



User Guide: Alarm and Events Configurator

Document Version 1.0

CONTENT

1	PURPOSE OF THE AECONFIGURATOR	4
2	MAIN WINDOW	5
2.1	Menu Bar	6
2.2	Switch between Configure and Connect Alarms	6
2.3	Alarm List	7
2.4	Editor Area	7
2.4.1	Digital Alarm	8
2.4.2	Limit Alarm	9
2.5	Language	9
2.6	Symbols from OPC	9
2.7	Connected Alarm Items	10
2.8	Alarm Definitions	10
3	FUNCTION OVERVIEW	12
3.1	File	12
3.1.1	'New'	12
3.1.2	'Open'	12
3.1.3	'Save'	12
3.1.4	'Save As...'	12
3.1.5	'Close'	12
3.1.6	'Exit'	12
3.2	Edit	12
3.2.1	'Append alarm -> limit'	12
3.2.2	'Append alarm -> digital'	12
3.2.3	'Remove'	12
3.2.4	'Duplicate Alarm(s)'	13
3.2.5	'Add Connected Symbol'	13
3.2.6	'Remove Connected Symbol'	13
3.3	Add Language	13
4	PLAUSIBILITY	14
4.1	Limit Alarm	14
4.1.1	Severity	14
4.1.2	Limits	14
4.1.3	Update in Ms	14
4.2	Digital Alarm	14
4.2.1	Update in Ms	14
4.2.2	Severity	14

4.3	Unique Alarm Names	15
4.4	Connected Alarm Items	15
4.5	Messages	15
5	STRUCTURE OF THE SETTINGS FILE	16
	CHANGE HISTORY	18

1 Purpose of the AeConfigurator

AeConfigurator signifies “Alarm and Events Configurator”. The AeConfigurator can be used by developers to create alarms. It is possible to generate digital- and limit alarms and link them with particular symbols from the OPC-Server. The OPCDA-Interface of the server offers a possibility to browse these items.

The AeConfigurator can save the currently defined alarms to an initializing file (ini-file). Further more the linked symbols and the messages which can be issued are stored in the file.

After a correct configuration the AeConfigurator can create ini-files which can be loaded to the OPC-Server. For that purpose the file has to be saved with the name “OPCServerA.ini” and this file must lie within the OPC Server folder.

2 Main Window

After the first start-up the AeConfigurator appears in its initial state. The main window consists of two main views, “Configure alarms” and “Connect alarms with symbols”. The areas of these views are numbered in the two figures below (Fig. 1 AeConfigurator after Start-up, Fig. 2 Connect Alarms) and are described in the following.

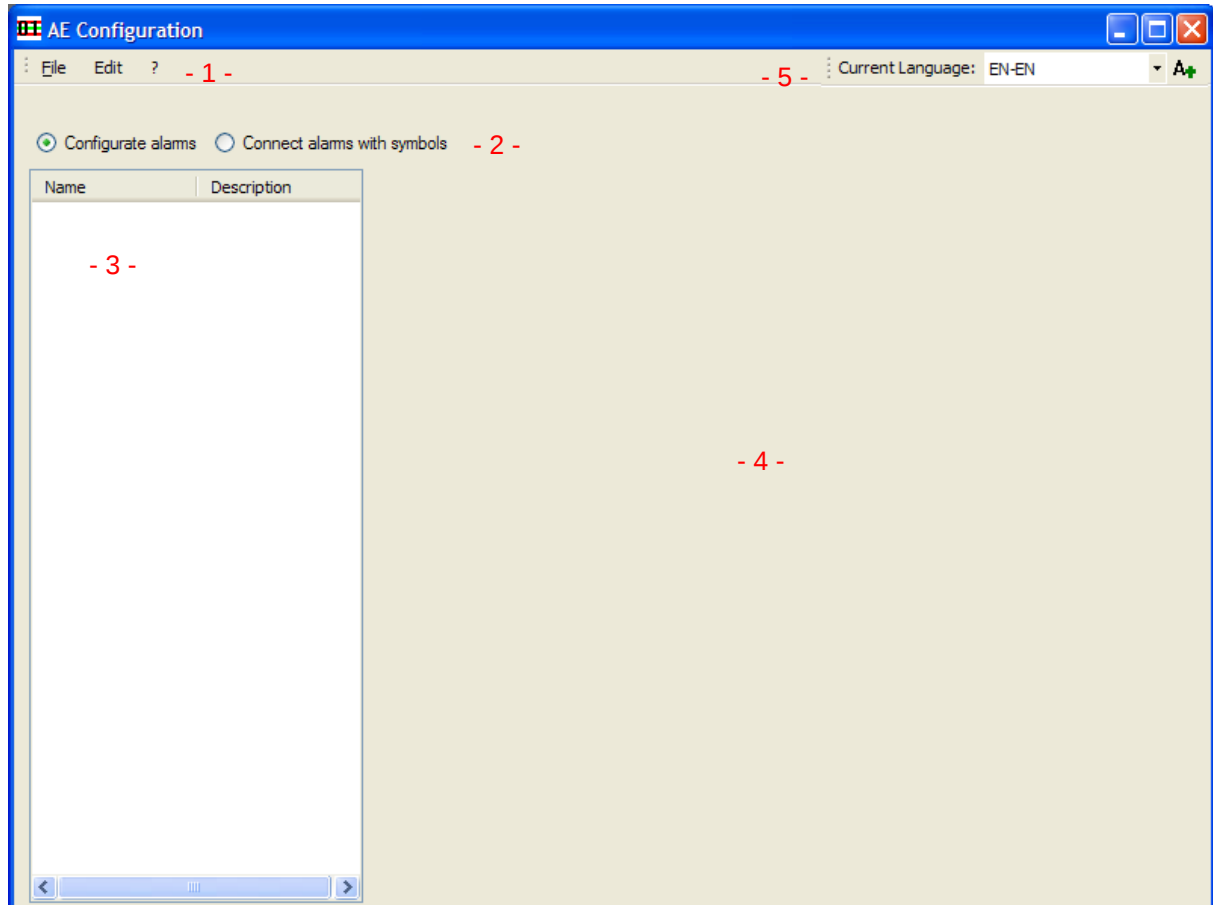


Fig. 1 AeConfigurator after start-up

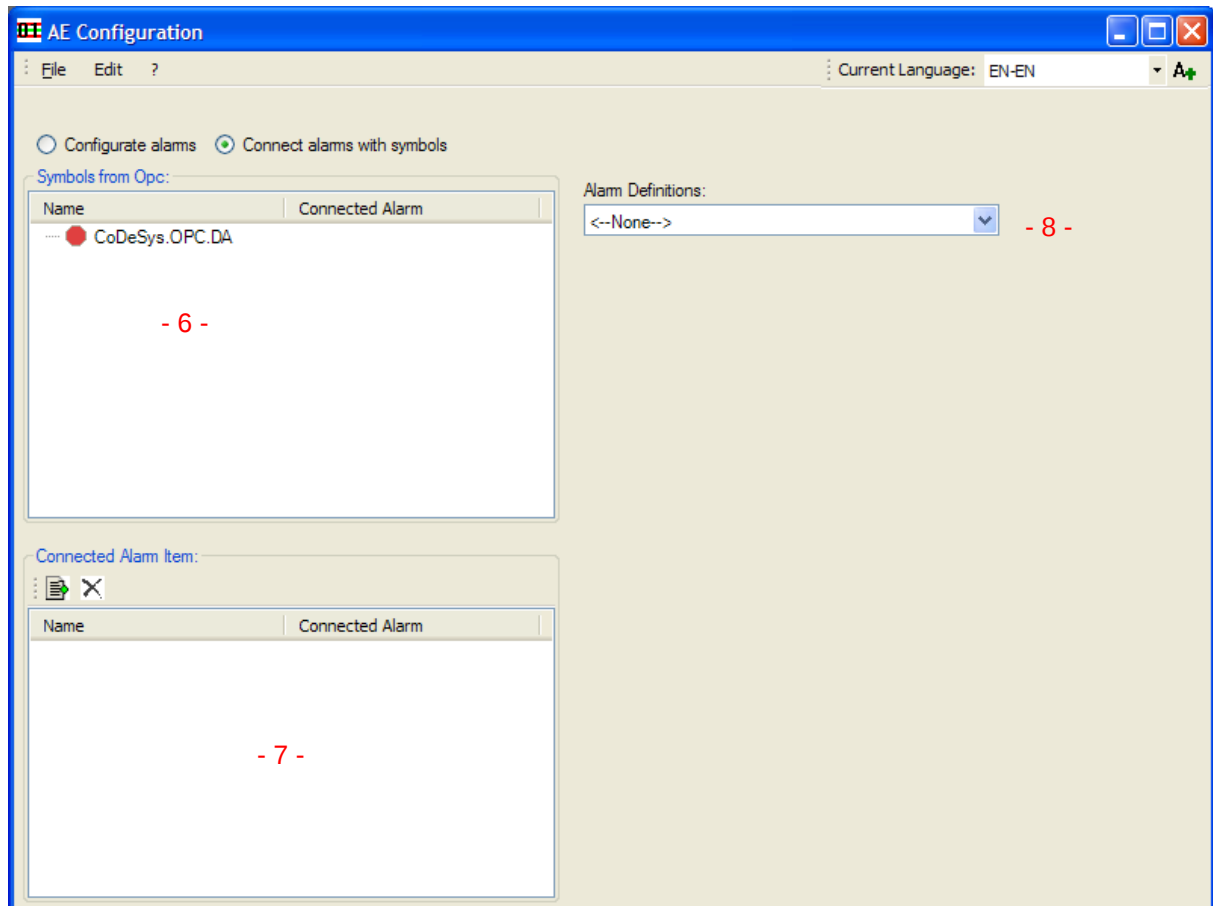


Fig. 1 Connect Alarms

2.1 Menu Bar

The menu bar (- 1 -) contains commands for creating, loading and saving files ("File"). In addition there are commands to add and remove alarms ("Edit").

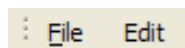


Fig. 2 Menu Bar

2.2 Switch between Configure and Connect Alarms

Switching between the two main views configuring and connecting alarms (- 2 -).

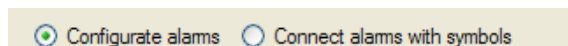


Fig. 3 Switch between Configure and Connect Alarms

2.3 Alarm List

All created alarms are displayed in the alarm list (- 3 -). There are two kinds of alarms, digital and limit. The name of the selected alarm can be defined in column "Name" after a mouse-click on the cell. To add or remove alarms set focus to the list below and use the context menu or go over main menu "Edit".

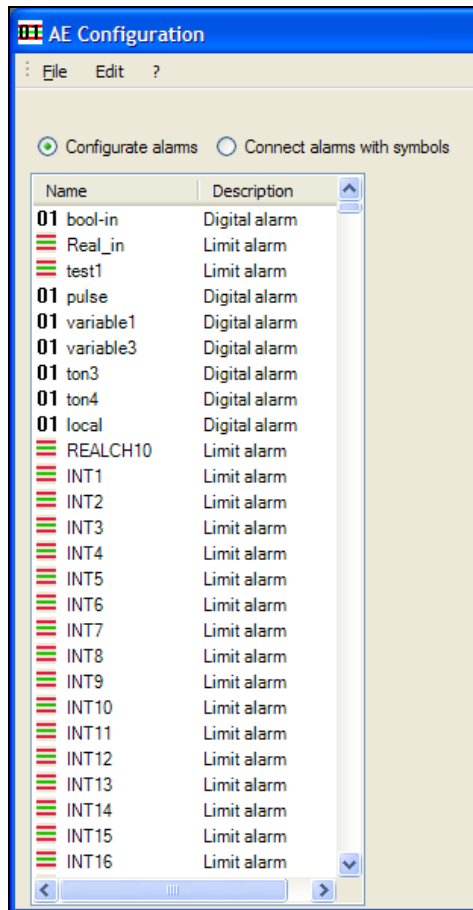


Fig. 4 Alarm list

2.4 Editor Area

Which editor is shown in editor area (- 4 -) depends on which alarm (digital or limit) is selected in the alarm list.

To enable textediting like languages and alarmnames click space bar, or execute an slowly double-click.

2.4.1 Digital Alarm

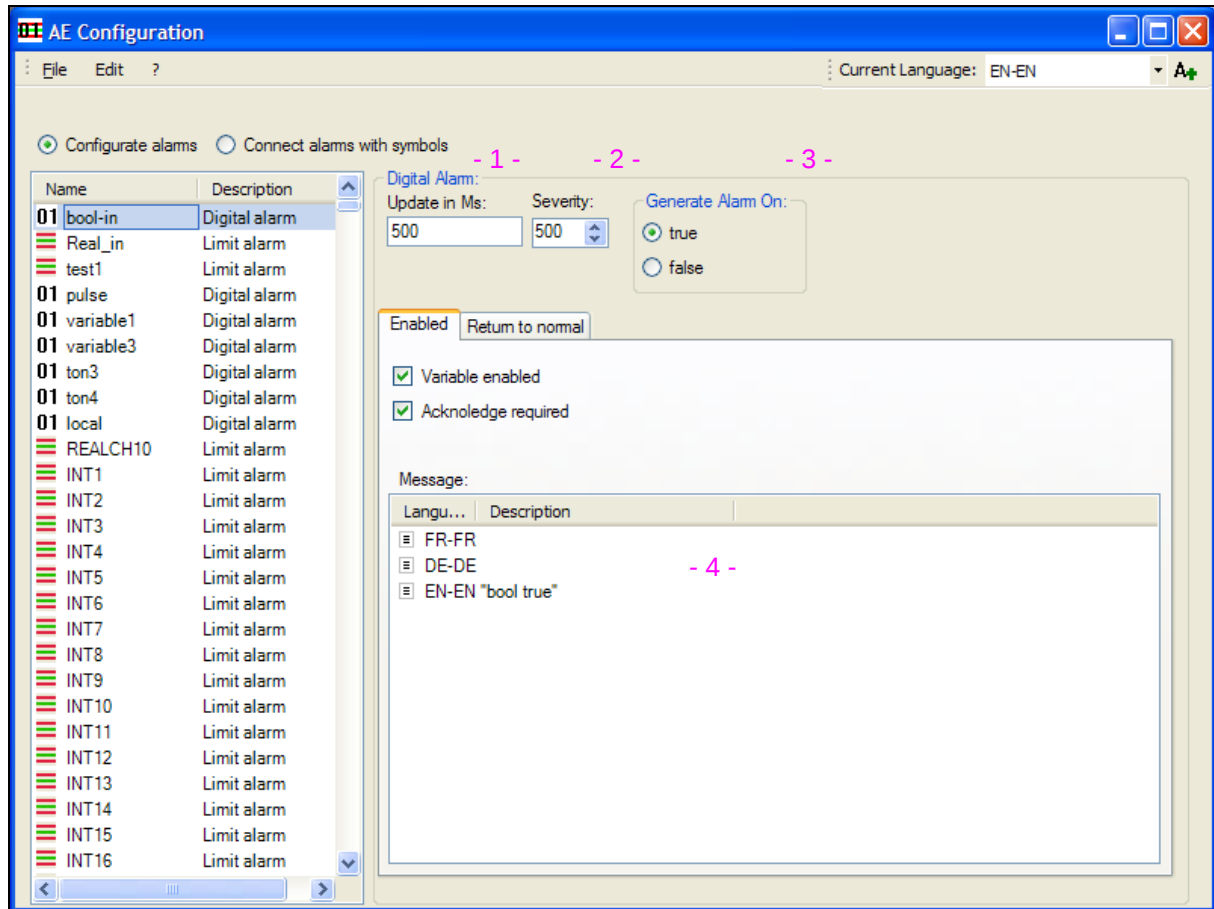


Fig. 5 Digital Editor

There are several settings in the digital editor. "Update MS" defines in which period of time the alarm is updated (- 1 -). The severity can be set from 1 to 1000 (- 2 -). Moreover it is possible to determine if the alarm is activated in case of "true" or "false" (- 3 -).

In the message view (- 4 -) all available languages are listed. These texts will be issued depending on which language is set.

2.4.2 Limit Alarm

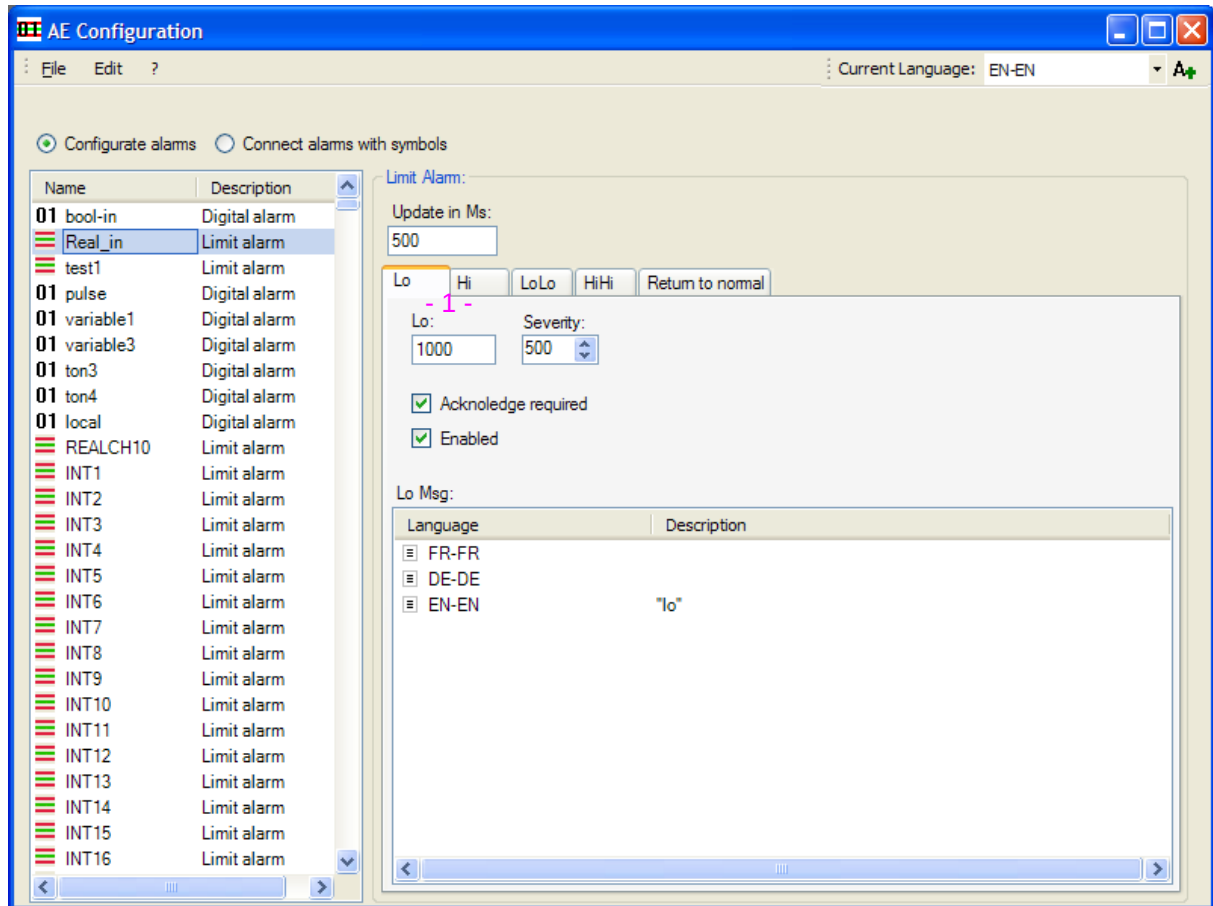


Fig. 6 Limit Editor

Additionally to time period and severity the lower respectively higher limits (- 1 -) can be entered.

2.5 Language

The language to be set can be selected in the combo box "Current Language" (- 5 -). In order to add a new language, press the button on the right side. This button is only available if defined in Settings.ini (see Structure of the Settings File).

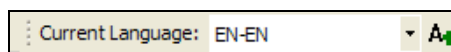


Fig. 7 Languages

2.6 Symbols from OPC

The list "symbols from Opc" shows all symbols available in the local OPC-Server. These symbols may be linked with defined alarms by selecting those from combo box "Alarm Definitions". To connect to the OPC-Server, select entry "CoDeSys.OPC.DA", press the right mouse button and select "Connect". If there is a suitable OPC-Server, the symbols will be shown in the list (see for example in Fig 8. Symbols from Opc).

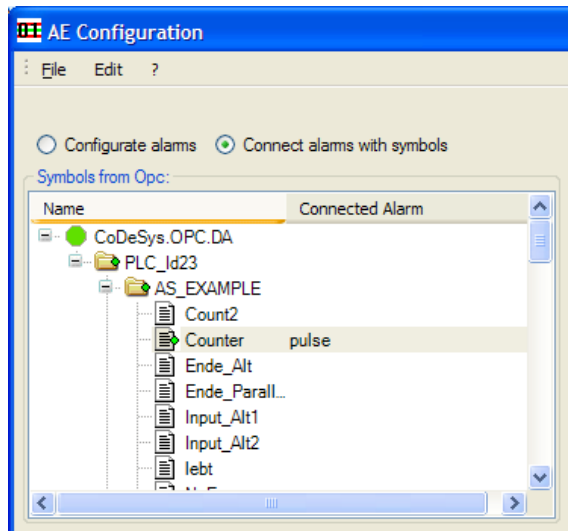


Fig. 8 Symbols from Opc

2.7 Connected Alarm Items

In this view (Fig. 9) alarms may be linked without being connected to the server. This is particularly useful if no server is available. In column "Name" find the whole name of the symbol to connect and in "Connected Alarm" the name of the alarm currently mapped on the symbol. An alarm to be connected can be chosen from the combo box "Alarm Definitions" (Fig. 10) In order to add a new one use the



button. To delete an entry use

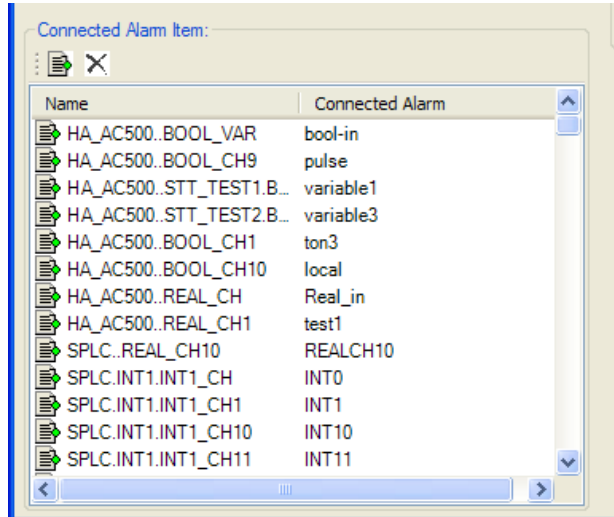


Fig. 9 Connected Alarm Items

2.8 Alarm Definitions

The alarms which have been defined before, are listed in combo box "Alarm Definitions". To link a symbol with an alarm select a symbol in "Symbol from Opc:" or "Connected Alarm Items" and choose an alarm from this combo box. The linked symbol and the parent folders will be marked with a green dot.

Below the combo box the settings of the alarm are shown.

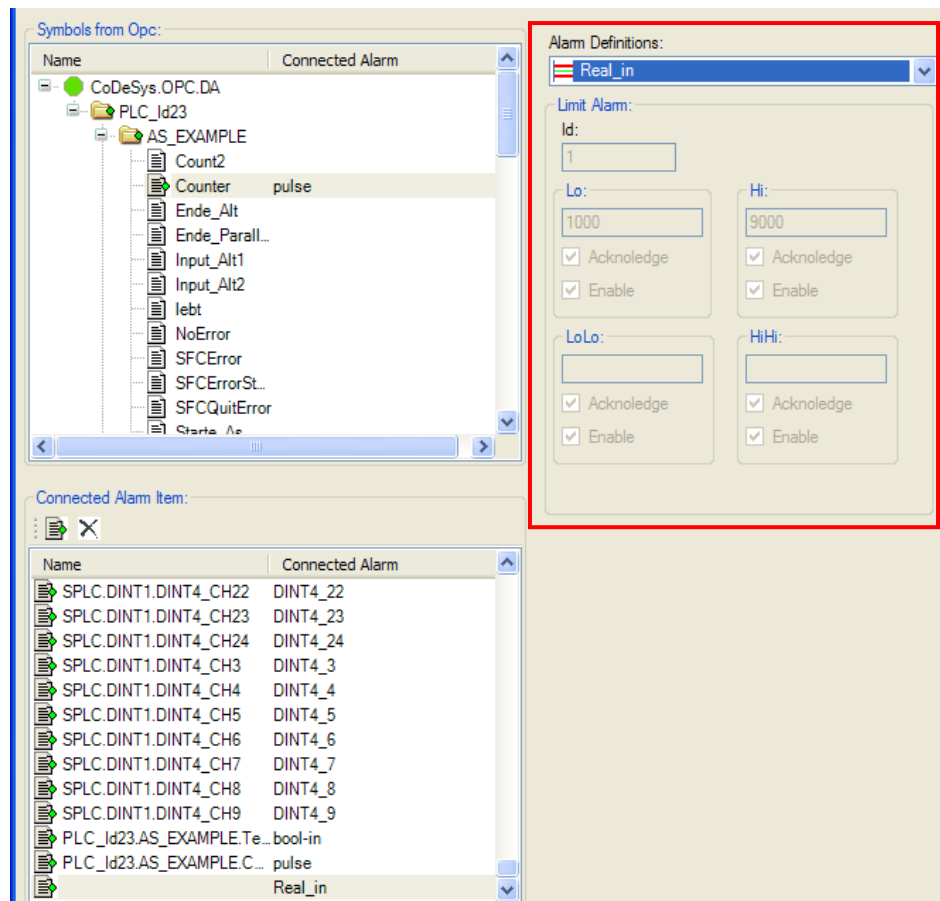


Fig. 10 Alarm Definitions

3 Function Overview

3.1 File

3.1.1 'New'

This command creates a new ini-file. The file name will be assigned on the first saving.

3.1.2 'Open'

This command opens an existing ini-file. The dialog for opening a file will appear, where you can select the desired ini-file with extension „*.ini“.

3.1.3 'Save'

This command saves the file with the file name which is displayed in the title bar.
If the current file name is “(Unnamed)*“, you must specify another name (see 3.5 'Save As...'). The extension for an ini-file is „*.ini“.

3.1.4 'Save As...'

This command saves the current file in another ini-file. If an already existing file gets saved in this way to a new file, the original file will not be modified.

After having selected the command, the dialog for saving a file will open. Either choose an existing file name or enter a new one. The file name will get the extension „.ini“. If you have chosen the name of an already existing file, after having pressed button „Save“ you will get asked whether you want to overwrite this existing file.

3.1.5 'Close'

This command closes the current file.

If the file has been modified but not yet saved, you will be asked whether the file should be saved or not. If the file is still “Unnamed”, you will be asked to define a name (see 3.5 'Save As...').

3.1.6 'Exit'

This command terminates the AeConfigurator.

If the file has been modified but not yet saved, you will be asked whether the modified file should be saved or not. If the file is still “Unnamed”, you will be asked to define a name (see 3.5 'Save As...').

3.2 Edit

3.2.1 'Append alarm -> limit'

Add a limit alarm to the ini-file.

3.2.2 'Append alarm -> digital'

Add a digital alarm to the ini-file.

3.2.3 'Remove'

Remove the selected alarm from the ini-file.

3.2.4 'Duplicate Alarm(s)'

Duplicates the selected alarm(s).

3.2.5 'Add Connected Symbol'

Adds an connected symbol to the connected alarm items list.

3.2.6 'Remove Connected Symbol'

Removes an connected symbol from the connected symbols list.

3.3 Add Language

Adds a language to the configuration This command can be switched on or off in Settings.ini.

4 Plausibility

To check the ini-file configuration click on the check-button in menu bar . Below is an message view (Fig. 11) which displays the current errors respectively warnings.

Error List		
Description	Name	Typ
✖ Limits not valid.	lo	Limit Alarm
⚠ Lo message for current language (EN-EN) is not set.	lo	Limit Alarm
⚠ Hi message for current language (EN-EN) is not set.	lo	Limit Alarm
⚠ There is already an alm with name lo.	lo	Limit Alarm
⚠ There is already an alm with name lo.	lo	Limit Alarm

Fig. 11 Message View

In order to jump to the error or warning in the configuration double-click on the corresponding entry in the message view.

4.1 Limit Alarm

4.1.1 Severity

The severity can have a value from 1 to 1000. It is not possible to set a value which is outside of these limits. In case of setting a severity out of this limits the value will automatically be set to its lower limit respectively higher limit.

4.1.2 Limits

It will be proved whether the borders of the limits are valid (Table 1).

	LoLo	Lo	Hi	HiHi
LoLo	-	<	<	<
Lo	>	-	<	<
Hi	>	>	-	<
HiHi	>	>	>	-

Table 1 Limits

On inconsistency an error is added to the message view.

4.1.3 Update in Ms

The value set in "Update in Ms" must be positive. It isn't possible to enter a negative one

4.2 Digital Alarm

4.2.1 Update in Ms

The value set in "Update in Ms" must be positive. It isn't possible to set a negative one.

4.2.2 Severity

The severity can have a value from 1 to 1000. It is not possible to set a value which is outside of these limits. In case of setting a severity out of this limits the value will automatically be set to its lower limit respectively higher limit

4.3 Unique Alarm Names

Within the check it is also proved whether the names of all alarm are unique. If there are redundant alarm names a warning will be posted to the message view.

4.4 Connected Alarm Items

A warning will be added to the message view if a symbol is linked more than once to one alarm.

4.5 Messages

Each alarm will be investigated if its messages are properly set. If the section of the alarm is enabled (e.g. for limit alarms Lo, LoLo, Hi, HiHi or / and "Return to normal") and the message for the "Current Language" is not set for this section a warning is posted to the message view.

5 Structure of the Settings File

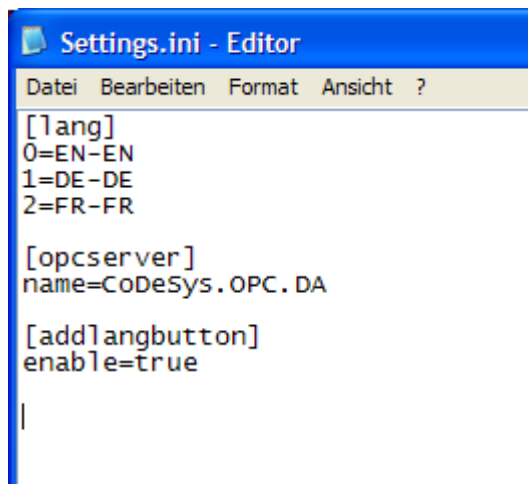


Fig. 12 Settings.ini

[lang]

Defined languages, important for alarm messages.

[opcserver]

The name of the OPC-Server to browse.

[addlangbutton]

Describes if the "Add Language Button" is available in the AeConfigurator.

Bibliography

Change History

Version	Description	Editor	Date
0.1	Issued	JK	02.03.2009
0.2	Some spelling and formal rework	MN	02.06.2009
0.3	Extensions on chapter 4 Plausibility	JK	17.06.2009
0.4	Content review	FH	22.06.2009
0.5	Correction of review	JK	22.06.2009
0.6	Reviewed (ok)	FH	22.06.2009
1.0	Release	JK	23.06.2009