

CONOTEC

CONOTEC CO., LTD.
DIGITAL TEMPERATURE CONTROLLER



ISO 9001:2008

INVENTION PATENT NO. 0441398

FOX-2006

Instruction Manual



- 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

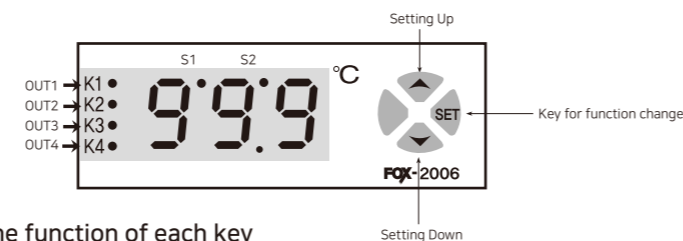
Caution: Risk of electric shock

- 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	Temp.range	Function
FOX-2006	NTC(10K)	-55.0 °C ~ +99.9 °C	Temperature control

03 Components

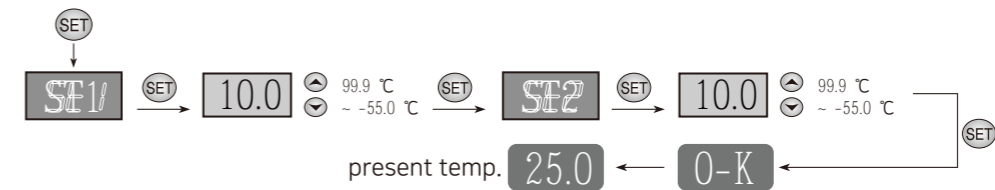


■ The function of each key

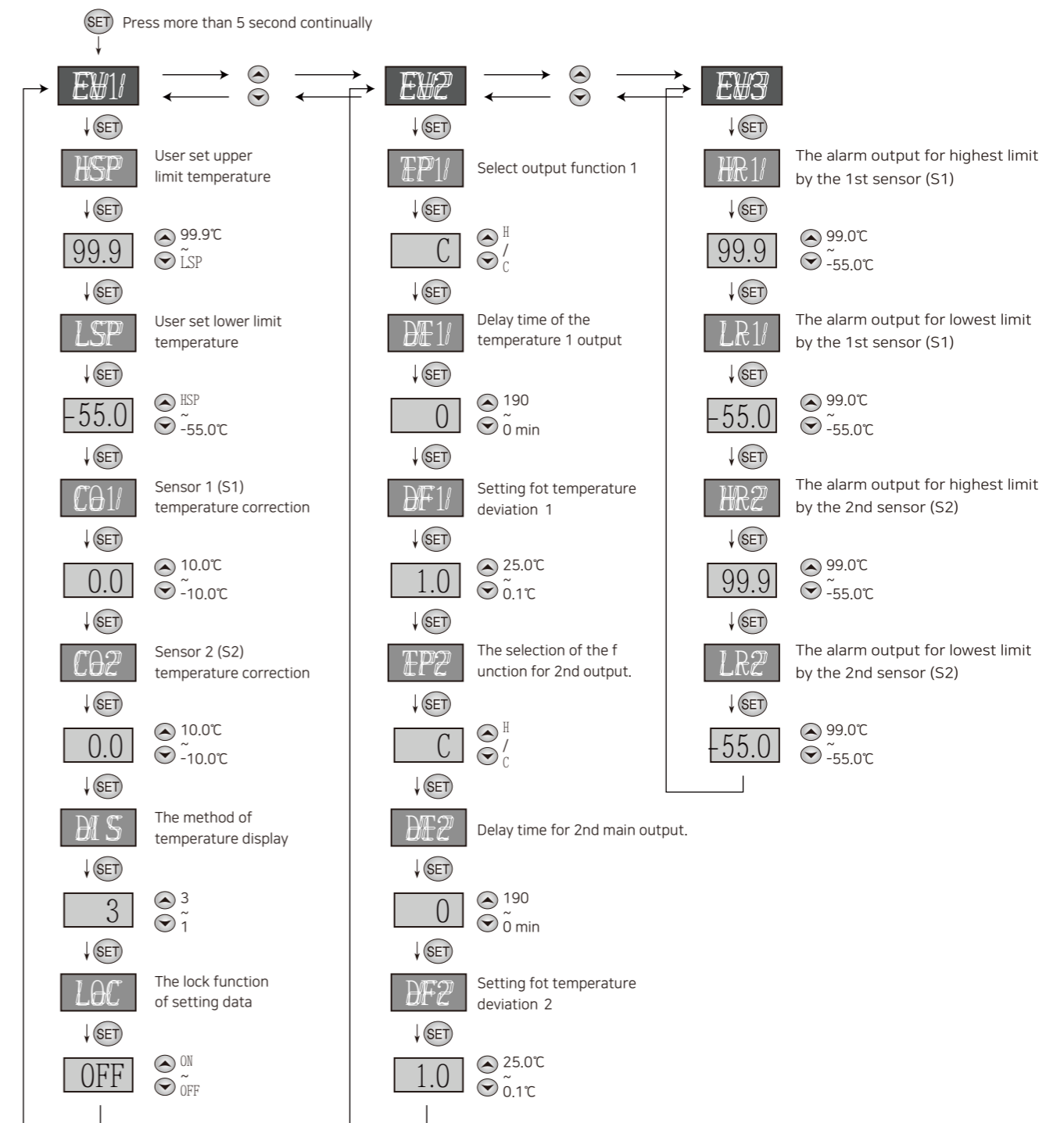
1. **SET** : A Key to change of the setting values.
To store of the data values, press **SET** key for 2second continually or if there is no any key's input, it is stored the data values automatically after 60second and then be returned at present temperature display mode.
2. **▲ ▼** : A key to changed of the setting values.
 - ▲** : A Key for conversion mode of the Sensor2(S2) temperature display (The conversion method of the Sensor2 temperture display : In the present temperature display, i **▲** key is pushed the S2 temperature is displayed as soon as the sensor 2 display is lighting and it is returned at **DIS** which was set after about 10second.)
 - ▼** : A Key for conversion mode of the Sensor1(S1) temperature display (The conversion method of the Sensor1 temperature display : In the present temperature display, i **▼** key is pushed the S1 temperature is displayed as soon as the sensor1 display is lighting and it is returned at **DIS** which was set after about 10second.)

04 Terminal wiring diagram

Setting Temperature

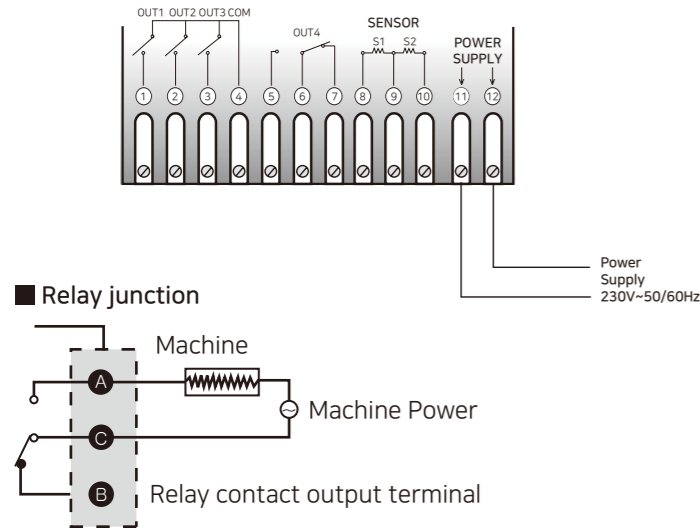


Program Setting (The value of each item is the factory setting.)



05 Terminal wiring diagram

[FOX-2006]



06 Function details

ST1 : Setting for the 1st temperature (OUT1)
/ Setting for the main output by the S1 (sensor1)

ST2 : Setting for the 2nd temperature (OUT3)
/ Setting for the main output by the S2 (sensor2)

HSP : Setting function for the highest limit of temperature range cannot set the set temperature values **ST1** **ST2** values above the set value of **HSP**

LSP : Setting function for the lowest limit of temperature range cannot set the set temperature values **ST1** **ST2** values below the set value of **LSP**

CO1 : Temperature correction for the sensor1 (S1)

CO2 : Temperature correction for the sensor1 (S1)
Correction for the present temperature : correction function for an discrepancy between temp, and real temp.

- ex) A real temperature is 23.0 only, but the display temperature was 23.5
You may use this function and can correct the display temperature by 0.5

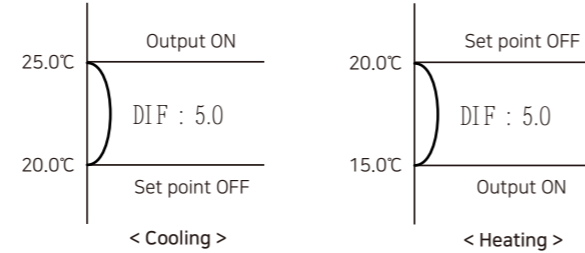
DIS : The method of temperature display
This product have two sensors but its display is only one. Therefore, you have to select the method of display.
1- S1(Sensor1) is only displayed.
2- S2(Sensor2) is only displayed.
3- S1 and S2 is displayed by turns at 5 intervals.

LOC : The lock function of setting data
Setting ON : All setting values are locked except for **ST1** and **ST2** .
Setting OFF : Removal of the lock function for all setting values.

TP1 : The selection of the function for 1st main output
C - When use in cooling
H - When use in Heating

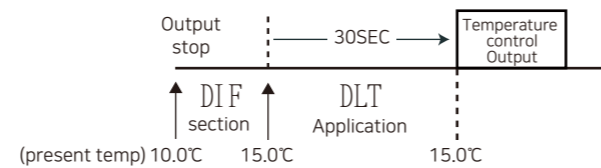
DF1 : Setting for temperature deviation
- In the ON/OFF control, it needs at regular interval between ON and OFF.
- By operating the ON/OFF control frequently, the reley or its output contact can be damaged quickly and it also occurs the hunting (oscillating, chattering) by virtue of external noise.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

- Ex1) Set temperature: 20.0°C, TYP : COOL, DIF : 5.0
- Ex2) Set temperature: 20.0°C, TYP : HEAT, DIF : 5.0



DT1 : Delay time of the temperature 1 output
- 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.

Ex) When is the output turned on at the set temperature: 10.0°C, DLT: 00.30, and DIF: 5.0°C?



TP2 : The selection of the function for 2nd main output.
C - when use in cooling
H - when use in heating

DT2 : Delay time for 2nd main output.
It is widely used as the followings in case of operating the ON/OFF control very often, (Cooler, Compressor and so on)

DF2 : Setting for temperature deviation of the 2nd main output
By operating the ON/OFF control frequently, the reley or its output contact can be damaged quickly and it also occurs the hunting (oscillating, chattering) by virtue of external noise.

HR1 : The alarm output for highest limit by the 1st sensor (S1)
The alarm output - turn on : The 1st sensor's temperature is higher than **HR1** (out2)

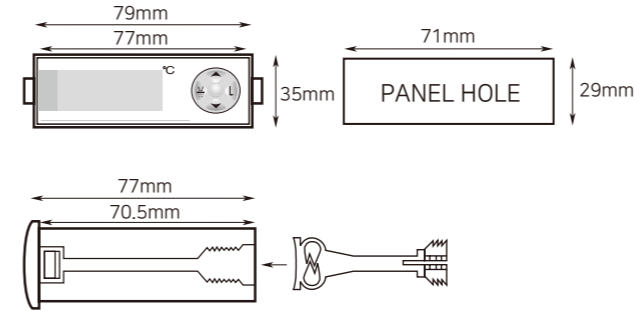
LR1 : The alarm output for lowest limit by the 1st sensor (S1)
The alarm output - turn on : The 1st sensor's temperature is lower than **LR1** (out2)

HR2 : The alarm output for highest limit by the 2nd sensor (S2)
The alarm output - turn on : The 2nd sensor's temperature is higher than **HR2** (out4)

LR2 : The alarm output for lowest limit by the 2nd sensor (S2)
The alarm output - turn on : The 2nd sensor's temperature is lower than **LR2** (out4)

07 Dimension and panel hole sizes

(Unit : mm / error : ±0.5)



08 Easy error diagnosis instructions

※ If an error is displayed while the product is running

- **ER1** : 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 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
- FAX : 051-819-4562
- Email : conotec@conotec.co.kr
- SNS : Facebook, Instagram, Twitter, YouTube ▶ 'Search for 'Conotec'
- Website : www.conotec.co.kr

◆ Installation precautions

- This device should be connected to a protective earth terminal and a power supply in order to prevent an electric shock.
- Do not block the air outlet.

◆ Operation precautions

- ※ An operating environment of this device is as follows.
- Ambient temperature : 0 ~ 60°C
- Ambient humidity : 80%RH or less
- Indoor uses only
- Pollution class 2
- Altitude under 2000m
- Installation category : II
- This device should be laid out in a way that its power cord is easy to handle.
- Using this product in any method other than those specified by the manufacturer may damage its protection function

■ Major products and development

- Temperature/humidity controller
- Counter and timer controller
- Current and voltage panel meter
- Temperature/humidity indicator
- Oven controller
- CO2 controller
- PID controller
- Unit cooler controller
- Heat pump controller
- Chiller controller
- Thermo-hygrostat controller
- Short message alarm
- Temperature/humidity transmitter
- Smartphone app and monitoring system

※ This manual was prepared in the Naver Nanum fonts.