



**zenon**  
by COPA-DATA

# zenon manual

## Categorization

v.8.20



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# 1 Welcome to COPA-DATA help

## ZENON VIDEO TUTORIALS

You can find practical examples for project configuration with zenon in our YouTube channel ([https://www.copadata.com/tutorial\\_menu](https://www.copadata.com/tutorial_menu)). The tutorials are grouped according to topics and give an initial insight into working with different zenon modules. All tutorials are available in English.

## GENERAL HELP

If you cannot find any information you require in this help chapter or can think of anything that you would like added, please send an email to [documentation@copadata.com](mailto:documentation@copadata.com).

## PROJECT SUPPORT

You can receive support for any real project you may have from our customer service team, which you can contact via email at [support@copadata.com](mailto:support@copadata.com).

## LICENSES AND MODULES

If you find that you need other modules or licenses, our staff will be happy to help you. Email [sales@copadata.com](mailto:sales@copadata.com).

# 2 Categorization

Categories make it possible to filter CEL entries for certain events in the Runtime. To do this, categories are created in the local project and/or global project in the zenon Editor.

Every entry possible in the CEL can be linked to one or more categories. These categories can be used to filter the entries. For instance, for a screen switch, an export or in faceplates. The CEL provides a separate column for the categories in the Runtime. Thus, the CEL can be filtered by categories. When creating a project, the appropriate CEL entries and all module categories are created and linked automatically.

Categories are available in local projects and in the global project.

#### To filter the CEL according to categories:

1. Define categories (on page 6) in the zenon Editor.
2. Assign CEL entries to the categories (on page 10).
3. Activate the display of the **Category** column in the **column settings** (on page 50) tab in the screen switching.
4. Configure the categories that are available in the CEL when switching screen to the CEL in the **Categories** (on page 47) tab.
5. Filter the CEL in the Runtime (on page 52) using the **Category** column.

## DISPLAY OF CEL ENTRIES

Only CEL entries for licensed zenon modules are displayed. Also, if the **Windows CE project** property is activated, only CEL entries that can be used in Windows CE are shown.

## DISTRIBUTED ENGINEERING

In the **distributed engineering** project configuration mode, the areas **Categories** and/or **CEL entries** are always checked in or checked out in full. Individual modules of the **CEL entries** cannot be checked out separately.

## 3 Difference between local project and global project

Categories can be created in the local project and in the global project. Categories from a local project can only be used in the respective local project. Categories from the global project can be linked with CEL entries in all local projects of the workspace.

#### Available actions.

Object	Local project	Global project
<b>Categories</b>	<ul style="list-style-type: none"> <li>▶ Create and administer categories.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Create and administer categories</li> </ul>
<b>CEL entries</b>	<ul style="list-style-type: none"> <li>▶ Show existing pre-defined entries.</li> <li>▶ Create custom entries.</li> <li>▶ Link entries to categories from the local project or the global project.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Not present</li> </ul>

## BEHAVIOR WITH THE SAME CATEGORIES

Categories must each be unique within the project. All categories of the local project are used when the Runtime files are created. They are supplemented with the categories of the global project that have an ID that is not used in the local project. If there are categories in the local project with the same ID as in the global project, the Runtime uses the categories from the local project. If there are names the same, all categories with the same name are shown in the Runtime as long as their IDs are different.

**Tip:** Ensure that you have unique names. You can thus identify categories clearly in the Runtime at any time. To do this, use unique prefixes or suffixes.

To avoid conflicts, ensure that different IDs are used in all projects when configuring. To do this, it is best to create a separate group of numbers for each project.

### For example:

- ▶ Global project: Categories start with ID 1
- ▶ Local project 1: Categories start with ID 1000
- ▶ Local project 2: Categories start with ID 10000

## 4 Configuration in the Editor

Categories for the CEL are created, administered and linked to CEL entries in the editor.

Possible actions in the Editor:

- ▶ Management of the categories (on page 6).
- ▶ Linking of categories to CEL entries (on page 10).
- ▶ Creation of custom CEL entries (on page 42).
- ▶ Configuration of screen switching with approval of categories for the CEL and activation of the column in which the categories are displayed.
- ▶ XML export and XML import (on page 45) of categories and CEL entries.

### CONTEXT MENU

Symbol/Entry	Description
Help	Opens online help.

## DISTRIBUTED ENGINEERING

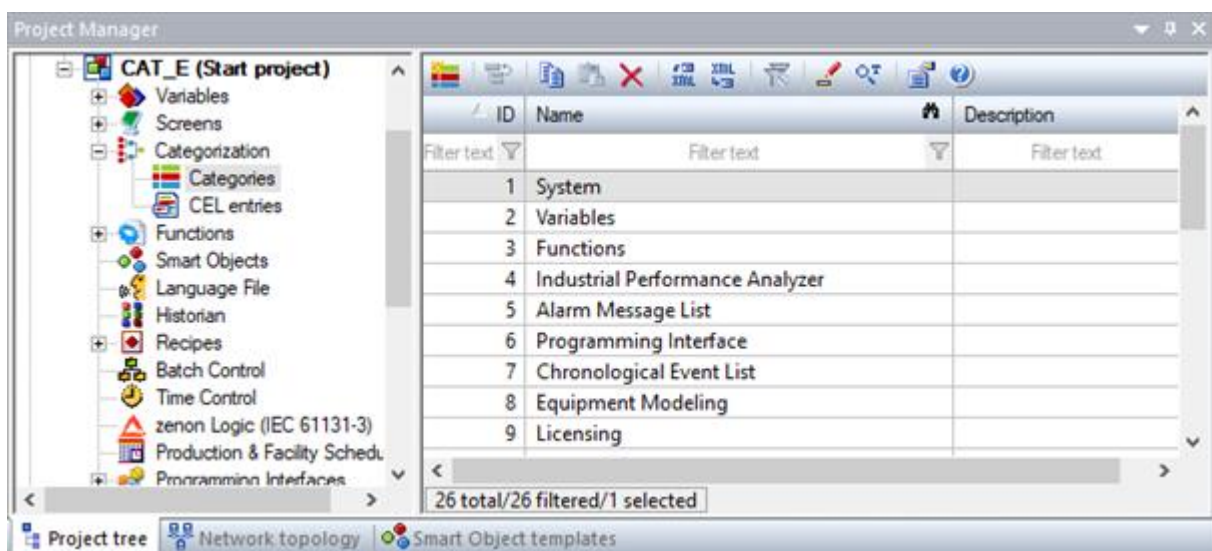
With **distributed engineering**, the areas Categories and CEL entries are separated with **check out** and blocked for editing by other users. This is always applicable for all objects in the respective area. Editing by other users is unlocked again with **check in**.

### 4.1 Categories

You create and manage the categories that are to be linked to CEL entries in the **Categories** area.

When creating a project, a standard category is automatically created for each module zenon. These categories are linked to the corresponding CEL entries (on page 10). These pre-defined categories can be edited and supplemented with individually-created categories.

Categories are shown in the list in the detail view. They can be edited via their properties and in the list directly. Triple-click on the cell to edit entries in the list directly.



Column	Description
ID	<p>ID of the category. Entry of a number between 1 and 4294967295.</p> <p>Criteria:</p> <ul style="list-style-type: none"> <li>▶ Must not be empty.</li> <li>▶ Must be unique within the project.</li> </ul> <p>Default: <i>Highest previously-used ID + 1</i></p>
Name	<p>Name of the category. Free text input.</p> <p>Criteria:</p>

Column	Description
	<ul style="list-style-type: none"> <li>▶ Must not be empty.</li> <li>▶ Must be unique within the project.</li> </ul> <p>Default: <b>Category n</b>.  <b>n</b> serves as a placeholder for consecutive numbering. It is always the lowest free number that is used.</p>
<b>Description</b>	Optional description of the category.

## CREATE CATEGORIES

### To create a new category:

1. Select the New category entry in the context menu or click on the symbol in the toolbar.  
A new category is created.  
It contains the next free **ID** and the names **Category n**.
2. Amend the **Id** and **Name** if required.
3. You can also enter an optional **Description** for the category.

## EDIT CATEGORIES

### To edit a category:

1. Highlight the category.
2. Edit the desired properties.

**Note:** You can also select and edit several categories together.

In doing so, please note: The properties **Id** and **Name** must be unique for each category in the project.

## COPY AND ADD CATEGORIES

### To copy and add categories:

1. Select the desired source categories.
2. Select **Copy** in the context menu or in the tool bar. The key combinations **Ctrl+C** and **Strg+V** can also be used.  
The selected objects are copied to the clipboard.
3. Select **Paste**  
The copied objects are added to the list as new categories.

**In doing so, the following applies:**



- ▶ Each category that has been added contains a unique **Id**.
- ▶ Each category that has been inserted gets the name of its source category with the prefix **copy n of**.  
**n** serves as a placeholder for consecutive numbering. It is always the lowest free number that is used.

## DELETE CATEGORIES

To delete a category:

1. Highlight the category.
2. Select **Delete** in the context menu or in the toolbar
3. Click on **Yes** when asked to confirm.

The category is deleted.

**Note:** You can also select and delete several categories together.

### 4.1.1 Context menu and toolbar

Categories can be edited and administered using the tool bar and context menus.

#### TREE VIEW

Symbol/Entry	Description
New category	Creates a new category and issues the next free <b>Id</b> .
Export all as XML	Exports all entries as an XML file.
Import XML	Imports entries from an XML file.
Editor profile	Opens the drop-down list with predefined editor profiles.
Help	Opens online help.

#### DETAIL VIEW

The following are available in the tool bar and the context menu for the administration of the categories:



Symbol/Entry	Description
<b>New category</b>	Creates a new category and issues the next free <b>Id</b> .
<b>Jump back to starting element</b>	<p>Jumps back to the initial position in the zenon Editor.</p> <p><b>Note:</b> Only available in the context menu if a jump to the current position has been made from another position with the <b>Linked elements</b> context menu entry.</p>
<b>Copy</b>	Copies the selected entries to the clipboard.
<b>Paste</b>	Pastes the content from the clipboard. If an entry with the same name already exists, the content is pasted as " <b>Copy of...</b> ".
<b>Delete</b>	Deletes selected entries after a confirmation from list.
<b>Export selected as XML</b>	Exports all selected entries as an XML file.
<b>Import XML</b>	Imports entries from an XML file.
<b>Remove all filters</b>	<p>Removes all filter settings.</p> <p><b>Note:</b> Only active if the current view is filtered.</p>
<b>Edit selected cell</b>	Opens the selected cell for editing. The binocular symbol in the header shows which cell has been selected in a highlighted line. Only cells that can be edited can be selected.
<b>Replace text in selected column</b>	Opens the dialog to search and replace texts for the selected column.
<b>Properties</b>	Opens the <b>Properties</b> window.
<b>Help</b>	Opens online help.

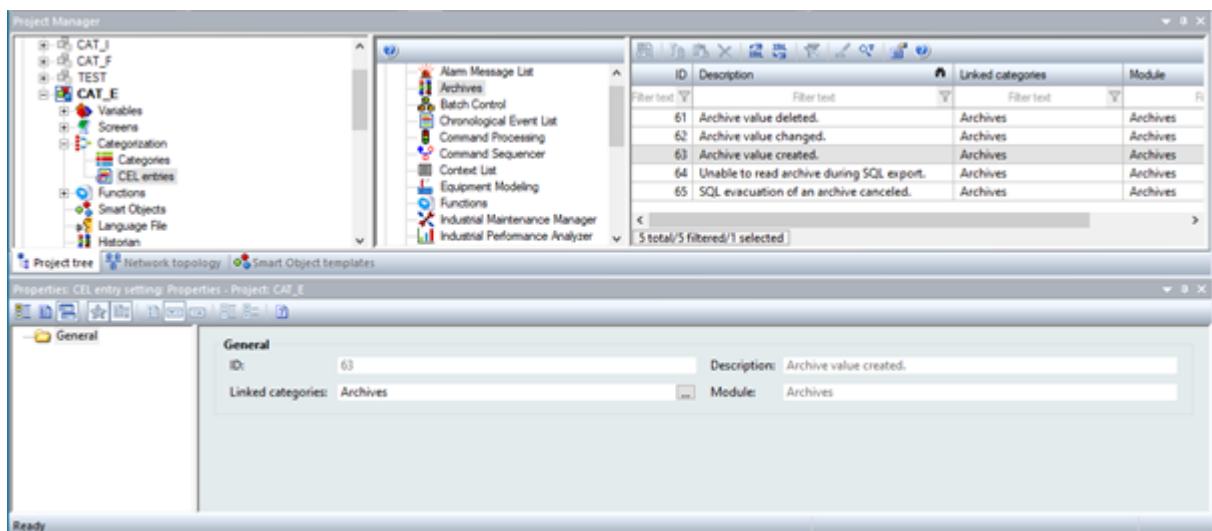
## 4.2 CEL entries in the local project

You link CEL entries to categories from the local project or the global project in the **CEL entries** area. You can also create and link your own custom CEL entries (on page 42). These are for use by the API.

## ⚠ Attention

Only CEL entries for modules that have a valid license are offered.

If the **Windows CE project** property has been activated, only CEL entries that are used with Windows CE are offered.



### Option

#### Module tree view

### Description

Lists all licensed zenon modules (on page 14) and allows the creation of custom entries. CEL entries can be selected here and linked to categories. Multiple selection is possible.

Tree view:

- ▶ **All modules:** Lists all available CEL entries available in zenon in the module detail view.
- ▶ **Dedicated module:** Lists all CEL entries available for the selected module.
- ▶ **User defined:** Enables the creation of individual entries and lists them. They are not listed in **All Modules**.

The list is displayed by default and sorted by **ID**.

Option	Description
<b>Module detail view</b>	<p>Lists all CEL entries available for the selected module. They can be selected here and linked to categories.</p> <p>Multiple selection is possible.</p> <ul style="list-style-type: none"> <li>▶ <b>ID:</b> ID of the CEL entry. Is assigned by the system. Display only.</li> <li>▶ <b>Description:</b> Description of the selected entry. Is assigned by the system. Display only.</li> <li>▶ <b>Linked categories:</b> Display of the categories linked to the entry. Editing is possible using the <b>Linked Categories</b> property.</li> <li>▶ <b>Module:</b> Shows the module that belongs to the entry. Display only, no changes possible. <b>Hint:</b> Helpful for module assignment if <b>all modules</b> have been selected in the tree.</li> </ul> <p><b>Note:</b> The <b>System has been started</b> entry is automatically linked to the <i>System</i> category.</p>
<b>Properties window</b>	<p>Displays the properties of a selected entry:</p> <ul style="list-style-type: none"> <li>▶ <b>ID:</b> ID of the CEL entry. Is assigned by the system. Display only. <b>Exception:</b> The ID can be freely assigned for user-defined entries. It must be between 10000 and 4294967295.</li> <li>▶ <b>Description:</b> Description of the selected entry. Is assigned by the system. Display only. <b>Exception:</b> The description can be freely issued for user-defined entries.</li> <li>▶ <b>Linked categories:</b> Categories linked to the entry. Clicking on the ... button opens the dialog to select categories (on page 43).</li> <li>▶ <b>Module:</b> Shows the module that belongs to the entry. Display only, no changes possible.</li> </ul>

## 4.2.1 Context menus and toolbars

CEL entries can be administered using the tool bar and context menus.

### MODULE TREE VIEW

Symbol/Entry	Description
Editor profile	Opens the drop-down list with predefined editor profiles.
Help	Opens online help.

### MODULE DETAIL VIEW

The following are available in the tool bar and the context menu for the administration of CEL entries:



Symbol/Entry	Description
New entry	Creates a new CEL entry and issues a free <b>ID</b> and a default <b>Description</b> for it. They can be amended using the properties.  Only available for the <b>custom</b> group.
Copy	Copies the selected entries to the clipboard.  Only available for the <b>custom</b> group.
Paste	Pastes the content from the clipboard. If an entry with the same name already exists, the content is pasted as " <b>Copy of...</b> ".  Only available for the <b>custom</b> group.
Delete	Deletes selected entries after a confirmation from list.  Only available for the <b>custom</b> group.
Export selected as XML	Exports all selected entries as an XML file.
Import XML	Imports entries from an XML file.

Symbol/Entry	Description
<b>Remove all filters</b>	Removes all filter settings.  <b>Note:</b> Only active if the current view is filtered.
<b>Edit selected cell</b>	Opens the selected cell for editing. The binocular symbol in the header shows which cell has been selected in a highlighted line. Only cells that can be edited can be selected.  Only available for the <b>custom</b> group.
<b>Replace text in selected column</b>	Opens the dialog to search and replace texts for the selected column.  Replacement is only available for the <b>custom</b> group
<b>Properties</b>	Opens the <b>Properties</b> window.
<b>Help</b>	Opens online help.

## 4.2.2 All modules

Contains all CEL entries. The list can be filtered and sorted.  
default sorting: Ascending according to **ID**.

Only entries for modules for which there is a license are shown.

**Note:** The **System has been started** entry is automatically linked to the *System* category. It is not available for user actions.

ID	Description	Category/Module
1	Runtime started.	System
2	Runtime quit.	System
3	Limit value breached.	Variables
4	Function "Start program" executed.	Functions
5	SAP variables alarm.	Variables
6	Status change in command processing screen.	SICAM 230 Only available for SICAM 230.

ID	Description	Category/Module
7	IEC actions executed in SICAM gateway.	SICAM 230 Only available for SICAM 230.
8	Messages from command sequences.	SICAM 230 Only available for SICAM 230.
9	IPA database entry deleted.	Industrial Performance Analyzer
10	AML entry acknowledged.	Alarm Message List
11	AML entry deleted.	Alarm Message List
12	CEL entry created via API.	Programming Interface
13	Comment from an AML entry changed.	Alarm Message List
14	Comment from a CEL entry changed.	Chronological Event List
15	Cause from an AML entry assigned.	Alarm Message List
16	Timeout of operating authorization expired.	Equipment modeling
17	Operating authorization for equipment groups transferred to new computer.	Equipment modeling
18	License protection removed.	Licensing
19	Set to daylight saving time.	System
20	Set to standard time.	System
21	Project reloaded.	System
22	User login.	User administration
23	Temporary user login.	User administration
24	User password changed.	User administration
25	Wrong user password.	User administration
26	Wrong user login code.	User administration
27	Wrong user name at login.	User administration
28	Last wrong password entry.	User Administration
29	Last wrong user name entry.	User administration

ID	Description	Category/Module
30	New user created.	User administration
31	User name changed.	User administration
32	User type changed to Admin.	User administration
33	User type changed to User.	User administration
34	User type changed to Power User.	User administration
35	User Runtime profile changed.	User administration
36	User deleted.	User administration
37	User locked.	User administration
38	System locked.	User administration
39	User unlocked.	User administration
40	System unlocked.	User administration
41	Function authorizations changed.	User administration
42	User deactivated.	User administration
43	Login aborted: User has been deactivated.	User administration
44	Cached Active Directory login of user.	User administration
45	User activated.	User administration
46	Operating authorization changed.	User administration
47	User logged out.	User administration
48	Action signed by user.	User administration
49	Login attempt by deactivated user.	User administration
50	Missing permissions in Active Directory.	User administration
51	New user group created.	User Administration
52	User group name changed.	User administration
53	User group permissions changed.	User administration
54	User group deleted.	User administration
55	Group mapping for user changed.	User administration



ID	Description	Category/Module
56	Lock code for user changed.	User administration
57	User authenticated.	User administration
58	Login code for user changed.	User administration
59	Write set value succeeded.	Variables
60	Write set value failed.	Variables
61	Archive value deleted.	Archives
62	Archive value changed.	Archives
63	Archive value created.	Archives
64	Unable to read archive during SQL export.	Archives
65	SQL evacuation of an archive canceled.	Archives
66	Device created.	Industrial Maintenance Manager
67	Device deleted.	Industrial Maintenance Manager
68	Device set to inactive.	Industrial Maintenance Manager
69	Device replaced.	Industrial Maintenance Manager
70	Counter of device replaced.	Industrial Maintenance Manager
71	Equipment ID created.	Industrial Maintenance Manager
72	Equipment ID deleted.	Industrial Maintenance Manager
73	Device: Maintenance modified.	Industrial Maintenance Manager
74	Maintenance created.	Industrial Maintenance Manager
75	Maintenance modified.	Industrial Maintenance Manager
76	Maintenance deleted.	Industrial Maintenance Manager
77	Device: Maintenance done. Comment: '...'.	Industrial Maintenance Manager
78	Device: Repair carried out. Comment: '...'.	Industrial Maintenance Manager
79	Device: Master data edited.	Industrial Maintenance Manager
80	Device: Documents edited.	Industrial Maintenance Manager
81	Document added.	Industrial Maintenance Manager

ID	Description	Category/Module
82	Document deleted.	Industrial Maintenance Manager
83	Shift model created.	Shift management
84	Shift model modified.	Shift management
85	Shift model property "Name" modified.	Shift management
86	Shift model property "Description" modified.	Shift management
87	Shift model property "Valid weekdays" modified.	Shift management
88	Shift model deleted.	Shift management
89	"Execute recipe command or change mode" function executed.	Functions
90	New control recipe created via API.	Programming interface
91	New control recipe created via function.	Functions
92	Control recipe terminated.	Batch Control
93	Master recipe terminated.	Batch Control
94	Faulty control recipe terminated after reload.	Batch Control
95	Faulty master recipe terminated after reload.	Batch Control
96	Exited from recipe element.	Batch Control
97	User interaction in command sequences.	Command Sequencer
98	Recipe imported from XML file.	Batch Control
99	Unable to start the command sequence.	Command Sequencer
100	Recipe placeholder allocated.	Batch Control
101	Master recipe released.	Batch Control
102	Operation released.	Batch Control
103	Master recipe outdated.	Batch Control
104	"Execute recipe command or mode switch" function executed.	Functions
105	New version created for master recipe.	Batch Control
106	Master recipe deleted.	Batch Control

ID	Description	Category/Module
107	New master recipe created.	Batch Control
108	Master recipe configured.	Batch Control
109	Master recipe duplicated.	Batch Control
110	Operation duplicated.	Batch Control
111	Command sequence deleted.	Command Sequencer
112	New command sequence created.	Command Sequencer
113	Command sequence configured.	Command Sequencer
114	Command sequence duplicated.	Command Sequencer
115	New control recipe created.	Batch Control
116	Control recipe duplicated.	Batch Control
117	Control recipe deleted.	Batch Control
118	Control recipe configured via API.	Programming interface
119	Master recipe configured via API.	Programming interface
120	New control recipe created via API.	Programming interface
121	Control recipe configured.	Batch Control
122	New operation created.	Batch Control
123	Operation configured.	Batch Control
124	Control recipe started.	Batch Control
125	Operation deleted.	Batch Control
126	Condition in recipe element "Unit allocation" skipped.	Batch Control
127	Condition in recipe element "Phase" skipped.	Batch Control
128	Condition in recipe element "Transition" skipped.	Batch Control
129	Recipe command executed.	Batch Control
130	Phase command executed.	Batch Control
131	Phase modified via dialog.	Batch Control
132	Unit allocation skipped while executing a master	Batch Control

ID	Description	Category/Module
	recipe.	
133	Unit allocation skipped while executing a control recipe.	Batch Control
134	Transition skipped while executing a master recipe.	Batch Control
135	Transition skipped while executing a control recipe.	Batch Control
136	Phase condition skipped while executing a master recipe.	Batch Control
137	Phase condition skipped while executing a control recipe.	Batch Control
138	External command executed for master recipe.	Batch Control
139	External command executed for control recipe.	Batch Control
140	External command executed for phase while executing a master recipe.	Batch Control
141	External command executed for phase while executing a control recipe.	Batch Control
142	Manual jump during recipe execution.	Batch Control
143	Step executed during recipe execution.	Batch Control
144	Status reported at start of a master recipe.	Batch Control
145	Status reported at start of a control recipe.	Batch Control
146	Exited from phase while executing a master recipe.	Batch Control
147	Exited from phase while executing a control recipe.	Batch Control
148	Mode changed while executing a recipe.	Batch Control
149	TAG value of a phase changed.	Batch Control
150	Phase property changed.	Batch Control
151	Command of a phase reaction executed.	Batch Control
152	Recipe started from saved image.	Batch Control
153	Recipe restarted by Batch Control Recorder.	Batch Control
154	Recipe execution done.	Batch Control

ID	Description	Category/Module
155	Reaction of a phase executed.	Batch Control
156	TAG values of a phase written.	Batch Control
157	Recipe started.	Batch Control
158	Command sequence started.	Command Sequencer
159	Command sent do recipe element.	Batch Control
160	Command sent to command sequence element.	Command Sequencer
161	Execution mode of a batch recipe changed.	Batch Control
162	Execution mode of a command sequence changed.	Command Sequencer
163	Step started while executing a recipe.	Batch Control
164	Step started while executing a command sequence.	Command Sequencer
165	Command sequence imported from simulation image.	Command Sequencer
166	Command sequence canceled.	Command Sequencer
167	"Gas" functionality of the Load Management module is no longer available from version 7.60.	Load Management
168	Lock in Command Processing executed.	Command Processing
169	Command Processing released.	Command Processing
170	PFS schedule started.	Production & Facility Scheduler
171	Set value written in PFS.	Production & Facility Scheduler
172	Function executed in PFS.	Production & Facility Scheduler
173	PFS data updated.	Production & Facility Scheduler
174	User-defined event executed in PFS via function.	Functions
175	User-defined event executed in PFS via API.	Programming interface
176	Message Control message deleted manually.	Message Control
177	Sending attempt with deactivated Message Control.	Message Control
178	Message Control activated.	Message Control
179	Message Control deactivated.	Message Control

ID	Description	Category/Module
180	Send failed: Message Control recipient deleted.	Message Control
181	Confirmation from Message Control recipient not received.	Message Control
182	Substitute person for Message Control invalid.	Message Control
183	Message sent to substitute person in Message Control.	Message Control
184	Message sending in Message Control completed.	Message Control
185	No further recipient included in Message Control group.	Message Control
186	All recipients of Message Control group notified.	Message Control
187	Confirmation of Message Control recipient received.	Message Control
188	Message from Message Control recipient rejected.	Message Control
189	Message with invalid PIN code.	Message Control
190	Sending result in Message Control.	Message Control
191	Sending state of the alarm handling in Message Control.	Message Control
192	Missing user configuration for message sending.	Message Control
193	Unable to add attachment to message.	Message Control
194	Sending mode deactivated by user.	Message Control
195	Invalid recipient.	Message Control
196	SAP function called via API.	Programming interface
197	SAP server application called via API.	Programming interface
198	Creating a SAP maintenance message failed.	SAP Interface
199	Modification of a SAP maintenance message failed.	SAP Interface
200	Acquisition of measured values from an SAP schedule succeeded.	SAP Interface
201	Acquisition of measured values from an SAP schedule failed.	SAP Interface

ID	Description	Category/Module
202	Connection state of the SAP server.	SAP Interface
203	Connection to SAP server disconnected.	SAP Interface
204	Login state of the SAP server application.	SAP Interface
205	Logoff state of the SAP server application.	SAP Interface
206	Labeling of the SAP alarm.	SAP Interface
207	Loading of the SAP library canceled.	SAP Interface
208	File export started.	XML export/import
209	File import started.	XML export/import
210	Export for file '...' completed.	XML export/import
211	Import for file '...' completed.	XML export/import
212	XML export error.	XML export/import
213	XML import error	XML export/import
214	Export file already exists and will be overwritten.	XML export/import
215	New export file created.	XML export/import
216	Import failed: unknown XML file structure.	XML export/import
217	Recipe added to recipe group while importing.	XML export/import
218	Existing recipe not overwritten while importing into recipe group.	XML export/import
219	Existing recipe overwritten while importing into recipe group.	XML export/import
220	Import of recipe value failed.	XML export/import
221	Import of recipe value failed: Variable not present in recipe group.	XML export/import
222	Recipe value does not exist in the import file.	XML export/import
223	Variable imported into recipe group.	XML export/import
224	Operating mode of the computer changed when restarting the simulation.	Functions

ID	Description	Category/Module
225	Module Load Management canceled: license does not cover it.	Functions
226	Unable to print Report Viewer report: no connection to the printer.	Functions
227	Simulation activated.	Functions
228	Simulation deactivated.	Functions
229	Unavailable recipe state written.	Functions
230	System time written.	Functions
231	Importing Context List from XML file.	Context List
232	Changes in Context List saved.	Context List
233	Change in Context List applied.	Context List
234	Occurrence of a skipped action in interlockings	Interlockings
235	Occurrence of a blocked remote command	Interlockings
236	Additional entry to a main entry in interlockings	Interlockings
237	Notification of user status in interlockings	Interlockings
238	Blocking and unblocking of interlockings.	Interlockings
239	States changed in interlockings.	Interlockings
240	Server connection lost.	System
241	One computer has been upgraded to a server.	System
242	Operating authorization timeout in network.	System
243	Operating authorization transferred to a network client.	System
244	Client(s) in network failed.	System
245	Redundancy switch executed.	System
246	Network rating paused.	System
247	Network rating resumed.	System
248	Network client logged off.	System



ID	Description	Category/Module
249	Network client logged on.	System
250	Recipe write result.	Standard recipes
251	Value change due to recipe write.	Standard recipes
252	Missing user authorizations for recipe.	Standard recipes
253	Recipe read.	Standard recipes
254	Recipe value read.	Standard recipes
255	New recipe value added.	Standard recipes
256	Recipe value changed.	Standard recipes
257	Recipe value deleted.	Standard recipes
258	Recipe renamed.	Standard recipes
259	Recipe imported.	Standard recipes
260	Recipe value imported.	Standard recipes
261	Recipe overwritten.	Standard recipes
262	Recipe value overwritten.	Standard recipes
263	Recipe created.	Standard recipes
264	Recipe value created.	Standard recipes
265	Recipe deleted.	Standard recipes
266	Unknown recipe state written.	Recipegroup Manager
267	Recipe value changed.	Recipe Group Manager
268	Action type changed.	Recipe Group Manager
269	Recipe variable with signature changed.	Recipe Group Manager
270	Source variable changed.	Recipe Group Manager
271	Recipe number changed.	Recipe Group Manager
272	Recipe comment changed.	Recipe Group Manager
273	Recipe state changed.	Recipe Group Manager
274	New recipe value created.	Recipe Group Manager

ID	Description	Category/Module
275	Variable linked with recipe group.	Recipe Group Manager
276	New recipe in recipe group created.	Recipe Group Manager
277	New recipe group created.	Recipe Group Manager
278	Recipe read.	Recipe Group Manager
279	Recipe executed.	Recipe Group Manager
280	Recipe value written.	Recipe Group Manager
281	Recipe renamed.	Recipe Group Manager
282	Recipe group renamed.	Recipe Group Manager
283	Variable removed from recipe group.	Recipe Group Manager
284	Recipe removed.	Recipe Group Manager
285	Recipe group removed.	Recipe Group Manager
286	Invalid recipe values for execution.	Recipe Group Manager
287	Insufficient data of the action.	Recipe Group Manager
288	Recipe changed.	Recipe Group Manager
289	Login attempt by expired user.	User administration

### 4.2.2.1 System

CEL entries for system messages:

ID	Description
1	Runtime started.
2	Runtime quit.
19	Set to daylight saving time.
20	Set to standard time.
21	Project reloaded.
240	Server connection lost.

ID	Description
241	One computer has been upgraded to a server.
242	Operating authorization timeout in network
243	Operating authorization transferred to a network client.
244	Client(s) in network failed.
245	Redundancy switching executed.
246	Network rating paused.
247	Network rating resumed.
248	Network client logged off.
249	Network client logged on.

**Note:** The **System has been started** entry is automatically linked to the *System* category. It is not available for user actions.

#### 4.2.2.2 Variables

CEL entries for messages of variables:

ID	Description
3	Limit value breached.
5	SAP variables alarm.
59	Write set value succeeded.
60	Write set value failed.

#### 4.2.2.3 Functions

CEL entries for messages of functions.

ID	Description
4	Function "Start program" executed.
89	"Execute recipe command or mode switch" function executed.
91	New control recipe created via function.

ID	Description
104	"Execute recipe command or mode switch" function executed.
174	User-defined event executed in PFS via function.
224	Operating mode of the computer changed when restarting the simulation.
225	Module Load Management canceled: license does not cover it.
226	Unable to print Report Viewer report: no connection to the printer.
227	Simulation activated.
228	Simulation deactivated.
229	Unavailable recipe state written.
230	System time written.

#### 4.2.2.4 Industrial Performance Analyzer

CEL entries for **Industrial Performance Analyzer** messages.

ID	Description
9	IPA database entry deleted.

#### 4.2.2.5 Alarm Message List

CEL entries for alarm message list messages.

ID	Description
10	AML entry acknowledged.
11	AML entry deleted.
13	Comment of a AML entry changed.
15	Cause of an AML entry assigned.

### 4.2.2.6 Programming Interfaces

CEL entries for programming interface messages.

ID	Description
12	CEL entry created via API.
90	New control recipe created via API.
118	Control recipe configured via API.
119	Master recipe configured via API.
120	New control recipe created via API.
175	User-defined event executed in PFS via API.
196	SAP function called via API.
197	SAP server application called via API.

### 4.2.2.7 Chronological Event List

CEL entries for CEL messages.

ID	Description
14	Comment of a CEL entry changed.

### 4.2.2.8 Equipment Modeling

CEL entries for equipment modeling messages.

ID	Description
16	Timeout of operating authorization expired.
17	Operating authorization for equipment groups transferred to new computer.

### 4.2.2.9 Licensing

CEL entries for licensing messages.

ID	Description
18	License protection removed.

#### 4.2.2.10 User Administration

CEL entries for user administration messages.

ID	Description
22	User login.
23	Temporary user login.
24	User password changed.
25	Wrong user password.
26	Wrong user login code.
27	Wrong user name at login.
28	Last wrong password entry.
29	Last wrong user name entry.
30	New user created.
31	User name changed.
32	User type changed to Admin.
33	User type changed to User.
34	User type changed to Power User.
35	User Runtime profile changed.
36	User deleted.
37	User locked.
38	System locked.
39	User unlocked.
40	System unlocked.
41	Function authorizations changed.

ID	Description
42	User deactivated.
43	Login aborted: User has been deactivated.
44	Cached Active Directory login of user.
45	User activated.
46	Operating authorization changed.
47	User logged out.
48	Action signed by user.
49	Login attempt by deactivated user.
50	Missing permissions in Active Directory.
51	New user group created.
52	User group name changed.
53	User group permissions changed.
54	User group deleted.
55	Group mapping for user changed.
56	Lock code for user changed.
57	User authenticated.
58	Login code for user changed.
289	Login attempt by expired user.

#### 4.2.2.11 Archives

CEL entries for archive messages.

ID	Description
61	Archive value deleted.
62	Archive value changed.
63	Archive value created.

ID	Description
64	Unable to read archive during SQL export.
65	SQL evacuation of an archive canceled.

#### 4.2.2.12 Industrial Maintenance Manager

CEL entries for IPA messages.

ID	Description
66	Device created.
67	Device deleted.
68	Device set to inactive.
69	Device replaced.
70	Counter for device replaced.
71	Equipment ID created.
72	Equipment ID deleted.
73	Device: Maintenance modified.
74	Maintenance created.
75	Maintenance modified.
76	Maintenance deleted.
77	Device: Maintenance done. Comment: '...'.
78	Device: Repair carried out. Comment: '...'.
79	Device: Master data edited.
80	Device: Documents edited.
81	Document added.
82	Document deleted.



### 4.2.2.13 Shift Management

CEL entries for shift management messages.

ID	Description
83	Shift model created.
84	Shift model modified.
85	Shift model property "Name" modified.
86	Shift model property "Description" modified.
87	Shift model property "Valid weekdays" modified.
88	Shift model deleted.

### 4.2.2.14 Batch Control

CEL entries for batch control messages.

ID	Description
92	Control recipe terminated.
93	Master recipe terminated.
94	Faulty control recipe terminated after reload.
95	Faulty master recipe terminated after reload.
96	Exited from recipe element.
98	Recipe imported from XML file.
100	Recipe placeholder allocated.
101	Master recipe released.
102	Operation released.
103	Master recipe outdated.
104	"Execute recipe command or mode switch" function executed.
105	New version created for master recipe.
106	Master recipe deleted.

ID	Description
107	New master recipe created.
108	Master recipe configured.
109	Master recipe duplicated.
110	Operation duplicated.
115	New control recipe created.
116	Control recipe duplicated.
117	Control recipe deleted.
121	Control recipe configured.
122	New operation created.
123	Operation configured.
124	Control recipe started.
125	Operation deleted.
126	Condition in recipe element "Unit allocation" skipped.
127	Condition in recipe element "Phase" skipped.
128	Condition in recipe element "Transition" skipped.
129	Recipe command executed.
130	Phase command executed.
131	Phase modified via dialog.
132	Unit allocation skipped while executing a master recipe.
133	Unit allocation skipped while executing a control recipe.
134	Transition skipped while executing a master recipe.
135	Transition skipped while executing a control recipe.
136	Phase condition skipped while executing a master recipe.
137	Phase condition skipped while executing a control recipe.
138	External command executed for master recipe.
139	External command executed for control recipe.

ID	Description
140	External command executed for phase while executing a master recipe.
141	External command executed for phase while executing a control recipe.
142	Manual jump during recipe execution.
143	Step executed during recipe execution.
144	Status reported at start of a master recipe.
145	Status reported at start of a control recipe.
146	Exited from phase while executing a master recipe.
147	Exited from phase while executing a control recipe.
148	Mode changed while executing a recipe.
149	TAG value of a phase changed.
150	Phase property changed.
151	Command of a phase reaction executed.
152	Recipe started from saved image.
153	Recipe restarted by Batch Control Recorder.
154	Recipe execution done.
155	Reaction of a phase executed.
156	TAG values of a phase written.
157	Recipe started.
159	Command sent do recipe element.
161	Execution mode of a batch recipe changed.
163	Step started while executing a recipe.

**Note:** Further entries for batch control are also in the **Functions** (on page 27) and **Programming Interface** (on page 29) groups.

#### 4.2.2.15 Command Sequencer

CEL entries for command sequence messages.

ID	Description
97	User interaction in command sequences.
99	Unable to start the command sequence.
111	Command sequence deleted.
112	New command sequence created.
113	Command sequence configured.
114	Command sequence duplicated.
158	Command sequence started.
160	Command sent to command sequence element.
162	Execution mode of a command sequence changed.
164	Step started while executing a command sequence.
165	Command sequence imported from simulation image.
166	Command sequence canceled.

#### 4.2.2.16 Load Management

CEL entries for load management messages.

ID	Description
167	"Gas" functionality of the Load Management module is no longer available from version 7.60.

#### 4.2.2.17 Command Processing

CEL entries for command input messages.

ID	Description
168	Lock in Command Processing executed.
169	Command Processing released.

#### 4.2.2.18 SICAM 230 Command Processing

CEL entries for SICAM 230 command input messages.

**Attention:** Only available if SICAM 230 is licensed as a product.

ID	Description
6	Status change in command processing screen.
7	IEC actions executed in SICAM gateway.
8	Messages from command sequences.

#### 4.2.2.19 Production & Facility Scheduler

CEL entries for **Production & Facility Scheduler** messages.

ID	Description
170	PFS schedule started.
171	Set value written in PFS.
171	Function executed in PFS.
173	PFS data updated.

#### 4.2.2.20 Message Control

CEL entries for Message Control messages.

ID	Description
176	Message Control message deleted manually.
177	Sending attempt with deactivated Message Control.
178	Message Control activated.
179	Message Control deactivated.
180	Send failed: Message Control recipient deleted.
181	Confirmation from Message Control recipient not received.

ID	Description
182	Substitute person for Message Control invalid.
183	Message sent to substitute person in Message Control.
184	Message sending in Message Control completed.
185	No further recipient included in Message Control group.
186	All recipients of Message Control group notified.
187	Confirmation of Message Control recipient received.
188	Message from Message Control recipient rejected.
189	Message with invalid PIN code.
190	Sending result in Message Control.
191	Sending state of the alarm handling in Message Control.
192	Missing user configuration for message sending.
193	Unable to add attachment to message.
194	Sending mode deactivated by user.
195	Invalid recipient.

#### 4.2.2.21 SAP Interface

CEL entries for messages from the SAP interface.

ID	Description
198	Creating a SAP maintenance message failed.
199	Modification of a SAP maintenance message failed.
200	Acquiring measured values of a SAP schedule succeeded.
201	Acquisition of measured values from an SAP schedule failed.
202	Connection state of the SAP server.
203	Connection to SAP server disconnected.
204	Login state of the SAP server application.

ID	Description
205	Logoff state of the SAP server application.
206	Labeling of the SAP alarm.
207	Loading of the SAP library canceled.

#### 4.2.2.22 XML export/import

CEL entries for XML export/import messages.

ID	Description
208	File export started.
209	File import started.
210	Export for file '...' completed.
211	Import for file '...' completed.
212	XML export error.
213	XML import error
214	Export file already exists and will be overwritten.
215	New export file created.
216	Import failed: unknown XML file structure.
217	Recipe added to recipe group while importing.
218	Existing recipe not overwritten while importing into recipe group.
219	Existing recipe overwritten while importing into recipe group.
220	Import of recipe value failed.
221	Import of recipe value failed: Variable not present in recipe group.
222	Recipe value does not exist in the import file.
223	Variable imported into recipe group.

#### 4.2.2.23 Context List

CEL entries for context list messages.

ID	Description
231	Importing Context List from XML file.
232	Changes in Context List saved.
233	Change in Context List applied.

#### 4.2.2.24 Interlockings

CEL entries for interlocking messages.

ID	Description
234	Occurrence of a skipped action in interlockings
235	Occurrence of a blocked remote command
236	Additional entry to a main entry in interlockings
237	Notification of user status in interlockings
238	Blocking and unblocking of interlockings.
239	States changed in interlockings.

#### 4.2.2.25 Recipe Group Manager

CEL entries for Recipe Group Manager messages.

ID	Description
266	Unknown recipe state written.
267	Recipe value changed.
268	Action type changed.
269	Recipe variable with signature changed.
270	Source variable changed.



ID	Description
271	Recipe number changed.
272	Recipe comment changed.
273	Recipe state changed.
274	New recipe value created.
275	Variable linked with recipe group.
276	New recipe in recipe group created.
277	New recipe group created.
278	Recipe read.
279	Recipe executed.
280	Recipe value written.
281	Recipe renamed.
282	Recipe group renamed.
283	Variable removed from recipe group.
284	Recipe removed.
285	Recipe group removed.
286	Invalid recipe values for execution.
287	Insufficient data of the action.
288	Recipe changed.

#### 4.2.2.26 Standard Recipes

CEL entries for standard recipe messages

ID	Description
250	Recipe write result.
251	Value change due to recipe write.
252	Missing user authorizations for recipe.

ID	Description
253	Recipe read.
254	Recipe value read.
255	New recipe value added.
256	Recipe value changed.
257	Recipe value deleted.
258	Recipe renamed.
259	Recipe imported.
260	Recipe value imported.
261	Recipe overwritten.
262	Recipe value overwritten.
263	Recipe created.
264	Recipe value created.
265	Recipe deleted.

### 4.2.3 User-defined

The Custom area makes it possible to create your own CEL entries, to edit them and to link them to categories. It is thus possible to change settings and filter via the API entries.

#### CREATE CUSTOM CEL ENTRY

To create a CEL entry and to link it to a category:

1. Select **New entry** in the context menu or in the toolbar.
2. A new CEL entry is created.  
This contains the next-highest free **ID** and the name **Custom entry n**.  
**n** serves as a placeholder for consecutive numbering. It is always the lowest free number that is used.  
**Note:** The **ID** for a custom entry must be *10000* or higher.
3. Amend the **ID** property if necessary.
4. You can, optionally, issue a **Description** for the CEL entry.

5. Link the CEL entry to a category using the **Linked categories** property.

**Note:** If there is an entry with the highest possible ID 4294967295, no new entry can be created. This is also applicable if lower IDs are free.

## EDIT CUSTOM CEL ENTRY

Custom CEL entries differ from pre-provided CEL entries in that:

- ▶ They can be deleted.
- ▶ They can be edited using copy & paste.
- ▶ **ID** and **Description** can be changed.
- ▶ The **ID** must be 10000 or higher.
- ▶ When importing from an XML file, entries with the same **description** and different **ID** are transferred.

## COPY & PASTE

Entries can be created by means of copy & paste via the context menu or the toolbar. The key combinations **Ctrl+C** and **Strg+V** can also be used. A new unique **ID** is issued when inserting. Description and category linking are taken over from copied entry.

## 4.3 Link entries to categories

CEL entries can be linked to categories from the local project and the global project.

### To link a CEL entry to a category:

1. Select the CEL entry in the module detail view.
2. In the **Linked categories** property, click on the ... button.  
Or Click on the detail view **Linked categories** column.  
The dialog for selecting categories (on page 44) is opened.
3. Select one or more categories.
4. Close the dialog.

**Note:** Several CEL entries can be selected and linked together.

## DETACH LINKINGS

To detach an existing linking of a CEL entry to categories:

1. Open the **category selection** dialog.
2. Click on the **None** button.

All linkings are released.  
The dialog is closed.

CONFLICT MANAGEMENT

If categories from the local project and the global project have the same **Id**, the category from the global project cannot be linked. If the ID is subsequently changed in the global project and thus identical to the ID used in the local project, the category from the local project is used.

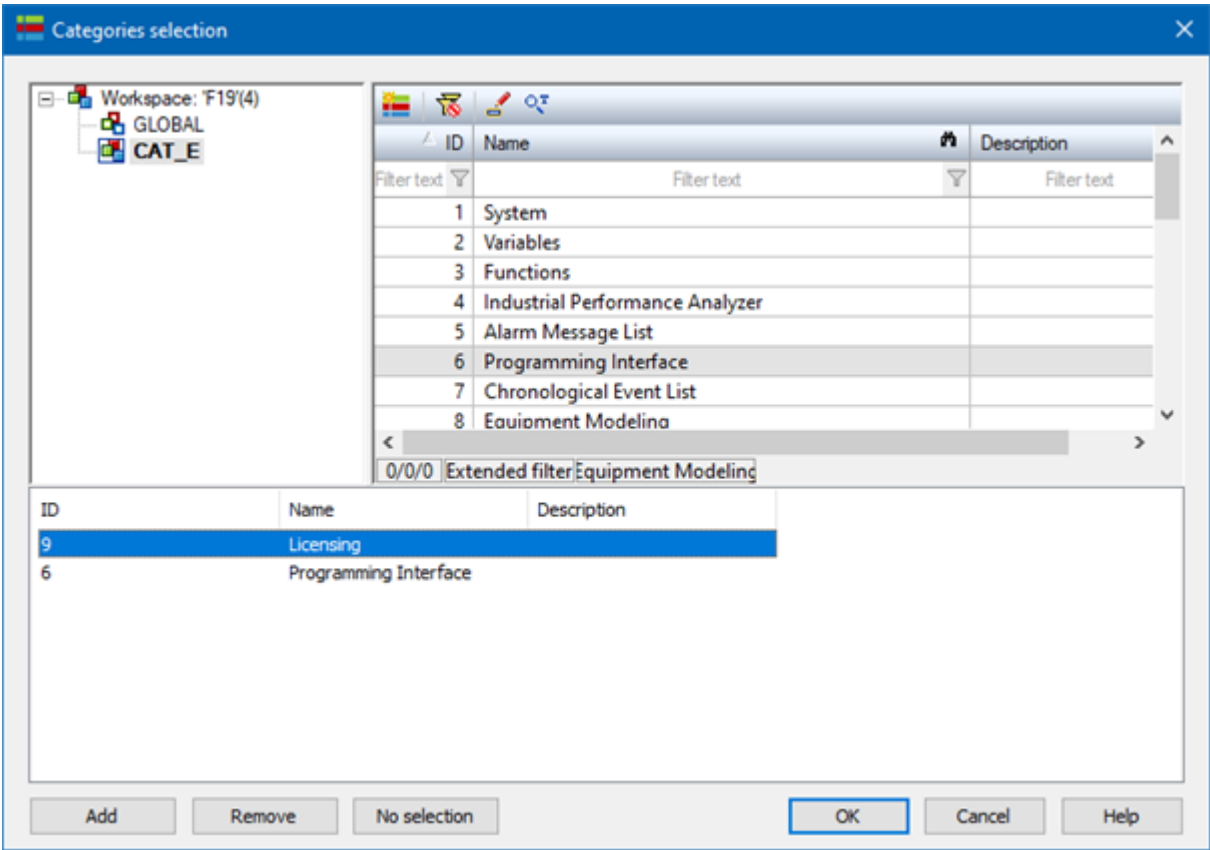
**Tip:** For each project, use a separate range of numbers for the **Id**.

If the same **Name** is issued for categories from the local project and from the global project, both categories are displayed in the Runtime.

**Hint:**When there are categories with the same names, ensure that the names become different by using prefixes.

4.3.1 Category selection

Categories are assigned to a CEL entry in this dialog.



Option	Description
Project tree	Selection of the project from which the categories are

Option	Description
	<p>to be linked.</p> <ul style="list-style-type: none"> <li>▶ Global project</li> <li>▶ Active local project</li> </ul>
List: <b>Linked categories</b>	<p>Display of all categories available in the project. Categories from the active local project and the global project can be added.</p> <p>Categories in the global project that have a <b>Id</b> that is the same as a category in the local project are not available.</p> <p>Adding of categories to the list of <b>selected categories</b>:</p> <ul style="list-style-type: none"> <li>▶ Click on the category and click on the <b>Add</b> button.</li> <li>▶ Or: Double-click on the category.</li> </ul> <p>Multiple selection is possible.</p>
List: <b>Selected categories</b>	Lists all categories that have already been selected.
<b>Add</b>	Adds categories that are highlighted in the list of <b>available categories</b> to the list of <b>selected categories</b> .
<b>Remove</b>	Removes the categories highlighted in the <b>Selected Categories</b> list from the list.
<b>None</b>	Removes categories that have already been assigned to the CEL entry and closes the dialog.
<b>OK</b>	Assigns the categories contained in the <b>selected categories list</b> to the CEL entry and closes the dialog.
<b>Cancel</b>	Discards all changes and closes the dialog.
<b>Help</b>	Opens online help.

## 4.4 XML: Export and import

Categories and CEL entries can be exported and imported by means of XML.

## XML EXPORT

### To export objects:

1. Select the desired entries.
2. Select **Export selection as XML** in the context menu or toolbar.  
There is a choice whether to also use the **Export all as XML** entry present in the **Categories** main node and in the module list of the **CEL entries**.  
The dialog to select the save location is opened.
3. Select the save location and enter a file name.
4. Click on **Save**.

The selected entries are saved in the XML file.

## XML IMPORT

### To import objects:

1. Select **Import XML...** in the context menu or in the toolbar.  
The dialog for selecting a file is opened.
2. Select the file to be imported.
3. Click on **Open**.

The entries are imported according to the import rules.

**Note:** When importing CEL entries, only the linked categories are transferred. **ID** and **Description** of the CEL entries are not changed.

**Exception:** Custom CEL entries are imported in full.

## IMPORT RULES

### The following is applicable for import:

- ▶ Entry not present: Entry will be added.
- ▶ Entry already present, **ID** and **name/description** correspond: Existing entry is overwritten.
- ▶ Entry already present, **ID** matches, **name/description** are different: Entry is imported.
- ▶ Entry already present, **ID** is different, **name/description** correspond: Entry is not imported.

**Exception:** With custom CEL entries, entries can have different **IDs** and the same **description**. These entries are therefore imported in this case.

## 5 Configuration in screen switching and functions

You configure the filtered display of categories in the Runtime in:

- ▶ Screen switch to a CEL screen.
- ▶ Screen switch to a CEL filter screen
- ▶ Screen switch to a faceplate with CEL or CEL Filter screen
- ▶ Function **Print AML or CEL**
- ▶ Function **Export CEL**

You need the following settings in the tabs for this:

- ▶ **Categories** (on page 47)
- ▶ **Column settings** (on page 50) (for screen switching only)

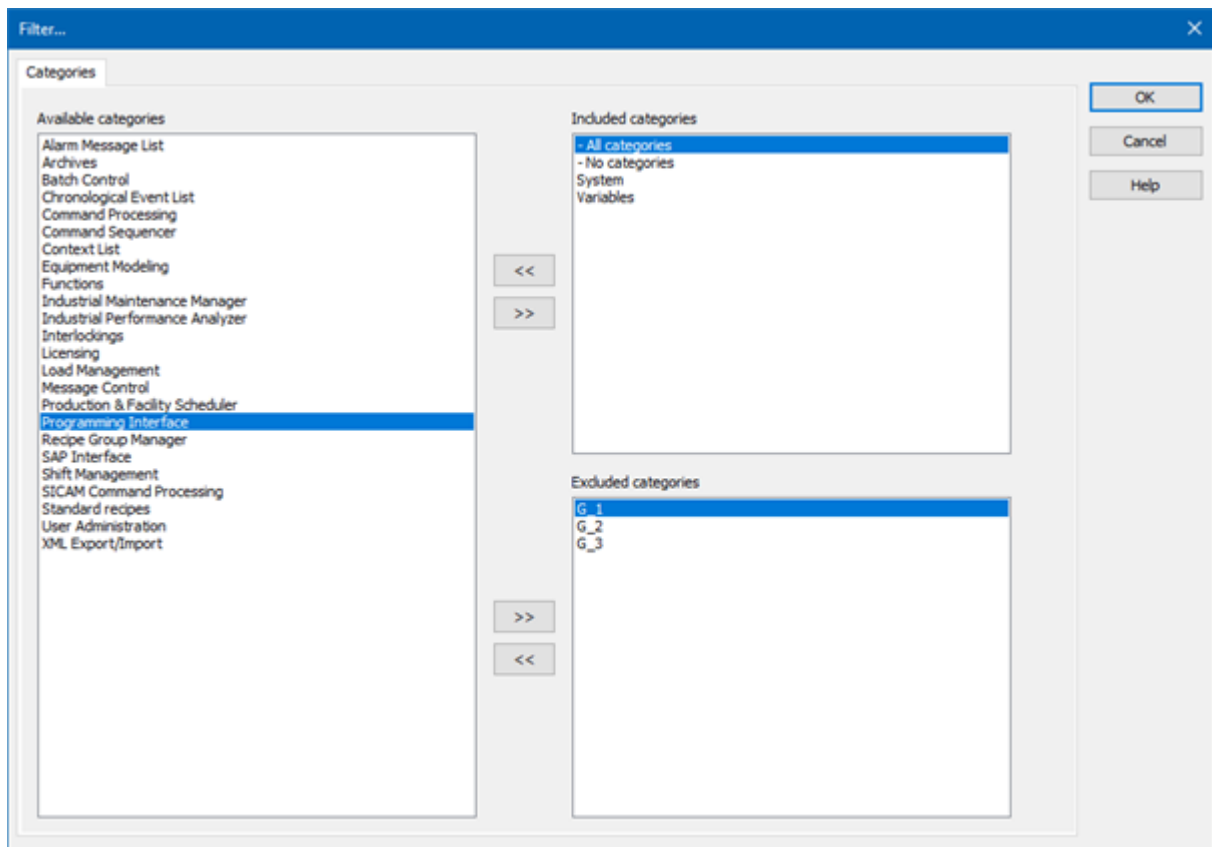
### 5.1 Categories

You configure categories in the editor in:

- ▶ Screen switch to *CEL* and *CEL Filter* screens
- ▶ Screen switch to faceplates with CEL or CEL filter screens
- ▶ The functions **Print AML or CEL** and **Export CEL**

These filters are applied in the Runtime. If the **Offer this dialog in the Runtime** option is offered, the respective filter can be reconfigured in the Runtime (on page 52).

## FILTER CATEGORIES DIALOG



Option	Description
<b>Linked categories</b>	Contains all categories that can be used for the filter.
<b>Included categories</b>	Contains all categories that are taken into account in the filter. They are linked with <b>or</b> .
<b>Excluded categories</b>	Contains all categories that are not taken into account in the filter. They are linked with <b>and not</b> .
<b>Arrow keys</b>	Move highlighted categories to the other respective list.
<b>OK</b>	Applies all changes in all tabs and closes the dialog.
<b>Cancel</b>	Discards all changes in all tabs and closes the dialog.
<b>Help</b>	Opens online help.



## CONFIGURING THE FILTER

To configure the filter:

1. Decide which categories are to be applied in the filter.
2. Move all categories that should be used in the list, **Included Categories**.
3. Move all categories that are explicitly not allowed to be used in the filter to the **Excluded Categories** list.  
This setting is handled with priority. Categories that are included here always lead to exclusion.  
For example: The **All Categories** entry is included in **Included Categories**. **Archives** is included in **Excluded Categories**. All entries that are linked to a category are shown in the Runtime. With the exception of entries that are linked with **Archive**.
4. Leave all categories that should not be used in the **Available Categories** list.

**Note:** You move categories by selecting the desired categories and moving them by clicking on the corresponding arrow key between the columns. Multiple selection via **Ctrl key+ click**.

### GENERAL ENTRIES: "ALL CATEGORIES" AND "NO CATEGORIES"

In addition to the defined categories, the filter offers the entries **All Categories** and **No Categories**.

- ▶ **All Categories:** CEL entries with as many categories as you want are displayed.  
This is shown with the character \* in the parameters of the detail view.
- ▶ **No categories:** CEL entries without a linked category are displayed.  
This is shown with the character X X in the parameters of the detail view.

#### Examples: Output in the Runtime

Included categories	Excluded categories	Result
<b>All categories</b> <b>No categories</b>		All entries are displayed.
<b>All categories</b>	<b>No categories</b>	Entries that are linked to a category are displayed.
<b>No categories</b>	<b>All categories</b>	Entries that are not linked to any category are displayed.
	<b>All categories</b> <b>No categories</b>	No entry is displayed.
<b>All categories</b> <b>No categories</b>	<b>A</b>	All entries are displayed. With the exception of entries that are linked to the <b>A</b> category.

Included categories	Excluded categories	Result
A	All categories	No entry is displayed.
	No categories	

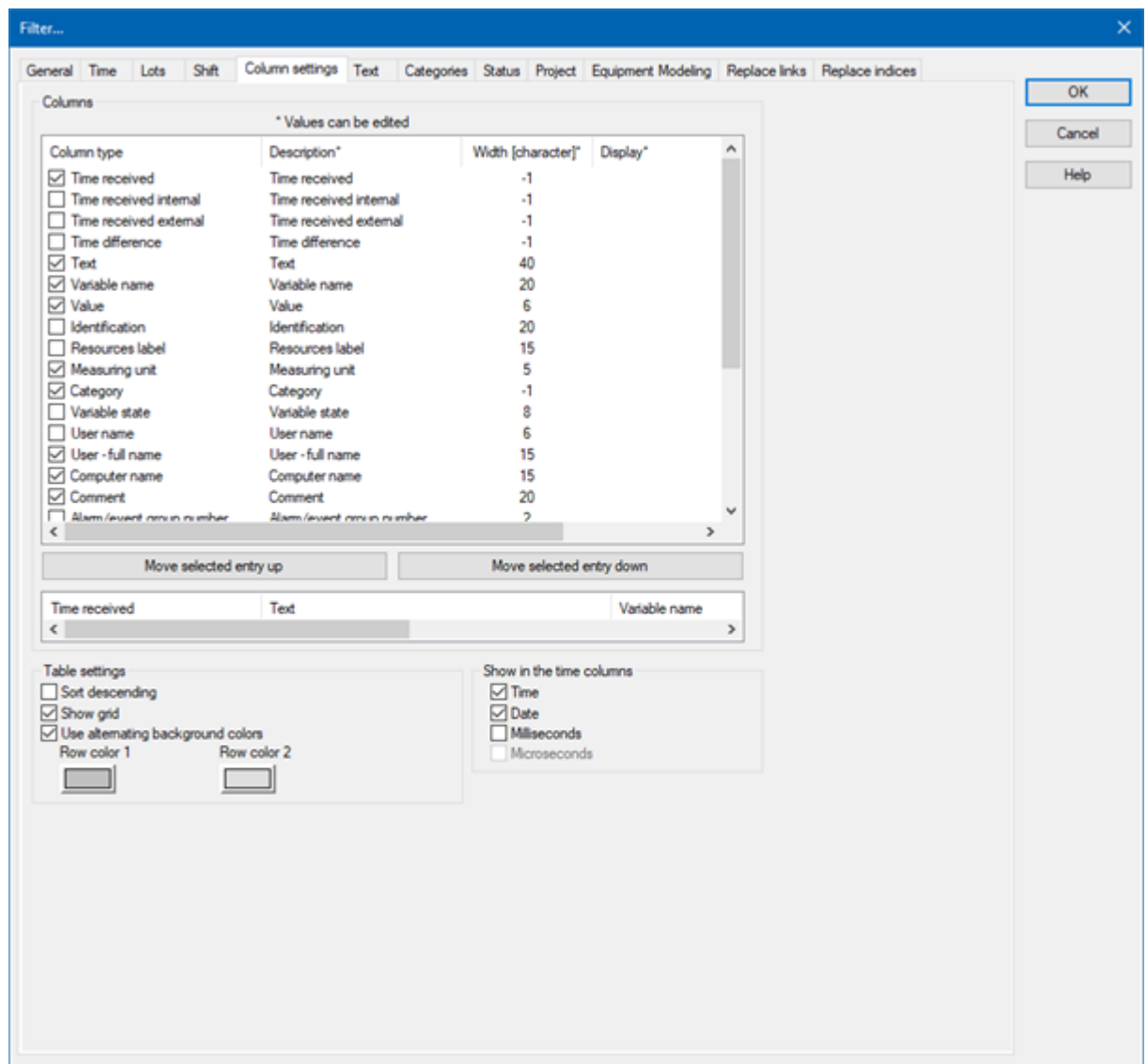
## 5.2 Column settings

In this dialog, you define which columns you have displayed, including the form, sequence and sorting.

To add categories:

1. Open screen switching to the screen.
2. Go to the **Categories** tab.

3. Tick the checkbox in front of the **Category** entry.



4. Position the entry at the desired location.

You can find details on this tab and this dialog in the **Chronological Event List** manual in the **Column Settings** chapter.

**Note:** All settings which you make in this tab are default settings for:

- ▶ Chronological event list screen
- ▶ Chronological event list filter screen
- ▶ Export to CSV, dBase or XML

### ⚠ Attention

The column width is given in characters and is dependent on the font used. The value -1 means that the width in the Runtime is calculated through the average character width.

If the column width is not a multiple of the character width of the used font, the actual column width can differ from the set column width. This can result in the text being cut of or an empty space being created.

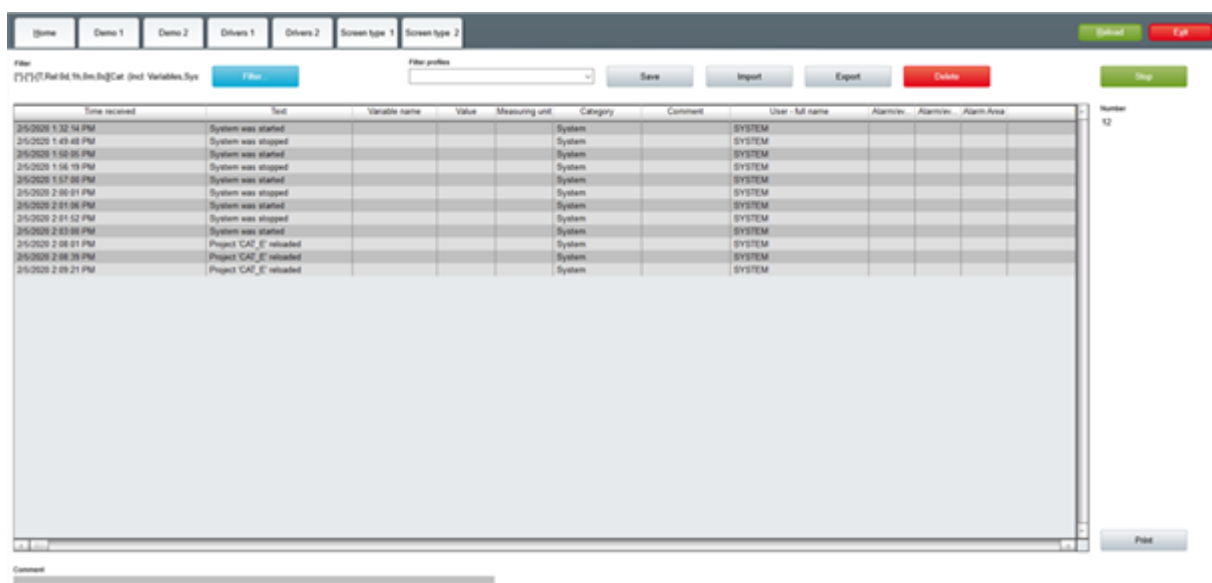
Solution: Use fonts with a fixed character width.

## 6 Usage in the Runtime

Categories can be applied in the Runtime to CEL screens and CEL filter screens, as well as faceplates with the corresponding containers.

### CEL

In the Runtime, the chronological event list is displayed according to the screen switch settings. If filters have been defined for categories, the display is reduced to the entries that correspond to the filter.

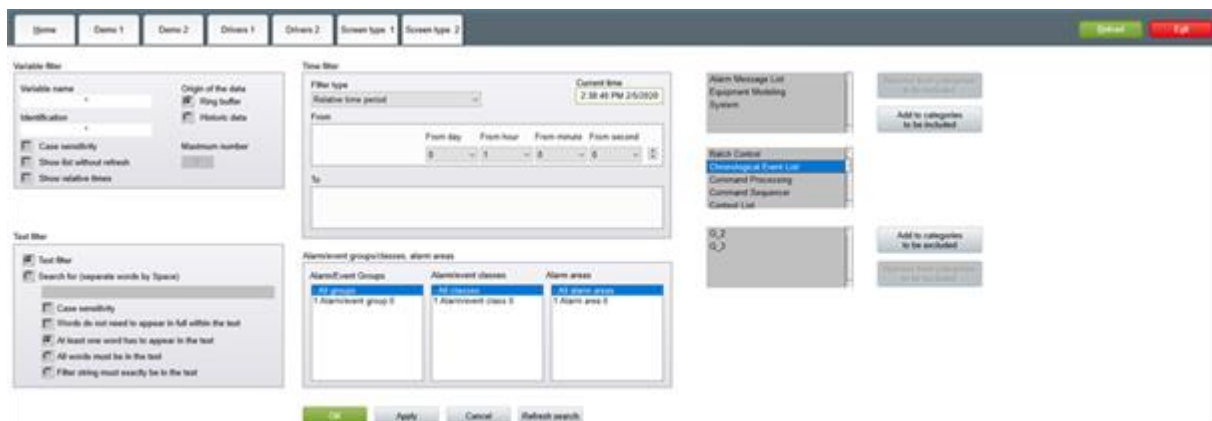


Time received	Text	Variable name	Value	Measuring unit	Category	Comment	User - full name	Alarm cre.	Alarm res.	Alarm Ack.	Number
2020-11-02 13:14 PM	System was started				System		SYSTEM				12
2020-11-02 13:14 PM	System was stopped				System		SYSTEM				
2020-11-02 13:14 PM	System was started				System		SYSTEM				
2020-11-02 13:14 PM	System was stopped				System		SYSTEM				
2020-11-02 13:14 PM	System was started				System		SYSTEM				
2020-11-02 13:14 PM	System was stopped				System		SYSTEM				
2020-11-02 13:14 PM	System was started				System		SYSTEM				
2020-11-02 13:14 PM	System was stopped				System		SYSTEM				
2020-11-02 13:14 PM	System was started				System		SYSTEM				
2020-11-02 13:14 PM	System was stopped				System		SYSTEM				
2020-11-02 13:14 PM	Project 'CAE_E' reloaded				System		SYSTEM				
2020-11-02 13:14 PM	Project 'CAE_E' reloaded				System		SYSTEM				

## CEL FILTER

Elements can be configured for the screen that make it possible to configure filters with categories in the Runtime.

These elements are available for this:



Type	Functionality	Description	Remark
List	<b>Categories to be included</b>	Contains all categories that are taken into account in the filter. They are linked with <b>or</b> .	Touch-capable
List	<b>Available categories</b>	Contains all categories that can be used for the filter.	Touch-capable
List	<b>Categories to be excluded</b>	Contains all categories that are not taken into account in the filter. They are linked with <b>and not</b> .	Touch-capable
Button	<b>Add to categories to be included</b>	Adds the selected category to the list of <b>categories to be included</b> .	
Button	<b>Remove from categories to be included</b>	Removes the selected category from the list of <b>categories to be included</b> .	
Button	<b>Add to categories to be excluded</b>	Adds the selected category to the list of <b>categories to be excluded</b> .	
Button	<b>Remove from categories to be excluded</b>	Removes the selected category from the list of <b>categories to be excluded</b> .	

## RULES

The following is applicable to filtering for categories in the Runtime:

- ▶ If no filter has been defined, all entries are displayed.

- ▶ Several categories are displayed separately, separated by a semicolon (;).
- ▶ If there are several categories in the column, the 'to be excluded' filter always prevails over the filter to be included.  
Example: The filter includes category A, but not B. Entries that contain categories A and B are thus not displayed. Entries with the categories A and C are displayed.

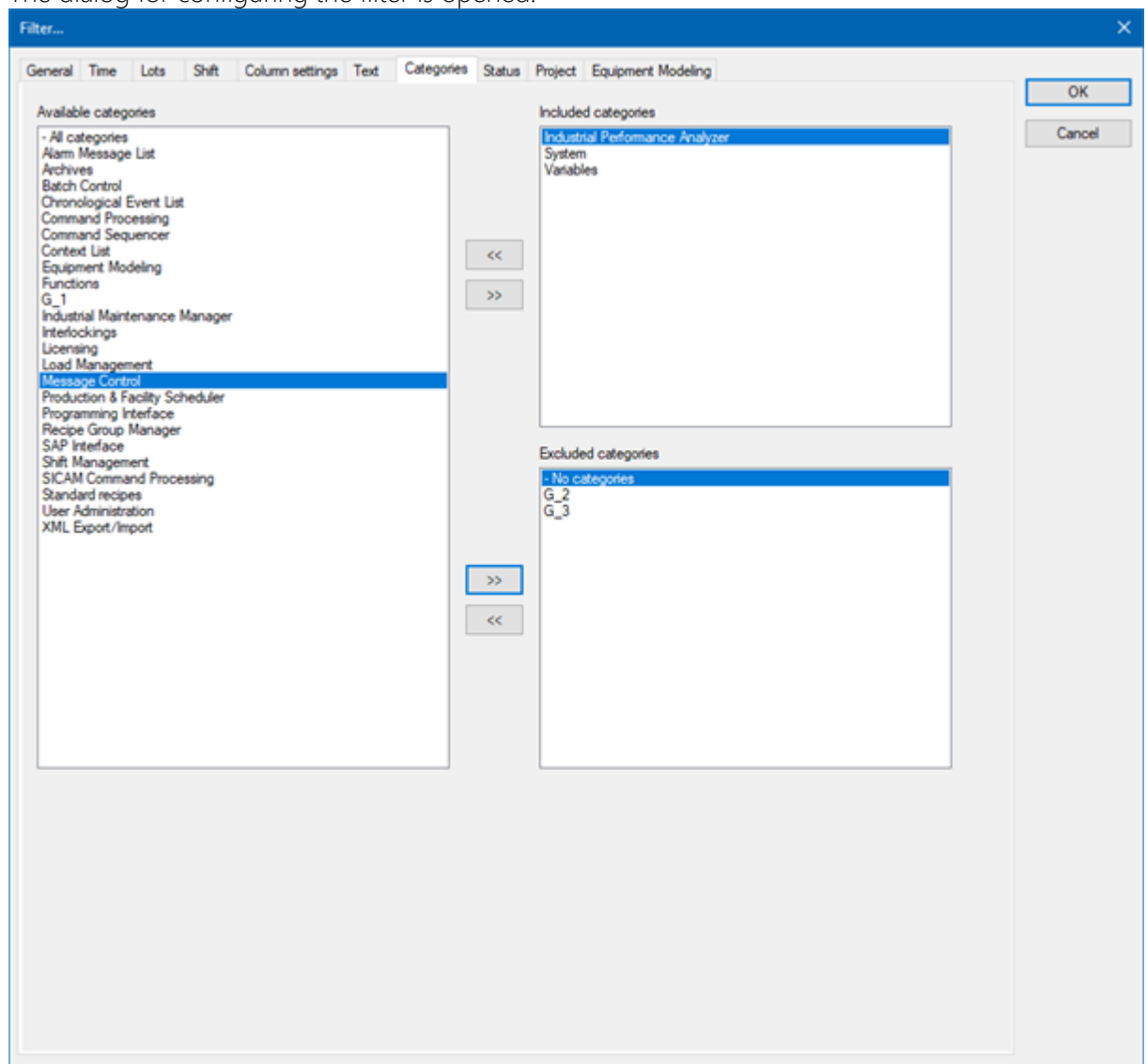
## 6.1 Filter dialog

The dialog for filtering can also be amended in the Runtime. To do this, the **Filter** button must be configured in the screen.

To adjust the filter:

1. Click on the button **Filter**.

The dialog for configuring the filter is opened.



This largely corresponds to that of the screen switch dialog (on page 47).

2. Configure the filter.
3. Close the dialog by clicking on OK.

The filter is applied to the screen.

**Note:** The filter is not saved. Use the filter profiles to save the filter.