New Features in ibaLogic v5.0.5

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Content

1 Support of new signals and calculatons for ibaMS4xUCO

Beginning with firmware version 02.12.005, additional measuring parameters can be Configured (mode2: period/frequency calculation) : minimum measuring time, required periods and timeout.

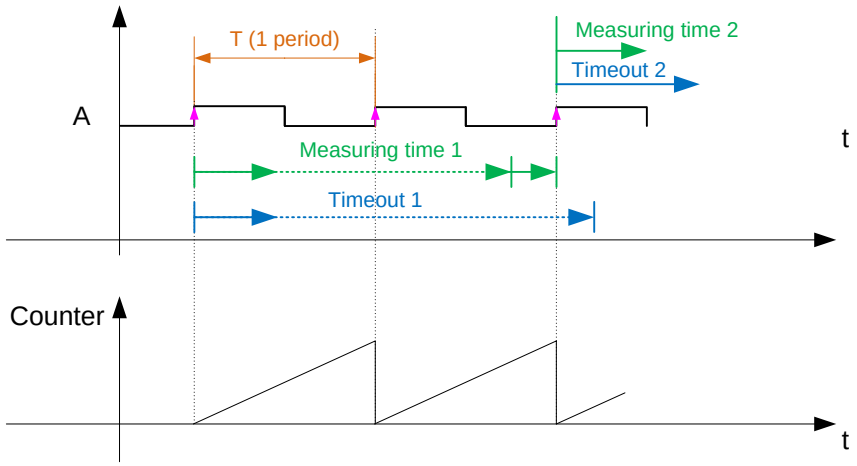


Figure 1: Period / frequency with minimum measuring time and timeout

The minimum measuring time specifies the time period after which the measured frequency value is updated. The frequency measurement starts at the first rising edge and ends when a rising edge happens after the minimum measuring time has elapsed. Since several periods may be passed during the measuring time, the frequency is averaged over the measured periods. In addition, a number of periods can be defined over which the average is calculated. If the number of required periods has not been reached during minimum measuring time, then the measuring time is extended until the required number of periods is reached. This means, both conditions (minimum measuring time and required periods) have to be met, then the frequency value is updated.
When a timeout is configured, measuring can be interrupted if, for example, a rising edge cannot be detected during measuring time. The timeout starts with the minimum measuring time, but must be longer than the minimum measuring time. When the measuring time exceeds the timeout then the frequency will be set to „0“. Measuring starts again with the next rising edge. The timeout is not active, when it is set to „0“.

With the default settings, measuring is carried out as depicted in Figure 1. Default values are:

- Minimum measuring time = 0 µs
- Required periods = 1
- Timeout = 0 µs.

In “quadrature mode”, the period is measured between the activated edges. When using the “quadrature mode”, the measured results need to be converted as follows:

f = fmeas : 4
T = Tmeas * 4

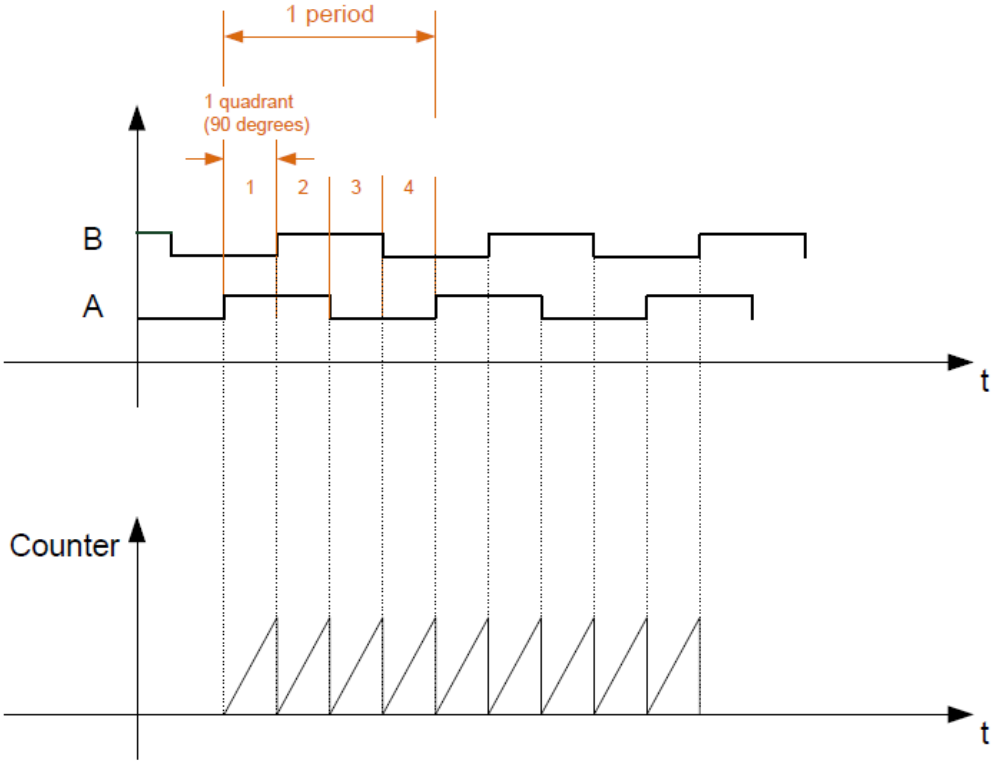
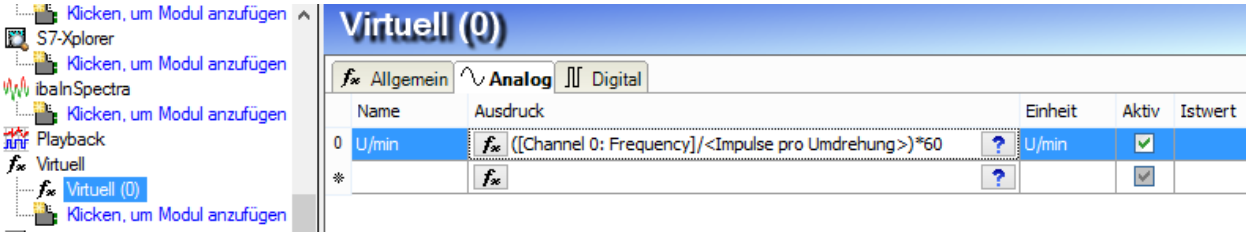


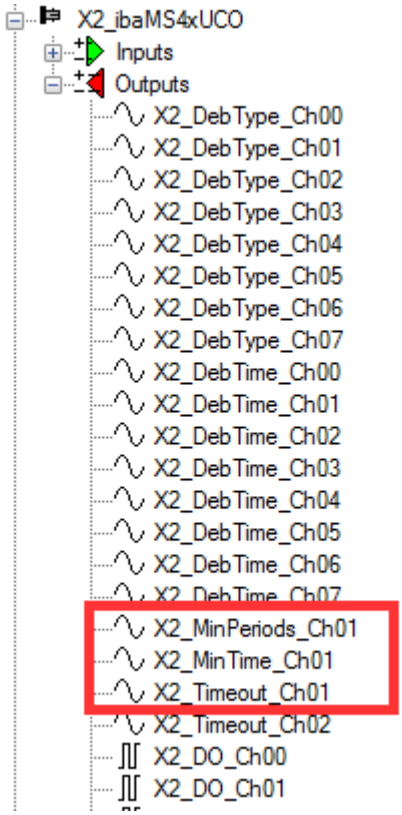
Figure 2: Theorie: „Quatrature Mode“

The measured frequency may be converted into the unit „revolution per minute“ by using a virtual module.



Exa,ple ibaLogic:

Channel1 is set to mode2. So that channel has the descriped outpus to set the values.



2 New Parameter for DatFileWrite function block

RENAME_AFTER_CLOSE enable that the name at FILE_NAME will be checked during closing the DatFile. If that option is set and there is a new name than these name will be taken as file name for the DatFile.