# KI&BNT® STC-8000H INSTRUCTIONS

## General description

STC-8000H is a universal single-sensor temperature controller, with refrigeration, exceeding temperature limit alarm functions. Compressor delay time adjustable, after electrified exceeding temp. limit alarm delay adjustable. Suitable for refrigerant industries such as refrigerator, refrigerator car, etc.

## Size

Front panel size: 75X34.5(mm)

Product size: 75X34.5X85(mm)

Installing hole size: 71X29(mm)

Sensor: 2 meters (probe included)

## Technical parameters

Power supply: 220VAC+10%/-15%，50/60Hz

Temperature measuring range: −50℃～99℃

Resolution: 1℃

Refrigeration output contact capacity: 10A/277VAC, can drive single phase compressor≤1/2HP
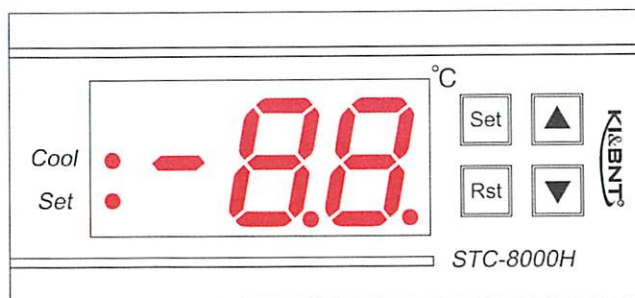
Sensor error delay time: 1min

Safe level: IP65

Operation humidity: 20～85％（no condensate）

Power consumption: ≤3W

Temperature controlling range: −40℃～50℃

Accuracy: −50℃～70℃, ±1℃, ±2℃at others

Sensor: NTC

Operation temperature: 0℃～60℃

Storage temperature：−30℃～75℃

## Front panel



STC-8000H

## Key operation

**Check parameter set value:**

Press ▲ and then loosen to display the set upper limit; press and then loosen ▼ to display the set lower limit; press and the loosen Set to display the set compressor protection time; press and then loosen Rst to display set temperature exceeding value. 2s later return to display normal temperature.

## Modify parameter set value:

Press Set for more than 3s to enter into parameter modifying status, 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, compessor starts, when 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. is higher than 99℃ and lower than 120℃.

Press any key to cancel alarm sound, but alarm status remains.

**Indicator light description:**
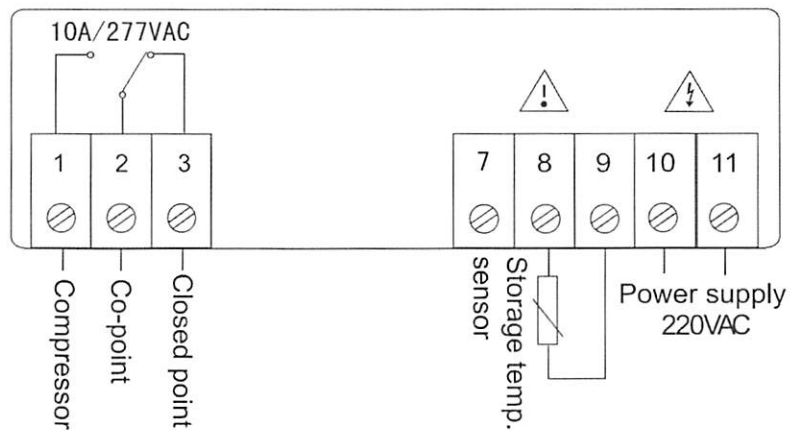
| Indicator light | Status | Function |
|---|---|---|
| Cool | Always on | Compressor output |
| Cool | Flashes | Compressor output delay |
| Set | Always on | Parameter modification status |

**Parameter list:**

| ITEM | FUNCTION | SETTING RANGE | UNIT | DEFAULT |
|---|---|---|---|---|
| F1 | Upper limit | F2~+50 | ℃ | -10 |
| F2 | Lower limit | -40~F1 | ℃ | -20 |
| F3 | Temperature calibration | -5~5 | ℃ | 0 |
| F4 | Compressor protection time | 0~9 | min | 3 |
| F5 | Exceeding temperature value | 0~50,set value as 0 to cancel alarm | ℃ | 15 |
| F6 | Exceeding temperature alarm delay time | 0~99 | min | 20 |

**Wire diagram:**



10A/277VAC

1 — Compressor
2 — Co-point
3 — Closed point
7 — Storage temp. sensor
8
9
10 — Power supply 220VAC
11

**Safety regulations:**

◆Danger:
◇Strictly distinguish the sensor down-lead, power wire and output relay 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 over damp, high temperature, strong electromagnetism interference or strong corrosion.

◆Caution:
◇The power supply should conform to the one labeled on the machine, and ensure the stability of the power voltage;
◇Sensor down-lead and power wire 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 errror | Alarm, Compressor starts/stop proportionably |
| HH | Exceeding temp. display limit | --- |