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How do you save time when creating the library file for the Plant Automation Accelerator Excel import?

PAA / V1.0.2

<https://support.industry.siemens.com/cs/ww/en/view/109749306>

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1 Introduction

This FAQ response includes an Excel generator for the automatic generation of library files for the Plant Automation Accelerator (PAA) Excel Import.

Contents

- Instructions
- Query
QueryCMTsignalsV5.xml
QueryCMTsignalsANDparameterV5.xml
- Export example
exampleCMTsignalsV5.xls
exampleCMTsignalsANDparameterV5.xls
- Excel generator
LibGeneratorV5.xlsm

Function of the Excel generator

The Plant Automation Accelerator provides a standard query to list all the existing signals of the Control Module Types (CMTs). The user has to enter this signal data manually into an Excel table. Here, a special structuring of the Excel table is required.

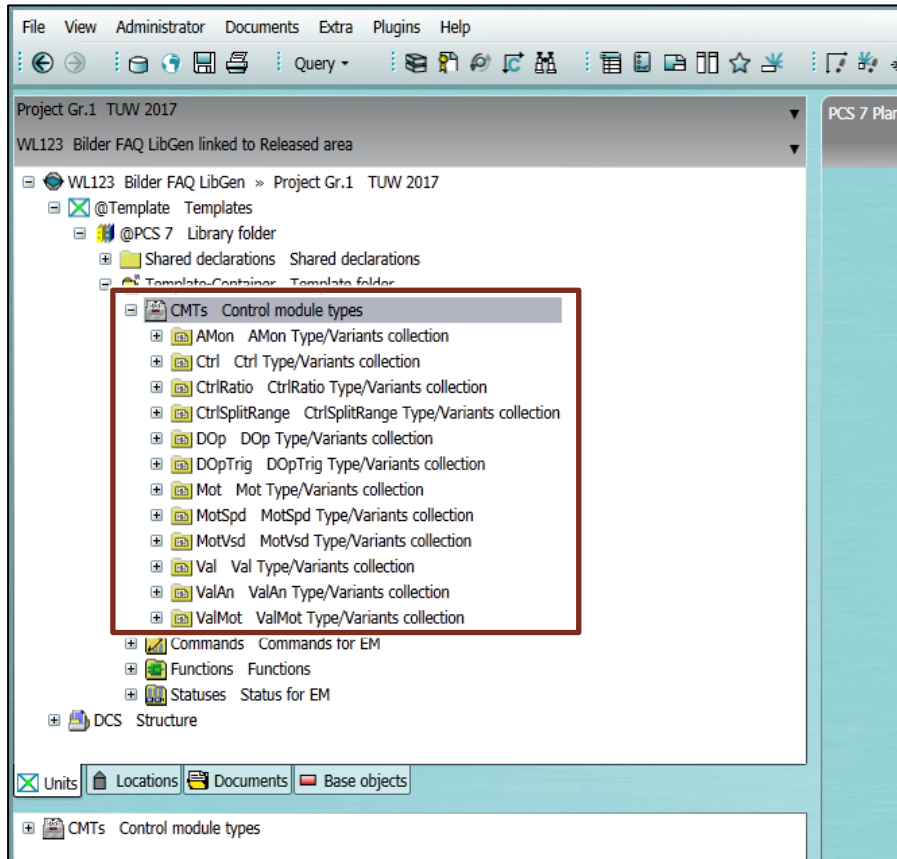
Through the two queries of this FAQ response you can choose to export all the signals or all the parameters and signals. The export is converted automatically into the required structure by the Excel generator.

Advantages

- Time saving through automatic generation
- Minimization of error sources
- Parameters can be included in the automatic generation
- Prepared queries with optimized sorting

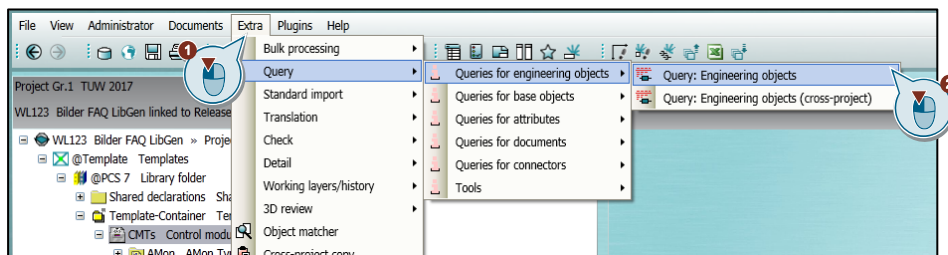
2 Export of Signals or Signals and Parameters

You need a CMT library in your PAA project to be able to export signals and parameters.



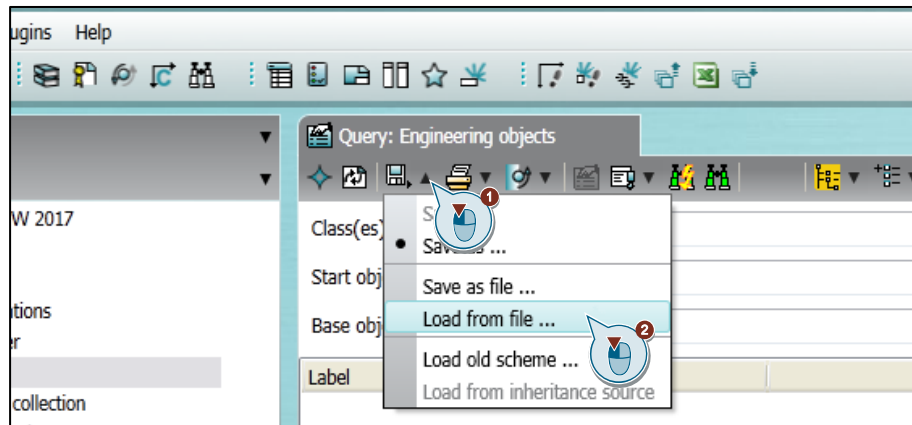
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1. Open an empty query for engineering objects.
For this you click the "Extra" tab and then select the menu command "Query > Queries for engineering objects > Query: Engineering objects".

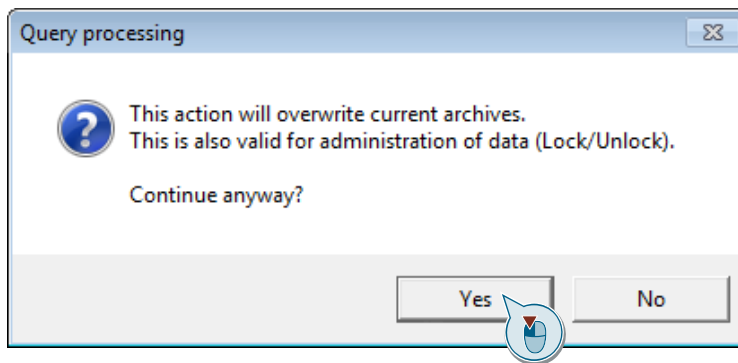


2 Export of Signals or Signals and Parameters

3. In the task bar of the dialog "Query: Engineering objects" you click the "Save" icon and select the menu command "Load from file...".



4. Confirm the "This action will overwrite..." message with "Yes".



2 Export of Signals or Signals and Parameters

6. The "Open" window opens. Open the path in which the queries provided in this FAQ response are stored.

Select one of the XML files provided.

- If you are exporting signals only, you select the "QueryCMTsignals.xml" file.
- If you are exporting signals and parameters, you select the "QueryCMTsignalsANDparameter.xml" file (regardless of the library file used).
Click "Open".

Note

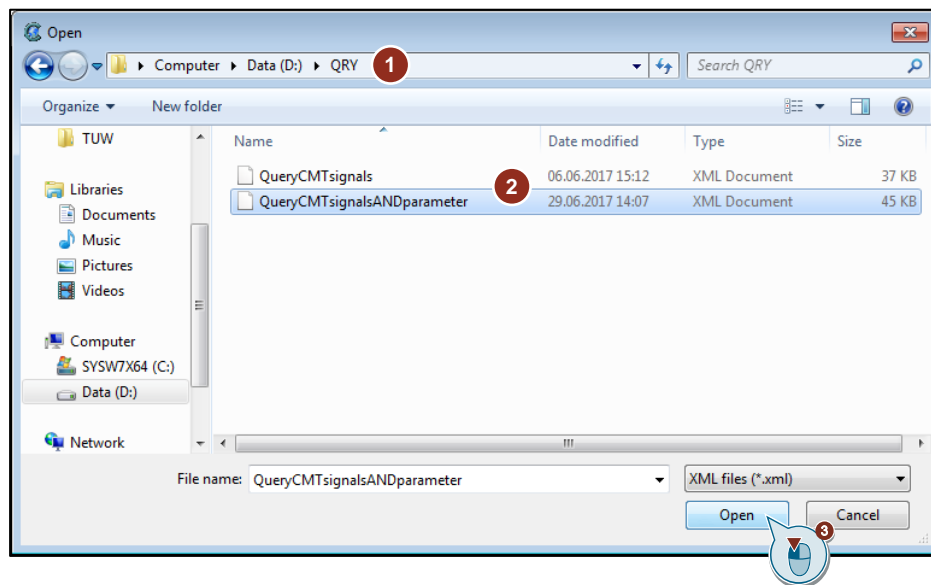
The queries are available for downloading on the entry page of this FAQ response.

- QueryCMTsignalsV5.xml
- QueryCMTsignalsANDparameterV5.xml

WARNING

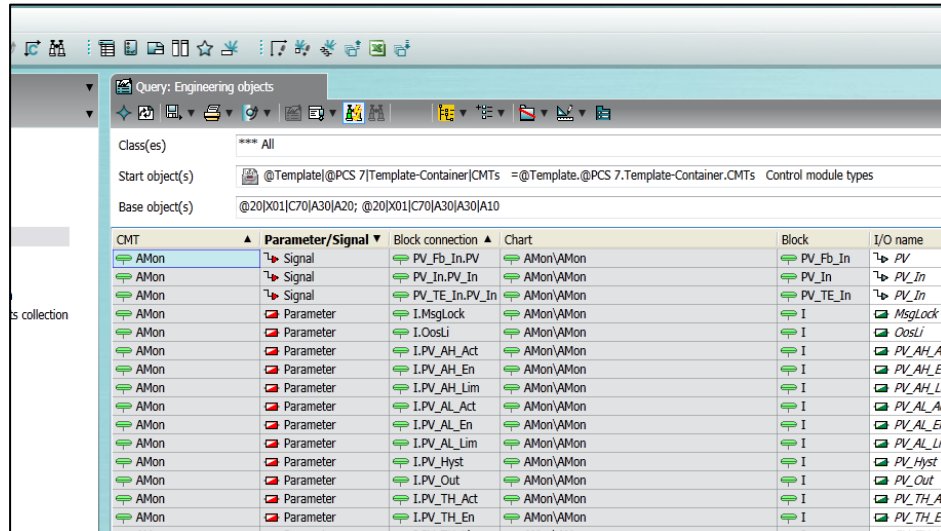
You must use the two queries provided by this FAQ response!

If you use third-party queries or your own queries in the Plant Automation Accelerator, the Excel generator will not work properly. Using third-party queries causes the Excel generator to crash or leads to defective library files. The queries in this FAQ response were configured specially for use with the Excel generator.



2 Export of Signals or Signals and Parameters

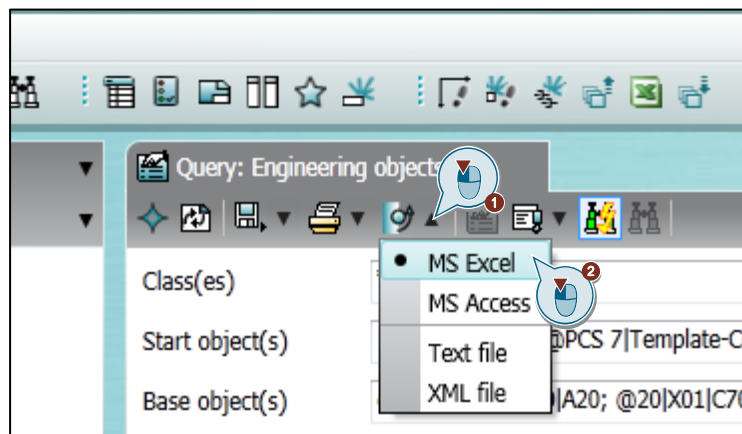
- The query opens and the search for relevant data from the project is launched automatically. This can take a number of minutes depending on the size of the project.



The screenshot shows the 'Query: Engineering objects' window. The 'Class(es)' field is set to '*** All'. The 'Start object(s)' field contains '@Template|@PCS 7|Template-Container|CMTs =@Template.@PCS 7.Template-Container.CMTs Control module types'. The 'Base object(s)' field contains '@20|X01|C70|A30|A20; @20|X01|C70|A30|A10'. The main table displays a list of objects with columns for 'CMT', 'Parameter/Signal', 'Block connection', 'Chart', 'Block', and 'I/O name'. The objects listed include various signals and parameters for 'AMon' blocks, such as 'PV_Fb_In.PV', 'PV_In.PV', 'PV_TE_In.PV', 'I.MsgLock', 'I.OosLi', 'I.PV_AH_Act', 'I.PV_AH_En', 'I.PV_AH_Lim', 'I.PV_AL_Act', 'I.PV_AL_En', 'I.PV_AL_Lim', 'I.PV_Hyst', 'I.PV_Out', 'I.PV_TH_Act', and 'I.PV_TH_En'.

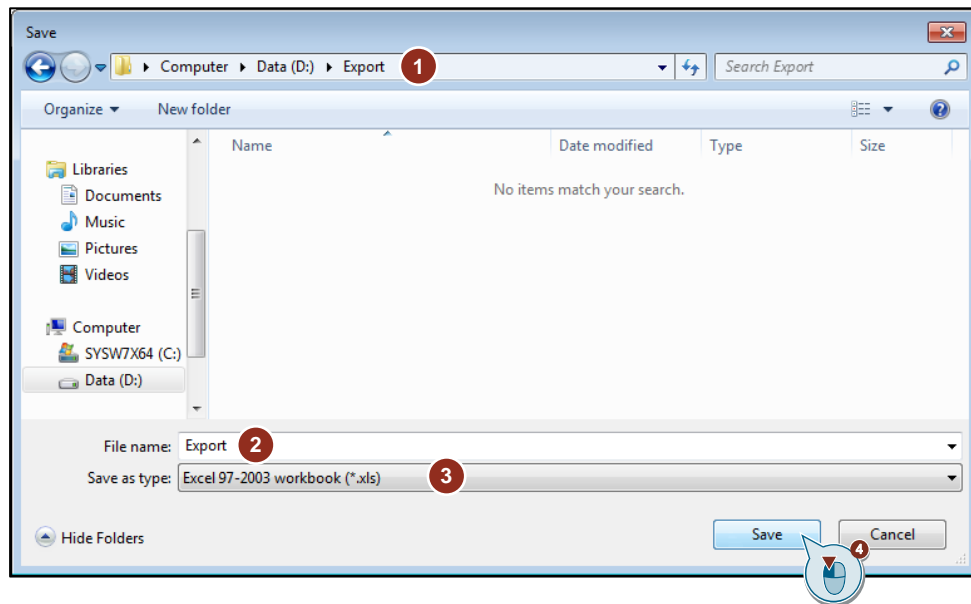
CMT	Parameter/Signal	Block connection	Chart	Block	I/O name
AMon	Signal	PV_Fb_In.PV	AMon AMon	PV_Fb_In	PV
AMon	Signal	PV_In.PV	AMon AMon	PV_In	PV_In
AMon	Signal	PV_TE_In.PV	AMon AMon	PV_TE_In	PV_In
AMon	Parameter	I.MsgLock	AMon AMon	I	MsgLock
AMon	Parameter	I.OosLi	AMon AMon	I	OosLi
AMon	Parameter	I.PV_AH_Act	AMon AMon	I	PV_AH_Act
AMon	Parameter	I.PV_AH_En	AMon AMon	I	PV_AH_En
AMon	Parameter	I.PV_AH_Lim	AMon AMon	I	PV_AH_Lim
AMon	Parameter	I.PV_AL_Act	AMon AMon	I	PV_AL_Act
AMon	Parameter	I.PV_AL_En	AMon AMon	I	PV_AL_En
AMon	Parameter	I.PV_AL_Lim	AMon AMon	I	PV_AL_Lim
AMon	Parameter	I.PV_Hyst	AMon AMon	I	PV_Hyst
AMon	Parameter	I.PV_Out	AMon AMon	I	PV_Out
AMon	Parameter	I.PV_TH_Act	AMon AMon	I	PV_TH_Act
AMon	Parameter	I.PV_TH_En	AMon AMon	I	PV_TH_En

- Export the query to an Excel file.
For this, in the task bar you click the "Export Data" icon and then select "MS Excel".



2 Export of Signals or Signals and Parameters

11. Open the path in which you want to store the file.
Assign a name and select the file type ".xls" ("Export.xls" in this FAQ response). The stored Excel file can be used with the Excel generator in the following step.

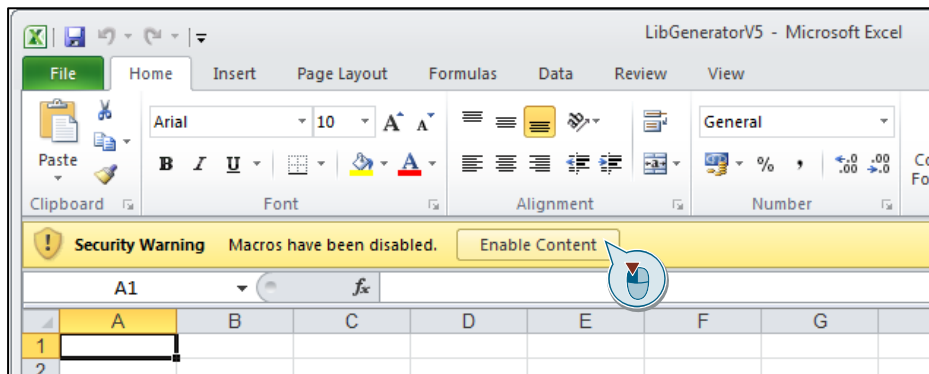


3 Generate the Library File

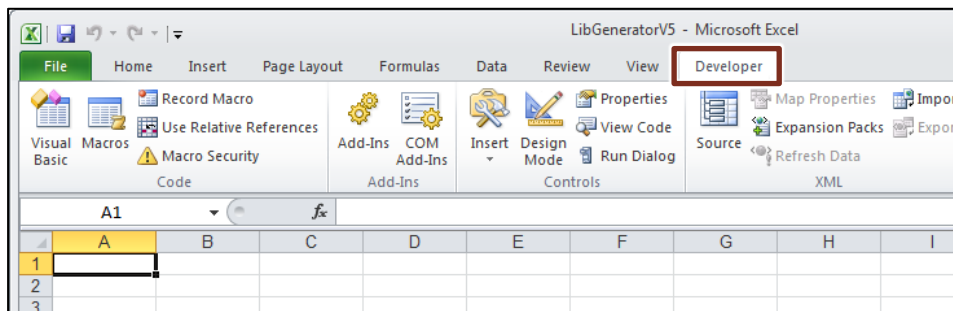
In this chapter we describe how to create the library file for the PAA Excel Import.

Note The Excel generator is available for downloading on the entry page of this FAQ response.

1. Open the "LibGenerator.xlms" file.
2. When you open the file you get the security message "Macros have been disabled".
Confirm the message with "Enable Content".

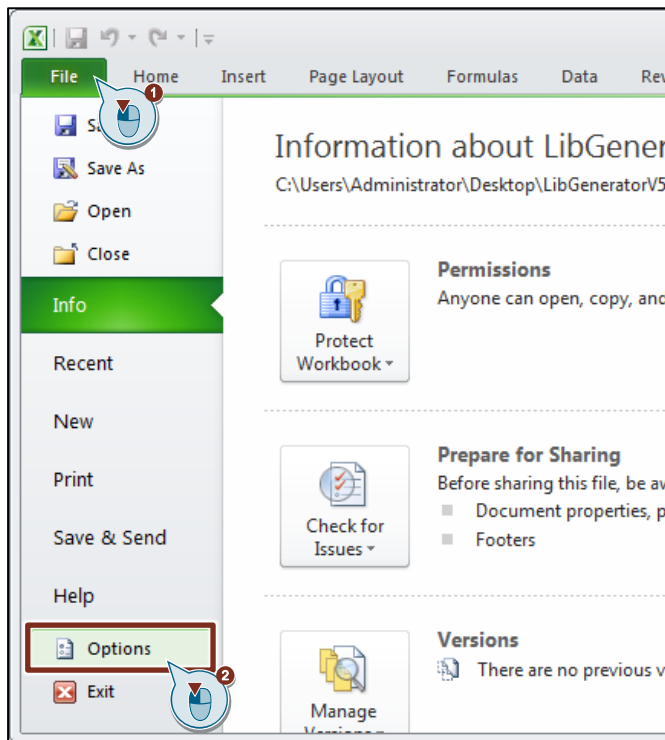


3. A prepared empty worksheet opens for creating the library file.
4. Check whether the developer is enabled.
 - If the "Developer" tab is displayed in the menu bar, proceed with Step 7.
 - If the "Developer" tab is not displayed in the menu bar, proceed with Step 5.

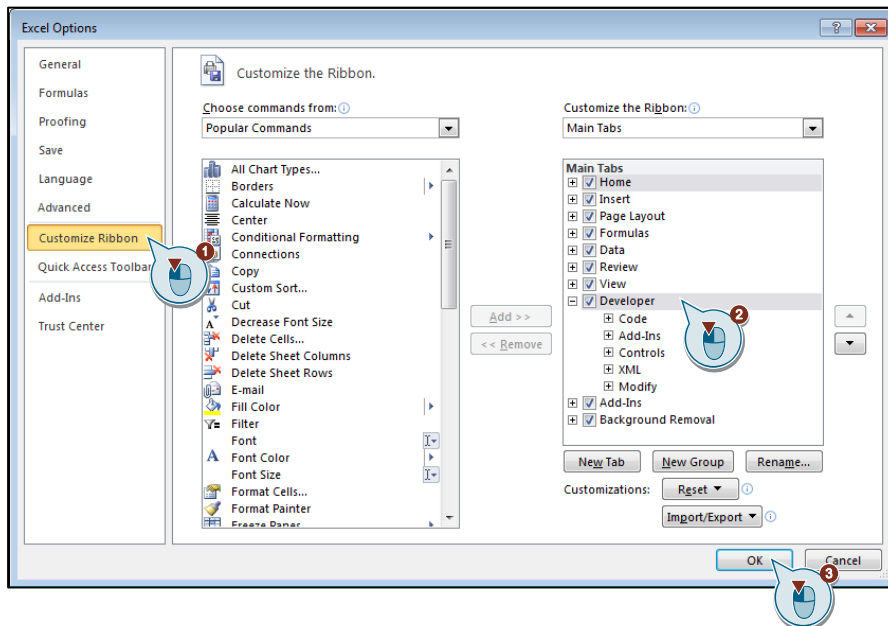


3 Generate the Library File

5. Select the menu command "File > Options".



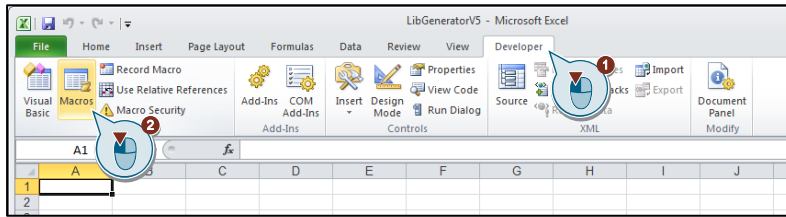
6. In the menu you click "Customize Ribbon". In the "Main Tabs" window you enable the "Developer" option. Click "OK".



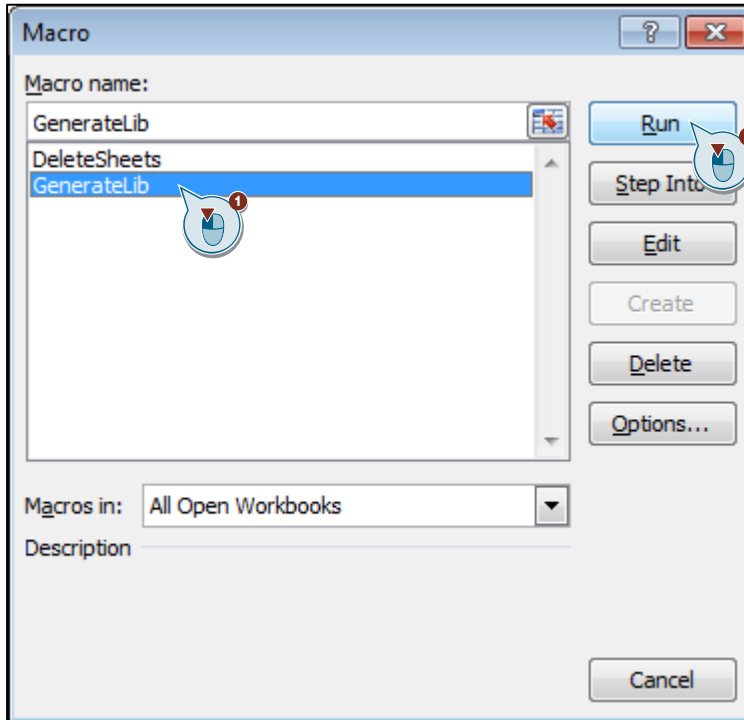
The "Developer" menu is now displayed in the menu bar.

3 Generate the Library File

7. Click the "Developer" tab and then click the "Macros" icon.



8. In the "Macro name" window you click "GenerateLib". Click "Run".



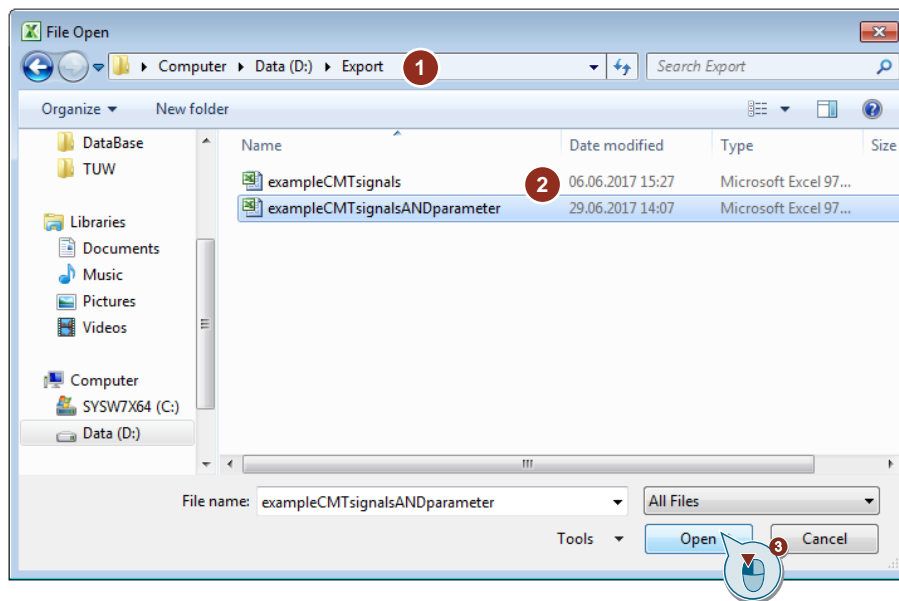
3 Generate the Library File

10. Select the "Export.xls" file that you created in chapter 2 with the query "Query for CMT Signals". Click "Open".
Alternatively you can also test the Excel generator with one of the two export examples (see screenshot).

Note

The export examples are available for downloading on the entry page of this FAQ response.

- exampleCMTsignalsV5.xls
- exampleCMTsignalsANDparameterV5.xls



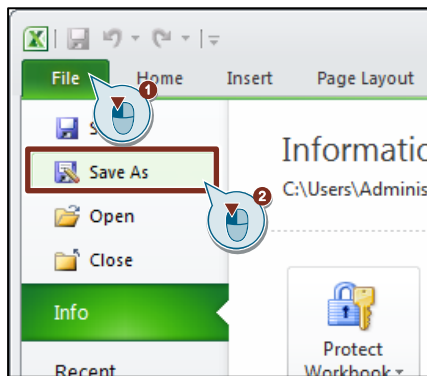
11. Generation starts and the result is shown immediately.

The screenshot shows the Microsoft Excel application window titled 'LibGeneratorV5 - Microsoft Excel'. The spreadsheet contains a table with the following data:

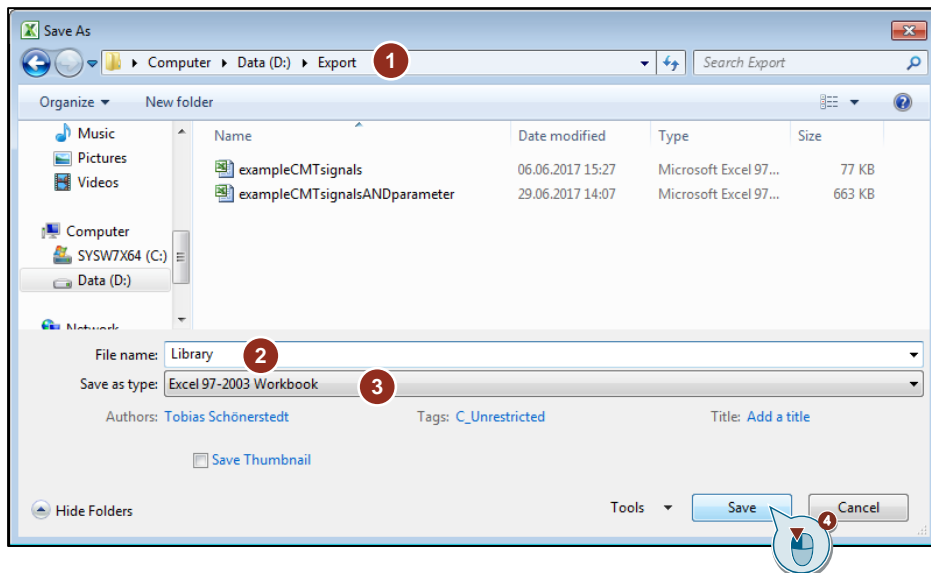
Parameter/Signal	Module connector	Plan	Module	Connector	Connector comment
Signal	1Ctrf#_PV_Out	Val_StdVal_Std	1Ctrf#	PV_Out	Output value
Signal	FbkClose.PV_In	Val_StdVal_Std	FbkClose	PV_In	Input value
Signal	FbkOpen.PV_In	Val_StdVal_Std	FbkOpen	PV_In	Input value
Parameter	FbkClose.LowactMode	Val_StdVal_Std	FbkClose	LowactMode	1=Invert signal, 0=Out=In
Parameter	FbkOpen.LowactMode	Val_StdVal_Std	FbkOpen	LowactMode	1=Invert signal, 0=Out=In
Parameter	Intlock.In01	Val_StdVal_Std	Intlock	In01	Input 01
Parameter	Intlock.In02	Val_StdVal_Std	Intlock	In02	Input 02
Parameter	Intlock.In03	Val_StdVal_Std	Intlock	In03	Input 03
Parameter	Intlock.In04	Val_StdVal_Std	Intlock	In04	Input 04
Parameter	Intlock.In05	Val_StdVal_Std	Intlock	In05	Input 05
Parameter	Intlock.In06	Val_StdVal_Std	Intlock	In06	Input 06
Parameter	Intlock.In07	Val_StdVal_Std	Intlock	In07	Input 07
Parameter	Intlock.In08	Val_StdVal_Std	Intlock	In08	Input 08
Parameter	Intlock.In01	Val_StdVal_Std	Intlock	In01	Input 01

3 Generate the Library File

12. Select the menu command "File > Save As".



13. Select the path in which you want to store the file.
Select a file name and the file type ".xls" ("Library.xls" in this FAQ response).
Click "Save".



14. Enter the mapping labels you are using in your signal list into the library file.
Now you can use the signal list and library file for the Excel Import in the PAA.

3 Generate the Library File

Optional: Reset the library file

You can reset the library file to the as-delivered status.

1. Click the "Developer" menu and then click the "Macros" icon.
2. In the "Macro name" window you click "DeleteSheets". Click "Run".

