HEM Gen5 Parameter 101-103 and 111-113 use.

Modified on: Mon, 19 Oct, 2020 at 3:44 PM

To set specific reports for your HEM Gen5, refer to the decimal table below if you do not know how to read a binary table. All you will need to do is add the decimal values together of all the settings you want, and then utilize the sum as the parameter setting value. The binary table is the same for the HEM G2.

ie. Parameter 101 [4 byte dec]: 6927 [This reports kwh and watt for total HEM, clamp 1, and clamp 2 + Voltage and Amperage for Total HEM readings]

ie2. Parameter 101 [4 btye dec]: 3 (from 1 + 2) (reports kWh and Watt on Total Readings)

Byte #	Decimal Value	Output	Clamp #	HEM Restriction
byte 4	1	kWh	Total Readings	
byte 4	2	Watt	Total Readings	
byte 4	4	Voltage	Total Readings	
byte 4	8	Amperage	Total Readings	
byte 3	256	Watt	Clamp 1	
byte 3	512	Watt	Clamp 2	
byte 3	1024	Watt	Clamp 3	
byte 3	2048	kWh	Clamp 1	
byte 3	4096	kWh	Clamp 2	
byte 3	8192	kWh	Clamp 3	
byte 2	65536	Voltage	Clamp 1	
byte 2	131072	Voltage	Clamp 2	
byte 2	262144	Voltage	Clamp 3	
byte 2	524288	Amperage	Clamp 1	
byte 2	1048576	Amperage	Clamp 2	
byte 2	2097152	Amperage	Clamp 3	
byte 2	4194304	Reserved		
byte 2	8388608	Reserved		

Parameter 101, 102, and 103 are the same, they are 3 separate time slots that you can set to report at different time intervals using Parameter 111, 112, and 113 (set in seconds) respectively.

So if you set Parameter 101 = 592,128 as per your example, you do not need to do this for Parameter 102 and 103, you can leave 102 and 103 as disabled or set to report other settings.

For all HEM versions, they will have 3 group for param 101, 102, and 103. The only thing different is the allowed report flags depending on version.1

-**Example 1**
As an example use, you want to report Total on Group 1 every 30 seconds, Clamp 1 on Group 2 every 4 minutes, and Clamp 3 on Group 3 every 5 minutes. (assuming we want all sensors for each group).

Parameter 101 = 1 + 2 + 4 + 8 = 15 //This sets group 1 to report total report of kwh, watt, voltage, current.
Parameter 111 = 30 //This sets Group 1 (Total report of kwh, watt, voltage, and current) every 30 seconds.

Parameter 102 = 256 + 2048 + 65536 + 524288 = 592128 //This sets group 2 to report Clamp 1 report of kwh, watt, voltage, current.
Parameter 112 = 240 //This sets Group 2 (Clamp1 report of kwh, watt, voltage, and current) every 240 seconds.

Parameter 103 = 512 + 4096 + 131072 + 1048576 //This sets group 3 to report Clamp 2 report of kwh, watt, voltage, current.
Parameter 113 = 300 //This sets Group 3 (Clamp 2 report of kwh, watt, voltage, and current) every 300 seconds.

This of course will have some value sync differences on each value, but the application highly depends.

-**Example 2**
If you want everything to report at the same time, you would input all reports to a single group, its not optimized to set it to group 2 or 3. This will keep all values synced up as all reports will report at a rate of every 240 seconds.

Parameter 101 = 1776399 //Everything (sum of total + Clamp 1 + Clamp 2
Parameter 111 = 240 //This sets Group 1 to report at a rate of once every 240 seconds.
Parameter 102 = 0 //disable group 2Parameter 103 = 0 //disable group 3

You can leave Parameter 112 and 113 alone since we are not using group 2 and 3

Preview