

CONOTEC

CONOTEC CO., LTD.
DIGITAL TEMPERATURE CONTROLLER



FOX-2001D, 2001T, 2001F

Instruction Manual



FOX-2001D

FOX-2001T

FOX-2001F

- A user manual for this product is posted on the company website.
- Please download the technical document and communications manual on the company website

01 Safety precautions

Please read the safety precautions carefully for correct operation of the product.

- ※ The specifications and dimensions specified in this instruction manual may be changed without any notice for performance enhancement.

▲ Warning

1. This product was not made as a safe device. Therefore, this product should be attached with dual safety devices if it is used for the control purposes (e.g. a device vulnerable to accident and property damage, etc.).
2. Do not wire, inspect or service this product while the power is being supplied.
3. You must attach this product to a panel. Otherwise, it may cause an electric shock.
4. When connecting the power, you must check the terminal number.
5. Do not ever disassemble, process, modify or repair this product.

▲ Caution

1. Please make yourself familiar with all the operation instructions, safety precautions and warnings before using this product. Comply with related specifications and capacity requirements
2. Do not wire or install this product to any unit with high inductive load (e.g. motor, solenoid, etc.).
3. Use a shielded cable with a proper length when extending a sensor.
4. Do not use any part that generates an arc when used in the same power or directly switched in close proximity.
5. Keep the power cable away from a high-voltage cable and do not install this product in any place that is full of water, oil and dust.
6. Do not install this product in any place that is exposed to direct sunlight or rain.
7. Do not install this product in any place that is subject to strong magnetic power, noise, vibration or shock.

8. Keep this product away from any place that generates strong alkaline or acid substances. Use a separate pipe.
9. Do not sprinkle water onto this product for cleaning when installing it in the kitchen.
10. Do not install this product in any place where the temperature/humidity ratings are exceeded
11. The sensor cable should not be cut or cracked..
12. Keep the sensor cable away from a signal cable, a power cable or a load cable. Use a separate pipe.
13. Keep in mind that the follow-up service will not be available if this product has been arbitrarily disassembled and modified
14. ⚠ symbol on the terminal wiring diagram indicates a safety statement that alerts a warning or caution.
15. Do not use this product near any device generating strong high-frequency noise (e.g. high-frequency welding machine, high-frequency sewing machine, high-frequency radio, large-capacity SCR controller, etc.).
16. Using this product in any method other than those specified by the manufacturer may lead an injury or a property damage
17. The product is not a toy. Keep it away from children.
18. The product should be installed only by an expert or a qualified person.
19. The company will not be liable for any damage caused by the violation of the above warnings and cautions or by a consumer's fault

▲ Danger

Caution: Risk of electric shock

- Electric shock - Do not touch the AC terminal while the current is flowing. It may cause an electric shock.
- Please intercept input power surely when input power check

02 Model Types

Model	Sensor	Output	Temp.Range	Function
FOX-2001D	NTC	Relay (2EA)	-55.0°C ~ +99.9°C	Temp. control
FOX-2001T	NTC	Relay (3EA)		
FOX-2001F	NTC	Relay (4EA)		

03 Components



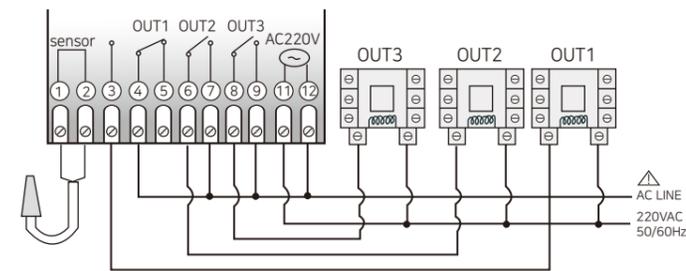
- 1 OUT1 output lamp
- 2 OUT2 output lamp
- 3 OUT3 output lamp
- 4 OUT4 output lamp
- 5 Setting up
- 6 A key for function's change
- 7 Setting down

· The function of each key.

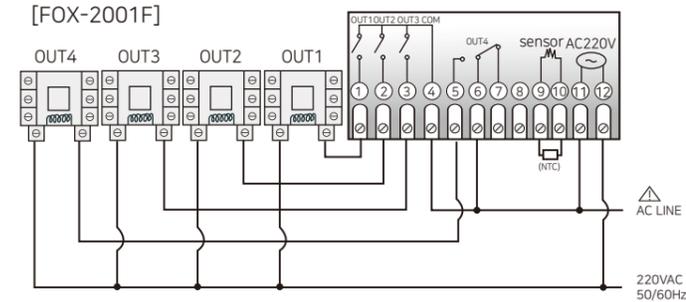
1. : A key to change of the program & setting temperature.
2. : A key to change of the temperature or the program's set values

04 Terminal wiring diagram

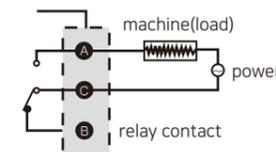
[FOX-2001D,2001T]



[FOX-2001F]



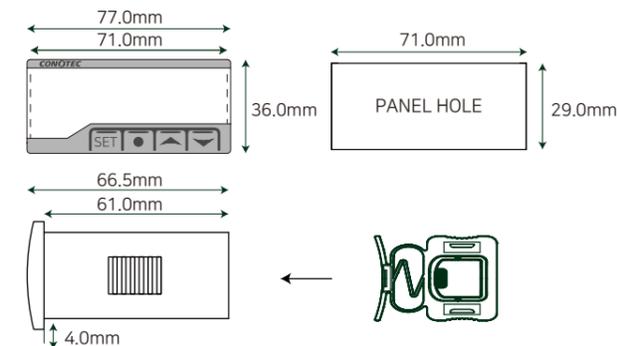
■ Relay junction



※ Output: 250VAC 2A;
A power relay or a magnet must be used. Be careful that any load over the contact capacity may cause contact fusion, contact defect, relay damage or others.

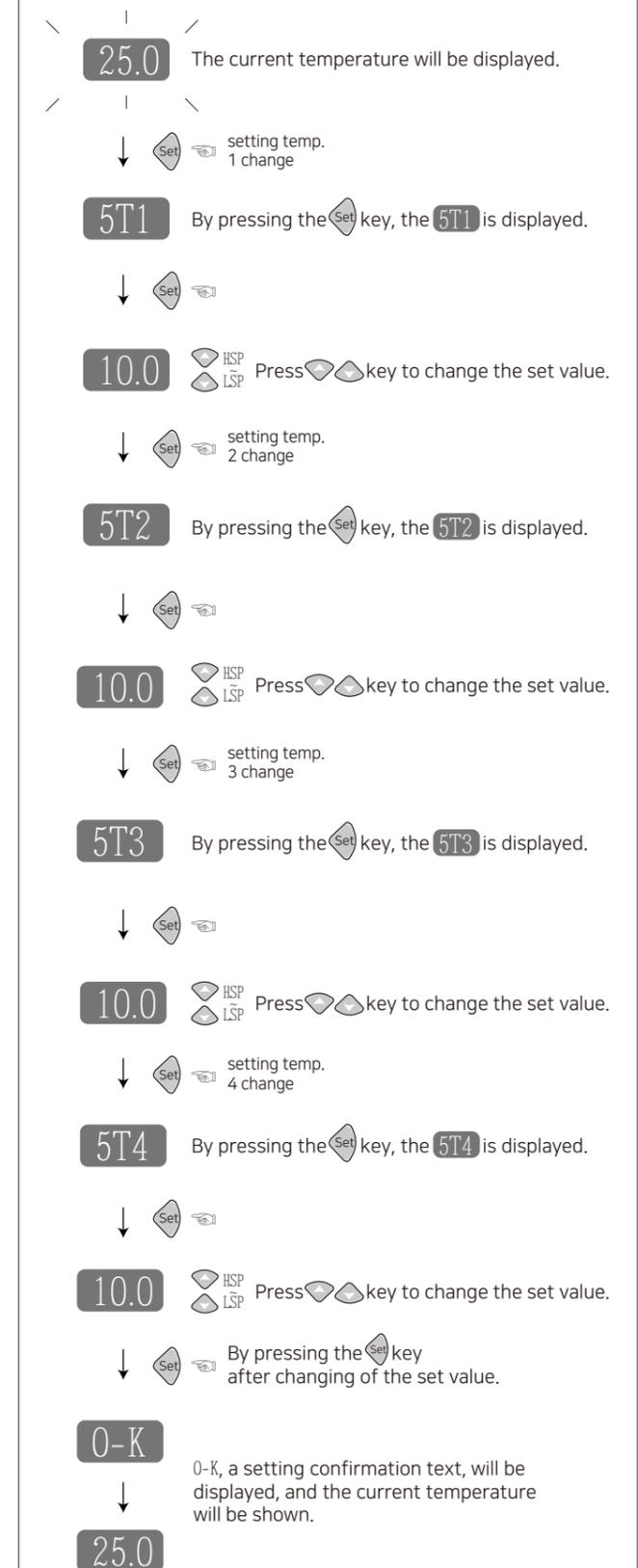
05 Dimension and panel hole sizes

(Unit : mm / error : ±0.5)

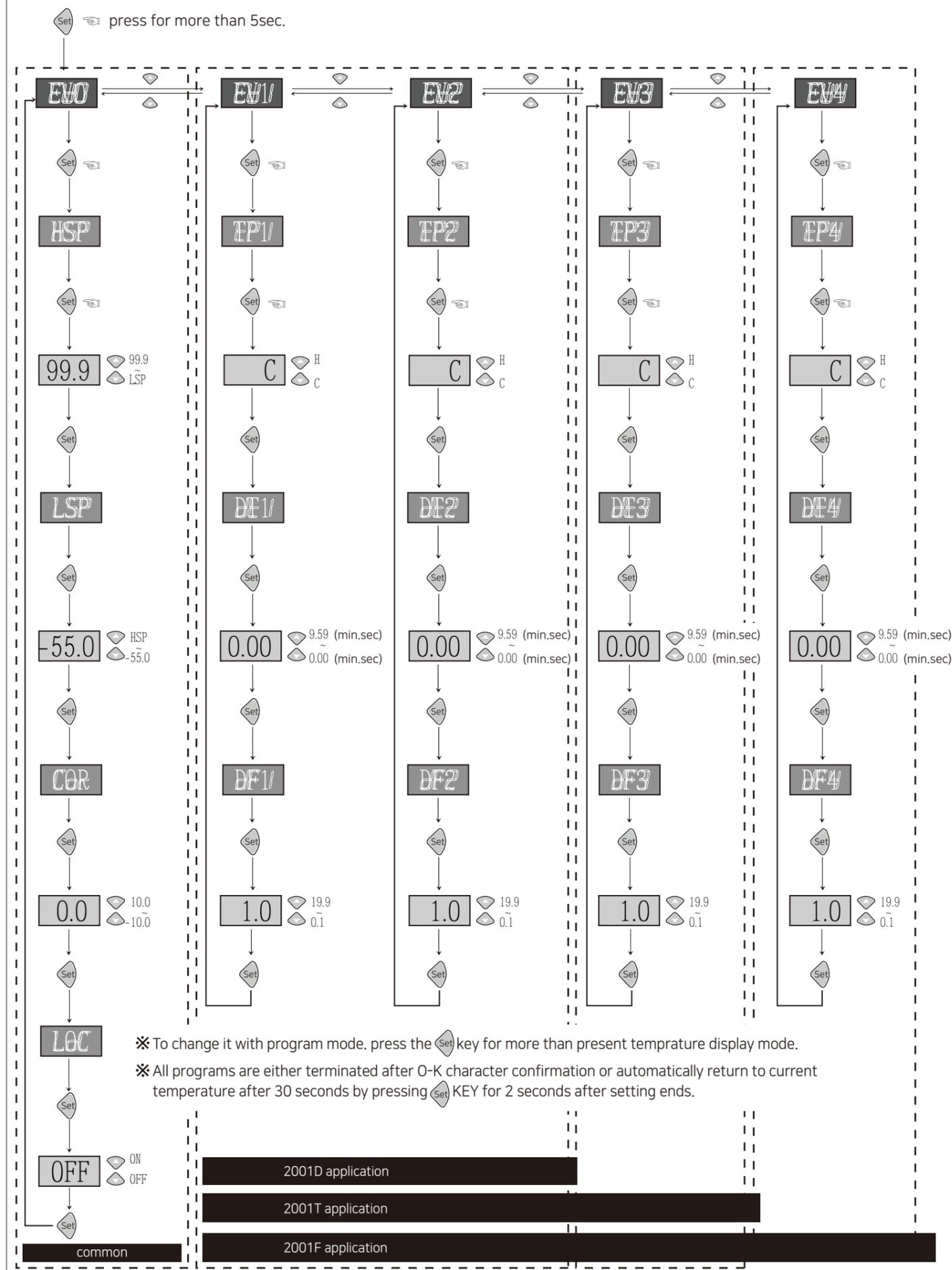


05 Setting process

Setting temperature



Program setting (The value of each item is the factory setting.)



06 Function details

- ST1**: Setting for the 1-stage temperature (application model:2001D, 2001T, 2001F)
- ST2**: Setting for the 2-stage temperature (application model:2001D, 2001T, 2001F)
- ST3**: Setting for the 3-stage temperature (application model:2001T, 2001F)
- ST4**: Setting for the 4-stage temperature (application model:2001F)

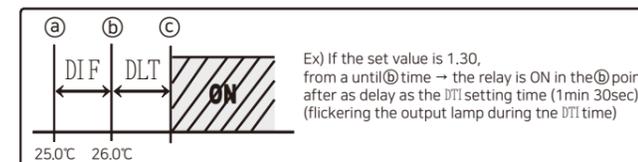
- HSP**: Setting function of the highest limit of temperature range (Minimum set point allowed to the end user) Impossible to set up the set value more than **HSP** set value
Ex1) **HSP** = 25.0°C setting => impossible to raise the set value more than 25.0°C
- LSP**: Setting function of the lowest limit of temperature range (Minimum set point allowed to the end user) Impossible to set up the set value more than **LSP** set value
Ex1) **LSP** = 10.0°C setting => impossible to lower the set value more than 10.0°C

- COR**: Correction of the current temperature Used to correct the current temperature based on the reference temperature (e.g. mercury thermometer, existing thermometer, thermostat, etc.) when there is an input error by an external sensor even though the product itself does not have any problem.
- Ex) Actual temperature : 25.0°C → **COR** Modification of 0.0 to -3.0
Display window : 28.0°C
When there is a difference of 3°C from the actual temperature → Displayed as 25.0 (current temperature modified)

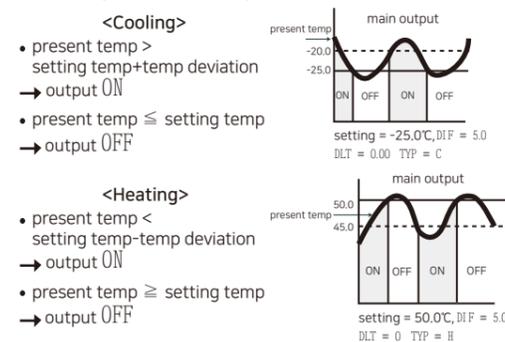
- LOC**: The lock function As a safety device, it is used in order not to change the set values except for the main user.
ON - setting for the lock function. OFF - removal for the lock function.

- TP1**: Selection of the Temp.1 or Cooling or Heating (application model:2001D,2001T,2001F)

- DT1**: Delay time of the temperature 1 output (application model:2001D,2001T,2001F) It is widely used as the followings in case of operating the ON/OFF control very often, (Cooler, Compressor and so on) to protect the operation machinery when re-input of the power supply or momentary stoppage of power supply.



- DF1**: Setting for temperature deviation (application model:2001D, 2001T, 2001F) In the ON/OFF control, it needs at regular interval between ON and OFF. By operating the ON/OFF control frequently, the relay or its output contact can be damaged quickly and it also occurs the hunting (oscillating, chattering) by virtue of external noise. You can make use of the temperature deviation in order to protect its relay or contact and so on.



- TP2**: Selection of the Temp.2 or Cooling (C) or Heating (H) Please refer to the above-mentioned no.9 (application model : 2001D,2001T,2001F)

- DT2**: Delay Time of the temperature 2 output Please refer to the above-mentioned no.10 (application model : 2001D,2001T,2001F)

- DF2**: Temp. deviation of the temperature 2 Please refer to the above-mentioned no.11 (application model : 2001D,2001T,2001F)

- TP3**: Selection of the Temp.3 or Cooling (C) or Heating (H) Please refer to the above-mentioned no.9 (application model : 2001T,2001F)

- DT3**: Delay Time of the temperature 3 output Please refer to the above-mentioned no.10 (application model : 2001T,2001F)

- DF3**: Temp. deviation of the temperature 3 Please refer to the above-mentioned no.11 (application model : 2001T,2001F)

- TP4**: Selection of the Temp.4 or Cooling (C) or Heating (H) Please refer to the above-mentioned no.9 (application model : 2001F)

- DT4**: Delay Time of the temperature 4 output Please refer to the above-mentioned no.10 (application model : 2001F)

- DF4**: Temp. deviation of the temperature 4 Please refer to the above-mentioned no.11 (application model : 2001F)

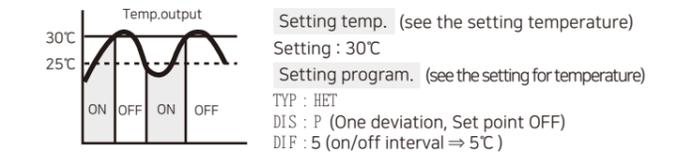
08 Model & OutPut spec.

	2001 (Sensor : 1EA)	2001D (Sensor : 1EA)	2001T (Sensor : 1EA)	2001F (Sensor : 1EA)	2000TT (Sensor : 1EA)
Temp. output	one-stage output	two-stage output	three-stage output	four-stage output	Control by the temperature & time (for greenhouse)

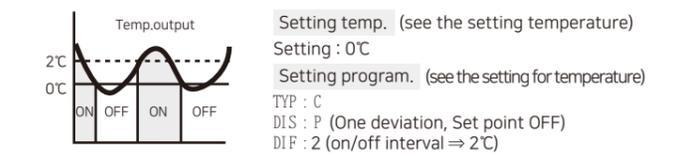
	2001 (sensor : 1EA)	2002 (sensor : 1EA)	2002 (General purpose of sensor)	2003 (sensor : 1EA)	2004 (sensor : 2EA)	2005 (sensor : 2EA)	2006 (sensor : 2EA)
Temp.output	○	○	○	○	○	○	Temp.1 Temp.2
Alarm.output	-	○	○	-	-	○	Alarm1 Alarm2
Defrost.output	-	-	-	○	○	○	○
FAN.output	-	-	-	○	○	○	-

Ex) application

Ex1) Heater → turn off at 30°C, turn on at 25°C → How to operate (setting for the temperature & programs)?



Ex2) Cooler → turn off at 0°C, turn on at 2°C → How to operate (setting for the temperature & programs)?



09 Easy error diagnosis instructions

※ If an error is displayed while the product is running

- ERR1**: It is case where the product was subject to a strong external noise and internal data memories have been damaged In this case, contact us for product service.
- Although this controller was designed to withstand a certain level of external noise, it is not supposed to withstand all levels of noise.
- If the product is subject to a noise greater than 2KV, it could be internally damaged.
- If **O-E** (open error) or **S-E** (short error) is displayed, there is something wrong with a sensor. Please check the sensor.

※ The above specifications may be changed without any notice for performance enhancement. Please make yourself fully familiar with and follow the above precautions.

■ Warranty period: One year from the date of purchase

■ Address : (Street address) 56, Ballyongsandan 1-rp, Jangan-eup, Gijang-gun, Busan, ROK
(Land-lot address) 901-1, Ballyong-ri, Jangan-eup, Gijang-gun, Busan, ROK (46034)

- Product service : 070-7815-8289
- Customer service : 051-819-0425 ~ 0427
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- Email : conotec@conotec.co.kr
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- Website : www.conotec.co.kr

※ This manual was prepared in the Naver Nanum fonts.