

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	1 st block: !v x 2 nd block: !¶	1 st block: x =1 wind sensor present =0 wind sensor NOT present 2 nd 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	1 st block: !w xxx 2 nd block: !¶	1 st block: xxx =wind speed in km/h 2 nd 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	1 st block: !Mxxxx 2 nd block: !¶	1 st block: xxxx 2 nd block: Handshaking block

The 4 character string is converted the following manner:

Delay period (seconds)	$(256\# * \text{Asc}(c1) + \text{Asc}(c2)) * 1.1\#$
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.

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

This command will get a handshaking block as a reply.