

Exercises for imc FAMOS I – Digital Course

- Block 5 -

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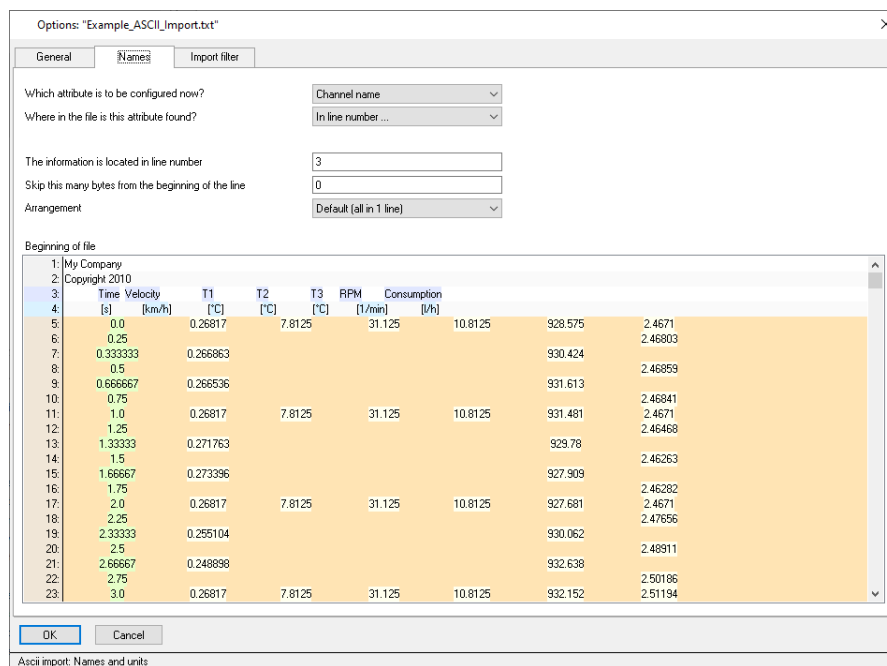
Exercise A

Exercise Objective:

In this exercise you will get to know the ASCII import wizard in FAMOS to import any ASCII data into FAMOS.

Result:

Depending on the selected settings you will get new variables in FAMOS, that have been read in with correct times, units and names.



Exercise steps:

- Open the import dialog via the **Variable -> Load** menu item.
- Navigate to the sample datasets and select the file **Example_ASCII_Import.txt**.
- Select the ASCII import filter by choosing **ASCII/Excel Import** as the file type, then click **Open**.
- The ASCII Import Wizard opens and you get a preview of the contents. Recognized data is highlighted in orange in the wizard, a recognized time track is highlighted in green. Try different settings in the **General** tab and observe how the color backgrounds change.
- Switch to the **Names** tab. To extract the channel names from the file, select **In line number...** for the **Channel name** property and enter line 3. Observe how the recognized names are highlighted in the wizard.
- Now select the **y-unit** property and adjust the options in a way that they are read from line 4. Again, pay attention to the color background of the recognized units.
- Experiment with other options and observe how the preview changes. Once you are satisfied with the selected options, confirm the dialog with **Ok**.

Exercise B

Exercise Objective:

An ASCII file without a valid time column is to be read into FAMOS. Missing information is added manually. Data of the German Weather Service serve as example data.

Exercise steps:

- Open the file **produkt_tu_stunde_20190207_20200809_01420.txt** from the sample data with the ASCII import wizard.
- This data set contains the values for QN_9 = quality level, MESS_DATUM = date as consecutive number, TT_TU = air temperature and RF_TU = relative humidity at 2m height (hourly referred to CET). For background information see: <https://www.dwd.de/DE/leistungen/klimadatendeutschland/klimadatendeutschland.html>
- The date is listed in the second column as the year followed by the month, day, and hour, preceded by leading zeros. This can be freely defined via the setting Time Column. (See details for the commands in the pop up Help or the FAMOS Users Manual/ File Management /Loading Files / ASCII....
- Show the imported data sets in a curve window and set the scaling of the x-axis to **Date/Time absolute**. Pay attention to the specified dates.

Options: "produkt_tu_stunde_20190207_20200809_01420.txt"

General	Names etc.	Import filter
Column separator	Semicolon ;	Character set
Time column	Time stamp freely defined	Auto
Time stamp format	<c><YYYYMMDDhh>	Not a number
		Auto
		Precision
		Auto
		separator for 1000s
		No
		Data type (XY)
		Always XY
		MS Excel worksheet
		Auto
Data begin at row	2	Auto

Beginning of file

1:	STATIONS_ID	MESS_DATUM	QN_9	TT_TU	RF_TU	eor
2:	1420	;2019020700;	3	; -2.0	; 93.0	;eor
3:	1420	;2019020701;	3	; -1.8	; 92.0	;eor
4:	1420	;2019020702;	3	; -1.9	; 92.0	;eor

- Since there were no units available in the imported dataset, these also must be set manually via the variable properties.

Exercise C

Exercise Objective:

Multiple datasets are to be exported to an Excel file, with each dataset having its own time column.

Exercise steps:

- Load the **slope.dat** and **sintest1.dat** datasets from the sample data.
- Open the FAMOS preferences dialog via the menu item **Extra -> Options** and navigate to the subitem **EXCEL (XLS)** in the category **File - Save/Export**.
- Select **Create new template...** and click **Open** to open the configuration dialog for a new export template.
- Define a name (e.g. "Export Excel") and select the option to use the .xlsx format, if necessary.
- Switch to the **Data** tab to configure the column header of the data series. Select **Name** and **y-Unit** from the placeholders one after the other and insert them one below the other in the column header.
- Switch to the **Scaling** tab to configure the time columns. Since each data set should have its own time column, select the **Per waveform** option under **Scaling column**.
- For naming the time columns, write a name in the column header (e.g. "t") and insert the placeholder for the x-unit in the second row.
- In the **File Header** tab, you can add more information as you wish.
- When you have finished the configuration, save the template and close the options window.
- Select the two data sets in the variable list and then choose **Save together** from the **Variable** menu.
- Define a storage location as well as a file name and select the previously defined export template under **File type**. Then click **Save**.