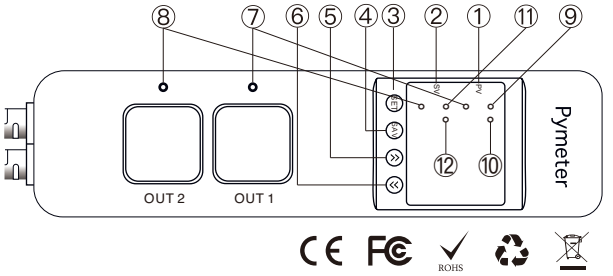
PY-20TH

Website: www.pymeter.com
Email: support@pymeter.com



1. Keys Instruction

① **PV:** under working mode, display current Temperature; under setting mode, display menu code.
② **SV:** under working mode, display current Humidity; under setting mode, display setting value.
③ **SET key:** press SET key for 3 seconds to enter menu for function setting.
④ **SAV key:** during the setting process, press SAV key to save and exit setting.
⑤ **INCREASE key:** under setting mode, press INCREASE key to increase value.
⑥ **DECREASE key:** under setting mode, press DECREASE key to decrease value.
⑦ **Indicator 1:** the lights are on when outlet 1 is turned on.
⑧ **Indicator 2:** the lights are on when outlet 2 is turned on.
⑨ **LED1-L:** the light is on if outlet 1 is set for **HEATING**.
⑩ **LED1-R:** the light is on if outlet 1 is set for **COOLING**.
⑪ **LED2-L:** the light is on if outlet 2 is set for **HUMIDIFICATION**.
⑫ **LED2-R:** the light is on if outlet 2 is set for **DEHUMIDIFICATION**.

2. Setup Instruction

Step 1: Enter Setting Mode

– Press and hold SET key for over 3 seconds to enter setting mode.
– PV window displays the menu code, while SV window displays according setting value.
– Press SET key to go to next menu, press INCREASE key or DECREASE key to set current parameter value.

Step 2: Switch Temp unit from °C to °F

In the first menu "**CF**", press INCREASE key or DECREASE key to select temp unit °F.

Step 3: Set TEMP RANGE controlled by outlet 1

I. Press SET key to menu "**1tn**".
II. Set **1tn** value as the temp point you want outlet 1 to **turn on**.

III. Press SET key to menu "**1tF**".
IV. Set **1tF** value as the temp point you want outlet 1 to **turn off**.

1tn stands for outlet 1 start(turn on) temp point[ON-point], **1tF** stands for outlet 1 stop(turn off) temp point[OFF-point]. Outlet 1 controls temp in the range of **1tn~1tF**.

– For **heating**, must set **1tn lower** than **1tF**, refer to section 3 "Setup for Heating device" to understand.
– For **cooling**, must set **1tn higher** than **1tF**, refer to section 4 "Setup for Cooling device" to understand.

Step 4: Set HUMIDITY RANGE controlled by outlet 2

I. Press SET key to menu "**2hn**".
II. Set **2hn** value as the humidity point you want outlet 2 to **turn on**.

III. Press SET key to menu "**2hF**".
IV. Set **2hF** value as the humidity point you want outlet 2 to **turn off**.

2hn stands for outlet 2 start(turn on) humidity point[ON-point], **2hF** stands for outlet 2 stop(turn off) humidity point[OFF-point]. Outlet 2 controls humidity in the range of **2hn~2hF**.

– For **humidification**, must set **2hn lower** than **2hF**, the same principle as "Setup for Heating device" explained in section 3.
– For **dehumidification**, must set **2hn higher** than **2hF**, the same principle as "Setup for Cooling device" explained in section 4.

Step 5: Save and Exit Setting

– After setup, press SAV key to save and exit setting at any menu.
– If no operation for 30 seconds during setup, it will automatically save the settings and exit.
– Settings are retained even when power off.

Below are optional to set, skip by SET key if no need. The preset values won't trigger those functions.

a: Set Alarm for Low and High Temperature t_L, t_H

– Press SET key to menu "**t_L**", and set value for it.
t_L is low temperature alarm, beeper sounds when current temp is **t_L** or Lower.

– Press SET key to menu "**t_H**", and set value for it.
t_H is high temperature alarm, beeper sounds when current temp is **t_H** or Higher.

b: Set Alarm for Low and High Humidity h_L, h_H

– Press SET key to menu "**h_L**", and set value for it.
h_L is low humidity alarm, beeper sounds when current humidity is **h_L** or Lower.

– Press SET key to menu "**h_H**", and set value for it.
h_H is high humidity alarm, beeper sounds when current humidity is **h_H** or Higher.

c: Set Power-on Delay P7

– Press SET key to menu "**P7**", and set value for it.
P7 is the time (in minute, since last power off) set to delay power on even if the outlets should be turned on.

(Example) if set **P7** to 1 min,outlets won't turn on until 1min countdown since last power off even if reach ON-point .

d: Calibrate Temperature t_C and Humidity h_C

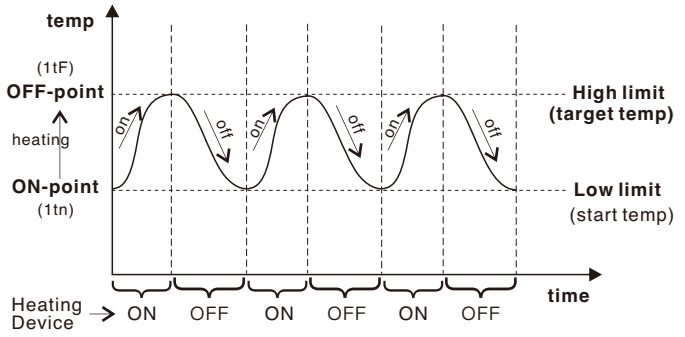
Please compare the readings of temperature and humidity with other thermometer and hygrometer you can trust, if the reading temp/humidity are different, offset the deviation in Settings **t_C** and **h_C** using INCREASE key or DECREASE key, save and exit.

t_C stands for the temperature deviation should be compensated to sensor, **h_C** stands for the humidity deviation should be compensated to sensor.

(Example) if reading temp is 88.5°F, other thermometer reading temp is 88.9°F, to calibrate temp, need to minus 0.4°F (88.9-88.5) in Setting **t_C** via DECREASE key.

Every Pymeter controller is calibrated in factory, its' readings are accurate, usually no need to calibrate.

3. Setup for Heating device



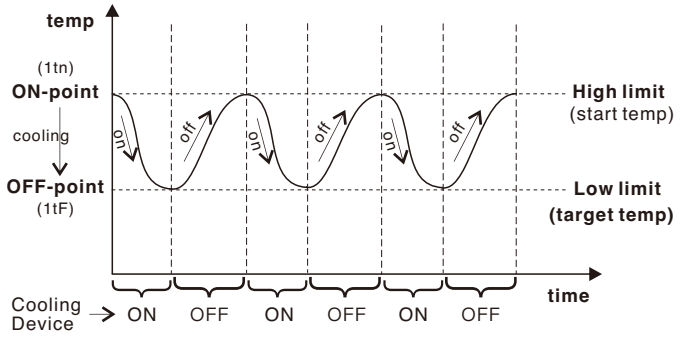
– For heating, it is the process from **Low** temp to **High** temp. Heating device turns ON at **Low** temp and turns OFF at **High** temp. Thus MUST set ON-point Temp [1tn] **<** (lower than) OFF-point Temp [1tF] for heating device.

It will **NOT** work properly for heating if set ON-point Temp **>** OFF-point Temp **! ! !**

– After power on, if current temp is **lower** than target temp (OFF-point), outlet turns on for heating till temp reaches OFF-point.

– After heating device is turned off, temp will auto **fall down** in the **cold** environment. Outlet will **NOT** turn on until temp reaches ON-point.

4. Setup for Cooling device



– For cooling, it is the process from **High** temp to **Low** temp. Cooling device turns ON at **High** temp and turns OFF at **Low** temp. Thus MUST set ON-point Temp [1tn] **>** (higher than) OFF-point Temp [1tF] for cooling device.

It will **NOT** work properly for cooling if set ON-point Temp **<** = OFF –point Temp **! ! !**

– After power on, if current temp is **higher** than target temp (OFF-point), outlet turns on for cooling till temp reaches OFF-point.

– After cooling device is turned off, temp will auto **rise up** in the **hot** environment.Outlet will **NOT** turn on until temp reaches ON-point.

5. Start to USE

1. After setup, plug [heating/cooling] and [humidification /dehumidification] devices into the corresponding outlets.
2. Place the probe to the area where you want to control temperature/humidity.

– The upper display shows current temp, the lower display shows current humidity.
– Outlet 1 works for heating/cooling, outlet 2 works for humidification/dehumidification. Two outlets can work at the same time or individually.
– High & Low Temperature/Humidity alarms beep with the sound “bi-bi-biii” unless temp/humidity are back to allowable range or any key is pressed.
– “EEE” is displayed in PV/SV window with “bi-bi-biii” alarm if sensor is fault.
– Factory reset by pressing both of SET and SAV keys simultaneously for over 5 seconds at temp display mode.

⚠Attention:
– Don’t compare temp/humidity reading with common inaccurate thermometer or Hygrometer!
– Do not exceed a total of 1200 watts (10A 120V) of attached appliances on two outlets .

6.Specification

Temperature Range	-40~99°C / -40~210°F
Resolution	[0.1 °C / 0.1°F], 0.1%RH
Accuracy	[±0.2°C / ±0.3°F], ±2%RH
Controller Dimension	210x55x40 mm
Input Power	85~250V, 50/60Hz
Output Power	85~250V, Max 10A
Beeper Alarm	High and Low Temperature/Humidity
Sensor Cable	2m/6.56ft
Input Power Cord	1.35m / 4.5ft

7. Support and Warranty

Pymeter products are provided Lifetime Warranty and Technical Support.

Any question/issue, please feel free to contact us any time on www.pymeter.com or Email support@pymeter.com.

User Manual PDF

LiveChat Support