TCY-BH-T-U-W05 On/Off Humidistat (Dehumidifying)

Features:

- 2 on/off relay outputs.
- Save energy with economy/comfort, mode and set point limitations.
- Replaceable humidity elements.
- Selectable humidity sampling rate.
- Input for external temperature sensor.

Programmable User and Control Parameters:

- Set point range limitation.
- Control access for set points and mode change.
- Control access to clock and time programs.
- Select your display contents.
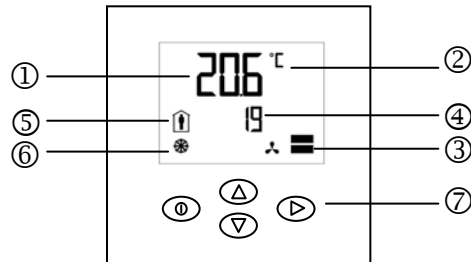- Select status after return from power failure.

Deluxe Version (TCY-BH-T-U-**D**-W05)**:**

- Clock and time schedule functions
- Blue backlight for LCD

Display and Operation

LCD display:

1. Current value, time, or set point.
2. Unit of displayed value, °C, °F, % or none
3. Dehumidifying active (running down to up).
4. Current value, time, or set point.
5. Operation modes: ⓘ Comfort mode, ☖ Economy mode, **OFF** Energy Hold Off
6. Symbols:

Setback Active	Schedule Set	Fan Active	TSET
❄	☉	⋏	▼

7. Operation buttons:

Ⓘ   POWER button: Pressing the button less than 2 sec toggles Economy and comfort modes. Pressing the button for more than 2 seconds switches the unit off.

△ ▽ UP and DOWN buttons: change setpoints and parameters

▷   OPTION button: display temperature if temperature setback is enabled and access advanced setup.

User and Controls Parameters

Parameters are set on the TCY-BH display terminal. There are two groups of password protected groups: User Parameters for display options and access to set points, mode and time changes; and Control Parameters for access to set point limitations, economy/comfort mode shift, fan control start and stop delays, outdoor temperature reset levels. Sample parameter:

CP 00	Minimum humidity set point	0...100% (range)	10% (factory default)
CP 01	Maximum humidity set point	0...100% (range)	90% (factory default)

Operation Modes

Comfort: The unit is in full operation mode. All the control functions are operating according to their set points. The unit displays occupied mode. Economy: The set point is shifted according to users parameter setting. The unit displays unoccupied Economy mode. Off mode: The unit is switched off; OFF and current time is displayed.
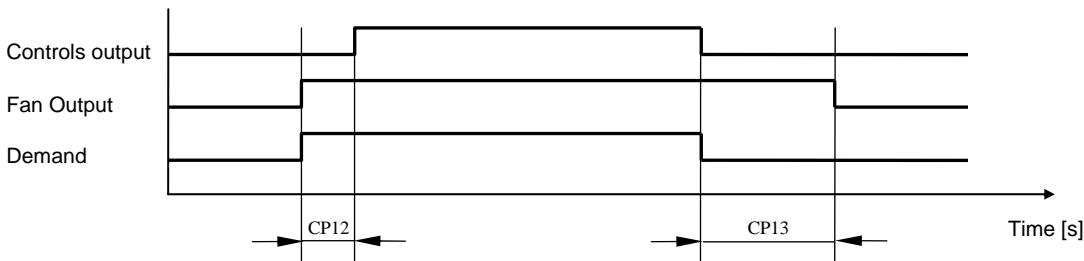
Sensor Calibration, Humidity Sampling Rate

The humidity sensor is factory calibrated, however, it can be field recalibrated. The calibration routine can be accessed using the humidistat key pad. TCY-BH humidity sampling rate default is 10 seconds. This can be set anywhere for 1 to 100 seconds with parameters using the TCY-BH keypad.

Power Failure

Parameter settings and set points are memorized and don't need to be reentered after a power failure. The deluxe version includes a real time clock with a 48-hour backup battery powered through a super capacitor. The time does not need to be re-entered after a power failure.

Fan Control Option

The fan output may be activated with parameter CP11. Once there is an output demand, the humidistat will first activate the fan, wait the required start delay time (CP12) and then activate the control output. This will ensure stable air for dehumidification. The control output will be switched off when the set point is reached. The fan keeps running until stop delay (CP13) has expired. This will ensure that no left over humidity remains in the dehumidifier device or its ducts.

Specifications	TCY-BH-T-U-W05
Operating voltage	24 V AC/DC ± 10 %, 50...60 Hz
Clock backup	Min 48 hrs with full charge (after 24hrs)
Humidity input	Element is Polymer-Based Capacity (0-100 % rh). Accuracy is ± 5.0% at 10%-90% rh and ± 7.0 % at %0-10% and 90-100% rh
Temperature input	External NTC (SOB-Tn10 sensor): -40...158 °F)
Relays	DO1 and DO2, 2(1.2)A, 24VAC
Operating environment	To IEC 721-3-3class 3 K50°C ...50°C (32°F...122°F) <95% R.H. non-condensing
Mounting	Flush wall-mount to 2"x4" single gang box
Standards	CE According to EMC Standard 89/336/EEC, EMEI Standard 73/23/EEC
Degree of protection	IP30 to EN 60 529
Safety class	III (IEC 60536)
Materials	Cover: Fire proof ABS plastic (UL94 class V-0). Back plate: Galvanized Steel
Dimensions HxWxD	Front part: 112 x 73 x 15 mm (4.4" x 2.9" x 0.6"). Power case: ø 58 x 32 mm (ø 2.3" x 1.3")
Weight (w/package)	270g

Terminal Connections

1. Power-supply common.
2. Power-supply (24 V AC/DC, ±10%)
3. DO 1 Relay contact dehumidify
4. DO 1 Relay contact dehumidify
5. DO 2 Relay contact fan
6. DO 2 Relay contact fan
7. RT temperature input
8. RT temperature input