mySQM+ CLOUD SENSOR II FORMAT

- Connect to controller
- Enable checkbox CSII Format
- Set logging interval
- Enable Automate logging

Date/Time		yyyy-MM-dd HH:mm:ss.ss	
Temperature		C	values in Celsius
Wind Velocity		m	meters per second
Sky temperature		IRObject Temperature	
Ambient temperature		IRAmbientTemp	
Sensor case temperature		bme280temperature	
Wind Speed		in m/s	
Humidity		bme280humidity	
Dew Point		bme280dewpoint	
Heater %		0	
Rain Flag		Raining or Not raining	
Seconds since the last valid data		timerinterval tick / 1000	
Now		038506.08846	
c	sky state	skystate	
w	wind condition	0	
r	rain condition	Raining or Not raining	
d	daylight condition	lux	
C	roof close	0	
A	Alert	0	

Skystate

Cloud cover percentage (0-100%) is used to generate the **cloud condition** value in the CSII log.

```
// 94 c sky state, cloudUnknown = 0, cloudClear = 1, cloudCloudy = 2, cloudVeryCloudy = 3
If cloudcover > 59.9 then cloudstate = 3;                              // cloudVeryCloudy
else if cloudcover > 33.9 AND cloudcover < 59.9 then cloudstate = 2;   // cloudCloudy
else cloudstate = 1                                                    // cloudClear

if cloudcover > cloudVeryCloudy then cloudstate = 3
else if cloudcover > cloudCloudy AND cloudcover < cloudVeryCloudy then cloudstate = 2
else cloudstate = 1
```

cloudVeryCloudy is the top boundary [default is 59.9]. Any cloudcover value greater than this results in a value of 3 for *cloudstate*

cloudCloudy is the middle boundary [default is 33.9]. Any cloudcover value greater than the cloudCloudy boundary value AND if the cloudcover value is less than the cloudVeryCloudy value, results in a value of 2 for *cloudstate*

cloudClear is the lower boundary. Any cloudcover less than the cloudCloudy value results in a value of 1 for *cloudstate*

Wind Condition

To do this we compare *windspeed* (remember some sensors have a maximum limit reading of 20 m/s) against some arbitrary boundaries to generate a **wind condition**.

```
// 96 w wind condition, windUnknown = 0, windCalm = 1, windWindy = 2, windVeryWindy = 3
If windspeed >= 15.0 then windcondition = 3                              // windVeryWindy
else if windspeed >= 5.0 and windspeed < 15.0 then windcondition = 2    // windWindy
else windcondition = 1                                                   // windCalm

if windspeed >= windVeryWindy then windcondition = 3
else if windspeed >= windWindy and windspeed < windVeryWindy then windcondition = 2
else windcondition = 1
```

windVeryWindy is the top boundary [default is 15.0]. Any windspeed value greater than this results in a value of 3 for *windcondition*

windWindy is the middle boundary [default is 33.9]. Any windspeed value greater than the windWindy value AND less than the windVeryWindy value, results in a value of 2 for *windcondition*

windCalm is the lower boundary. Any windspeed value that is less than the windWindy value results in a value of 1 for *windcondition*

Daylight Condition

The **lux** value is compared against some arbitary boundaries to generate a **daylight condition**.

```
// (100) d daylightcondition, dayUnknown = 0, dayDark = 1, dayLight = 2, dayVeryLight = 3
if lux >=  5000.0 then daylightcondition = 3                        // dayVeryLight
else if lux >= 5.0 AND lux < 5000.0 then daylightcondition = 2     // dayLight
else daylightcondition = 1                                          // dayDark

// (100) d daylightcondition, dayUnknown = 0, dayDark = 1, dayLight = 2, dayVeryLight = 3
if lux >=  dayVeryLight then daylightcondition = 3
else if lux >= dayLight AND lux < dayVeryLight then daylightcondition = 2
else daylightcondition = 1
```

dayVeryLight is the top boundary [default is 5000.0]. Any lux value greater than this results in a value of 3 for *daylightcondition*

dayLight is the middle boundary [default is 5.0]. Any lux value greater than the dayLight value AND less than the dayVeryLight value, results in a value of 2 for *daylightcondition*

dayDark is the lower boundary. Any lux value that is less than the dayLight value results in a value of 1 for *daylightcondition*