

Sommario

VC21LPFilter	3
IMPLEMENTATION	3
Description	3

VC21LPFilter

V = Variables

C = Claculation functions

The VC21LPFilter function implements a low-pass digital filter of the first order for values in the range from -999999 to +999999. It ' also provided the pre-charge filter option.


IMPLEMENTATION

VC20LPFilter (Mode, Tsample, Tau, FilterIn, FilterOut)

Parameters:

IN/OUT	VARIABLE TYPE	EXAMPLE NAME	DIM	
IN	CONST / GLOBAL	Mode	F	Mode of operation (0=pre-charge, 1=filter execution).
IN	CONST / SYSTEM	Tsample	W	Sample time filter (msec) [0÷32767].
IN	CONST / SYSTEM	Tau	W	The filter time constant (ms) [0÷32767]
IN	GLOBAL	FilterIn	L	Value of the variable that you want to filter [-999999÷999999]
OUT	GLOBAL	FilterOut	L	Value of the filtered variable [-999999÷999999]

Description

The VC21LPFilter function implements a digital low-pass filter of the first order whose time constant (Tau) is defined in the parameters passed to the function. Assuming you start from a zero input variable value, the output of the filter takes a value equal to 63% of the input after the long Tau. Similarly the cutoff frequency of the filter is . If the Mode topic is zero allows you to preload the filter to a value that can be set with the topic FilterIn.



Example

```

-----
Project      : REG 012
Module Name  : ReadTemp
Author       :
Description   : Read temperature & filter
-----
MAIN:
CALL ReadTemp
swTsample = 100      ;100 ms time sampling filter
swTau = 5000         ;5 sec filter time constant
gfMode = 1           ;normal execution
VC21LPFilter (gfMode,swTsample, swTau, gwFilterIn, gwFilterOut)
    WAIT 1
    JUMP MAIN

```

Note

- The function contains an internal timer to actually execute the filter each sample time(Tsample). The function should be executed at a frequency higher than the sample time (Tsample). Typically each cycle task.

Documento generato automaticamente da **Qem Wiki** - <https://wiki.qem.it/>

Il contenuto wiki è costantemente aggiornato dal team di sviluppo, è quindi possibile che la versione online contenga informazioni più recenti di questo documento.