

RS232 Communication

The RG-15 supports communication through RS-232 at 3.3V, more information can be found at

www.rainsensors.com/rg-9-15-protocol

All lines are terminated with a carriage return followed by a new line, this is used for all output. But only the new line is required for commands. The command is processed following the new line.

Cmd (case insensitive)	Description, example response	
A	Read the accumulation data Response: "Acc 0.000 in"	
R	Read available data. Response: "Acc 0.000 in, EventAcc 0.000 in, TotalAcc 0.000 in, RInt 0.000 iph" Acc the additional accumulation since the last message. If the External TB is enabled there is an additional line. "XTBTips: 0, XTBEventAcc: 0.00 in, XTBTotAcc: 0.000 in, XTBRInt: 0.00 iph" XTBTips is the number of tips since the last message.	
K	(Kill) Restarts the device, this will output the header, readjust the emitters and read the DIP switches again. Response: <i>Device Restarts</i>	
B <baud Code>	Set the baud rate, if none is specified responds with the current baud rate. Response: "Baud <baud rate>" <i>sent just before it is changed</i> "Baud 9600"	Baud Codes: 0 = 1200 1 = 2400 2 = 4800 3 = 9600 (Default) 4 = 19200 5 = 38400 6 = 57600
P	Set to polling only mode, outputs a new R message only when requested command. Response: "p"	
C	Set to continuous mode, outputs a new R message when the accumulation changes. Response: "c"	
H	Force High Resolution, will ignore the switch Response: "h"	
L	Force Low Resolution, will ignore the switch Response: "l"	
I	Force Imperial, will ignore the switch Response: "i"	
M	Force Metric, will ignore the switch Response: "m"	
S	Use the switch value for the Resolution & Unit Response: "s"	

O	Resets the Accumulation Counter No Response
X	Enable External TB Input Assumes 0.01in or 0.2mm per tip
Y	Disable External TB Input

The output keywords can be comma delimited such as

"Emitters 9 10, EmTotal 19", with a space following the comma.

Output Keyword	Description, example output	
Reset	Shows the reason the device was reset.	
	Possible variations: Reset N Reset M Reset W Reset O Reset U Reset B Reset D	N = Normal Power Up M = MCLR W = Watchdog Timer Reset O = Stack Overflow U = Stack Underflow B = Brownout (Low Voltage/ disconnected) D = Other
SW	Firmware version & build date Ex: SW 1.000 2020.07.06	
Emitters	Emitter 1 & 2 Levels Ex: Emitters 9 10	
EmTotal	Sum of emitters Ex: EmTotal 19	
PwrDays	How many days the device has been powered on Ex: PwrDays 13	
;	The semicolon is used to indicate that this line doesn't include any data, this is not always followed by a space. ; HYDREON MODEL RG-15 RAIN GAUGE	
LensBad	The Lens is not able to get sufficient light through for reasonable readings.	
EmSat	Emitter is saturated. Can be useful for diagnostics.	