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CONOTEC

CONOTEC CO., LTD.

DIGITAL TEMPERATURE CONTROLLER

ISO 9001:2008

DSFOX-H10,HR10 **Instruction Manual**

Detailed Instructions

- 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 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

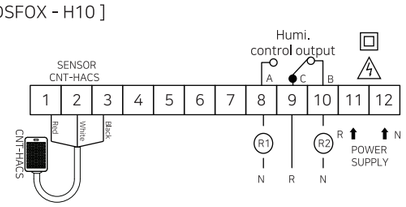
Model	Sensor	Control method	Humidity range	Power	Function
DSFOX-H10	CNT-HACS	Relay Contact (1EA) 1c 250Vac2A	10%~95%Rh	100-240Vac 50/60Hz	Humi control
DSFOX-HR10					Humi control RS485 Comm

03 Components

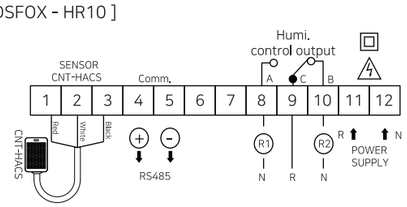
1 Humidity control output display 2 Setting key
3 Back Key 4 Up key 5 Down key
6 Humidity unit

04 Terminal wiring diagram

[DSFOX - H10]



[DSFOX - HR10]



※ Output: 250VAC 2A Be sure to use a power relay or magnet.

※ If a load exceeding the contact capacity is used, contact fusion, contact failure, relay damage, etc. Please be careful as this may cause it.

05 Setting process

Set humidity setting

Title	Image	Content
Setting key	SET	Change humidity settings and program settings Select and store data values
Back key	●	Go to the previous menu when setting up a program
Up/Down Key	▲ / ▼	Increase/decrease selection menu data

■ **Setting Humidity Output Changing Humidity (Humidity Setting)**

1) A single press of **SET** key will flash the setting value.
2) You can increase or decrease the settings with ▲ or ▼ key.

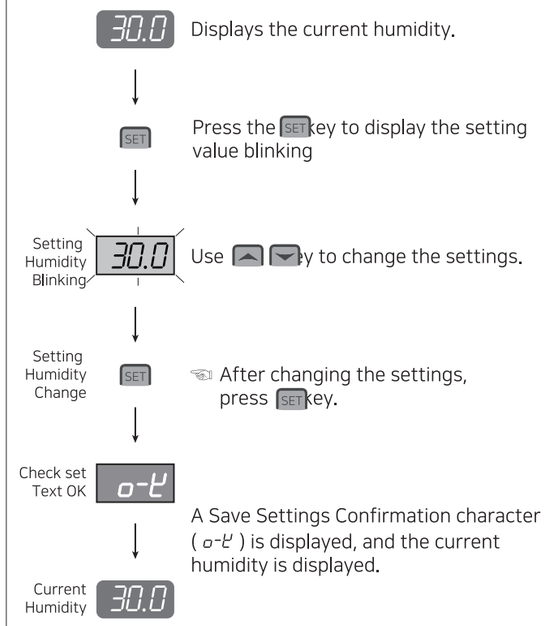
■ **Setup installer mode function (Program Setting)**

1) Press **SET** key for more than 5 seconds to enter installer mode.
2) Refer to Program Settings Configuration Chart to set up a program
3) Return to the previous settings menu with ● key. (Applies to program setting mode only)

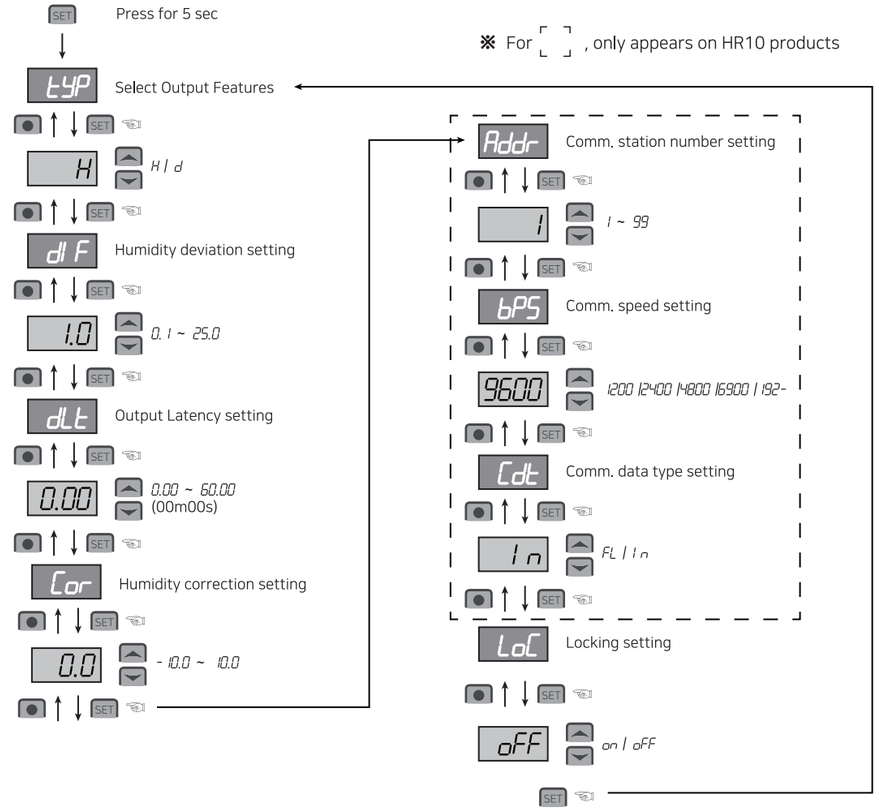
■ **System operation/Stop method (applies to HR10 products only)**

1) The system stops when the ● + ▲ key is pressed simultaneously while the system is operating.
2) System operation when the ● + ▲ key is pressed simultaneously while the system is stopped.

Set humidity setting



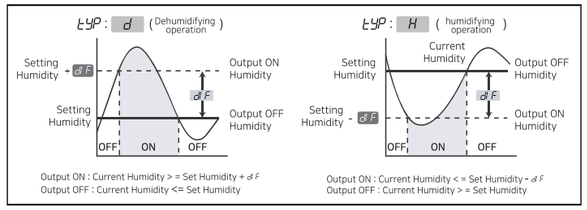
Program setting (The value of each item is the factory setting.)



06 Function details

typ : Output Type Settings

- Select Dehumidification (d) and Humidification (H) Features

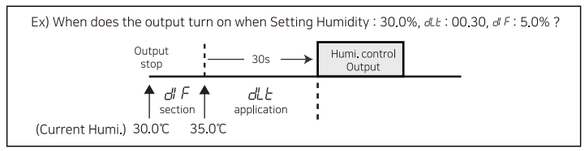


dIF : Deviation Humidity Settings

- If ON and OFF are operated too often, relay or other The output contact point is quickly damaged or hunting (power generation phenomenon, chattering) occurs due to external noise. In order to prevent this phenomenon, it is a function that protects the contact point or life of the device by setting a certain interval between ON and OFF in ON/OFF control.

dIt : Output Latency Setting

- It is wi dely used as the followings in case of operating the ON/OFF control very often, (Cooler,Compressor and so on)
- Activation machine protection during instantaneous power failure or power cycle.



Cor : Current Humidity Correction

- There is no problem with the product itself, but if the actual humidity and the humidity displayed on the display window of the device are different, it is a function that corrects the current humidity and makes it the same as the actual humidity.

Ex) Actual Humidity : 55.0%rH, Current Humidity : 57.0%rH,
Cor value is set -2.0
→ the current humidity will be displayed at 55%Rh.

⚠ Caution : The performance of the actual humidity is verified. Please use calibrated equipment for calculation. Calibration based on humidity calculation with incorrect equipment may cause product malfunction.

Addr : Set Communication Country code

- RS485 When using communication, a country number between 1 and 99 must be designated.

bPS : Set Communication Speed

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

Cdt : Set Communication Data Type

- Change the communication data datatype to 'Float' or 'Integer' type.
- Float (FL) and Integrer (IN) selections.

LoC : Locking of the setting

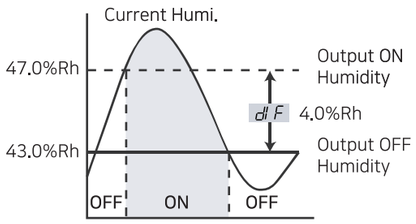
- Safety function intended to prevent anyone other than the main user from changing the settings
- If set at on : All the settings expect for the set temperature will be locked.
- If set at oFF : All the settings will be unlocked.

07 Humidity Controller Use Example

■ What is the set humidity and program value when you turn off the dehumidifier at 43.0%Rh and try to run it at 47.0%Rh?

Changing User Settings Humi. : 47.0%Rh

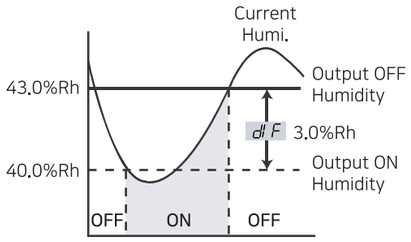
Program Settings
typ : d dIF : 4.0%Rh



■ What is the set humidity and program value when trying to turn off the humidifier at 43.0%Rh, and run at 40.0%Rh?

Changing User Settings Humi. : 43.0%Rh

Program Settings
typ : H dIF : 3.0%Rh



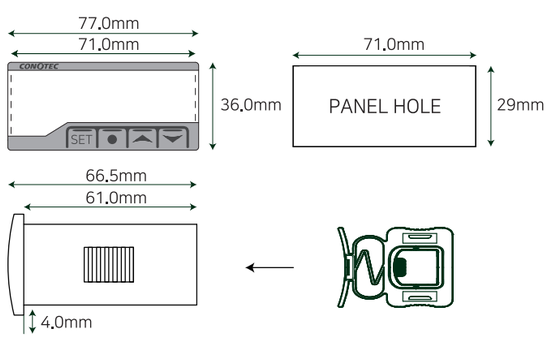
08 Communication interface

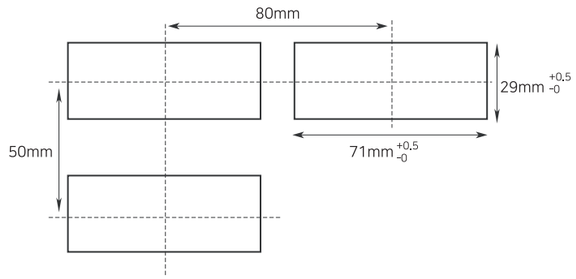
Application Specifications	standard EIA RS485
Maximum number of connections	32 (but address settings can be set from 1 to 99)
The method of communication	Two-wire half-duplex, asynchronous
Communication speed	1200/2400/4800/9600/19200Bps(Selectable)
Communication distance	within 1.2Km
Protocol	Modbus
StartBit, StopBit	fixed 1bit
ParityBit, DataBit	none, fixed 8bit

※For communication manuals, please refer to the detailed manual on the website.

09 Diemension and panel hole sizes

(Unit : mm / error : ±0.5)





10 Easy error diagnosis instructions

※ If an error is displayed while the product is running

- **Err** : 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.
- **o-K** : If the same character appears 'O-K', the setting value has been saved.
- **LoCt** : If a text message such as 'lock' appears, the product is locked.
- **H10** : If a text such as 'product name' appears, it is the product model name.
- **H-10** : If a text such as 'product name' appears, it is the product 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
- SNS : Facebook, Instagram, Twitter, YouTube ▶ 'Search for '**Conotec**'
- 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℃ ■ 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.