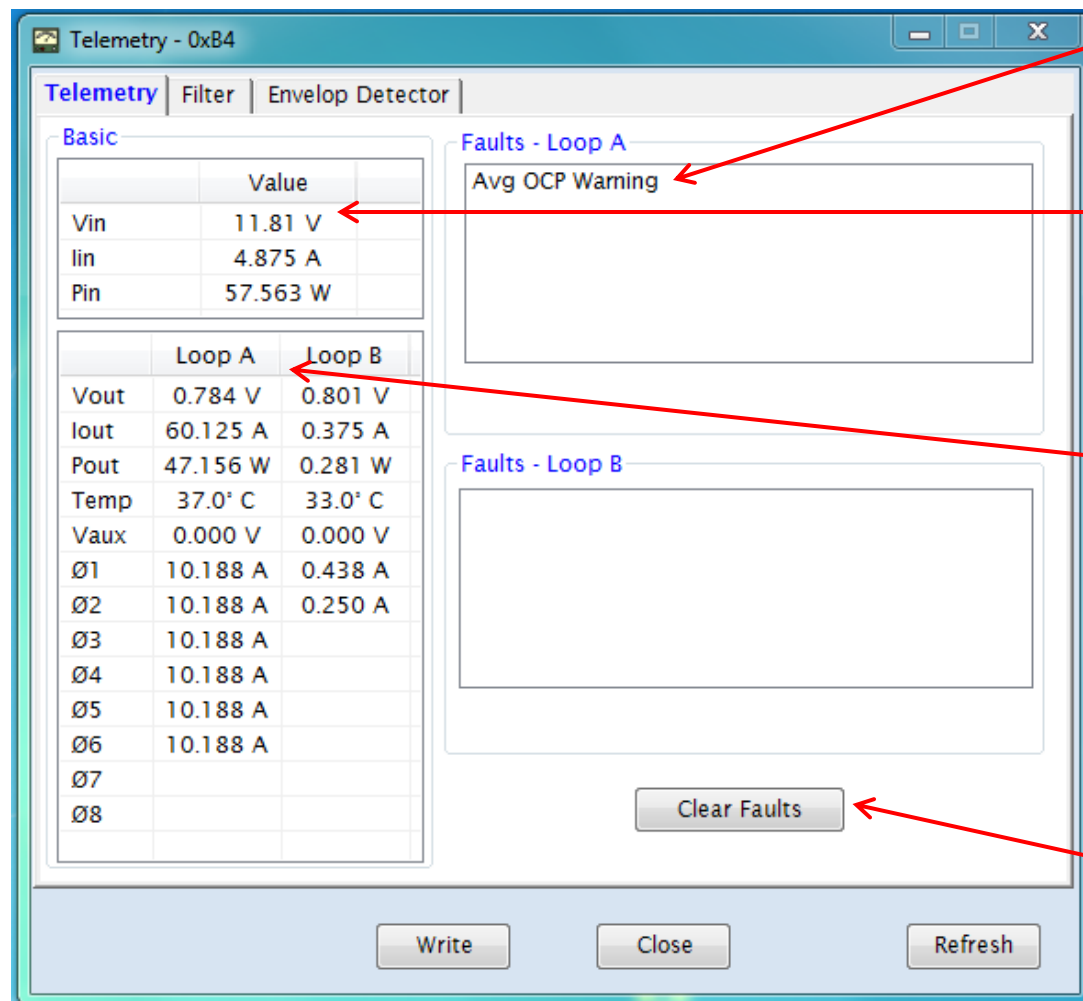


# Telemetry...



## Faults

Shows what faults are detected  
In this example an Average OCP warning is detected for Loop A

## Basic

Shows measured values for input Voltage, Current and the calculated input Power

## Loop A and loop B measurements

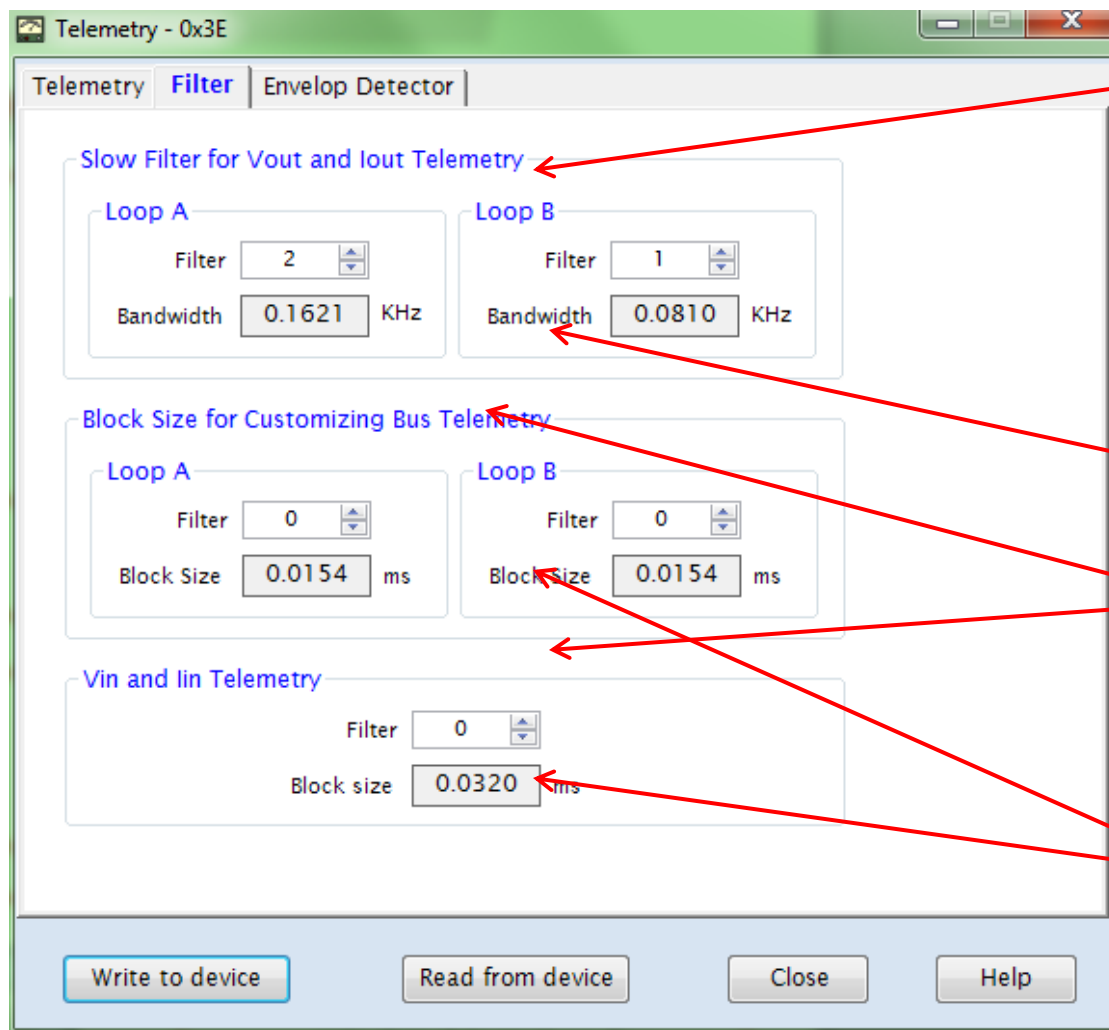
Shows measured values.  
For the phase currents some phases may show 0A due to not all phases active. Typical for low load currents where i.e. Only 2 phases are active. Then it will show 0 A for the other phases

Vout values are filtered and sampled and due to sampling behavior and resolution in filter there can be up to a 0.25% error in reported Vout

## Clear Faults button

Click this button to clear a fault.  
Notice this only works if the fault condition is no longer existing. Otherwise the fault will immediately be listed again.

# Telemetry... Filter



## Slow Filter for Vout and Iout Telemetry

Adjusts the bandwidth of the slow telemetry filter. This is a single pole low-pass filter. Each telemetry component (Iout, Vout ) has its own independent slow filter. However, the adjustment of the bandwidth is common to all slow filters for the same Loop.

## Bandwidth

Indicates the bandwidth of the Slow Filter

## Block size for SVID Telemetry

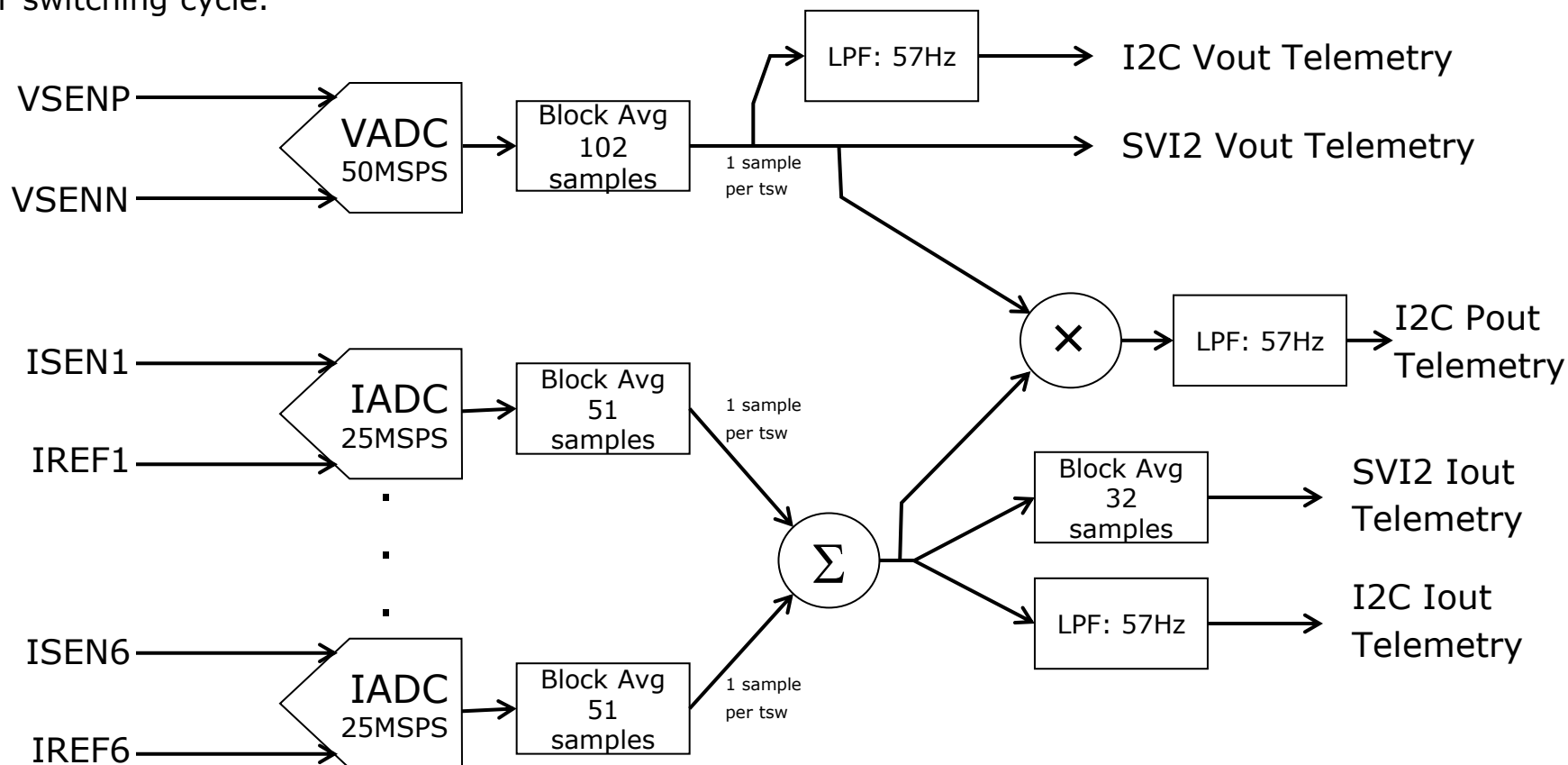
Adjusts the block size for the average value to be taken across for the fast telemetry. The fast filter calculates the average across a block of data at a time (different from a moving average).

## Block Size

Block size of fast telemetry in terms of time, which will be calculated based on Fsw ([Phases and Frequency](#)) and Fast Filter

# Telemetry... Filter theory

The ADC's are oversampling the inputs. For  $V_{adc}$ , there are 102 samples taken per switching cycle. For  $I_{adc}$ , 51 samples are taken in the same time period. These numbers depend on the switching frequency chosen. As  $f_{sw}$  changes, the number of averaging samples will be different since the ADC sample rate is fixed. The averager will average all the samples in 1 switch cycle and output a block averaged number. Hence, the update rate of the ADCs for telemetry used is 1 block averaged sample per switching cycle.



\*Above filter rate is for a 490kHz switching frequency. Will change depending on filter setting and Switching frequency

# Telemetry... Envelop Detector

Telemetry - 0x7C

Telemetry | Filter | **Envelop Detector**

**Input**

Max  A

Min  A

**Signal Selection**

Input Voltage ▼

Reset Input

**Loop A**

Max  A

Min  A

**Signal Selection**

Phase Current ▼

**Phase Selection**

N/A ▼

Reset Loop A

**Loop B**

Max  A

Min  A

**Signal Selection**

Phase Current ▼

**Phase Selection**

N/A ▼

Reset Loop B

Write Close Refresh

## Max

Maximum measured value of the selected Signal Selection

## Min

Minimum measured value of the selected Signal Selection

## Signal Selection:

Enables/disables of the envelope detector

Available Signals: Phase Current, Total Current, Output Power, Input Voltage, Output Voltage, Input Current, Input Power

## Phase Selection

Available when Signal Selection -Phase Current signal is selected

## Reset

Resets the Max and Min values recorded