Version 2.0.0(2024.03.22) WWW.CONOTEC.CO.KR CONOTEC

CONOTEC CO., LTD. DIGITAL TEMPERATURE CONTROLLER





DSFOX- SL30,SLR30

Instruction Manual



- a detailed description
- 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.
- 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. A 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 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.
- You must disconnect the input power when servicing it.

02 Model Types

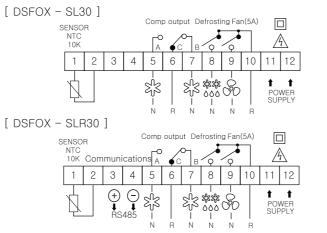
Model	Sensor	Control Type	Temperature Range	Power	Function		
DSFOX-SL30 (for freezing)	NTC	Relay contact (3EA)	Celsius : -55.0 ℃ ~+99.9 ℃	100~240	100 040 D	100~240 Defrosting Evaporator far	Comp control Defrosting control Evaporator fan control
DSFOX-SLR30 (for freezing)	1014	Evafen capacity (5A)	Fahrenheit: - 60 °F ~ + 200 °F	IIVI	VAC 50/60Hz	Comp control Defrosting control Evaporator fan control 485 communications	

03 Components



- 1 Comp output display 2 Defrosting output display 3 Fan output display
- 4 SET switch 5 Defrost switch 6 Up switch 7 Down switch
- 8 Temperature unit 9 Low-temperature prevention output display

04 Terminal wiring diagram



* 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

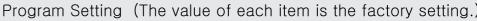
05 Setting process

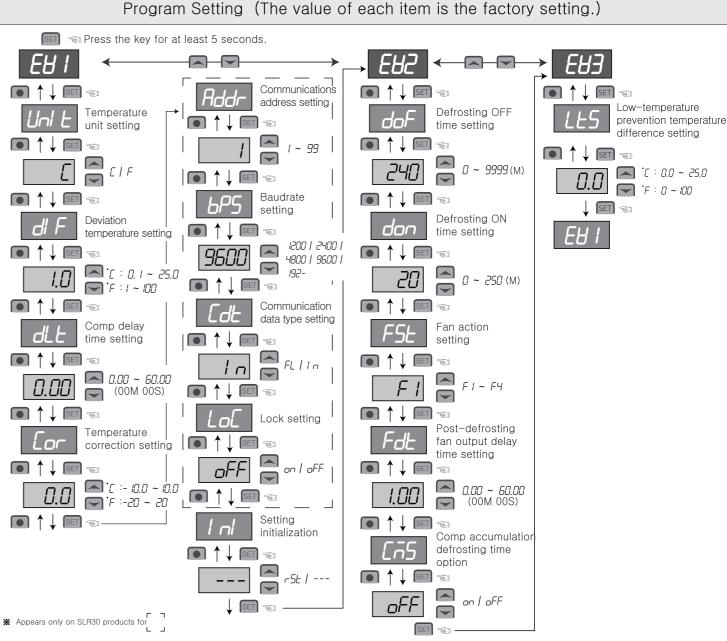
Setting Method

Name	Image	Description
Set key	SET	Entry into or return to the settings page Selection and saving of data values
Defrost key	•	Manual defrosting ON/OFF
Up/Down key	<u> </u>	Increment/decrement of the selected menu data

- Chance of the temperature output's set temperature (temperature setting)
- 1) If you press the SET key once, the setting will blink and be displayed.
- 2) Increase or decrease the setting with the _ or _ key
- Installer mode settings (Program settings)
- 1) Press the **SET** key for at least 5 seconds to enter into the installer mode.
- 2) Configure the program based on the temperature program configuration diagram.
- Manual defrosting and defrosting stoppage
- 1) In the freezing mode: Manual defrosting will commence if you press the \cup key for at least 3 seconds.
- 2) In the defrosting mode: Defrosting will stop if you press the kev for at least 3 seconds.

Temperature Setting The current temperature will be displayed. If the press the SET key, the setting will blink. Bilnking Use the or key to change the setting. Change of the Press the setting. set temperature OK (setting confirmation text) o-E, a setting confirmation text, will be displayed, and the current temperature will be shown. Current temperature





06 Function details

: Modification of various settings for temperature output, communications and others

Modification of various settings for defrosting and fan output

Modification of various settings for alarm

: Change of the temperature unit

- [(temperature displayed in Celsius)

- F (temperature displayed in Fahrenheit)

Note: If you change the Un! E while the product is running, all the settings except for the Unit will be initialized to factory settings. Please reset all the settings.

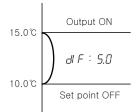
HE: Deviation temperature setting

For on/off control, there should be a certain interval between on and off.

- A relay or other output contacts may be quickly damaged or experience hunting (electricity generation, chattering, etc.) due to an external noise if the on/off function is used too frequently.

- Different temperature is set to prevent such phenomenon and protect relevant contacts.

- Ex1) Set temperature: 10.0°C, dF: 5.0



HE: Output delay time setting

- Used if the on/off function of a control target is used too frequently (freezer, compressor, etc.)
- Protects running machine from momentary outage or power re-connection.
- Ex) When is the output on for the following conditions: set temperature (10.0°C); $dI \to (00.30)$, $dI \to (5.0°C)$?

	Output stopped	30 seconds	\rightarrow	Temperature output	
(Current temperature) 1	↑ JIF section 0.0℃ 15.0	dLE applied 0℃	15.	0°C	

Correction of the current temperature

- Used to correct the current temperature based on the reference temperature (e.g. mercury thermomrter, 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 : 10.0 ℃ Modification of 0.0 to -2.0

→ Displayed as 10.0

(current temperature modified)

Communications address setting

- An addres from 1 to 99 should be specified for RS485 communications

: Baudrate setting

- 1200BPS / 2400BPS / 4800BPS / 9600BPS / 19200BPS

Communication data type setting

- Change the communication data format to Float type or Integer type.
- Float (FL) and Integrer (In) selections.

: Locking of the setting

- Safety function intended to prevent anyone other than the main user from changing the settings
- If set at on: All the settings expect for the set temperature will be locked.
- If set at oFF: All the settings will be unlocked.

⚠ Note: When you arbitrarily run a defrosting machine, consider the machine's condition and be alert for a fire.

Setting initialization

- If set at -52: The current temperature will be displayed after the product's model name is displayed.

! Note: All the settings will be initialized to factory settings. Please verify them

: Defrosting OFF time (defrosting cycle)

- Defrosting will proceed after the set time elapses.

Defrosting ON time

Defrosting will commence when the defrosting cycle comes.

	Defrosting stopped	Defrosting output	Defrosting stopped	Defrosting output	
1	doF (240MIN)	don (10MIN)	doF (240MIN)	don (10MIN)	

- Defrosting will be repeated for 10 minutes every 240 minutes.
- Note: If 'don [], defrosting will be prohibited

■ Setting the manual defrosting

- 1. Manual defrosting ON: If you press the least 3 seconds, manual defrosting will commence as the defrosting LED lights. 'n.on' and the remaining defrosting time will be displayed alternately on the display.
- 2. Manual defrosting OFF: If you press the key for 3 seconds while manual defrosting is set ON, it will be OFF. Otherwise, it will be automatically stopped in 'don' hours.



: Fan action setting(F I ~ F4)

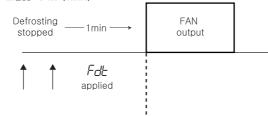
		When comp is ON	When comp is OFF	When defrosting is ON
FI Fan ON		Fan	Fan OFF	
Fan	F2		Fan ON	
setting	F3	Fan ON	Fan OFF	Fan ON
	FY	Fan ON		Fan OFF



Post-defrosting comp output delay time setting

- A compress is output after a delay of the time set after defrosting.

- Ex)886:01.00 (1MIN)



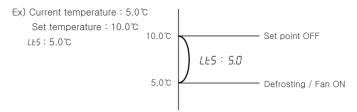


: Comp accumulation defrosting time option

- If set at an: Defrosting operation based on the comp accumulation
- If set at oFF: Defrosting operation based on the cycle
- ¥ If the comp accumulation time is greater than doF (defrosting OFF time), defrosting will commence.

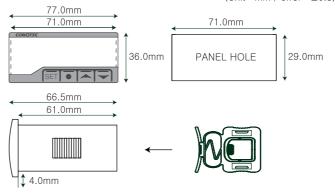
: Low-temperature prevention temperature difference setting

- If LE5 is 0, the low temperature prevention function will be off.
- Current temperature ≤ (set temperature LE5)
- → Defrosting/fan ON
- (When running in the LES mode, defrosting/fan will be instantly output regardless of the fan setting chart)



08 Diemension and panel hole sizes

(Unit: mm / error: ± 0.5)



09 Easy error diagnosis instructions

- ₩ If an error is displayed while the product is running
- [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 ___ (open error) or ___ (short error) is displayed, there is something wrong with a sensor. Please check the sensor.
- If final (defrosting ON) is displayed, the product is in the defrosting mode.
- A text such as **Loll** (lock) indicates that the product is in the lock mode.
- If (OK) is displayed, settings have been saved.
- If [5] (product name) is displayed, it refers to a model name.
- If (product name) is displayed, it refers to a model name.

- * 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: conotec@conotec.co.kr
- Website: www.conotec.co.kr
- Installation precautions
- This device sholuld 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 ■ Altitude under 2000m
- Pollution class 2 ■ 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
 Heat pump controller
- Counter and timer controller
 Chiller controller
- · Current and voltage panel meter · Thermo-hygrostat controller • Temperature/humidity indicator • Short message alarm
- Oven controller CO2 controller
- PID controller
 - Smartphone app and
- · Unit cooler controller
- monitoring system

humidity transmitter

Temperature/

* This manual was prepared in the Naver Nanum fonts.