actually measured temperature: 10° ⇒ Input Cor +5°
Example 2) Displayed value: 5°, Actually measured temperature: 2° ⇒ Input Cor -3°

12 Other

* Sensor extension

-PT100 ohm sensor: All 3 strands should have same quality of material and thickness.
-CA(K): It should be extended with CA(K) sensor wire or exclusive compensating wire.
⇒We recommend soldering on extension area and be careful that poor treatment on extension area may cause malfunction of sensor by inflow of moisture.

* Sensor error display

O-E In case that sensor line is cut in the middle or it is connected to terminal loosely
S-E In case that sensor lines are short-circuited

* Memory error display

ER1: It is displayed in case that abnormal data is recorded in non-volatile memory inside product or it is damaged by serious external noise. If pressing "Set" key when this sign appears, set value is changed to factory set value.

■ Supplementary measures are established in this regulator for external noise, however if noise of 2KV flows in, internal system may be damaged.
Warranty period: One year from the date of purchase

■ Above mentioned product specification may be changed without prior notice to improve performance of product. When handling above product, please be well-acquainted with content specified in "Caution" and comply with it strictly.

Please download English manual at our homepage.

■ This device is suitable for following environment.
Ambient temperature: 0°C~ 60°C
Surrounding humidity: Below 80%Rh
Rated power source: AC230V 50/60Hz

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