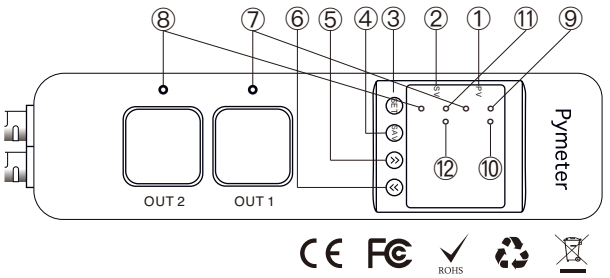
PY-20TT

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



1. Keys Instruction

① **PV:** under working mode, display sensor #1 Temp; under setting mode, display menu code.
② **SV:** under working mode, display sensor #2 Temp; under setting mode, display setting value.
③ **SET key:** press SET key for 3 seconds to enter 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 **HEATING**.
⑫ **LED2-R:** the light is on if outlet 2 is set for **COOLING**.

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 "**1on**".
II. Set **1on** value as the temp point you want outlet 1 to **turn on**.

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

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

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

Step 4: Set TEMP RANGE controlled by outlet 2

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

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

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

– For **heating**, must set **2on lower** than **2oF**, refer to section 3 "Setup for Heating device" to understand.
– For **cooling**, must set **2on higher** than **2oF**, refer to section 4 "Setup for Cooling device" to understand.

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 AL AH

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

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

b: Set Alarm for Temperature Difference d7

– Press SET key to menu "**d7**", and set value for it.
d7 is difference alarm, beeper sounds when the temp difference between sensor #1 and sensor #2 is over d7.

(Example) if set **d7** to 5°C, when temp difference between sensor 1 and sensor 2 is over 5°C, it will alarm with sound "bi-bi-biii".

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 for sensor #1 #2 C1 C2

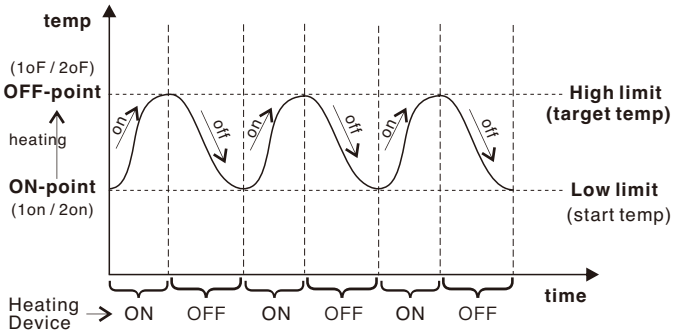
Immerse the probes fully into the ice-water mixture, the actual temperature should be 0°C/32°F, if the reading temperature are not, offset the deviation in Settings **C1/C2** using INCREASE key or DECREASE key, save and exit.

C1 stands for the temperature deviation should be compensated to sensor #1, **C2** stands for the temperature deviation should be compensated to sensor #2.

(Example) if reading temp of sensor #1 is 28°F in ice-water mixture, to calibrate sensor 1, need to plus 4°F (32-28) in setting **C1** via INCREASE key.

Every Pymeter controller is calibrated in factory, it is reading temp accurately, usually no need to calibrate.

3. Setup for Heating device



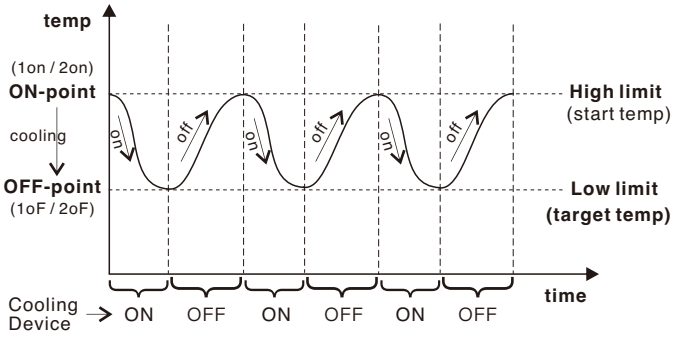
– For heating, it is the process from **Low** temp to **High** temp. Heating device turns ON at **Low** temp and turns OFF at **High** temp. Thus MUST set ON-point Temp [1on / 2on] **<** (lower than) OFF-point Temp [1oF / 2oF] for heating device.

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 [1on / 2on] **>** (higher than) OFF-point Temp [1oF / 2oF] 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 device into the corresponding outlets.
2. Place the probes to the area where you want to control temp.

– The upper display shows current temp of sensor #1, the lower display shows current temp of sensor #2.
– Outlet 1 works with sensor #1 only, outlet 2 works with sensor #2 only. It is actually independent two controllers in one unit.
– Each outlet supports heating/cooling mode, two outlets can work at the same time or individually.
– Probes are waterproof, work in the air, water, and solid.
– AL AH d7 alarms beep with the sound “bi-bi-biii” unless temps 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 readings with common inaccurate thermometer or temp gun! Please Calibrate with ice-water mixture (0°C/32°F) if necessary.
– Do not exceed a total of 1200 watts (10A version) / 1920 watts (16A version) of attached appliances on two outlets .

6.Specification

Temperature Range	-40~99°C / -40~210°F
Temperature Resolution	0.1 °C / 0.1°F
Temperature Accuracy	±1°C / ±1°F
Controller Dimension	210x55x40 mm
Input Power	85~250V, 50/60Hz
Output Power	85~250V, Max [10A] / [16A]
Beeper Alarm	High and Low Temperature, Temperature Difference
Sensor Cable	NTC Sensorx2, 2m/6.56ft
Input Power Cord	1.35m / 4.5ft

7. Support and Warranty

Pymeter products are provided Lifetime Warranty and **One Year Exchange/Refund Guarantee**.

Any question/issue, don’t hesitate to contact us anytime via Email support@pymeter.com or Livechat below.

User Manual PDF

LiveChat Support