Python config file

**Should be added to the Python config file**

IP : 180.64.29.99

PORT : 1883

D-ID : Solar1

Topic

Pub : /Solar/state/D-ID

Sub : /Solar/cmd/D-ID

Battery Volume : xxAh

**Json 1**

{

“Solar” : {

“D-ID” : Solar1,

“PV”:{

“Volt” : 12.55,

“Current”:0.5,

“Power”:6.27,

},

“Battery”:{

“Volt” : 12.55

“Current”:0.5

“Remaining”:65,

}

“Load”:{

“Volt” : 12.55,

“Current”:0.5,

“Power”:6.27,

},

“Status”:{

“Controller Temperature”:27.5,

“UPTIME”:2021-09-02 09:07:05,

“Available Time”:1

}

}

}

**Json 2**

{

“Today”:{

“PV”:{

“Generate”:100,

“Peak”:100,

},

“Battery”:{

“Efficiency”:90,

}

“Load”:{

“TotalCurrent”:50,

“Average”:10,

},

“Status”:{

“Estimated Charge Time”:2

}

}

}

**Web -> Raspberry Pi**

When receiving sub command “**RESET0x3FF**”, Reboot Control Board power

**MSB LSB**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 12\_ch6 | 12\_ch5 | 12\_ch4 | 12\_ch3 | 12\_ch2 | 12\_ch1 | 5\_ch3 | 5\_ch2 | 5ch1 | 9 |

예시)

RESET0x2A3

2A3 : 1010100011

12\_ch6, 12\_ch4, 12\_ch2, 5\_ch1, 9 Reset

**효율 계산 방법**

배터리 효율 = (((((23:00측정 잔량 - 00:00시 측정 잔량)/100)\*배터리용량)\*전압)/하루발전전력-하루소비전력) \* 100

**사용가능시간 계산**

잔량(Wh) = (잔량/100)\*(배터리전체용량(Ah)\*전압)

사용가능 시간(hour) = 잔량(Wh)/소비전력(한시간)

사용가능시간(Day) = 사용가능 시간(hour)/24

**완충예상시간 계산**

완충예상시간 = ((배터리전체용량(Ah)\*전압)-잔량(Wh))/하루발전전력(Wh)-하루소비전력(Wh)