



CONOTEC CO., LTD.
DIGITAL TEMPERATURE CONTROLLER

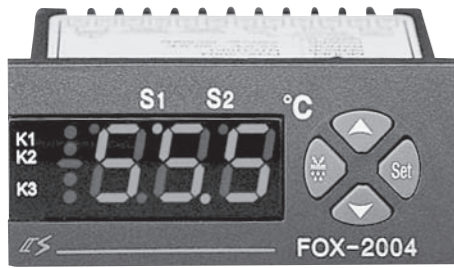


ISO 9001:2008

PATENT NO. 0441398

FOX-2004

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

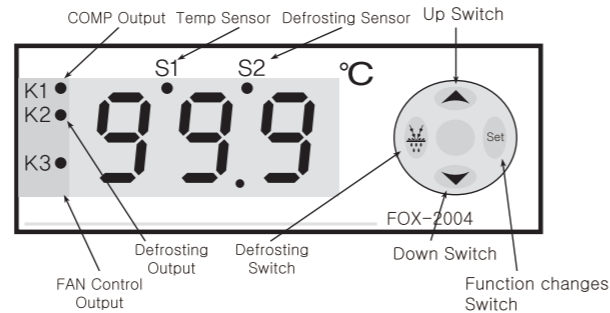
▲ Danger

- Caution: Risk of electric shock
- Electric shock – Do not touch the AC terminal while the current is flowing. It may cause an electric shock.
 - Disconnect the input power before checking the input power.

02 Model Types

Model	Sensor	Temp. Range	Function
FOX-2004	NTC : 2EA	-55.0 °C ~ +99.9 °C	COMP / Defrost / FAN Control

03 Components



[How to Switch User Mode and Set Up Installer Mode]

· Change User Mode (Temperature Setting)

1. : Press the key once, and the set temperature will blink
2. : Use the key to change the setting
3. : Press the key again, and the display will show **0-L** saving the setting

· Installer Mode Function Settings

: Press and hold the key for more than 5 seconds, and the display will show **E01**, **E02** or **E03**. Use the key to change **E01**, **E02**, **E03**

E01 If displayed, it indicates HSP (User Set Temperature Upper Limit Setting), LSP (User Set Temperature Lower Limit Setting), **d 5** (Differential Mode Selection), **d F** (Differential Temperature Setting) **dLF** (Output Delay Time Setting), **Cor** (Display Temperature and Actual Temperature Difference Calibration Setting), **SEr** (Sensor Error, on/off Continuous OFF Setting), **dSP** (Sensor Selection Display), **LoL** (Lock Function: ON – Enable Lock Function, OFF – Disable Lock Function) It proceeds in order, and...

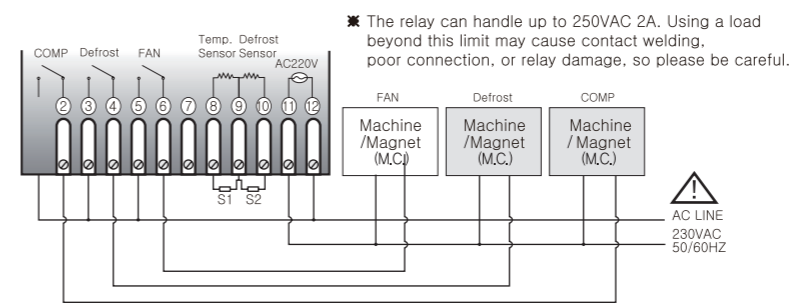
E02 If displayed, it indicates. **ddE** (Defrost Stop Temperature), **d.or** (Defrost Sensor Temperature Calibration),

d.tP (Defrost COMP Selection: ON – Set COMP ON during defrost, OFF – Set COMP OFF during defrost)

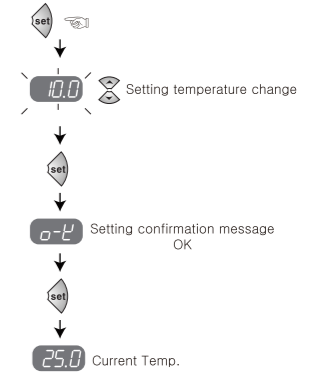
d.oF(Defrost Stop Time), **d.on**(Defrost Time)→**d.dE**(Post-Defrost Cooling Delay Time Setting) **dSt**(Defrost Time Delay Setting) It proceeds in order, and...

E03 If displayed, it indicates **F.St** (FAN Setting, refer to the chart), **F.dE** (FAN ON Delay time). The settings are adjusted in order, and the value for each mode can be changed using the key. To move to the next mode, press the key

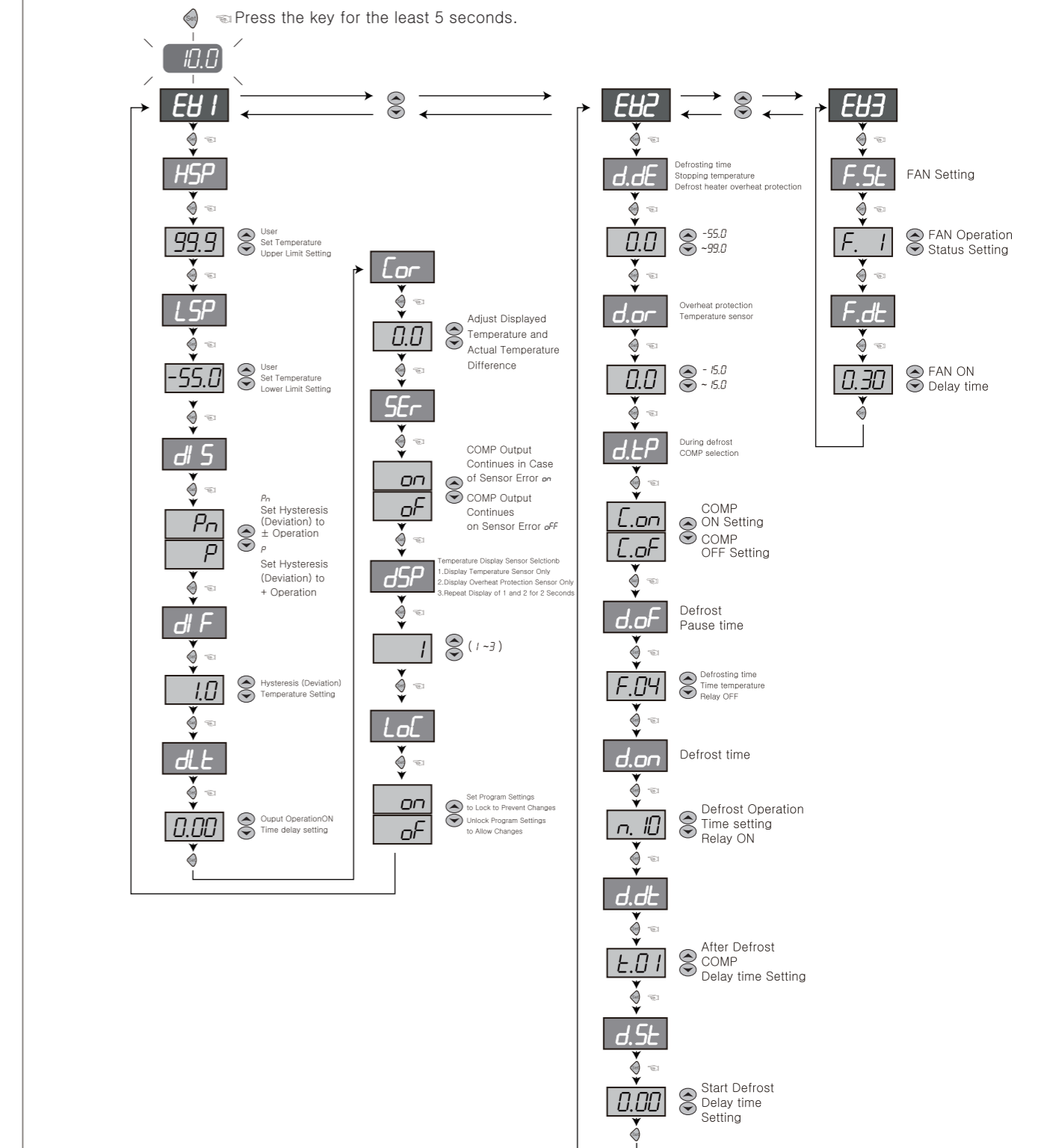
04 Terminal wiring diagram



Temperature Setting



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





※ When the current temperature is displayed, press and hold the key for 5 seconds to switch to program setting mode
 ※ After finishing the settings for all programs, press and hold the key for 2 seconds to confirm with an OK message and exit, or it will automatically return to the current temperature after 30 seconds



Fan Operation Setting (F.1 ~ F.4)

		COMP ON	COMP OFF	Defrost ON
FAN Setting	F.1	Fan ON	Fan OFF	
	F.2	Fan ON		
	F.3	Fan ON	Fan OFF	Fan ON
	F.4	Fan ON		Fan OFF

※ Manual Defrost Setting Method

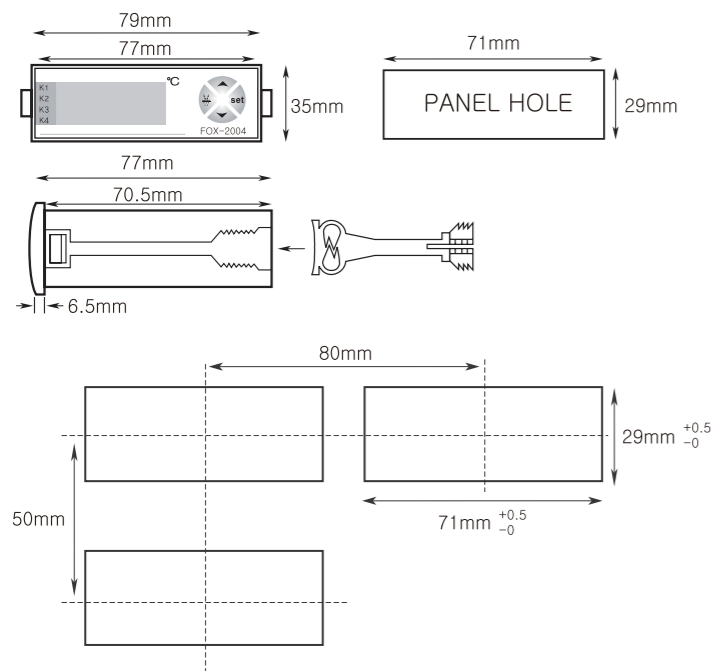
1. Manual Defrost ON: Press and hold the  for 3 seconds.
The K2 LED will light up, and the display will alternate between "M.on" and the remaining defrost time.
2. Manual Defrost OFF: While in the Manual Defrost ON state, press and hold the  again for 3 seconds to turn it off. Alternatively, it will automatically turn off after the d.on time ends

※ How to Switch the Display Board to Temperature Sensor Selection Mode

1. Temperature Sensor Display: In the current temperature display mode, press and hold the  key for about 1 second.
The temperature sensor indicator will light up.
2. Overheat Prevention Sensor Display: In the current temperature display mode, press and hold the  key for about 1 second.
The overheat prevention sensor indicator will light up.

05 Dimension and panel hole sizes

(Unit : mm / error : ±0.5)



06 Easy Error diagnosis Instructions

※ When an Error Occurs During Product Operation

- **E1** This may occur if the product receives strong external noise during operation, causing damage to the internal data storage components.
In this case, please contact our service center for assistance.
- This controller is designed with noise protection measures however, it cannot withstand unlimited noise levels.
- If noise exceeding 2KV enters, internal components may be damaged.
- **oE1** Error that occurs when the temperature sensor is open.
- **oE2** Error that occurs when the defrost sensor is open.
- **SE1** Error that occurs when the temperature sensor is shorted.
- **SE2** Error that occurs when the defrost sensor is shorted.
- **HH1** Error that occurs when the temperature sensor exceeds its display range.
- **HH2** Error that occurs when the defrost sensor exceeds its display range.
- **LL1** Error that occurs when the temperature sensor is below the display range.
- **LL2** Error that occurs when the defrost sensor is below the display range.

※ 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
- FAX : 051-819-4562
- Email : overseas-sales@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.