

Introduction

The Digital Temperature Unit is a digital thermostat is used for controlling heating and cooling equipment, filter fans or signal devices.

The thermostat registers the surrounding air and can switch both inductive and resistive loads via snap-action contact.

Electronic thermostat, thermostat control and thermostat system are desired switching thermostat, heating elements and heating cooling devices such as the temperature setting on the scale equals to the upper switch point, which means that the Normally Closed contact opens.

The temperature setting minus switch temperature difference (and tolerances) equals to the lower switch point, which means that the Normally Closed contact closes.

Application

The Digital Temperature Unit is designed for applications that requires high volume cooling inside Server or Network Cabinets snap-action contact, the built-in sensor alarm snap feature will allow the user to control the maximum temperature inside cabinet, it also has a built-in sensor fault alarm snap it mounts to any standard 19" installation cabinet to provide a maximum airflow in your mission critical network.



Feature

- The Digital Temperature Unit is for cabinet temperature control applications.
- Most popular model in the market.
- Exquisite design with precise dimension and craftsmanship
- Contact type is change-over snap-action contact.
- Standard 19" installation
- Simple structure, easy installation.
- Easy cabling & operation.
- Disturbing resistance, reliable running.
- 2-way output (IEC320 C13 and NEMA 5-15R).

Technical Parameter:

- Power supply: 220VAC+10%/-15%,50/60Hz.
- Temperature measuring range: -50°C~99°C.
- Resolution: 1°C.
- Refrigeration output contact capacity: 10A/227VAC.
- Sensor error delay time: 1min.
- Safe level: IP65.
- Operation humidity: 20~85% (no condensate).
- Power consumption: ≤3W.
- Temperature controlling range: -40°C~50°C.
- Accuracy: -50°C~70°C, ±1°C, ±1°C, at others can
- drive single phase compressor ≤1/2HP.
- Sensor: NTC.
- Operation Temperature: -30°C~75°C.
- Color: Black

Key Operation

- Check parameter set value:
 - Press ▲ and then loosen to display the set upper limit.
 - Press ▼ and then loosen to display the lower limit.

Front panel



Modify Parameter set value

- Press set for more than 3s to enter into parameter modifying status, the last display the last adjusted menu after electrified with parameter modifying indicator light on.
- Press ▲ or ▼ to go forward or backward the menu item; Press set to display the current.

Parameter set value

- Press set and ■ or ■ simultaneously can adjust the current parameter set value; press set and ■ simultaneously more than 1s will increase current parameter set value quickly; press set and ■ simultaneously more than 1s will decrease current parameter set value quickly;
- Press rst or no key operation in 30s will save the modified parameter and return to normal temperature display status.

Restore the parameter setting

- When electrify the controller, first check the parameter setting, if parameter setting is wrong, LED display E1 with buzzer sound, at this time press Set will restore default parameter setting.
- Advise to reset the parameter

Key-press function

Key-press	Normal mode	Parameter modification mode
SET	Check compressor protection time	Display current menu set value
SET...3seconds	Enter into parameter modification	
Rst	Check temperature exceeding value	Quit from parameter modification
▲	Temperature upper limits checking	Menu items go backwards
▼	Temperature lower limits checking	Menu items go forwards
SET+▲		Parameter Values increase by degrees
SET+▼		Parameter Values decrease by degrees

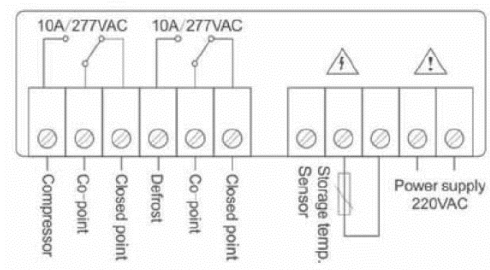
Control Output

- **Compressor:** When the storage temp. is higher than set temp. Upper limit, compressor starts, lower than set temp. Lower limit, compressor stops, when sensor error, compressor works proportionably as on -15 minutes off-30 minutes. After electrified or compressor stops. Compressor restart-up is allowed after running out of compressor protection time.
- **Alarm:** While temp. exceeding value is not 0. LED blinkingly displays current temperature when storage temperature is higher than set temperature upper limit + exceeding temp value or lower than set lower limit-exceeding temp. value. When running out of the exceeding temp. limit alarm delay after electrified. exceeding temp. limit alarm starts with buzzer sound, and alarm cancel when temperature return to normal temperature LED blinkingly display E1 with buzzer sound when memorizer error; display E2 with buzzer sound when sensor error; display HH when temp. higher than 99°C and lower than 120°C. Press any key to cancel alarm sound, but alarm status remains.

Indicator light description

Indicator light	Status	Function
Cool	Always on	Compressor output
Cool	Flashes	Compressor output delay
Set	Always on	Parameter modification Status

Wire diagram



Safety regulations

- **Danger:** Strictly distinguish the sensor down-lead, power wire and output replay interface from one another, prohibit wrong connections or overloading the relay.
All connections should be modified under electricity cut-off.
- **Warning:** Prohibit to use the machine in water or under the environment of lower damp, high temperature, string electromagnetism interference or string corrosion.
- **Caution:** The power supply should conform to one labeled on the machine, and ensure the stability of the power voltage. Sensor down-lead and power should be kept for a proper Distance to avoid possible interferences

Error Code

Code	Reason	Status
E1	Memorizer error	Alarm, machine does not work
E2	Sensor error	Alarm Compressor starts/stop proportionably
HH	Exceeding temp. display limit	

Ordering Information

Product Code	Description
LN-DW-DTU	TC Digital Temperature Unit, 19" for cabinet

Notice: The data in this document are only reference and will be changed without any notice. This specification is intended as a guide only.