

The control of the rain sensor heater is performed by the PC software.

The rain sensor heater is controlled according to the following:

1. The rain sensor operating temperature is calculated as a function of the ambient temperature (this function is defined as the red parameters in the document [RainSensorHeaterAlgorithm.pdf](#));
2. The rain sensor power is adjusted in order to achieve the desired temperature (see section [Internal Algorithm](#) in the document [RainSensorHeaterAlgorithm.pdf](#));
3. The rain sensor power is always kept above a minimum value (this value is defined as the green parameters in the document [RainSensorHeaterAlgorithm.pdf](#));
4. If the rain sensor stays wet for a certain period of time, an heat impulse is applied to the rain sensor to dry the sensor (the parameters controlling this heat impulse are defined as the blue parameters in the document [RainSensorHeaterAlgorithm.pdf](#));

On every reading cycle the ambient temperature and the rain sensor temperature are read from the device.

The software calculates the desired rain sensor temperature according to 1 above.

It adjusts the power to rain sensor to achieve the desire temperature (as described in 2 above) keeping in mind that the power to rain sensor is always kept above the minimum value as described in 3 above.

If the rain sensor is wet for a long period of time then a heat impulse is applied to the rain sensor in order to dry it as described in 4 above.

RS232 commands to adjust rain sensor power and to obtain the ambient and rain sensor temperatures

These commands are described in document *Rs232_Comms_v100.pdf*.

Please note that the power to the rain sensor is adjusted using the RS232 command

Ppppp!

pppp is a value between 0 and 1023 where zero corresponds to zero power and 1023 to full power.

The rain sensor temperature information is read using command **C!**

The value read from the device is then used to calculate the rain sensor temperature using the formula described in 7 of the section [Converting values sent by the device to meaningful units](#) of document *Rs232_Comms_v100.pdf*.

Please note that the constants used in these calculations correspond to the values shown in section **Constants of Device** TAB.

The ambient temperature corresponds to the sensor temperature and it is obtained using command

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