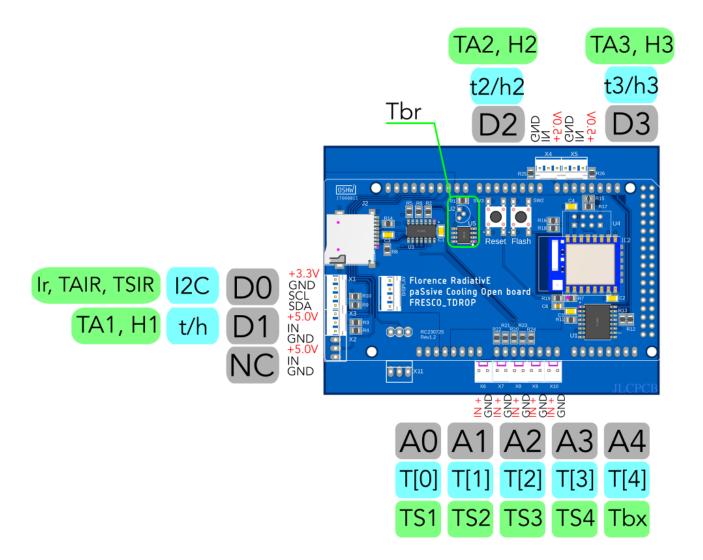


## TDrop I/O pin description



## **PID Set Point settings**

Go in the "Settings" webpage and use the suitable field (PID Set Point (°C)) to set the desired reference for the PID, pay attention to leave the "New Set Point (°C)" equal to 0.

| PID Set Point (°C): (Sensors name at): | Sample Surface (m <sup>2</sup> ):  0.0036 |  |
|--|---|--|
| 1                                      |   |  |
| New Set Point (°C):                    |   |  |
| 0                                      |   |  |
| Submit                                 |   |  |

To set the *PID Set Point* use the following table with useful indication and reference numbers (The name indicated in the <u>cyan</u> label represent the corresponding I/O sensor and their values are saved in the SD card according to the name of the <u>green</u> labels).



| Reference numbers | Corresponding I/O sensor | Name on the saved file   |
|-------------------|--------------------------|--------------------------|
| 0,1               | t                        | TA1 (ambient temp DHT1)  |
| 2                 | t2                       | TA2 (ambient temp DHT2)  |
| 3                 | t3                       | TA3 (ambient temp DHT3)  |
| 4                 | T[0]                     | TS1 (NTC sample 1 on A0) |
| 5                 | T[1]                     | TS2 (NTC sample 2 on A1) |
| 6                 | T[2]                     | TS3 (NTC sample 3 on A2) |
| 7                 | T[4]                     | TS4 (NTC sample 4 on A3) |
| 8                 | T[5]                     | Tbx (NTC sample 5 on A4) |

For any other values written in **PID Set Point (°C)** that not match with the previous one the set point will be equal to **t (TA1)**.

## New Set Point (°C)

Otherwise if you want to set up a different temperature value for the PID set point you can follow these instructions:

In the "Settings" webpage set the PID Set Point (°C) equal to 10 and then use New Set Point (°C) to indicate a *temperature values* e.g 32.5. It allows setting a new set point temperature for the PID system. The New Set Point (°C) ranges from >= 0 °C to <= 60 °C, if a different value is written the system will set up automatically the default parameters, hence the PID Set Point temperature will be equal to t (TA1).

| PID Set Point (°C): (Sensors name at): | Sample Surface (m <sup>2</sup> ): |  |
|--|-----------------------------------|--|
| 1                                      |                                   |  |
| New Set Point (°C):                    |                                   |  |
| 0                                      |                                   |  |
| Submit                                 |                                   |  |

Please pay attention on the following lines.

In all cases after pressing **submit** ESP will be restarted, so if you have to operate also on other settings like the WiFi or the Database you can wait the ESP restart and do it, but the measurements will be not aligned. While if you already did all the needed things, you can **turn off the power supply of the FRESCO and turn on again** to get a well alignment among Tdrop, PCool and the ESP microcontroller.

In the next page you will find the I/O ports referred to the PCool board and all useful reference.



## **PCool I/O pin description**

T3 PD3

averageTemperatureValue[3] powerDensity[3] T2 PD2

averageTemperatureValue[2] powerDensity[2] T1 PD1

averageTemperatureValue[1] powerDensity[1] averageTemperatureValue[0] powerDensity[0]

T0

PD0

A14

A12

A10

A8

Current

A15

A13

A11

A9

NTC temperature

