RS232 Communication protocol for AAG_CloudWatcher (Part 3)

This document contains the alterations to the RS232 communication protocol when using firmware version 5.xx.

Command v!

Command **v!** - is the command to determine if wind sensor is connected to the device.

Sent	**Received**			
Command	No of Blocks	Total no. of characters	Block Content	Meaning
v!	2	30	1st block: !v x 2nd block: ! ¶	1st block: x =1 wind sensor present =0 wind sensor NOT present 2nd block: Handshaking block

Command V!

Command **V!** - is the command to get the wind speed.

Sent	**Received**			
Command	No of Blocks	Total no. of characters	Block Content	Meaning
V!	2	30	1st block: !w xxx 2nd block: ! ¶	1st block: xxx =wind speed in km/h 2nd block: Handshaking block

New commands to read information stored in the microprocessor non-volatile memory

The units with firmware versions 5.xx have information stored in the microprocessor non-volatile memory regarding the parameters for the auto-shutdown routine.

The auto-shutdown routine is performed if the device does not receive any commands via the RS232 port after a period of **x** seconds, where **x** is the delay period stored in the non-volatile memory of the microprocessor.

The auto-shutdown routine will adjust the switch status according to the **switch status** flag stored in the non-volatile memory of the microprocessor. If this flag is

0 then the switch will be set to open;
1 then the switch will be set to close;
2 then the switch will be left unaltered;

The rain sensor heater power will be set to the value stored in non-volatile memory of the microprocessor.

Command m!

This command will get a reply **!mxxxx** where **xxxx** contains information regarding the auto-shutdown parameters. Note that the 1st character of this information starts immediately after **!m** (this is an exception to the general structure of the information received)

Sent	**Received**			
Command	No of Blocks	Total no. of characters	Block Content	Meaning
m!	2	30	1st block: !Mxxxx 2nd block: ! ¶	1st block: xxxx 2nd block: Handshaking block

The 4 character string is converted the following manner:

Delay period (seconds)	(256# * Asc(c1) + Asc(c2)) * 1.1#
Switch Status	Asc(c3) 0 = open 1 = close 2 = unaltered
Percentage rain sensor heater power (%)	Asc(c4) **NB:** If Asc(c4) > 98 then the microprocessor will default to 10.

Where c1 is the 1st character of xxxx;
c2 is the 2nd character of xxxx;
c3 is the 3rd character of xxxx;
c4 is the 4th character of xxxx;

Command lxxxxyyyyyyyy!

Command to store the auto-shutdown parameters in the non-volatile memory of the microprocessor.

1st character	lower case L
2nd up to 5th characters	Delay period, switch status and rain sensor power percentage as described in command m!
6th up to 13th characters	space characters
14th character	exclamation mark

This command will get a handshaking block as a reply.