

Engineering Base

Smart Datasheet

Issue: April 2018

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1 General Information

In Engineering Base, data sheets may be output as PDF files for external editing. The edited PDF file may then be reimported into Engineering Base, and the data will be imported without a prior mapping.

The assistant has the following functions:

- Export of one or more datasheets as PDF file.
- In the created PDF file, the text blocks of the technical attributes may be edited via interactive text fields.
- Import of the revised data into Engineering Base.
- The data to be imported may be displayed in a preview in which faulty changes will be highlighted in red in the PDF file.
- To enable change tracking in the project, status information may be stored at the changed objects.
- Attribute values of changed objects may be updated with entries from catalog.
- For all attributes into which data is imported, the property Read-Only may automatically be activated after the import of data.

Prerequisites

This assistant may only be used with the following licenses:

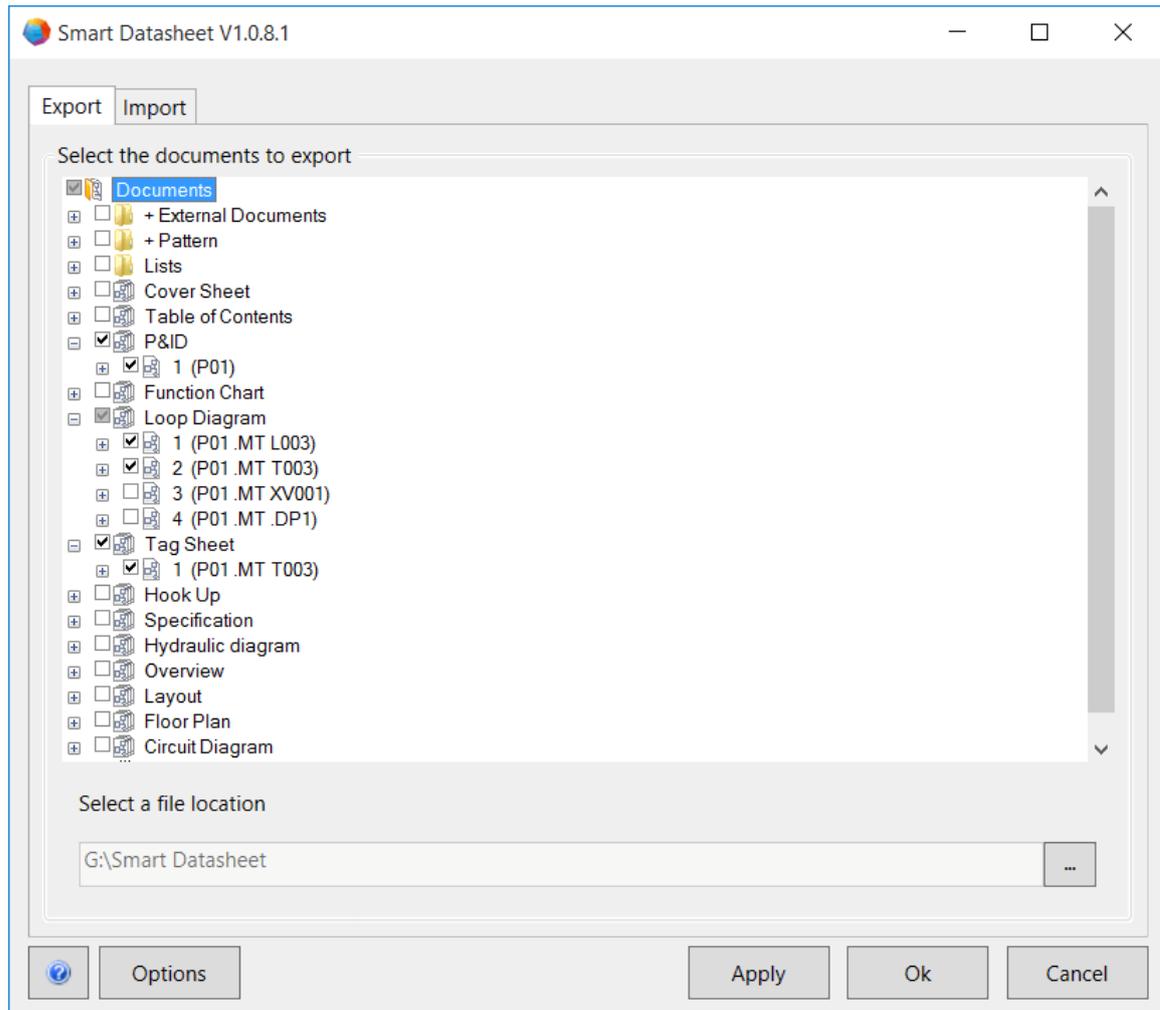
- Instrumentation Pro Add-On (1043)
- EB Basic Engineering (1103)
- EB Process Engineering(1104)
- EB Detailed Engineering (1105)
- EB Plant Engineering (1106)
- EB Plant Engineering (Campus) (1107)
- EB Plant Operation (1108)
- EB Data Editor (1109).

2 Export of PDF Files

To create a writeable PDF file from datasheets.

1. In the **Engineering Base Explorer**, select the project, a folder, a drawing or sheets. A multiple selection is possible.
2. On the shortcut menu, click **Select Assistant**, select the assistant **Smart Datasheet** and click **Run**.

The assistant is started and the dialog **Smart Datasheet** is opened.



All objects in the **Documents** folder are offered for selection.

If a drawing or a sheet was selected on starting the assistant, all sheets of the drawing or the directly marked sheets will be marked in the dialog.

If you remove the check mark in front of the **Documents** folder, all documents will be unchecked.

3. Select the **Export** tab.
4. Select the documents to be output as PDF files.

5. Under **Select a file location**, define the directory into which the export file is to be stored. Clicking the  button opens the **Search Folders** dialog.
Confirm the selection of the directory with **OK**.
The path will be saved and offered as default on restarting the assistant.
6. Click the **Options** button to specify the export options.
7. Click **OK** to start the export.
A message indicating that the export was completed successfully will then be displayed.

Buttons

Button	Meaning
Options	The dialog Smart Datasheet - Options is opened and the export options may be edited.
Apply	Depending on the selected option, one or several PDF files will be created for the marked documents. After the export, a message will be displayed. The dialog Smart Datasheet remains opened.
Ok	Depending on the selected option, one or several PDF files will be created for the marked documents. After the export, a message will be displayed. The dialog Smart Datasheet is closed.
Cancel	Terminates the assistant Smart Datasheet .

2.1 Export Options

Smart Datasheet - Options

Export

Combine to single file

Protect file(s) with a password (4-16 characters)

Insert text as watermark

Watermark

Import

Show preview before import

Update material from the catalog

Set attributes Read-Only

Set status of attributes (if enabled on project)

Configure

Ask for status information before import

Configure

Ok Cancel

Export option	checked	Meaning
Combine to single file	<input type="checkbox"/>	One PDF file will be created for each selected document. The file name is composed of the drawing number and the sheet designation (e.g. Tag sheet 1.pdf).
	<input checked="" type="checkbox"/>	For all selected documents, only one PDF file with the name of the start project will be created.
Protect file(s) with a password	<input type="checkbox"/>	The created PDF files will be saved without a password protection.
	<input checked="" type="checkbox"/>	In the input field, enter a password of your choice. It must consist of no fewer than 4 and no more than 16 characters. If this is not the case, the Ok button will not be enabled.
Insert text as watermark	<input type="checkbox"/>	The PDF file is created without a watermark.
	<input checked="" type="checkbox"/>	The selected watermark text will be displayed multiple times in the PDF file.

Confirm your selection of the options with **Ok**.

3 Editing the PDF Export File

1	2		3	4		
A	Designation <i>MT</i>	Part of <i>P01</i>	P&I Diagram <i>02</i>	Remarks <i>Change</i>		
	Comment <i>Methanol Delivering</i>					
	Designation <i>T003</i>	Process Factor <i>T</i>	Tag Number <i>003</i>	Tag Function <i>TIA</i>	P&I Diagram	Part of <i>P01.MT</i>
	Required Measuring Method		Required Measuring Range			
Required Mechanical Protection		Required Explosion Protection				
Temperature Indicator <i>1</i>	Comment	Additional Comment	Remarks <i>HH; H; L; LL</i>			
Designation <i>1</i>	Short Description					
Producer <i>Siemens</i>	Type Designation <i>SM331</i>	Material <i>3IE_331-001</i>	Control-System Type	Hardware Address <i>PIW 336</i>	Symbolic Address <i>T_MAX</i>	
Designation <i>TT 003</i>	Comment <i>Temperature Resistor</i>	Additional Comment	Short Description			
Producer <i>ENDRESS & HAUSER</i>	Type Designation <i>TR24</i>	Material <i>E&H TR24 01</i>	Protection Classification (IP) <i>IP67</i>	Explosion Protection <i>EEx ia IIC T6</i>		
Media Type <i>MeOH-N</i>	Designation <i>MT1</i>	Type of Construction	Specification			
Constitution	Material	Comment <i>Methanol Tank</i>				
Condition	Volume	Width <i>12</i>	Height <i>5</i>	Depth <i>5</i>		
Molecular Weight	Operating Pressure	Nominal Flow Rate	Nominal Pressure (PN)	Basic Material		
Density	Wall Thickness <i>10</i>	Type Designation				
Boiling, Condensation Point	Freezing, Melting Point	Producer	Remarks			
Location / Device	Device / Channel	Comment	Manufacturer	Type		
<i>+F1 MT1</i>	<i>TT 003</i>	<i>Temperature Resistor</i>	<i>ENDRESS & HAUSER</i>	<i>TR24</i>		
<i>+IB01 -15A4</i>	<i>1</i>		<i>Siemens</i>	<i>SM331</i>		
B	Designation <i>1</i>	Comment	Additional Comment	Short Description		
	Producer <i>Siemens</i>	Type Designation <i>SM331</i>	Material <i>3IE_331-001</i>	Control-System Type	Hardware Address <i>PIW 336</i>	
	Designation <i>TT 003</i>	Comment <i>Temperature Resistor</i>	Additional Comment	Short Description		
	Producer <i>ENDRESS & HAUSER</i>	Type Designation <i>TR24</i>	Material <i>E&H TR24 01</i>	Protection Classification (IP) <i>IP67</i>	Explosion Protection <i>EEx ia IIC T6</i>	
C	Media Type <i>MeOH-N</i>	Designation <i>MT1</i>	Type of Construction	Specification		
	Constitution	Material	Comment <i>Methanol Tank</i>			
	Condition	Volume	Width <i>12</i>	Height <i>5</i>	Depth <i>5</i>	
	Molecular Weight	Operating Pressure	Nominal Flow Rate	Nominal Pressure (PN)	Basic Material	
Density	Wall Thickness <i>10</i>	Type Designation				
Boiling, Condensation Point	Freezing, Melting Point	Producer	Remarks			

In the PDF file, the text blocks of the technical attributes in the data sheet are represented as interactive input fields.

On revising data, attention should be paid to the following aspects:

- The data formats must be adhered to. If a property is defined as a numerical value in Engineering Base, only a numerical value may be entered in the respective cell.
- If a selection list is defined for an attribute in Engineering Base, this selection will also be available in the export file. If a cell is clicked, a value may be selected from this list.

4 Import of PDF Files

Via the import function of the **Smart Datasheet** assistant, modified data may be imported from a PDF file previously exported via **Smart Datasheet** back into Engineering Base.

The revised data will be checked for changes and errors and displayed in a preview. After that, you may decide if and which data is to be taken over.



Via the assistant, only PDF files previously exported via **Smart Datasheet** may be reimported!



If the current project is not the same project the data were exported from, a query will be displayed as to whether the import shall be carried out anyway.

Requirements for the import of data from the PDF file

- The entire sheet path of the sheet matches in both the PDF file and the project.
- The entire equipment path of the object on the sheet matches in both the PDF file and the project.
- The attribute type matches in both the PDF file and the project.
- At the target attribute, the properties **From Catalog**, **Read-only** and **Frozen by P&ID** are not checked.

If one of these requirements is not met, the respective data can not be imported. In the preview, the faulty value will be highlighted in red. An error message will be saved in the **Messages** folder under **Smart Datasheet**.

To import a PDF file via Smart Datasheet

1. In the **Engineering Base Explorer**, select a folder, a drawing or a sheet.
2. On the shortcut menu, click **Select Assistant** to select the assistant **Smart Datasheet** from the list of available assistants.

The assistant is started and the dialog **Smart Datasheet** is opened.

3. Click the **Import** tab to open the import dialog.

Smart Datasheet V1.0.8.1

Export Import

Select a file to import

Preview Select all

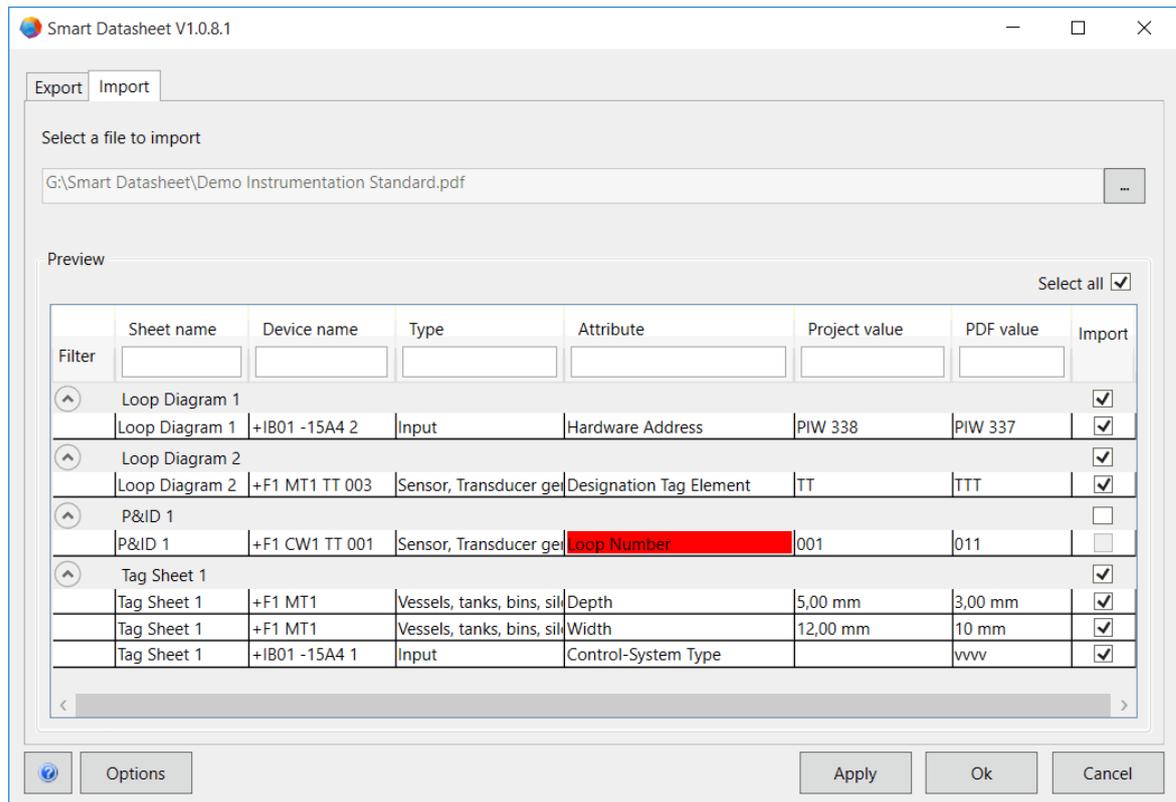
Filter	Sheet name	Device name	Type	Attribute	Project value	PDF value	Import

Options Apply Ok Cancel

- Under **Select a file to import**, select the file(s) to be imported. Clicking the button  opens the file selection dialog.

The directory selected during the export will be preselected in the file selection dialog.

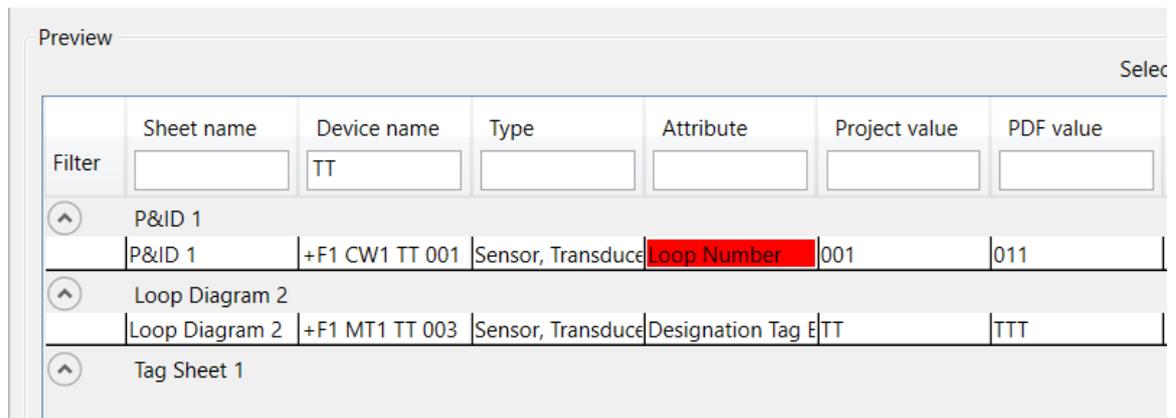
In the **Smart Datasheet** dialog, a preview of the data that were changed in the PDF file will additionally be displayed.



If the PDF file contains several data sheets, the changed data will be summarized per data sheet.

The displayed data may be filtered. In a filter cell, enter a letter or a character string to be filtered by in the respective column. Please note that this entry is case-sensitive.

In the example, only data of devices with the character string "TT" in their names is to be displayed.



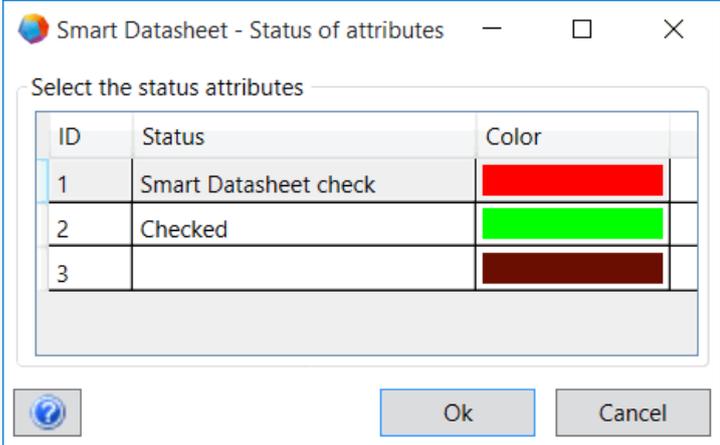
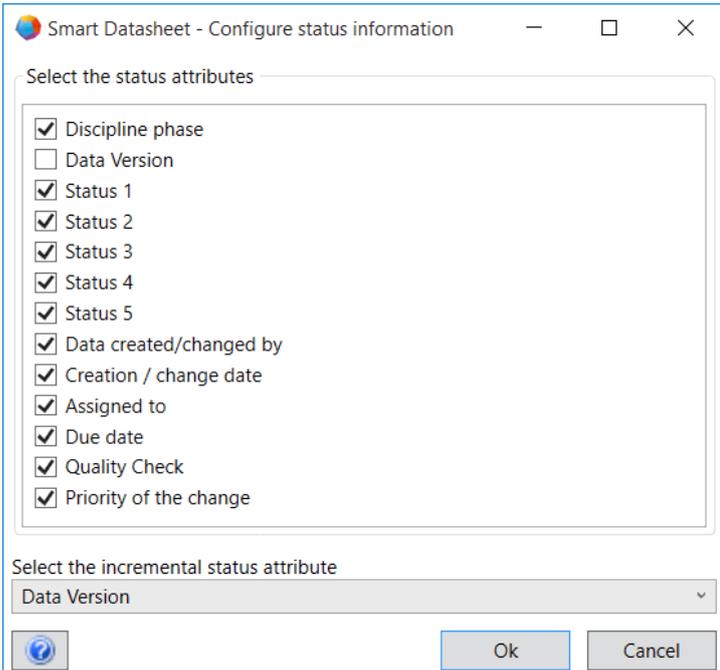
5. Select the data to be imported.
6. Click **Ok** if you want to import the marked data displayed in the preview.
 A message indicating that the import was completed successfully will then be displayed.
 The dialog **Smart Datasheet** is closed.

Buttons

Button	Meaning
Options	The dialog Smart Datasheet - Options is opened and the import options may be edited.
Apply	The marked data will be imported into the project taking into account the selected options. This allows for a stepwise import of the changed data from the preview. After the import, a message will be displayed. The dialog Smart Datasheet remains opened.
Ok	The marked data will be imported into the project taking into account the selected options. After the import, a message will be displayed. The dialog Smart Datasheet is closed.
Cancel	Terminates the assistant Smart Datasheet without importing any data.

4.1 Import Options

Import Option	checked	Meaning
Show preview before import	<input type="checkbox"/>	After clicking Apply or Ok , all changed data of the selected PDF file(s) will be imported direct into the project. Faulty data will not be imported.
	<input checked="" type="checkbox"/>	In the preview, only the data that was changed compared to the project will be displayed. Faulty data will be highlighted in red and may not be imported. If the PDF file contains several data sheets, the changed data will be summarized per data sheet. Starting from the preview, the data may be imported stepwise via Apply during the import. The preview will be empty if no data were changed in the PDF files.
Update material from the catalog	<input checked="" type="checkbox"/>	If the material number of an object is changed by the data import, the object data will be updated with the respective catalog data after the import. If an error occurs during the update, an error message will be displayed and an error message will be stored in the Messages folder Smart Datasheet .
Set attributes Read-Only	<input checked="" type="checkbox"/>	For all attributes into which values will be imported, the property Read-Only will be activated after the data import.

<p>Set status of attributes (if enabled on project)</p>	<p><input checked="" type="checkbox"/></p>	<p>If attribute statuses are defined in the general project properties, you may define here which status is to be allocated to the imported values. The imported attribute values will then be displayed in the project with the respective color coding.</p> <ol style="list-style-type: none"> 1. Click Configure. The defined attribute statuses will be displayed.  <ol style="list-style-type: none"> 2. Click the row of the status you want to allocate. The selected status will be highlighted in light gray. 3. Click Ok to allocate the status. The selection of the attribute status will be saved in the assistant.
<p>Ask for status information before import</p>	<p><input checked="" type="checkbox"/></p>	<p>On importing data, status information may be created for changed data sets which will then be stored at the changed objects in the Status Information tab.</p> <ol style="list-style-type: none"> 1. Click Configure to open the Smart Datasheet - Configure Status Information dialog. 

2. Select the status attributes of your choice.
3. Select the incremental status attribute.
The value of this attribute will be incremented with each import. The attribute selected here must not be checked in the above-mentioned list.
4. Click **Ok** to confirm the selection of the status attributes.

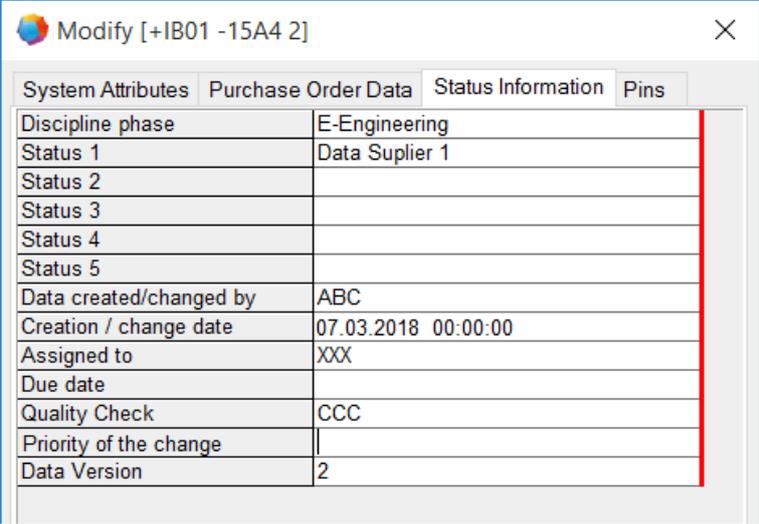
If the tab **Status Information** or the status attributes at the changed object are not available, they will be created.

Once the import is started, the dialog **Smart Datasheet - Status information** will be opened.

Attribute name	Attribute value
Discipline phase	E-Engineering
Status 1	Data Suplier 1
Status 2	
Status 3	
Status 4	
Status 5	
Data created/changed by	ABC
Creation / change date	07.03.2018
Assigned to	
Due date	
Quality Check	CCC
Priority of the change	

Enter the attribute values of your choice.
Clicking **Ok** starts the import.

At the changed objects, these entered values will be saved.



System Attributes		Purchase Order Data	Status Information	Pins
Discipline phase	E-Engineering			
Status 1	Data Suplier 1			
Status 2				
Status 3				
Status 4				
Status 5				
Data created/changed by	ABC			
Creation / change date	07.03.2018 00:00:00			
Assigned to	XXX			
Due date				
Quality Check	CCC			
Priority of the change				
Data Version	2			



The status attributes (Discipline phase, Status 2, etc.) will be emptied if the object is copied within the project or between projects cross-project!