



Supervise User Guide  
IGSS Version 12.0

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# Chapter 1: Welcome to IGSS Supervise

## 1.1 What is IGSS Supervise?

The Supervise module is an integral part of IGSS (Interactive Graphical **SCADA**<sup>1</sup> System). The Supervise program is a tool for online process monitoring and operator control based on the user interaction using mouse and keyboard.

A set of pictures - called process diagrams - present the plant or process graphically on your PC screen. Each diagram consists of a static background picture and dynamic symbols representing the plant's working components (motors, valves, flow meters, temperature scales, etc.). States and values of these process objects, also called process components, are updated automatically each time they change. Click-sensitive areas give you operator access to the process diagram; they bring up another diagram or open a command box, for example.

### Diagrams and Areas

The first thing for you to know is that the IGSS screen representation of your plant or process is subdivided into Areas and Diagrams.

Typically, a process diagram may be opened from the **Diagram** menu. The pictures that you see in the **Diagram** menu all belong to the same part of the process, the same area. If you select another area from the **Area** menu, you will see other pictures for selection in the **Diagram** menu.

#### Related Topics

"Login and access rights" on page 14

"Menus" on page 5

"Operator control using the keyboard only" on page 8

"The IGSS Supervise screen" on page 4

### Graphs

Graphs opened from the **Graph** menu allow you to have process values presented in curve charts so that you can evaluate their variation with respect to time. There are two graph types: Standard Graphs (graphs that are predefined by the system designer) and Operator graphs (graphs you can define yourself on-the-fly during online process monitoring. )

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<sup>1</sup>Supervisory Control & Data Acquisition

## Related Topics

"Graph Properties Form" on page 43

The graph window

"Adjust the Y-Axis for each signal" on page 72

"Add or remove a signal" on page 73

"Change the graph appearance" on page 70

"Change signal appearance" on page 69

"Compare two graph periods" on page 81

"Display graph points and show graph values" on page 66

"Create an Operator Graph" on page 75

"Set up graph properties" on page 78

## Controlling Process Objects

The Supervise program allows you to directly intervene in the plant and process operation provided you have the right access authority assigned to your user name and password.

Clicking on a dynamic object in a process diagram displays the principal characteristics of the component in the status bar at the bottom of the process diagram window. At the same time a popup menu appears. It gives you direct access to the **Properties** menu of the object and also displays the object commands which you can trigger with a simple mouse click; commands such as opening or closing a valve, adjusting a limit or setpoint value.

## Related Topics

"Control data collection" on page 11

"Find out the purpose of a process object" on page 25

"Give a command on a process object" on page 26

"Open a process diagram" on page 25

"What happens when you click on a process object" on page 25

## Handling process alarms

When a component in the process is in some way faulty, if for instance a valve is open when it should be closed or some level in a tank is too high, an alarm may be triggered. In this case, the symbol representing the faulty component will typically flash in red. Simultaneously, all details about the alarm situation are registered in the alarm list. You gain access to this list by clicking the **Active Alarms** button in the task bar at the bottom of the screen, or by double-clicking on the alarm icon.

In the alarm list, instructions on how to handle the alarm may be attached and you yourself may describe how you resolved the problem in a note that is automatically attached to the alarm.

The alarm can be acknowledged the moment it arises but remains in the list of alarms until the error situation in the process is resolved. After that, the alarm is automatically transferred to the alarm log.

Throughout online process monitoring, and even when you turn to other programs on your PC, the alarm icon will remain visible, always informing you about the current alarm situation. Double-clicking on the alarm icon takes you directly into the alarm list and the Alarm module for further alarm handling.

### Related Topics

"Acknowledge alarms" on page 32

Acknowledge in the EDIT menu

"Recognise alarms" on page 31

"View the alarm text" on page 32

## Printing process information

All process information can be printed out, be it a screen dump of a complete process diagram, the contents of the alarm list or log, a graph or the values of process objects.

### Related Topics

"Direct message printing" on page 135

"Print a complete graph window" on page 134

"Print a report" on page 135

"Print out a process diagram" on page 133

"Print the alarm list/alarm log" on page 135

"Print the current values of a process diagram" on page 133

"What can you print?" on page 133

## Plant Reports

The system has built-in facilities for generating operational reports and automatically keeps track of when the last report was created and printed. These report facilities are defined by the system designer and are usually made available to the plant operator in the form of **User Programs**.

Reports may be displayed in several formats. In most cases, the standard IGSS reports will fulfil your documentation requirements. Special requirements can be taken into account by customised reports which again are called up by the operator under the menu function **User Programs**.

## 1.2 Technical support

In case you need technical support, please contact your local system integrator.

The system integrator knows a lot about the IGSS system and will help you find the optimal solution to the needs of your plant.

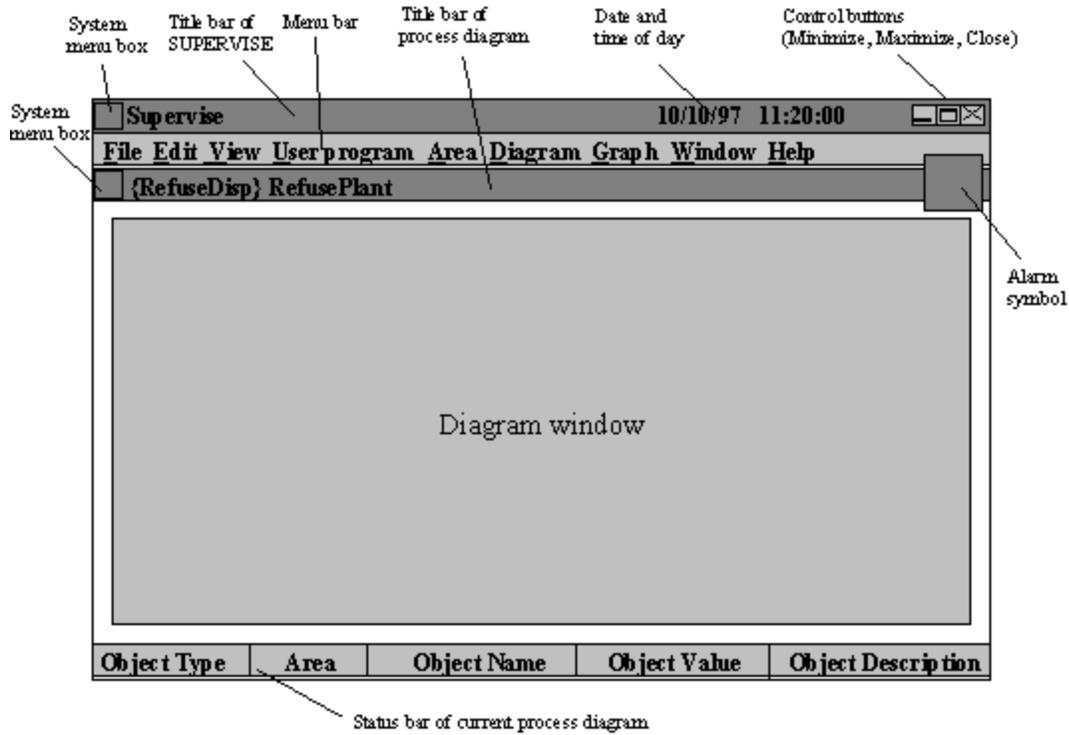
In turn, the system integrator has direct access to technical support from Schneider Electric.

## 1.3 The User Interface

### The IGSS Supervisescreen

Your IGSS Supervise screen typically looks like this.

Click the item descriptions to get more detailed explanations:



## Menus

The following menus are available in the **Supervise** module.

| Menu        | Description   |
|-------------|---|
| <b>File</b> | <p>In the <b>File</b> menu you can:</p> <ul style="list-style-type: none"> <li>• Log in and out if you are using the IGSS User Administration module as well as change your password.</li> <li>• Start and stop ordinary Data Logging, Data Collection and Extended Logging as well as initiating scans, restarting stations, delete spool file and restart as a single user backup.</li> <li>• Save any changes made to object properties.</li> <li>• Save an active graph as an Operator graph.</li> <li>• Print, view a print preview as well as set up the print properties.</li> </ul> |

| Menu        | Description   |
|-------------|---|
| <b>Edit</b> | <ul style="list-style-type: none"> <li>• Save the present values of selected objects in a list file.</li> <li>• Exit and close the Supervise module.</li> </ul> <p>In the <b>Edit</b> menu you can:</p> <ul style="list-style-type: none"> <li>• Open the <b>Object Properties</b> form for the selected object.</li> <li>• Open the <b>Object Browser</b> form to find objects in the configuration.</li> <li>• Select all objects in the diagram.</li> <li>• Open the <b>Object Historian</b> form to view historical data either for the selected objects or for an object added after the <b>Object Historian</b> form is opened.</li> <li>• Acknowledge alarms for the selected object if the object is in alarm.</li> <li>• View alarm information and instructions for the selected object if the object is in alarm.</li> <li>• Display the <b>Maintenance</b> form for the selected object if the <b>Maintenance</b> form is already open.</li> <li>• Open the <b>Select Job type and Indicator object</b> form to create a new maintenance job for the selected object if the <b>Maintenance</b> form is open.</li> </ul> |
| <b>View</b> | <p>In the <b>View</b> menu you can:</p> <ul style="list-style-type: none"> <li>• Display customized toolbars (if any)</li> <li>• Display the navigation toolbar in the top of the screen</li> <li>• Display the status toolbar in the bottom of the screen</li> <li>• Toggle between displaying the time from local to <b>UTC</b><sup>1</sup> time</li> <li>• Display milliseconds in the time display</li> <li>• Display object properties menus when selecting the object with the mouse</li> <li>• Open the <b>Object Watch Window</b></li> <li>• Open the <b>Audit Trail</b> data for the selected object</li> <li>• Display any unit sets defined for the configuration</li> <li>• Save and Restore Views containing diagrams and Graphs</li> </ul>  |

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<sup>1</sup>Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.

| Menu                 | Description  |
|----------------------|--|
|                      | <ul style="list-style-type: none"> <li>• Display object edges and any defined tooltips for objects</li> <li>• Display the <b>Pan Control</b> window</li> <li>• Select an elements in the <b>Most Recently Used</b> (MRU) list</li> </ul>   |
| <b>User Programs</b> | <p>Open or run a user program in the list.</p> <p>If no user programs have been defined for the configuration, this option will be inaccessible.</p>   |
| <b>Area</b>          | <p>Open an area in the configuration.</p>  |
| <b>Diagram</b>       | <p>Open a process diagram in the configuration.</p>  |
| <b>Graph</b>         | <p>In the Graph menu you can:</p> <ul style="list-style-type: none"> <li>• Create a new Operator graph</li> <li>• Open an existing graph</li> <li>• Open a Standard graphs made accessible in the Graph menu.</li> </ul>   |
| <b>Tools</b>         | <p>In the <b>Tools</b> menu you can:</p> <ul style="list-style-type: none"> <li>• Create, edit and delete Operator Reports</li> <li>• Create, edit and delete Events</li> <li>• Edit Alarm properties</li> <li>• Open the <b>Playback</b> form and define a playback sequence to display historical data in the Supervise module.</li> <li>• Send a message to all online IGSS stations</li> <li>• Run a predefined macro as well as access the built-in VBA Editor</li> </ul> |
| <b>Server</b>        | <p>In the <b>Server</b> menu you can:</p> <ul style="list-style-type: none"> <li>• Connect to another IGSS server in the server list</li> <li>• Add new IGSS servers to the server list</li> </ul>   |
| <b>Views</b>         | <p>Select which layer views are to be enabled from the Views list.</p> <p>Layers and Views are created and maintained in the <b>Definition</b> module by a System Designer and made available in the <b>Supervise</b> module.</p> <p>If there are no defined layers and views, the <b>Views</b> menu will be inaccessible.</p>   |
| <b>Window</b>        | <p>In the <b>Window</b> menu you can:</p>  |

| Menu        | Description  |
|-------------|--|
|             | <ul style="list-style-type: none"> <li>• Close the active (current) diagram</li> <li>• View a list of currently open diagrams and graphs and select one to bring to the front.</li> </ul>  |
| <b>Help</b> | <p>In the <b>Help</b> menu, you can:</p> <ul style="list-style-type: none"> <li>• Open the online help for the Supervise module</li> <li>• Open the <b>About IGSS</b> form where you can find information about your IGSS installation.</li> </ul> |

**See Also**

File menu

Edit menu

View menu

User Programs menu

Area menu

Diagram menu

Graph menu

Tools menu

Server menu

Window menu

Help menu

**Operator control using the keyboard only**

The plant components may be controlled and operated from your PC operator station, using mouse or keyboard or a combination of both.

If you only use a keyboard for online operator control, follow the general Windows conventions for keyboard operations. Some of them are explained below, for more detailed information please consult the Windows User manual or Windows online help facility.

| How to ...           | Procedure...   |
|----------------------|--|
| Pull down a menu     | Press the <b>ALT</b> key and the underlined letter in the menu name.   |
| Close a menu         | Press <b>F10</b> or the <b>ALT</b> key.  |
| Give a command       | In the open menu or dialogue, enter the underlined letter in the command name<br>or<br>use the <b>arrow</b> keys to select the command and confirm with <b>ENTER</b> . |
| Select an option     | Within a dialogue, use the <b>TAB</b> key or the <b>arrow</b> keys to go from one option to the next. Always confirm your selection with <b>ENTER</b> .                |
| Close an application | With <b>ALT+F4</b> you close the currently active application.   |

**Tip:** Your process control system may be provided with special function and control keys. These features depend on the definitions made by your system designer. He/she may have included global function keys that apply to the entire control system, and function keys that are tied up with a specific process diagram.

## Chapter 2: Starting and Stopping the Configuration

### 2.1 Connect to the IGSS Server

#### Connecting for the first time

Once the configuration is running on the IGSS Server, the operator station can connect to the server and download the configuration.

Click the **Start** button on the **IGSS Master** > **Home** tab to start the IGSS configuration.

**Result:** The **Operator Connect Options** dialogue appears.

[Show picture](#)

3. Make sure that the name of the server is correct and click the **Continue** button.

**Result:** A message will appear prompting the operator to download the configuration from the server.

[Show picture](#)

4. Click **Yes**. The configuration files are downloaded.
5. To start the configuration, [click here](#).

Tip

- If the operator station will always connect to this server, you can select the **Don't show this dialog again** check box.
- If the operator station will connect to multiple servers, [click here](#).

### 2.2 Start and stop the configuration

Once the operator station is connected to the IGSS Server, the configuration can be started and stopped as follows.

#### Typically controlled by the IGSS Server

Once an IGSS configuration has been commissioned, changes will typically be implemented on the IGSS Server. These changes will be automatically downloaded to the connected operator

stations. On the individual operator station, IGSS can be set up to display a message when the configuration on the server is updated. Otherwise, the changes are automatically downloaded.

## Start the configuration

IGSS can be set up to start a configuration in three different modes:

- Manual (the operator must click **Start** to start data collection and subsequently **Supervise** to view the process)
- Auto (data collection starts automatically, but the operator must click **Supervise** to view the process)
- Supervise (data collection starts and the operator is taken straight into the **Supervise** module)

If you need to start the configuration manually, open the **File** menu and select **Start Configuration**.

This is the same as clicking the **Start** button in the IGSS Master.

## Stop the configuration

If you need to stop the configuration manually, open the **File** menu and select **Stop Configuration**.

This is the same as clicking the **Stop** button in the IGSS Master.

## Only for authorized users

Starting and stopping the configuration are seen as system commands. If access control is enabled, the current user must have the appropriate rights to start or stop the configuration.

## 2.3 Control data collection

You can control the acquisition of up-to-date process data, always assuming of course that you have the appropriate access rights for these actions.

1. In the menu bar, go **File** → **Status and Control**...
2. The **Data Collection Control** dialogue opens showing you the current status of data collection and logging.
3. The following methods of influencing data collection are available:

[Data collection](#)  
[Data logging](#)  
[Extended log](#)  
[One manual scan](#)

4. Select **Start** or **Stop** or **Yes** or **No**.
5. Confirm with  for the changes to take effect.

- All data collection modes are password protected. You will have to enter the authorized password before you can make any changes in the Data Collection Control dialogue.
- For direct guidance on each individual item, option or entry of a particular dialogue, use the **What's This? Help** facility: while you are in the dialogue, click the  in the upper right corner of the dialogue, then click the item you want information about.

## 2.4 Switch to another IGSS Server

In some cases, an operator must have access to multiple IGSSconfigurations residing on different IGSS Servers.

### Switch to another server

1. In the **Server** menu, select the name of the server you want to switch to.

**Result:** The operator station disconnects from the current server and connects to the new server. The configuration from the new server is downloaded to the operator station.

### Edit the list of IGSS Servers

When an operator station connects to an IGSSServer, the operator chooses the appropriate server in the **Operator Connect Options** dialogue. The drop-down list will contain the names of servers typed in directly here or edited in the **Edit Server List** dialogue.

1. In the **Server** menu, select **Edit Server List**.

### [Show picture](#)

2. Do one of the following:
  - To add a new server, place the cursor in the input field. Type the [IP address](#) of the new server and click **Add**.

- To rename a server, select the name. Type the new name and click **Rename**.
- To delete a server, select the name and click **Delete**.

3. Click **OK** to save the changes.

**Result:** When you open the **Server** menu, the updated list is shown at the bottom.

## Chapter 3: Logging In and Out of the System

### 3.1 Login and access rights

All plant components displayed in process diagrams may be individually protected. The system designer may decide for each individual object whether or not a particular operator with a particular user name and password has the right to give a command or change a value for a particular plant component.

When you [log into](#) the **Supervise** program for online operator access and process control, you are automatically given the access rights defined by the system designer for your user name and password. Provided you have the authority, you may change your password in the **File** → **Change password...** menu.

### 3.2 View user login/logout in Object Historian

You can view user login/logout information in the **Object Historian** without choosing any objects for inspection. But the typical scenario would be to combine the event types, allowing you to view which user was logged in when a certain event occurred.

1. Under **Time interval**, define the relevant start and end time. IGSS goes back one hour by default.
2. Under **Event types**, select the **User login/logout** check box.
3. Click **Query data** to view the data in the list.
4. For details on the individual columns in the list, click the **?** button, then click inside the list.

[Show picture](#)

To be able to view user login/logout, user administration must be enabled in the System Configuration form and users must have been defined in the User Administration form.

### 3.3 Registration of user name

When user administration is enabled, the user name is registered in the following places.

#### Title bar of Supervise

The name of the active user can be shown in the title bar of **Supervise** as [xxx]. At a glance, the operator can see whether he's logged in with the right user name or if he's logged in at all.

This option must be enabled in the **System Configuration** program.

## The Object Historian

The user name is registered in the **Object Historian** as follows:

- Outgoing commands under **LOG** data  
(commands to digital objects, change of setpoint, change of alarm limits, etc.)
- Acknowledgment of alarms under **ALM** data
- Login and logout information under **User login/out**

## The Alarm List

When a user acknowledges an alarm, it is registered in the **User** field in the **Alarm List**.

## The Event List

When a user logs in and out of the system, it can be registered in the **Event List**.

In the **Tools** menu of **Supervise**, choose **Events** and add the **User login/logout** event.

## Chapter 4: Navigating the Configuration

### 4.1 Areas, diagrams and graphs

#### Areas

An IGSS configuration can be divided into a number of areas. The area is typically a logical section of the monitored process, for example, a sub process.

Open the **Area** menu to switch between the areas of the configuration. In all IGSS configurations, an area named **Global** will be available. The remaining areas can be named freely.



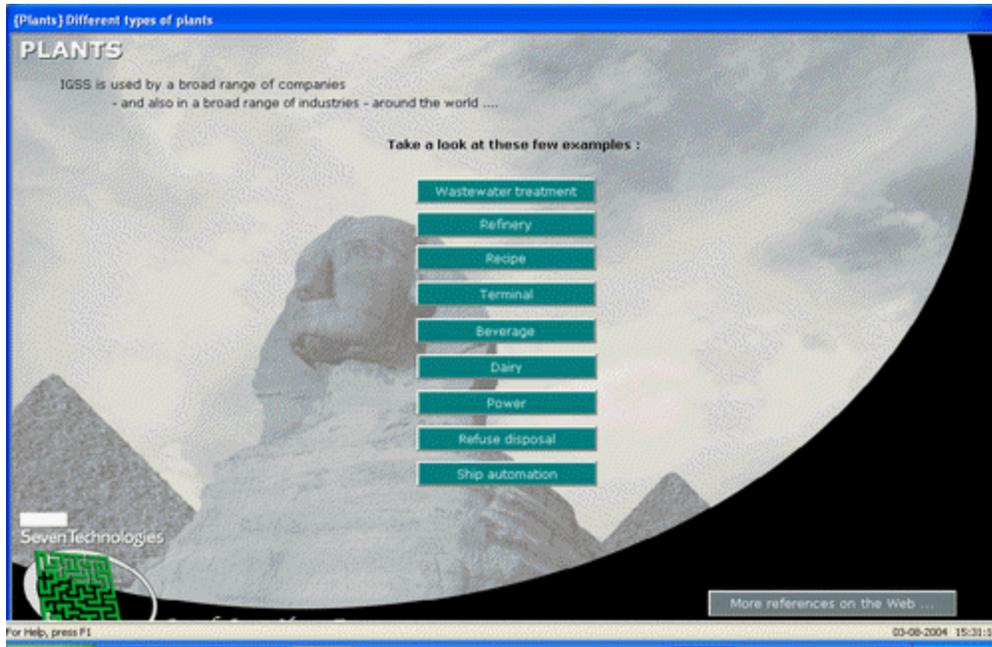
When the configuration is started, the initial diagram is shown. When you switch to another area, the initial diagram for that area is shown. When you choose an area, all the diagrams and graphs in that area become available. In other words, only one area can be active at a time.

Each area contains a number of diagrams (process pictures), graphs and objects (the actual process components).

#### Diagrams

The diagram is a graphical process picture showing a section of the monitored process. The **Diagram** menu shows the diagrams available in the active area. Some diagrams may not be visible in the menu. In that case, choose **Open** to browse for those areas.

Typically, an overview diagram will be the initial diagram of an area. From that diagram, buttons lead to the other diagrams in that area. Here's an example from the IGSS Demo Configuration.



On every subdiagram, the system designer will typically place buttons allowing the operator to navigate to related diagrams. Another way of navigating is using the [Home, Back and Forward](#) buttons or the next/previous buttons on your mouse (if included on your mouse).

When a diagram is open, there's a checkmark beside its name. Multiple diagrams can be open simultaneously.

## Graphs

A graph is a chart showing the process values of a number of objects. The lower part of the **Graph** menu shows the Standard graphs available in the active area.

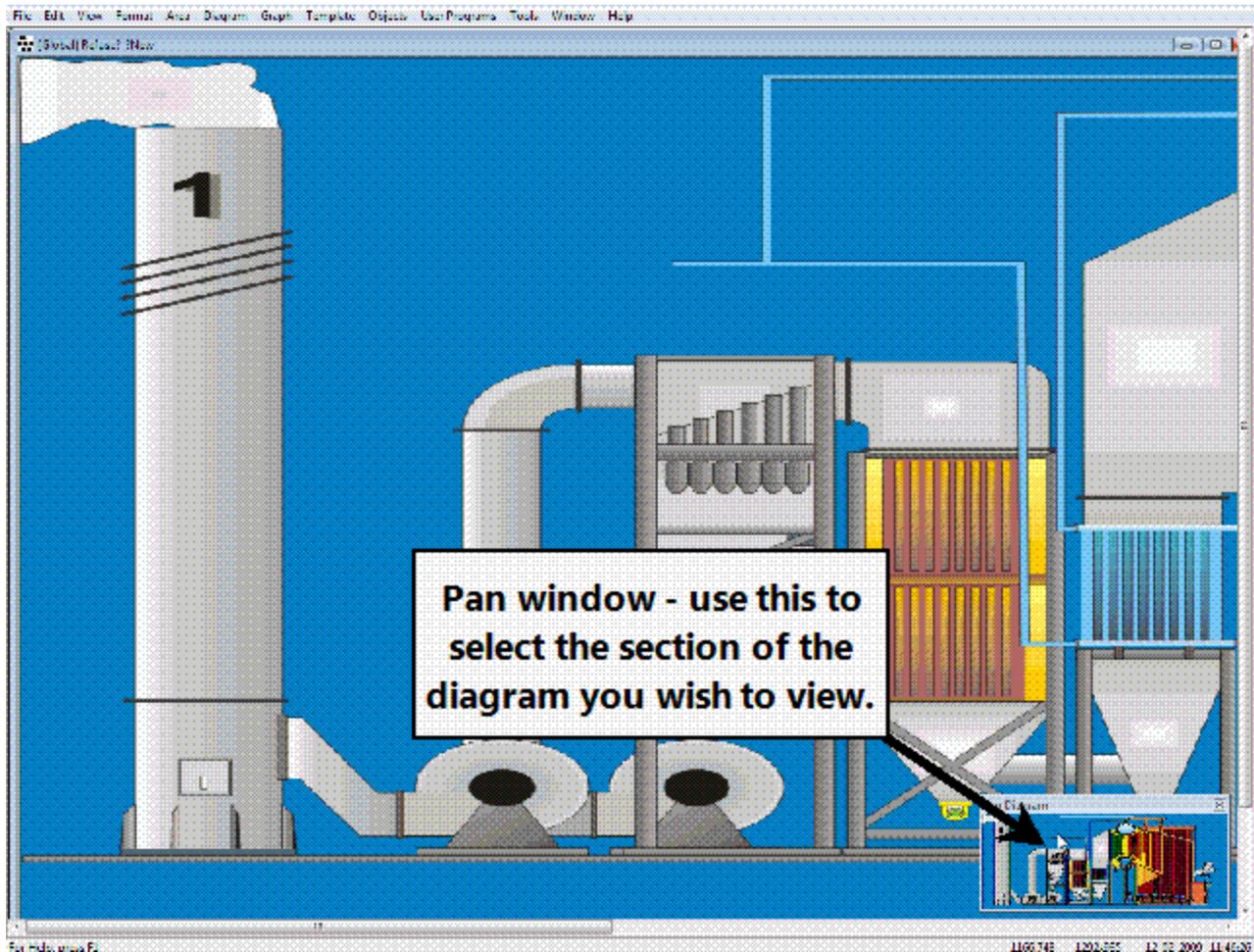
When a graph is open, a check is displayed beside its name. Multiple graphs can be open simultaneously.

## 4.2 Panning

### What is panning?

The pan function lets you view wide diagrams (panoramas) on a narrower screen for example if you have a long production line represented on a single diagram in IGSS, but only one screen to work with, the system integrator would then use the pan function to allow you to select which section of the diagram you want to view.

[Click here to view an example with pan](#)

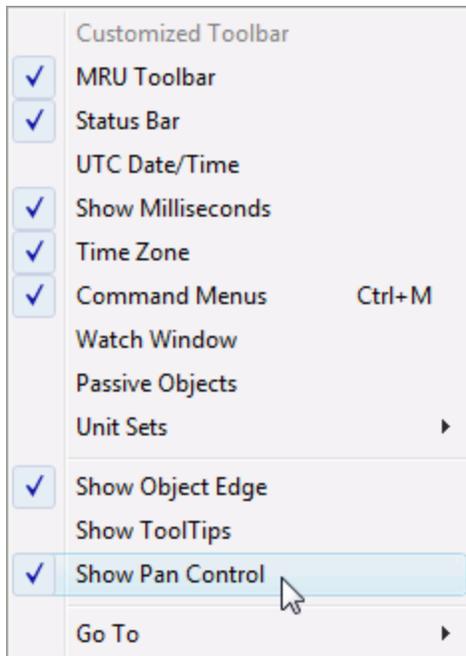


### How to open the Pan window

Normally the pan window will automatically be displayed when a diagram, wider than the available screen(s), is opened. This means that if, for example the system integrator has created a diagram which fits on 2 screens, the second screen must then be disabled in Windows before IGSS will use the pan function.

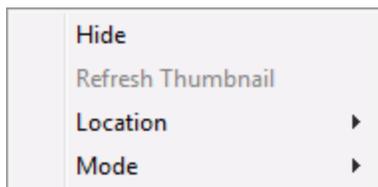
The Pan window can also be manually opened (still only available when the above condition is met):

1. Select the **View** tab.
2. Click **Show Pan Control**.



### Right-click menu

If you right-click on the Pan window, the following menu will appear. click on any of the menu items to view a description of its function.

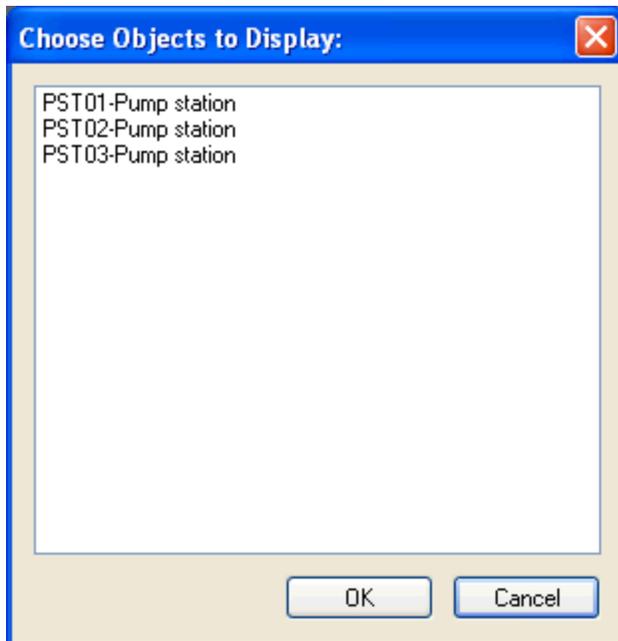


## 4.3 Reusable diagrams

### Same diagram – multiple sets of objects

As an operator you may come across reusable diagrams. This special type of diagram allows the system designer to show multiple sets of objects on the same diagram. When you activate a reusable diagram either from the **Diagram** menu or from a button, the **Choose Objects to Display** dialogue appears.

Select the set of objects you want to show and click **OK**.



### The title bar of the reusable diagram

When a specific set of objects has been selected, the diagram appears showing the name of the set in the title bar.

To choose another set of objects, press F5 or choose the name of the diagram in the **Diagram** menu.



### Reference to reusable diagram

The system designer can choose to link directly to one of the sets of objects available. The operator will thus click a button with the name of the set and go straight to the reusable diagram without seeing the **Choose Objects to Display** dialogue. The only indication that this is a reusable diagram is the name of the set in the title bar.

## 4.4 Home, Back and Forward buttons

To use these buttons, activate the **MRU Toolbar** in the **View** menu.



### The Home button

Press the **Home** button to go to the initial display of the IGSS configuration. The initial display is set by the system designer and is typically an overview diagram.

### The Back button

Press the **Back** button to return to the last diagram you viewed. Click the arrow to view the list of previously viewed diagrams.

### The Forward button

Press the **Forward** button to go to the diagram you last activated from the current diagram. Click the arrow beside the button to view the list of diagrams previously activated from here.

### Using the mouse

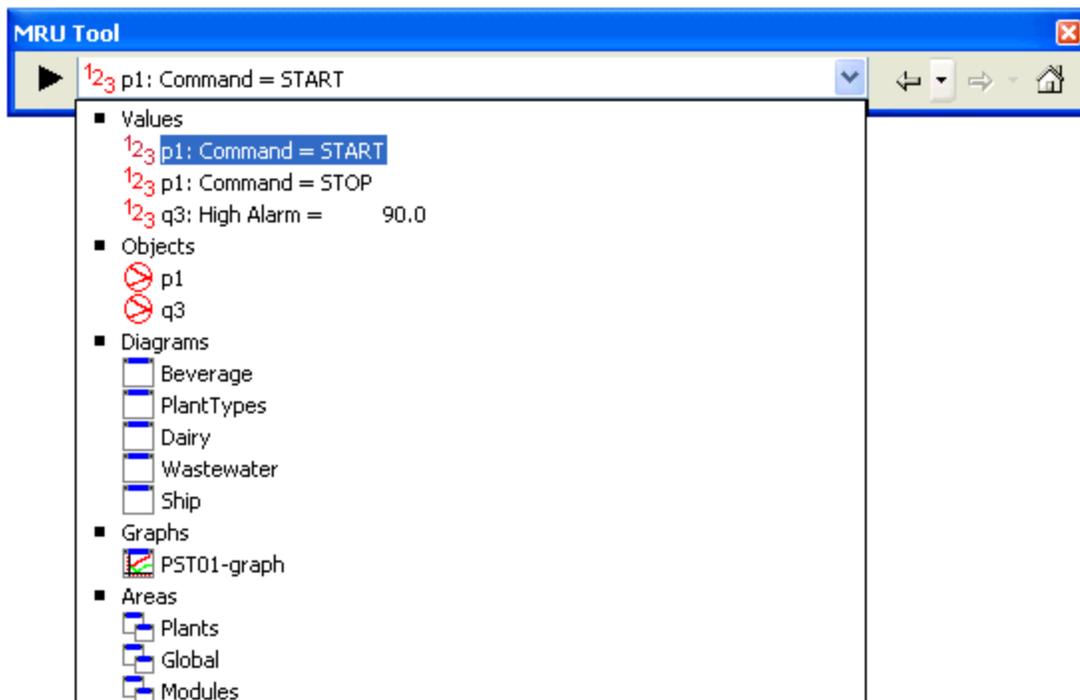
You can also use the next/previous buttons on your mouse (if included on the mouse) to navigate between the diagrams.

## 4.5 Most Recently Used toolbar

Activate the **MRU Toolbar** in the **View** menu.

It is used to navigate to the most recently used objects in the configuration. It shows the following:

- The last five values / commands
- The last five activated standard objects (analog, digital, string, table, counter)
- The last five activated diagrams
- The last five activated graphs
- The last five activated areas



#### Note

When sending commands from the MRU Toolbar a confirmation dialog will appear, where the command has to be confirmed, before it will be sent out. If the selected object is using Safe Commands, the respective Safe Command dialog will appear when a command is sent from the MRU Toolbar.

The confirmation dialog may be disabled by going to the Windows registry and setting the value DefRun32 -> ConfirmMRUValues = 0.

## 4.6 Find an object using Open by Name

### The Open by Name function

The **Open by Name** functionality in IGSS is very versatile. Use this function when you know the name or part of the name of an object, but do not know which diagram it resides on. You can also use it to view a list of objects with common properties, f.ex. all objects based on a specific template, all objects sharing the same alarm number, etc.

1. Go to the **Edit** menu and select **Open by Name** or press CTRL + E.

### The Object Browser

The **Object Browser** shows you a tree view on the left and a list of objects on the right. The list of objects is filtered dependent on what you select in the tree view. When you open the **Object Browser**, it shows all the objects in the configuration.

### Examples

Here are some examples of use. We recommend that you start with the "Browse the tree view" procedure and follow the instructions.

### Standard functions

[Browse the tree view](#)

[Browse the list of objects](#)

### Advanced functions

[Filter the list with wildcards](#)

[Change the tree structure](#)

## 4.7 Save View

You can save the current view of the Supervise module, saving all the position and placement of all currently open diagrams and graphs. You can restore the saved view at a later date and continue the process monitoring from where you left off.

- To save the current view of the Supervisemodule, in the menu, click **View > Save View**

- To restore a previous view into the current Supervise module, in the menu click **View > Restore View**

### **Single and multiple views**

You can only create view for each operator machine, but you can create one view per IGSS user if IGSS User Administration is enabled and set up for the configuration. You must also select the **Save/Restore view per user** check box in the **System Configuration** form > **Supervise & Language** tab.

Additionally, you can save multiple views per IGSS user if you also select the **Multiple Views** check box in the **System Configuration** form > **Supervise & Language** tab.

### **Object values**

Object values are not saved with the diagrams. When the saved view is restored, object values in the diagrams and graphs will be populated with the actual values retrieved from normal process monitoring.

If you want to view historical object values in the diagrams of the Supervise module, you can click the **Playback** button to open and set up the IGSS Player.

The maximum number of open diagrams setting in the **System Configuration** form will limit the number of open diagrams in the Supervisemodule, including open graphs.

Any diagrams and graphs that have been removed from the configuration after the view has been saved will not be displayed by restoring the view.

### **See Also**

The Save and Maintain View form

"About IGSS Playback" on page 106

# Chapter 5: Controlling Process Objects

## 5.1 Open a process diagram

1. In the menu bar, click the [Diagram](#) option.
2. You see a list of all process diagrams available for the selected [area](#).
3. Click the diagram you wish to open.
4. This diagram is now the active one.

**Note:** Up to 4 process diagrams can be open simultaneously, but only one diagram is active at any one time.

## 5.2 Find out the purpose of a process object

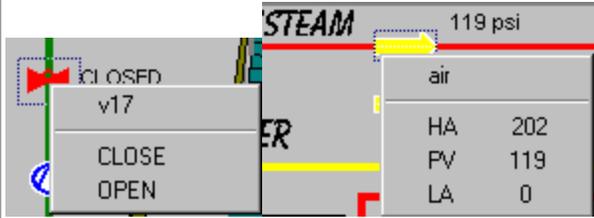
1. In the open and active process diagram, place the mouse pointer on a process component which can be a [digital process object](#) such as a valve, or an [analog process object](#), such as a temperature scale.
2. The object name and possibly a short description are displayed.



## 5.3 What happens when you click on a process object

Using the mouse, you have several possibilities to enquire about or send a signal to a process component ([object](#)) displayed in the process window:

| This feature...            | Allows you to ...  |
|----------------------------|--|
| Clicking LEFT or RIGHT ... | ... view the elements name and the available commands, if it is a digital element, and its possible characteristic values (actual and limit values), if it is an analog element. Provided that you have enabled <input checked="" type="checkbox"/> <b>View</b> → <b>Commandmenus</b> in the <b>Edit</b> menu you are given direct access to all commands and values associated with the selected object in a small selection box which opens up right next to the selected object.<br><br><b>Result:</b> (Click on the box entries to get more detailed information about their purpose.) |



Provided that you have the right access authority , you can now operate the element: A mouse click on the element's name *v17* or *air* in the command box takes you directly into the **Object Properties** dialogue.

Clicking RIGHT... ... enquire about and modify the properties of the selected process object. The **Properties** button appears. A right or left mouse click on this button takes you into the **Object Properties** dialogue:

**Tip:** For a more detailed explanation of the **Object Properties** dialogue, open the dialogue, click the  in the upper right hand corner of the dialogue and then - with the  symbol attached to the mouse pointer - click the item you want information about.

**Note:** With **View** → **Command** menus switched off, a single left click on the object will have no effect at all. A double click on the left mouse button will take you directly into the Object Properties dialogue.

### 5.4 Give a command on a process object

1. In the menu bar, enable the option  **View** → **Command menus**.
2. In the active process diagram, left click on the process object you wish to operate.

**Digital object:**

A box appears giving you the possible commands. The currently valid command is highlighted.

1. Click the new command.
2. The box closes automatically and the digital object adopts the new status.

**Analog object:**

A box appears giving you the characteristic values, such as

- [PV = process or actual value](#)
- [HA = high alarm value](#)

[LA = low alarm value](#)

1. Click on the value you wish to change.
2. A selection box opens.
3. Using the up and down buttons , increase or decrease the value and confirm with .

#### Tips

- With **View** → **Command menus** switched off, a single left click on the object will have no effect at all. A double click on the left mouse button will take you directly into the **Object Properties** dialogue which allows you to change commands, settings and values for the selected object.
  - Giving a command on a process object requires that you have the access right for these actions as they will most certainly cause changes in the plant or process.
- 

## 5.5 Add an object note

### 5.6 Purpose

The object note is designed as a communications medium between operators. If an operator needs to communicate an object-specific situation to the other operators, the object note is ideal.

The object note is treated as an alarm and when the note is created, the alarm number 96 appears in the **Active Alarms** form. The other operators can see there is a note on the object and can acknowledge and terminate the object note alarm from the object properties form in the **Supervise** module.

#### Create the object note

1. Right-click the relevant object on the diagram and select **Object Note**.
2. On the **Edit Object Note** tab, type the object note in the **Note** group.
3. Click the **OK** button to create the object note.

**Result:** Alarm number 96 now appears in the **Active alarms** form and the symbol starts blinking on the diagram.

In this example, the operator writes "This pump must be serviced ASAP. I've contacted the service engineer and he will be here on Monday. If any other components need to be serviced, please contact the service engineer."

[Show picture](#)

## Alarm number 96

Every time an object note is created, alarm number 96 is associated with the object and appears in the **Active alarms** form.

[Show picture](#)

By default, the alarm color is blue and the priority is 3. The object on the diagram will turn blue and the symbol will blink. You can change the characteristics of the alarm number in the **Definition** module.

If you have selected the **Use marks instead of alarms to indicate object note** check box in the **System Configuration** form > **Supervise and Languages** tab, an object note will be indicated by a triangle icon in the upper right-hand corner of the object. The color of the triangle icon is the same color as defined for the alarm number 96.

## Acknowledge the alarm

1. Right-click the relevant object on the diagram and select **Object Note**. Notice that there's a checkmark indicating that an object note has been created.
2. Click the **Acknowledge** button to acknowledge the object note alarm.
3. Click the **OK** button to close the **Object properties** form.

**Result:** The alarm is now acknowledged and the symbol stops blinking on the diagram.

The alarm can also be acknowledged from the **Active alarms** form. If user administration is enabled, the user name will be shown just above the note field.

[Show picture](#)

## End the alarm

1. Right-click the relevant object on the diagram and select **Object Note**.
2. Click the **Acknowledge** button to acknowledge the object note alarm.
3. Click the **OK** button to close the **Object properties** form.

**Result:** The text in the note field is cleared and the alarm is ended. The alarm disappears from the list of **Active Alarms** and moves to the **Alarm Log**.

[Show picture](#)

Notice that the acknowledgment time is shown to the left.

## 5.7 Start/stop data collection and logging on an object

### Start / Stop logging

If logging is not enabled for a certain object, the operator can switch it on manually as follows.

1. Click the object symbol on the diagram.
2. In the command menu, select **Properties**.
3. Click the **Data Collection & Logging** tab.
4. Under **Logging** do the following:
  - Under **In** select **Yes** to start logging of incoming process values. All changes will be logged.
  - Under **Out** select **Yes** to log outgoing commands.
  - Under **Print** select **Yes** to print log values directly.
5. Click **OK** to save the changes.

### Start/stop data collection

1. Click the object symbol on the diagram.
2. In the command menu, select **Properties**.
3. Click the **Data Collection & Logging** tab.
4. Under **Data collection**, do the following:
  - Select **Start** to start the data collection
  - Select **Stop** to stop the data collection
5. Click **OK** to save the changes.

Note

If the data collection is stopped, the object becomes passive. The color of the object changes to indicate that data collection has been stopped. This color is predefined by the system designer in the **Definition** program.

In the **View** menu, select **Passive Objects** to view the list of passive objects in the configuration. From this dialog box you can activate the data collection again.

## 5.8 Handle passive objects

A passive object is an object for which data collection has been stopped. The color of the object changes to the passive color predefined by the system designer in the **Definition** program.

Passive objects can be re-activated as follows:

1. In the **View** menu, select **Passive Objects**.

[Show picture](#)

2. To re-activate the passive object(s), do the following:
  - To re-activate all passive objects, click the **All** button. The dialog box closes automatically.
  - To re-activate one object, select it and press the arrow button.
3. Click **OK** to save the changes.

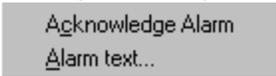
# Chapter 6: Handling Alarms

## 6.1 Recognise alarms

An alarm situation is indicated in three ways, depending on the definitions made by the system designer:

1. The alarm icon is automatically incremented.
2. In the process diagram, the symbol representing the process object changes color and/or begins to flash.
3. The diagram's message line displays a message about the nature of the alarm.

### To view the alarm, please...

1. Double click on the alarm icon .
- OR
2. Click  Active Alarms displayed in the taskbar at the bottom of the process diagram.
  3. Left click of the flashing symbol in the process diagram. A selection box appears next to the symbol, providing you with the options , amongst others.

### Notes

- The first two actions take you directly into the Alarm List and the **Alarm** program with all its alarm handling, alarm reporting and editing facilities.
- Once you are in the **Alarm** program you have full access to the relevant help functions.
- Action no. 3 allows you to acknowledge the alarm, to view the associated message text and/or enter your own comments, but you stay in the **Supervise** program.

## 6.2 Acknowledge alarms

1. Double click the alarm icon.
2. You are directly taken into the Alarm List which displays all pending alarms - acknowledged and unacknowledged.  
Unacknowledged alarms are usually shown in red.
3. In the list, select the alarm you wish to acknowledge.
4. In the menu bar, select **Actions** → **Acknowledge**.

### Notes

- This way of acknowledging an alarm takes you directly into the Alarm List and the **Alarm** program with all its alarm handling, alarm reporting and editing facilities.
- Once you are in the **Alarm** program you have full access to the relevant help functions.



## 6.3 View the alarm text

1. In the process diagram, click the object which is in the state of alarm.
2. In the menu bar, choose **Edit** → **Alarm text**.
3. The alarm text is displayed next to the faulty process object.

### Tip:

For more detailed information on the alarm situation:

- press  Active Alarms in the taskbar or
- double click on the alarm icon .

Both actions take you directly into the **Alarm** program with all its alarm handling, alarm reporting and editing facilities.

**Note:** Once you are in the **Alarm** program you have full access to the relevant help functions.



## 6.4 Reading and editing Alarm notes

Alarm notes are created in the Alarm module and are attached to the individual alarm for the specific object. You can read or edit any notes that have been created for the individual alarm on the object in the Supervise module.

### IGSS-based alarms

For IGSS-based alarms, only one alarm note will be displayed for the object because only one alarm per object will be displayed for IGSS-based alarms. The alarm displayed will be the alarm triggered by the highest or lowest value of the object, respectively.

For example, if the value of an analog object exceeds not only the High Limit, but the High Alarm as well in one scanning pass of the object, then only the high alarm will be displayed on the object.

### Edit or read an alarm note

1. In the Supervise module, right-click the object in alarm and select **Alarm Text** to open the **Object Properties** form.
2. In the **Object Properties** form, click the **Edit Alarm Note** tab.
3. On the **Edit Alarm Note** tab > **Note** group, you can read or edit the alarm note and click the OK button to save any changes.

You can see details for the present alarm, such as alarm number, alarm start date and time and alarm text in the **All alarms on object** group.

### Digital (multiple) alarms

Digital alarms (alarms administered by PLC settings) enable simultaneous alarms to exist on the object and you can therefore read and edit multiple alarm notes on the object by selecting the desired alarm in the **All Alarms on object** group on the **Edit Alarm note** tab.

When an alarm is acknowledged and ended, the alarm note will stay attached to the alarm, but will not be displayed for editing or reading on the object.

### Edit or read multiple alarm notes

1. In the Supervise module, right-click the object in alarm and select **Alarm Text** to open the **Object Properties** form.
2. In the **Object Properties** form, click the **Edit Alarm Note** tab.
3. On the **Edit Alarm Note** tab > **All alarms on object** group, select the alarm you want to read or edit the alarm note for
4. In the **Note** group, you can read or edit the alarm note for the selected alarm and click the **OK** button to save any changes.

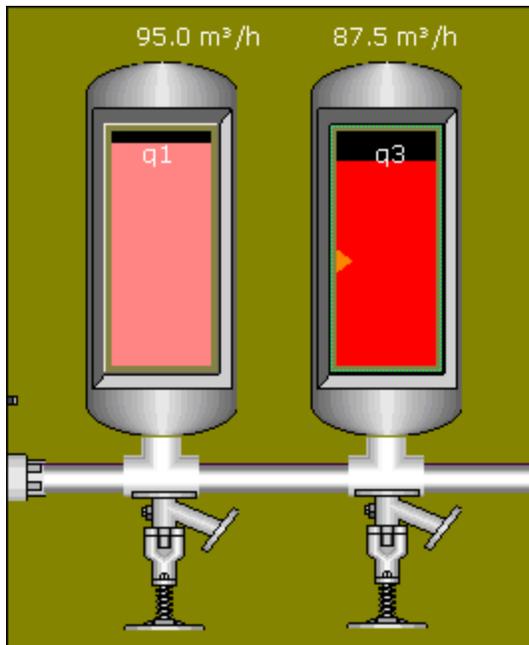
You can see details for the present alarm, such as alarm number, alarm start date and time and alarm text in the **All alarms on object** group.

## 6.5 Alarm indication on diagrams

### When the alarm occurs

When an alarm occurs, the object's symbol will typically change color and start blinking. Also a sound may be associated with the alarm. The system designer defines the alarm colors and behavior in the **Definition** program.

On this picture the two objects, **q1** and **q3** are both in alarm.



### When the alarm is acknowledged

The alarm can be acknowledged from the **Alarm List** or directly from the diagram by clicking on the object and selecting **Acknowledge Alarm** in the command menu.

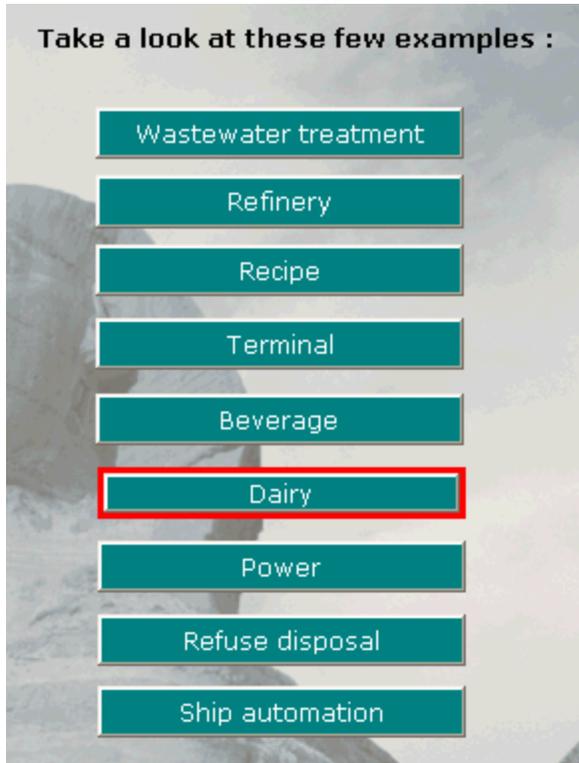
The object's symbol will typically change color and stop blinking. The acknowledge color is defined by the system designer.

### Alarm transparency

To provide the optimal overview for the operator, IGSS has a built-in feature called alarm transparency. It means that an alarm appearing on a diagram which is referenced by another diagram will be indicated in both places.

### Example

The objects above, **q1** and **q3**, are both located on the **Dairy** diagram. On the **PlantTypes** diagram there's a button referencing this diagram. When an object on the **Dairy** diagram goes in alarm, the button will start blinking. By default, the alarm color will be blue and the alarm priority 3, but the system designer can change this in the **Definition** program. Alarm no. 1 is used to achieve the alarm transparency effect. However, this alarm is for internal use and will not be visible in the **Alarm List**.



## 6.6 Alarm delay on objects

Alarm delay is used to prevent the alarm list and alarm log from becoming filled with intermittent alarms which come and go within a very short time. If an alarm ends during the alarm delay period , it will not be registered in IGSS - not even in the Alarm log.

If new alarms are triggered while an existing alarm is registered in the **Active Alarms** form, the new alarm will immediately be registered in the **Active Alarms** form and the existing alarm will be automatically acknowledged and moved to the Alarm log. This means the most recent alarm will always be displayed in the **Active Alarms** form.

You can define alarm delay for each individual object in the Supervise module on the **Object Properties** form > **Data Collection & Logging** tab > **Alarm Delay** field.

The maximum alarm delay is 2 billion seconds (2,000,000,000 seconds) roughly 63 years.

### To define an alarm delay for an object

1. In the Supervise module, right-click the object and select **Properties** to open the **Object Properties** form.

2. On the **Data Collection & Logging** tab > **Alarm Delay** field, enter or click the up and down arrows to set the desired number of seconds for the alarm delay. If the value of the Alarm Delay field is 0, alarms will not be delayed.
3. Click the **OK** button to save the changes and close the **Object Properties** form.

Access to the **Object Properties** form can be and has been restricted or removed on some IGSS configurations.

### See Also

Alarm Delay

## 6.7 Inhibit alarms

If a process component is being serviced or renders irrelevant alarms for other reasons, these alarms can be temporarily inhibited. The operator can choose to inhibit all alarms for the object or only specific ones.

### Inhibit specific alarms

To inhibit specific alarms on an object, do the following:

1. Click the object on the diagram.
2. In the command menu, select **Inhibit Alarms**.
3. In the list select the check box beside the alarm(s) you want to inhibit.

[Show picture](#)

4. Click **OK**.

**Result:** Alarm no. 92 "Alarm Inhibit (specific alarms)" appears in the **Alarm List**.

Tip

To inhibit a specific alarm that is already active, right-click the alarm in the **Alarm List** and select **Inhibit Alarm**.

### Inhibit all alarms

To inhibit all alarms on an object, do the following:

1. Click the object on the diagram.
2. In the command menu, select **Inhibit Alarms**.
3. At the top, select the **Inhibit All Alarms** check box.
4. Click **OK**.

**Result:** Alarm no. 91 "Inhibit Alarms (all alarms)" appears in the **Alarm List**.

Tip

To inhibit all alarms, right-click in the **Alarm List** and select **Inhibit All**.

### To reactivate inhibited alarms

In the **Supervise** program, do the following:

1. Click the object on the diagram.
2. In the command menu, select **Inhibit Alarms**.
3. Clear all check boxes. You can use **Clear All** button.
4. Click **OK**.

OR

In the **Alarm** program, do the following:

1. Right-click the relevant alarm (no. 91 or 92). A checkmark will be visible beside the **Inhibit Alarms** menu item.
2. Select the **Inhibit Alarms** item.

## 6.8 Inhibit WinPager alarms

The IGSS **Winpager** module allows operators to receive plant alarms as SMS messages on their mobile phones.

In some cases, you may want to inhibit the dialing out of these alarms.

### Inhibit WinPager dialout from Supervise

1. Click the object on the diagram.
2. In the command menu, select **Inhibit Alarms**.
3. Select the **Inhibit WinPager dialing** check box.
4. Click **OK**.

**Result:** Alarm no. 93 "WinPager Inhibit" appears in the **Alarm List**.

### Inhibit WinPager dialout from Alarm

1. Right-click the alarm in the **Alarm List**.
2. In the popup menu, select **Inhibit WinPager**.

[Show picture](#)

### To reactivate WinPager-inhibited alarms

1. In the **Alarm List**, right-click alarm no. 93 and select **Inhibit Winpager**.

## 6.9 Change Alarm Priority

You can change the priority of an alarm in the Supervise module.

The highest alarm priority is 255 and the lowest priority you can assign an alarm priorities is 1.

In some installations, operator access to the **Alarm Details** form can be restricted through user administration and internal security policies.

### To change the alarm priority of an alarm

1. In the Supervise module, click **Tools > Alarms** to open the **Alarm Details** form.
2. In the **Alarm Details** form, select the alarm number you want to change the priority for
3. Select the **Edit** button to open the **Edit Alarm Description** form.
4. In the **Priority** field, enter the new alarm priority and click the **OK** button to close the **Edit Alarm Description** form.
5. In the **Alarm Details** from, click the **Close** button to save the new alarm priority.

## Chapter 7: Working with Graphs

### 7.1 Graphs in IGSS

A graph displays variations in object states or values with respect to time and can facilitate gaining a quick overview of the characteristic behavior of selected key process components.

You can use graphs to evaluate the state of one or more process components over time and to detect adverse trends at an early stage. IGSS graphs are capable of combining current trends and historical data in the same chart. You can thus see at a glance what happened in the process just before and immediately after an intervention or incident.

#### Graph types

IGSS contains two types of graphs: Standard graphs and Operator graphs.

- **Standard Graphs** are graphs created, edited, maintained and deleted by a System Designer in the Definition module and made accessible to the operators either in the Graph menu of the Supervise module or through a **descriptor**<sup>1</sup> in the process diagram. Operators cannot edit or delete a Standard graph but can use Standard graphs as base to create their own Operator graphs.

Standard graphs can be accessed from the Graph menu in the Supervise module or from selected descriptors in the process diagrams (buttons, images, symbols, clickable areas and more)

- **Operator graphs** are graphs created by operators. An Operator graph is not write-protected and can be edited and deleted by any other online operator. Operator graphs can be created based on a Standard graph or created from the ground up and can be created either in the Supervise module or directly from the object menu in the process diagrams.

Operator graphs can only be accessed through the Graph menu in the Supervise module.

In addition to these two graph types, IGSS also contains Embedded graphs and Dashboard graphs.

Embedded graphs are embedded in the process diagram and are created and defined by the System Designer in the Definition module.

Dashboard graphs can only be displayed in the Dashboard module and can be created and maintained by the System Designer and the Operator both.

#### Supported object types

A graph chart may contain up to 16 signals from process components (IGSS objects). Signals from the following object types can be displayed in the graphs:

- Analog
- Digital

---

<sup>1</sup>A descriptor is the graphical display of an object. IGSS includes many types of descriptors including: - Built-in standard symbols - Animated symbols (Symbol Factory library) - Graphics and animation - Drawing symbols - Windows controls - ActiveX controls An IGSS object can be represented with different descriptors on different diagrams.

- Table
- Counter

## **Navigating and making changes**

Operators have a large degree of freedom when using the graphs - not only viewing and zooming the graph but also adjusting the graph properties themselves.

Operators can use a large number of methods to navigate the graph charts, dragging X-and Y-axes forward or backwards in time, hiding and displaying graph signals and signal lines, zooming graph areas for better detail and clarification,

When a Standard or Operator graph is created, a number of default properties such as signal

appearance, graph colors and settings are automatically applied to the graph elements in order to facilitate rapid creation and deployment of usable graphs. Operators can freely edit these defaults and save the results as a new Operator graph.

Operators can freely change any graph property including adding and removing signals to the chart and save the results as a new Operator graph.

### **See Also**

"Open an existing graph" on page 62

"Change graph period" on page 63

"Navigate the Axes" on page 65

"Highlight and hide a signal" on page 67

"Display graph points and show graph values" on page 66

"Change the graph appearance" on page 70

"Add or remove a signal" on page 73

"Zoom an area in the graph" on page 80

"Compare two graph periods" on page 81

"Print a Graph" on page 83

"Save an Operator graph" on page 83

## 7.2 Graph Properties Form

Use the **Graph Properties** form to define the graph period, the object atoms and appearance of the graph line, the data source to be displayed in the graph, the graph title and the font properties for all graph texts.

You can also set up the graph legend properties and chart colors as well enable display of the graph toolbar and status bar.

### Signals

A graph must contain at least one signal, which can be any object **atom** which contains data (**LOG**, **BCL** and/or Live data).

You can select up to 16 signals that can consist of any object atoms which contain data (LOG, BCL or Live data) from the following atom types:

- Analog
- Digital
- Table
- Counter

### Preconditions

- The Supervise module must be opened and the configuration must be started and running.

### Where do I find it?

- In the **Supervise** module > **Graph** > **Create Operator Graph**
- In an open Operator Graph, right-click the graph and select **Properties**.

### Tab Overview

| Tab Page      | Description  |
|---------------|--|
| <b>Window</b> | On this tab page you can : <ul style="list-style-type: none"> <li>• Enter the name and/or description of the graph</li> <li>• Set up the graph window properties</li> <li>• Define how the graph is displayed in the menu</li> <li>• Connect the graph to other objects</li> <li>• Enable object-level protection for the graph</li> </ul> |
| <b>Period</b> | On this tab page you can: <ul style="list-style-type: none"> <li>• Select the graph period to display:</li> <li>• Relative periods (1 hour back, 2 days back)</li> </ul>   |

| Tab Page       | Description  |
|----------------|--|
|                | <ul style="list-style-type: none"> <li>• Absolute periods (Today, Yesterday)</li> <li>• Custom durations (3 hours back)</li> <li>• Custom periods, where you define the start and end dates and times of the graph.</li> </ul>   |
| <b>Signals</b> | <p>On this tab page you can:</p> <ul style="list-style-type: none"> <li>• Select the signals to be displayed in the graph. <ul style="list-style-type: none"> <li>• Add new signals from the <b>Object Browser</b> form.</li> <li>• Remove existing signals.</li> <li>• Replace one signal with another new signal.</li> <li>• Rearrange the display order of the signals</li> </ul> </li> <li>• Define the signal line color and legend text for the signal</li> <li>• Select to display the Y-axis for the signal</li> <li>• Define which value limits to apply to the signal</li> </ul> |
| <b>Chart</b>   | <p>On this tab page you can:</p> <ul style="list-style-type: none"> <li>• Define the title of the graph</li> <li>• Define the placement of the graph legend</li> <li>• Select the signal legend properties</li> <li>• Select the font properties for all graph texts</li> </ul>  |
| <b>Options</b> | <p>On this tab page you can:</p> <ul style="list-style-type: none"> <li>• Define colors for the graph elements: <ul style="list-style-type: none"> <li>• Background color</li> <li>• Text color</li> <li>• Axis colors</li> <li>• Graph grid color</li> </ul> </li> <li>• Display the graph toolbar</li> <li>• Display the graph status bar</li> </ul>   |

## Field and button Help

### Period tab

| Field name                   | Description  |
|------------------------------|--|
| <b>Select display period</b> | Select the period you want to display in the graph for the signal selected in the display. |

| Field name       | Description  |
|------------------|--|
|                  | <p>All back dates and times are based on the present date and time.</p> <p>You can also define a fixed custom duration or custom period:</p> <ul style="list-style-type: none"> <li>• <b>Custom Duration:</b> You must define the interval in the <b>Duration</b> field.</li> <li>• <b>Custom Period:</b> You must define the start and end date and times in the <b>From</b> and <b>To</b> fields below.</li> </ul> <p>Operators will be able to change the graph period by accessing the Graph properties.</p> |
| <b>Duration</b>  | <p>Enter the duration and time interval for the <b>Custom Duration</b> graph period</p> <p>These fields will only be accessible if you selected the <b>Custom Duration</b> graph period in the <b>Select period to display</b> field.</p>  |
| <b>From date</b> | <p>Enter the start date for the <b>Custom Period</b> graph period.</p> <p>This field will only be accessible if you selected the <b>Custom Period</b> graph period in the <b>Select period to display</b> field.</p>   |
| <b>From time</b> | <p>Enter the start time for the <b>Custom Period</b> graph period.</p> <p>This field will only be accessible if you selected the <b>Custom Period</b> graph period in the <b>Select period to display</b> field.</p>   |
| <b>To date</b>   | <p>Enter the end date for the <b>Custom Period</b> graph period.</p> <p>This field will only be accessible if you selected the <b>Custom Period</b> graph period in the <b>Select period to display</b> field.</p>   |
| <b>To time</b>   | <p>Enter the end time for the <b>Custom Period</b> graph period.</p> <p>This field will only be accessible if you selected the <b>Custom Period</b> graph period in the <b>Select period to display</b> field.</p>   |

### Signals tab

| Field/button name  | Description   |
|--------------------|---|
| <b>Object</b>      | <p>The name of the object selected in the <b>Signals to show on the graph</b> pane.</p> <p>The content of this field cannot be edited.</p>  |
| <b>Atom</b>        | <p>The atom of the object selected in the <b>Signals to show on the graph</b> pane to be displayed in the graph.</p> <p>Select a new atom from the drop-down list in the field. Only those atoms that have been enabled on the object will be listed in the drop-down list.</p> |
| <b>Data Source</b> | <p>Select the data source to be used for displaying data values from the atom selected</p>  |

| Field/button name | Description  |
|-------------------|--|
|                   | <p>in the <b>Atom</b> field.</p> <p>Only data files that exist for the selected atom are accessible in the drop-down list.</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> The quickest and best data is retrieved first in order to draw the initial graph lines. As the data retrieval continues, the graph line and details become more refined and specific. This option is most effective if the object saves LOG and reduced (BCL) data simultaneously.</li> <li>• <b>LOG:</b> Only data in the LOG files are used to draw the chart.</li> <li>• <b>Reduced:</b> Only reduced data in the BCL files are used to draw the chart. You must also select which data reduction method enabled on the atom to apply as well as which period to display reduced data for.</li> <li>• <b>Online:</b> Live data is used to draw the graph lines and points</li> </ul> <p>Only accessible data options are displayed in the drop-down lists. If an object atom is not set up to store data in LOG or BCL (reduced data) files, these options will not be accessible.</p> |
| <b>Reduction</b>  | <p>Select which data reduction method is to be used as chart data.</p> <p>Only data reduction methods that have been enabled for the object selected in the <b>Signals to show on the graph</b> pane will be displayed in the drop-down list.</p> <p>This field is only accessible if you have selected <b>Reduced</b> in the <b>Data source</b> field.</p>  |
| <b>Period</b>     | <p>Select which period Data reduction data is to be used as chart data:</p> <ul style="list-style-type: none"> <li>• <b>Auto:</b> The quickest and best data is retrieved from all reduced data files (BCL and <b>HDM</b>) in order to draw the initial chart lines</li> <li>• <b>Base:</b> The Base Class Files are used to draw the graph lines</li> <li>• <b>Hour:</b> The Hour values in the HourDayMonth (HDM) database are used to draw the graph lines</li> <li>• <b>Day:</b> The Day values in the HourDayMonth (HDM) database are used to draw the graph lines</li> <li>• <b>Month:</b> The Month values in the HourDayMonth (HDM) database are used to draw the graph lines</li> </ul> <p>This field is only accessible if you have selected <b>Reduced</b> in the <b>Data source</b> field.</p> <p>If you have selected a period which does not contain reduced data for the atom, the graph line will not be drawn.</p>  |
| <b>Line Color</b> | <p>Select the line color used to represent the object you selected in the <b>Signals to</b></p>  |

| Field/button name                  | Description   |
|------------------------------------|---|
|                                    | <b>show on the graph</b> pane.  |
| <b>Legend text for signal</b>      | <p>Enter the legend text for the object selected in the <b>Signals to show on the graph</b> pane.</p> <p>The text will be displayed in addition to the object name and description.</p>   |
| <b>Add button</b>                  | <p>Click this button to open the <b>Object Browser</b> form and add an object to the <b>Signals to show on the graph</b> pane.</p> <p>In the <b>Object Browser</b> form, you can search for and select the object you want to add for display in the graph.</p> <p>You can specify which object atom to display as the signal in the graph in the <b>Atom</b> field on the <b>Basic</b> tab.</p>    |
| <b>Delete button</b>               | Click this button to remove the object selected in the <b>Signals to show on the graph</b> pane from the graph.   |
| <b>Replace button</b>              | <p>Click this button to replace an object selected in the <b>Signals to show on the graph</b> pane with new object.</p> <p>The <b>Object Browser</b> form will open and you can search for and select the new object you want to add for display in the graph.</p> <p>You can specify which object atom to display as the signal in the graph in the <b>Atom</b> field on the <b>Basic</b> tab.</p> |
| <b>Move Up button</b>              | Click this button to move a selected object in the <b>Signals to show on the graph</b> pane up in the Signals list.   |
| <b>Move Down button</b>            | Click this button to move a selected object in the <b>Signals to show on the graph</b> pane down in the Signals list.   |
| <b>Show Y-axis for this signal</b> | <p>Select this check box to display the Y-axis in the graph for the object selected in the <b>Signals to show on the graph</b> pane.</p> <p>You can clear this check box when displaying multiple signals</p> <p>Operators can display or hide individual Y-axes during runtime display of the graph.</p>   |
| <b>Automatic</b>                   | The graph will attempt to set the upper and lower limits of the Y-axis based on the object data selected for display in the graph.  |
| <b>Limits from object</b>          | Select this check box to use the atom limits (minimum and maximum) of the object selected in the <b>Signals to show in the graph</b> pane as lowest and highest values on the Y-axis.   |

| Field/button name   | Description   |
|---------------------|---|
| <b>Fixed limits</b> | <p>Select this option to manually define minimum and maximum Y-axis values in the <b>Minimum</b> and <b>Maximum</b> fields below.</p> <p>The Y-axis will automatically be adjusted to reflect the new limits, distributing the Y-axis scale values evenly along the entire axis.</p> <p>Any defined maximum and minimum values for the atom will not be used.</p> |
| <b>Minimum</b>      | <p>Enter the minimum (lowest) value of the Y-axis.</p> <p>Atom values lower than this value will not be displayed in the graph.</p>   |
| <b>Maximum</b>      | <p>Enter the maximum (highest) value of the Y-axis.</p> <p>Atom values greater than this value will not be displayed in the graph.</p>  |

### Chart tab

| Field name                               | Description   |
|--|---|
| <b>Chart title (Top)</b>                 | <p>Enter the title of the chart.</p> <p>The title is displayed on the top of the chart.</p>   |
| <b>Show Legend</b>                       | <p>Select this check box to display the graph legend in the chart.</p>  |
| <b>Legend Placement</b>                  | <p>Select where the graph legend is to be placed in the chart area:</p> <ul style="list-style-type: none"> <li>• Top</li> <li>• Bottom</li> <li>• Left</li> <li>• Right</li> </ul>  |
| <b>Show object/atom information</b>      | <p>Select this check box to display the object name, description and atom name in the graph legend.</p> <p>The object description will not be displayed if the object does not have a description. If the object atom contains a display name, the display name will be shown instead of the atom name.</p> <p>This setting is applied to all signals in the graph.</p> |
| <b>Show text defined for each signal</b> | <p>Select this check box to display the text defined in the <b>Signals</b> tab &gt; <b>Basic</b> sub-tab &gt; <b>Legend text for signal</b> field.</p> <p>This setting is applied to all signals in the graph.</p>  |

| Field name                | Description  |
|---------------------------|--|
| <b>Select font button</b> | Click the button to open the <b>Font</b> form and select the font, font size and font type to apply to all texts in the graph. |

## Options

| Field name                   | Description   |
|------------------------------|---|
| <b>Use auto-matic colors</b> | <p>Clear this check box to manually define colors of the following graph elements:</p> <ul style="list-style-type: none"> <li>• Background</li> <li>• Text</li> <li>• Axis</li> <li>• Grid</li> </ul> <p>If this check box is selected, the graph will be displayed in the default system colors .</p>  |
| <b>Background</b>            | <p>Click the field to open the <b>Colors</b> form and select the graph background color.</p> <p>The background of the entire graph will be displayed in this color</p> <p>This field is only accessible if the <b>use automatic colors</b> check box has been cleared.</p>  |
| <b>Text</b>                  | <p>Click the field to open the <b>Colors</b> form and select the color of all X and Y axis scale values.</p> <p>This field is only accessible if the <b>use automatic colors</b> check box has been cleared.</p>  |
| <b>Axis</b>                  | <p>Click the field to open the <b>Colors</b> form and select the color of the X-axis.</p> <div style="border: 1px solid gray; padding: 5px; margin: 5px 0;"> <p>The Y-axis will still be displayed in the selected signal color and the individual graph line colors are defined on the <b>Signals</b> tab for each individual signal.</p> </div> <p>This field is only accessible if the <b>use automatic colors</b> check box has been cleared.</p> |
| <b>Grid</b>                  | <p>Click the field to open the <b>Colors</b> form and select the color of the grid lines in the graph.</p> <div style="border: 1px solid gray; padding: 5px; margin: 5px 0;"> <p>To remove grid lines, select the grid same color as the grid background.</p> </div> <p>This field is only accessible if the <b>use automatic colors</b> check box has been cleared.</p>  |

| Field name                                      | Description  |
|---|--|
| <b>Display graph toolbar</b>                    | Select this check box to display the graph toolbar in the top of the graph window.   |
| <b>Display graph status-bar</b>                 | Select this check box to display the graph status bar at the bottom of the graph window.   |
| <b>Auto hide axes with the same value range</b> | Select this check box to merge all Y-axes that have identical measuring ranges. This reduces the number of identical Y-axes to only one. |

### See Also

"The Graph Toolbar" on page 50

"The Graph Status bar" on page 52

## 7.3 The Graph Toolbar

The graph toolbar presents a number of functions and options to the operator and can be displayed or hidden for the graph by selecting the **Display Graph Toolbar** check box on the **Options** tab in the **Graph Properties** form.

Use the Graph Toolbar to

- Display signal points on the graph line
- Display signal value on the graph line
- Magnify a graph area (Zoom in or zoom out)
- Jump to a specific date in the graph
- Change the period of the graph
- Compare the present graph trend with the graph trend for another period
- Send the present graph image to the default printer
- Save the graph as an Operator Graph - either updating an existing Operator graph or creating a new one.

### Preconditions

The **Display Graph Toolbar** check box on the **Options** tab in the **Graph Properties** form must be selected for the **Graph toolbar** to be display .

## Button help

| Buttons                | Description  |
|------------------------|--|
| <b>Show Points</b>     | <p>Click this button to display the points in the graph line. The points will be displayed as light gray dots.</p> <p>If you want to see the values on the graph line, click the <b>Show Values</b> button.</p>  |
| <b>Hide Points</b>     | <p>Click this button to hide the points in the graph line.</p> <p>The graph will be rendered as lines with no points.</p>  |
| <b>Show values</b>     | <p>Click this button to display data values in the graph line.</p> <p>The yellow value indicator will be displayed in the X-axis of the graph. You can drag the value indicator to any position in the graph and display the values on the graph line as well as the date and time of the value..</p> <p>If you want to see the points on the graph line, click the <b>Show points</b> button.</p> |
| <b>Hide values</b>     | <p>Click this button to hide the value indicator.</p>  |
| <b>Zoom in</b>         | <p>Click this button to zoom an area in the graph.</p> <p>You can continue to zoom graph areas, increasing the detail of the graph by click this button and selecting area repeatedly.</p>   |
| <b>Zoom out</b>        | <p>Click this button to zoom out of a graph area, stepping back one zoom action.</p>   |
| <b>Reset Zoom</b>      | <p>Click this button to zoom out to the main graph area, resetting all zoomed areas.</p>   |
| <b>Go to Date</b>      | <p>Click this button to open the <b>Go to Date</b> form where you can jump to a an entered date and time . You can also click the <b>Now</b> button to jump to the present date and time in the graph.</p>   |
| <b>Change Period</b>   | <p>Click this button to open the <b>Graph Properties</b> form and change the display period of the graph.</p> <p>Only the <b>Period</b> tab of the <b>Graph properties</b> form will be accessible.</p>  |
| <b>Compare Periods</b> | <p>Click this button to compare the present graph trend with the graph trend for another period.</p> <p>The graph area will be divided into two sections, the upper section which can be scrolled individually and the lower section which is scrolled together with the upper section.</p>  |
| <b>Single Period</b>   | <p>Click this button to revert the graph from a split-sectioned graph used for comparing two graph periods to a the original single-period graph.</p>  |
| <b>Print</b>           | <p>Click this button to send the present graph to the default printer.</p>   |
| <b>Save</b>            | <p>Click this button to open the <b>Save As</b> form where you can save the graph as an oper-</p>  |

| Buttons | Description   |
|---------|---|
|         | <p>ator graph, either overwriting the original operator graph or creating a new operator graph.</p> <p>You can always save a standard graph as an operator graph and afterwards edit the graph properties parameters and signal settings of the operator graph, creating your own customized graph.</p> |

### See Also

"Graph Properties Form" on page 43

"Zoom an area in the graph" on page 80

"Compare two graph periods" on page 81

## 7.4 The Graph Status bar

The graph status bar displays the status of data retrieval when the graph is opened and being populated with data or when scrolling along the X-axis , changing time period.

The Graph status bar can be removed from the graph by clearing the **Display graph statusbar** check box on the **Options** tab in the **New Graph Properties** form.

### See Also

"Graph Properties Form" on page 43

## 7.5 Graph Property Menu

Use graph property menu to:

- Hide or display selected signals
- Highlight or remove highlights from selected signals
- Show or hide graph points
- Show or hide graph values
- Zoom in or zoom out graph areas as well as reset all zoom levels
- Jump to a selected date in the graph

- Change the graph period
- Compare the present period with another
- Send the present graph to the default printer
- Save the present graph as an operator graph
- Open the **Graph properties** form

## Where do I find it?

In the graph area, right-click to open the **Graph property** menu.

## Preconditions

The graph must be opened in the graph window.

## Menu help

| Menu option                  | Description   |
|------------------------------|---|
| <b>Show All</b>              | Select this option to display the graph and Y-axis of all hidden signals.<br>This option is only accessible if there are hidden signals in the graph.   |
| <b>Remove all highlights</b> | Select this option to remove all highlights from all signals.   |
| <b>Show Points</b>           | Select this option to display the points in the graph line. The points will be displayed as light gray dots.<br>If you want to see the values on the graph line, select the <b>Show Values</b> option.  |
| <b>Hide points</b>           | Select this option to hide the points in the graph line.  |
| <b>Show Values</b>           | Select this option to display data values in the graph line.<br>The yellow value indicator will be displayed in the X-axis of the graph. You can drag the value indicator to any position in the graph and display the values on the graph line as well as the date and time of the value..<br>If you want to see the points on the graph line, select the <b>Show points</b> option. |
| <b>Hide Values</b>           | Select this option to hide the value indicator.   |
| <b>Zoom in</b>               | Select this option to zoom an area in the graph.<br>You can continue to zoom graph areas, increasing the detail of the graph by Select this option and selecting area repeatedly.   |
| <b>Zoom out</b>              | Select this option to zoom out of a graph area, stepping back one zoom action.  |

| Menu option            | Description   |
|------------------------|---|
|                        | This option is only accessible if the graph has been zoomed once or more.   |
| <b>Reset zoom</b>      | <p>Select this option to zoom out to the main graph area, resetting all zoomed areas.</p> <p>This option is only accessible if the graph has been zoomed multiple times.</p>  |
| <b>Go to Date</b>      | Select this option to open the <b>Go to Date</b> form where you can jump to an entered date and time. You can also click the <b>Now</b> button to jump to the present date and time in the graph.   |
| <b>Change Period</b>   | <p>Select this option to open the <b>Graph Properties</b> form and change the display period of the graph.</p> <p>Only the <b>Period</b> tab of the <b>Graph properties</b> form will be accessible.</p>  |
| <b>Compare Periods</b> | <p>Select this option to compare the present graph trend with the graph trend for another period.</p> <p>The graph area will be divided into two sections, the upper section which can be scrolled individually and the lower section which is scrolled together with the upper section.</p>  |
| <b>Single Period</b>   | Select this option to revert the graph from a split-sectioned graph used for comparing two graph periods to a the original single-period graph.   |
| <b>Hide</b>            | <p>Select this option to hide one or more signals.</p> <p>Hidden signals are not displayed in the graph and the Y-axis of the signal will be hidden.</p>  |
| <b>Highlight</b>       | <p>Select this option to emphasize one or more signals.</p> <p>The graph lines and Y-axis of highlighted signals will be displayed with thicker lines.</p>  |
| <b>Print</b>           | Select this option to send the present graph to the default printer.  |
| <b>Save</b>            | <p>Select this option to open the <b>Save As</b> form where you can save the graph as an operator graph, either overwriting the original operator graph or creating a new operator graph.</p> <p>You can always save a standard graph as an operator graph and afterwards edit the graph properties parameters and signal settings of the operator graph, creating your own customized graph.</p> <p>This option is only accessible if changes have been made to a standard graph or you have opened an Operator graph.</p> |
| <b>Properties</b>      | <p>Select this option to open the <b>Graph Properties</b> form.</p> <p>Use the <b>New Graph Properties</b> form to define the graph period, the object atoms and appearance of the graph line, the data source to be displayed in the graph, the graph title and the font properties for all graph texts.</p>   |

| Menu option | Description  |
|-------------|--|
|             | You can also set up the graph legend properties and chart colors as well enable display of the graph toolbar and status bar. |

## See Also

"Graph Properties Form" on page 43

## 7.6 Signals Property Menu

Use Signals property menu to:

- Hide or display selected signals
- Highlight or remove highlights from selected signals

### Where do I find it?

In the graph area, right-click a signal in the legend to open the **Signals property** menu.

### Preconditions

The graph must be opened in the graph window and legends must be displayed in order to be able to right-click on a signal.

### Menu help

| Menu option             | Description  |
|-------------------------|--|
| <b>Highlight</b>        | Select this option to emphasize the selected signal.<br>The graph lines and Y-axis of highlighted signals will be displayed with thicker lines.            |
| <b>Remove Highlight</b> | Select this option to remove emphasis for the selected signal.<br>This option is only accessible if the selected signal is highlighted.                    |
| <b>Hide</b>             | Select this option to hide the selected signal in the graph.<br>Hidden signals are not displayed in the graph and the Y-axis of the signal will be hidden. |
| <b>Show</b>             | Select this option to display the selected signal in the graph.<br>This option is only accessible if the selected signal is hidden.                        |
| <b>Show All</b>         | Select this option to display the graph and Y-axis of all hidden signals.  |

| Menu option            | Description   |
|------------------------|---|
|                        | This option is only accessible if there are hidden signals in the graph.  |
| <b>Hide all others</b> | <p>Select this option to hide all other signals.</p> <p>Hidden signals are not displayed in the graph and the Y-axis of the signal will be hidden.</p>  |
| <b>Properties</b>      | <p>Select this option to open the <b>Graph Properties</b> form.</p> <p>Use the <b>New Graph Properties</b> form to define the graph period, the object atoms and appearance of the graph line, the data source to be displayed in the graph, the graph title and the font properties for all graph texts.</p> <p>You can also set up the graph legend properties and chart colors as well enable display of the graph toolbar and status bar.</p> |

**See Also**

"Graph Properties Form" on page 43

**7.7 X-Axis Property Menu**

Use the X-axis property menu to:

- Move the graph period backwards by time period (day, week, month)
- Move the graph to the present date or to a specified date
- Change the period of the graph
- Compare the signal with another time
- Hide and display selected signals in the graph
- Highlight and remove highlight for selected signals

**Where do I find it?**

In the graph area, right-click the X-axis to open the **X-axis property** menu. If comparing two periods, right-click the lower X-axis to open the X-axis property menu.

**Preconditions**

The graph must be opened in the graph window.

## Menu help

| Menu option            | Description   |
|------------------------|---|
| <b>Go Forward</b>      | Move the graph period forward by the selected period.   |
| <b>Go Backward</b>     | Move the graph period back by the selected period.  |
| <b>Go to Now</b>       | Move the graph to the present date and time.  |
| <b>Go to Date</b>      | Specify the date and time and move the graph to the date.   |
| <b>Change Period</b>   | <p>Select this option to open the <b>Graph Properties</b> form and change the display period of the graph.</p> <p>Only the <b>Period</b> tab of the <b>Graph properties</b> form will be accessible.</p>  |
| <b>Compare Periods</b> | <p>Select this option to compare the present graph trend with the graph trend for another period.</p> <p>The graph area will be divided into two sections, the upper section which can be scrolled individually and the lower section which is scrolled together with the upper section.</p>  |
| <b>Single Period</b>   | Select this option to revert the graph from a split-sectioned graph used for comparing two graph periods to a the original single-period graph.   |
| <b>Properties</b>      | <p>Select this option to open the <b>Graph Properties</b> form.</p> <p>Use the <b>New Graph Properties</b> form to define the graph period, the object atoms and appearance of the graph line, the data source to be displayed in the graph, the graph title and the font properties for all graph texts.</p> <p>You can also set up the graph legend properties and chart colors as well enable display of the graph toolbar and status bar.</p> |

### See Also

"Navigate the Axes" on page 65

"Graph Properties Form" on page 43

## 7.8 Y-Axis Property Menu

Use the Y-axis property menu to:

- Hide and display selected signals in the graph
- Highlight and remove highlight the selected signals

## Where do I find it?

In the graph area, right-click a Y-axis to open the **Y-Axis property** menu.

## Preconditions

The graph must be opened in the graph window and the Y-axis of the signal must be displayed in order to be able to right-click on a Y-axis.

## Menu help

| Menu option              | Description  |
|--------------------------|--|
| <b>Highlight</b>         | Select this option to emphasize the signal associated with the Y-axis.<br>The graph lines and Y-axis of highlighted signals will be displayed with thicker lines.  |
| <b>Remove High-light</b> | Select this option to remove emphasis for the selected signal associated with the Y-axis.<br>This option is only accessible if the selected signal is highlighted.   |
| <b>Hide</b>              | Select this option to hide selected signal associated with the Y-axis.<br>Hidden signals are not displayed in the graph and the Y-axis of the signal will be hidden.   |
| <b>Hide All Others</b>   | Select this option to hide all other signals.<br>Hidden signals are not displayed in the graph and the Y-axis of the signal will be hidden.  |
| <b>Show All</b>          | Select this option to display the graph and Y-axis of all hidden signals.<br>This option is only accessible if there are hidden signals in the graph.  |
| <b>Properties</b>        | Select this option to open the <b>Graph Properties</b> form.<br>Use the <b>New Graph Properties</b> form to define the graph period, the object atoms and appearance of the graph line, the data source to be displayed in the graph, the graph title and the font properties for all graph texts.<br>You can also set up the graph legend properties and chart colors as well enable display of the graph toolbar and status bar. |

**See Also**

"Navigate the Axes" on page 65

"Graph Properties Form" on page 43

**7.9 Compare X-Axis Property Menu**

Use the Compare X-axis property menu to:

- Move the period used for comparison
- Move the graph to a specified date

**Where do I find it?**

In the graph area, right-click the upper X-axis to open the **X-axis property** menu.

**Preconditions**

The graph must be opened in the graph window

**Menu help**

| Menu option            | Description   |
|------------------------|---|
| <b>Go Backward</b>     | Move the graph period back by the selected period.  |
| <b>Reset Offset</b>    | Select this option to reset any adjustment of the compare X-axis and restore the compare x-Axis to the same position of the lower X-Axis.   |
| <b>Go to Date</b>      | Specify the date and time and move the graph to the date.   |
| <b>Change Period</b>   | Select this option to open the <b>Graph Properties</b> form and change the display period of the graph.<br><br>Only the <b>Period</b> tab of the <b>Graph properties</b> form will be accessible.   |
| <b>Compare Periods</b> | Select this option to compare the present graph trend with the graph trend for another period.<br><br>The graph area will be divided into two sections, the upper section which can be scrolled individually and the lower section which is scrolled together with the upper section. |
| <b>Single Period</b>   | Select this option to revert the graph from a split-sectioned graph used for comparing two graph periods to a the original single-period graph.   |
| <b>Properties</b>      | Select this option to open the <b>Graph Properties</b> form.  |

| Menu option | Description   |
|-------------|---|
|             | <p>Use the <b>New Graph Properties</b> form to define the graph period, the object atoms and appearance of the graph line, the data source to be displayed in the graph, the graph title and the font properties for all graph texts.</p> <p>You can also set up the graph legend properties and chart colors as well enable display of the graph toolbar and status bar.</p> |

## See Also

"Graph Properties Form" on page 43

Delete this text and replace it with your own content.

## 7.10 Graph keyboard shortcuts and Mouse combinations

The following keyboard shortcuts and mouse combinations are available for operations in the graphs:

### Keyboard shortcuts

| Keyboard short-cuts | Description   |
|---------------------|---|
| Arrow Left          | Offsets (moves) the lower X-axis and upper (compare) X-axis back.   |
| Arrow Right         | Offsets (moves) the lower X-axis and upper (compare) X-axis forward.                                      |
| Arrow Up            | <p>Offsets (moves) the Y-axis upwards.</p> <p>This is only relevant for graphs that have been zoomed.</p> |
| Arrow Down          | Offsets (moves) the Y-axis downwards.   |

| Keyboard short-cuts | Description   |
|---------------------|---|
|                     | This is only relevant for graphs that have been zoomed.   |
| Page Up             | Shift the Y-axis upwards by one graph page.<br>This is only relevant for graphs that have been zoomed.                                    |
| Page Up             | Shift the Y-axis downwards by one graph page.<br>This is only relevant for graphs that have been zoomed.                                  |
| Shift + Page Up     | Shift the lower X-axis and upper (compare) X-axis backwards by one graph page.<br>This is only relevant for graphs that have been zoomed. |
| Shift + Page Down   | Shift the lower X-axis and upper (compare) X-axis forwards by one graph page.<br>This is only relevant for graphs that have been zoomed.  |
| End                 | Moves the lower X-axis and upper (compare) X-axis the graph to the end of the graph period.   |

## Mouse Combinations

| Mouse Combinations        | Description   |
|---------------------------|---|
| Left click + drag         | Drag the lower or upper (compare) X-axis forward or backward  |
| Shift + Left click + drag | Drag both X-axes forward or backward.   |
| Rolling Mouse-wheel       | In graph area: Scrolls both X-axes forward or backward.<br>In X-axis: Only scrolls the X-axis where the mouse cursor is placed.<br>In Y-axis: Only scrolls the Y-axis where the mouse cursor is placed.<br><br>The Y-axis can only be scrolled if parts of the Y-axis is not displayed, for example when zooming. |

| Mouse Combinations         | Description  |
|----------------------------|--|
| Shift + Rolling Mousewheel | Scrolls all Y-axes up or down.<br><br><div style="border: 1px solid gray; padding: 5px; margin: 5px 0;">             The Y-axis can only be scrolled if parts of the Y-axis is not displayed, for example when zooming.           </div> |
| Ctrl + rolling mousewheel  | The scrolling speed is increased, allowing for faster scrolling of greater time periods (X-axes) or values (Y-axes).   |
| Left click in graph area   | Moves the Value Indicator to the clicked mouse position.<br><br>The Value Indicator must be enabled by clicking the <b>Show Values</b> button in the <b>Graph Toolbar</b> .  |
| Shift + Mouse click        | Select an area of the graph to zoom.<br><br>Select the Zoom in button and press the <b>Shift</b> key to select a custom area of the graph for zooming.   |
|                            | When zooming a graph area  |
| Click in the zoom window   | The graph is moved to the position of the mouse cursor in the zoom overview window.  |
| Click in the graph area    | The zoom overview window is moved to display the graph at the location of the mouse cursor.  |

## See Also

## 7.11 How To

### Open an existing graph

You can open an existing Standard or Operator graph in the Supervise module in several ways:

#### Standard graphs, made accessible in the Graph menu

In the **Supervise** module, click **Graph** and select the graph you want to open.

### Standard graphs, made accessible directly through a descriptor

In the process diagram, click the **descriptor**<sup>1</sup> (button, image or graph symbol) connected to the graph to open the Standard graph.

### Operator graphs

In the **Supervise** module, click **Graph > Open Operator Graph** and select the operator graph you want to open.

Operator graphs cannot be connected to descriptors in IGSS and must be accessed through the **Graph** menu.

## Change graph period

You can change the default period displayed in the graph for both graph types (Operator and Standard)

### Standard graphs

The graph period defined for a Standard graph will be the default period when the graph is opened in the Supervise module, but you can change the graph period to display object data for other periods.

When you change a graph property for a Standard graph, you can save the changes, converting the Standard graph to an Operator graph.

### Operator graphs

The default period when a new Operator graph is created is one hour back, but you can change this by editing the graph properties of the Operator graph.

You can save your changes, either overwriting the original Operator graph or creating a new one. If you do not save your changes, the Operator graph you opened will retain its original graph period.

### To change the graph period

#### If the Graph toolbar is displayed

1. Click the **Change Period** button to open the **Graph Properties** form > **Period** tab
2. In the **Select display period** field, select period to display in the graph. You can select from the fixed periods or select a custom duration or custom period.

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<sup>1</sup>A descriptor is the graphical display of an object. IGSS includes many types of descriptors including: - Built-in standard symbols - Animated symbols (Symbol Factory library) - Graphics and animation - Drawing symbols - Windows controls - ActiveX controls An IGSS object can be represented with different descriptors on different diagrams.

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- **Fixed Duration:** Select a fixed (pre-defined) duration in the drop-down list.
  - **Custom Duration:** Select **Custom Duration** in the drop-down list. In the **Duration** field, enter the duration interval and the duration type (Minutes, Hours, Days, Weeks, Months or Years)
  - **Custom Period:** Select **Custom Period** in the drop-down list.
    1. In the **From date** field, select the start date of the graph period.
    2. In the **From time** field, select the start time of the graph period.
    3. In the **To date** field, select the end date of the graph period.
    4. In the **To time** field, select the end time of the graph period.
3. Click the **OK** button to save the changes and close the **Graph Properties** form

### If the Graph toolbar is not displayed

1. Right-click the graph or right-click the X-axis and select **Change period** to open the **Graph Properties** form > **Period** tab
2. In the **Select display period** field, select period to display in the graph. You can select from the fixed periods or select a custom duration or custom period. Fixed Duration: Select a fixed (pre-defined) duration in the drop-down list.
  - **Custom Duration:** Select Custom Duration in the drop-down list. In the **Duration** field, enter the duration interval and the duration type (Minutes, Hours, Days, Weeks, Months or Years)
  - **Custom Period:** Select **Custom Period** in the drop-down list.
    1. In the **From date** field, select the start date of the graph period.
    2. In the **From time** field, select the start time of the graph period.
    3. In the **To date** field, select the end date of the graph period.
    4. In the **To time** field, select the end time of the graph period.
3. Click the **OK** button to save the changes and close the **Graph Properties** form

### To go to a date in the graph

### If the Graph toolbar is displayed

1. Click the **Go to Date** button to open the **Go to Date** form.
2. Enter the date and time. Click the now button to enter the present date and time.
3. Click the **OK** button to close the Go to Date form and jump to the date entered

### If the Graph toolbar is not displayed

1. Right-click the graph or right-click the X-axis and select **Go to Date** to open the **Go to Date** form
2. Enter the date and time. Click the now button to enter the present date and time.
3. Click the **OK** button to close the Go to Date form and jump to the date entered

You can also right-click the X-axis and select **Go to Now** to jump the graph to the present date and time.

### See Also

"X-Axis Property Menu" on page 56

"Compare two graph periods" on page 81

## Navigate the Axes

The X and Y axes can be moved, shifted and adjusted by the operators in the graph using the mouse and/or keyboard combinations. This will shift the graph lines along with the axis in the direction moved.

### Navigating the X-axis

You can move the X-axis to the left and right by using the LEFT and RIGHT arrows on the keyboard or you can drag the X-axis to the left and right using your left mouse button. If you have a wheel mouse, scrolling the wheel up will shift the X-axis to the right and scrolling down will shift the X-axis to the left.

If you right-click the X-axis, you can move the entire graph backwards or forwards by a selected period.

#### Shift the X-axes when comparing graphs

If the graph is used to compare two periods, dragging the upper or lower X-axis will shift the axis independently to the left or right. If you press SHIFT while dragging the upper or lower X-axis, both X-axes will be locked and moved simultaneously.

If you have a wheel mouse, scrolling the wheel up will shift both X-axes to the right and scrolling down will shift both X-axes to the left.

### Navigating the Y-axis

The Y-axis can be adjusted by pressing the SHIFT button and dragging the axis with the left mouse button. You can adjust the Y-axis individually for each signal and

**See Also**

"Graph keyboard shortcuts and Mouse combinations" on page 60

"X-Axis Property Menu" on page 56

"Y-Axis Property Menu" on page 57

**Display graph points and show graph values**

A graph is by default not displayed with graph points or options for viewing the graph values, but you can enable graph point display and view graph values in the graph lines when viewing the graph.

**Display graph points**

You can display the individual graph points, which each represent a data value retrieved from the data source (**LOG**, **BCL** or Live data) as gray dots on the signal line.

**If the Graph toolbar is displayed**

- Click the **Show Points** button to display individual graph points on the signal line.
- Click the **Hide Points** button in the graph toolbar to hide the points again.

**If the Graph toolbar is not displayed**

- Right-click the graph and select **Show Points** to display individual graph points on the signal line.
- Right-click the graph and select **Hide Points** to hide the points again.

**See values on the graph line**

You can also display and use the Value bar to see the signal values for the graph line, dragging the value bar to the position you want to see signal values for all signal lines.

**If the Graph toolbar is displayed**

- Click the **Show Values** button to display the value bar. You can drag the value bar along the X-axis to view the signal values on the graph lines.
- Click the **Hide Values** button in the graph toolbar to hide the value bar again.

**If the Graph toolbar is not displayed**

- Right-click the graph and select **Show Values** to display the value bar. You can drag the value bar along the X-axis to view the signal values on the graph lines.
- Right-click the graph and select **Hide Values** to hide the value bar again.

Zoom the graph to obtain a better overview of the graph line and period.

**See Also**

"The Graph Toolbar" on page 50

"Graph Property Menu" on page 52

"Zoom an area in the graph" on page 80

"Change graph period" on page 63

**Highlight and hide a signal**

To improve the overview of your graph, you can highlight and emphasize as well as hide other signal lines, cleaning up the graph and removing distractions and clutter.

**Highlight a signal**

You can highlight one or more signals in the graph, emphasizing the signal's graph line and the Y-axis by thickening the line and axis to gain a better overview of the graph trend.

**If the signal legend is displayed**

Right-click the signal legend text of the signal you want to highlight and select **Highlight**. The signal line and Y-axis will be changed to a thicker line.

**Remove signal highlight**

To remove a highlight from a signal, right-click the signal legend of the signal you want to remove the highlight from and select **Remove Highlight**.

You can remove all signal highlights by right-clicking a signal legend text that is not highlighted and selecting **Remove all Highlights**.

If there are multiple highlighted signals, you can right-click any signal legend text and select **Remove all Highlights** to remove highlights from all signals.

**If the signal legend is not displayed**

Right-click the graph and select **Highlight**. Select the signal you want to highlight from the list. Repeat to highlight another signal.

**Remove signal highlight**

To remove a highlight from a signal, right-click the graph menu and select **Highlight**. Select the signal you want to remove highlight from the list. Repeat to remove highlight from another signal.

## Hide a signal

If the graph is cluttered with many signals obscuring the overview of the signals you want to monitor, you can hide selected signals from display in the graph. The hidden signal line and corresponding Y-axis will not be displayed in the graph and the signal legend (if displayed) will be dimmed to indicate that the signal is not displayed.

You can hide an individual signal or hide all other signals than the individual signal. You cannot hide all signals from the graph. At least one signal must be displayed.

### If the signal legend is displayed

To hide a signal from display in the graph, right-click the signal legend you want to hide and select **Hide**.

To hide all other signals from display in the graph, , right-click the signal legend you want to hide and select **Hide all others**.

### Display a hidden signal

To display a hidden signal, right-click the dimmed (hidden) signal legend text and select **Show**.

If multiple signals are hidden, you can display all signals by clicking any signal legend text and select **Show All**.

If there are multiple hidden signals, you can right-click any signal legend text and select **Show All** to display signals in the graph.

### If the signal legend is not displayed

Right-click the graph and select **Hide**. Select the signal you want to display from the list. Repeat to hide another signal.

### Display a hidden signal

To display a hidden signal, right-click the graph menu and select **Hide**. Select the signal you want to display from the list. Repeat to display another signal.

## See Also

"Change the graph appearance" on page 70

"Change signal appearance" on page 69

"Change graph period" on page 63

## Change signal appearance

When a graph is created, a number of default colors and settings are automatically applied to the defined signals in order to facilitate rapid creation and deployment of usable graphs.

You can change the settings if you want to better align the signal display with your preferences. You can change...

- The order of the signals in the chart
- The signal line color
- the signal legend text
- the display of object/**atom** information in the signal legend
- the font of all graph texts

### To change the signal order

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Signals** tab > **Object** field (left pane of the **Signals** tab), select the signal you want to move.
3. Click the **Move Up** or **Move Down** buttons to move the selected signal to a new placement in the list of signals.
4. Click the **OK** button to save the changes and exit the **Graph Properties** form

### To change the line color of a signal

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Signals** tab > **Line color** field , select a new color from the drop-down list.
3. Click the **OK** button to save the changes and exit the **Graph Properties** form

### To define a new signal legend text

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Signals** tab > **Legend text for signal** field , enter a new text for the signal. The text will be added to the existing object/atom signal legend text.

You can hide the object/atom signal legend text if you only want to display the new signal legend text.

3. Click the **OK** button to save the changes and exit the **Graph Properties** form

### To hide object/atom signal legend text

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Chart** tab, clear the **Show object/atom information** check box to hide the default object name or description, atom name and measuring range from the legend text for all signals.
3. Click the **OK** button to save the changes and exit the **Graph Properties** form

### To change the font of all chart texts

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Chart** tab, click the Select Font button to open the **Font** form and select a new font, font styles, font size, font color and effects as necessary.
3. Click the **OK** button to save the changes and exit the **Graph Properties** form

#### See Also

"Add or remove a signal" on page 73

"Change the graph appearance" on page 70

"Adjust the Y-Axis for each signal" on page 72

"Graph Properties Form" on page 43

"Set up graph properties" on page 78

### Change the graph appearance

When a graph is created, a number of default colors and settings are automatically applied to the graph elements in order to facilitate rapid creation and deployment of usable graphs.

You can change the settings if you like to better align the chart appearance with your preferences. You can change...

- The background color of the graph
- The X and Y axis text colors
- The X-Axis line color
- The grid color
- The font of all graph texts
- The display parameters of graph toolbar and status bar
- Display one Y-axis for all signals with identical measuring ranges

When collecting Y-axes for all signals with identical measuring ranges, it is the measuring range used in the graph which is used for comparison. If you have adjusted the Y-axis limits for a signal in the Signals tab > Advanced sub tab, it will be these new Y-axis limits that will be used to determine whether or not the Y-axes contain identical measuring ranges.

### To change the color of the graph elements

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Options** tab, clear the **Use Automatic colors** check box
  - In the **Background** color field, select a new color for the chart background
  - In the **Text** color field, select a new color for the X and Y-axis values
  - In the **Axis** color field, select a new color for the X-axis
  - In the **Grid** color field, select a new color for the chart grid. If you do not want to display the grid in the chart, select a color that matches the color selected in the Background field.
3. Click the **OK** button to save the changes and exit the **Graph Properties** form

### To change the font of all chart texts

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Chart** tab, click the Select Font button to open the **Font** form and select a new font, font styles, font size, font color and effects as necessary.
3. Click the **OK** button to save the changes and exit the **Graph Properties** form

### To remove the graph toolbar and/or graph status bar

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.

2. In the **Graph Properties** form > **Options** tab:
3. Clear the **Display graph toolbar** check box to remove the graph toolbar
4. Clear the **Display graph statusbar** check box to remove the graph statusbar
5. Click the **OK** button to save the changes and exit the **Graph Properties** form

### Display one Y-axis for all signals with the same measuring range

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Options** tab:
3. Select the **Auto hide axes with the same value range** check box to only display one Y-axis for all signals with identical measuring ranges.
4. Click the **OK** button to save the changes and exit the **Graph Properties** form

#### See Also

"Change signal appearance" on page 69

"Graph Properties Form" on page 43

"Set up graph properties" on page 78

### Adjust the Y-Axis for each signal

You can adjust the Y-axis for each signal, setting the upper and lower limits displayed in the Y-axis.

The Y-axis of each individual signal can also be hidden from display, reducing the number of Y-axes and reducing potential confusion.

### Hide Y-axis for a signal

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Signals** tab > **Object** field (left pane of the **Signals** tab), select the signal you want to hide the Y-axis for.
3. Click the **Advanced** sub-tab and clear the **Show Y-axis for this signal** check box

To display the Y-axis for the individual signal again, select the **Show Y-axis for this signal** check box

4. Click the **OK** button to save the changes and exit the **Graph Properties** form

### Change the display range of the Y-axis for a signal

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Signals** tab > **Object** field (left pane of the **Signals** tab), select the signal you want to change the Y-axis range.
3. In the **Advanced** sub-tab :
  - Select the **Automatic** option to set the upper and lower limits of the Y-axis based on the object data selected for display in the graph.
  - Select the **Limits from object** option to use the **atom** limits (minimum and maximum) of the object selected as the lowest and highest values on the Y-axis.
  - Select the **Fixed limits** option to define you own upper and lower limits of the Y-axis in the **Minimum** and **Maximum** fields.
4. Click the **OK** button to save the changes and exit the **Graph Properties** form

#### See Also

"Change the graph appearance" on page 70

"Change signal appearance" on page 69

"Graph Properties Form" on page 43

"Set up graph properties" on page 78

### Add or remove a signal

You can add new signals to an existing graph or remove or replace existing signals from an existing graph, adjusting the signals in either an Operator graph or a Standard Graph.

If you add new signals to an Operator graph, you can save the changed Operator graph as a new graph or overwrite the existing one. If you add signals to (or edit any graph properties for) a Standard graph, you can save the changes as an Operator graph.

You can also add objects to existing graphs directly from the Process diagram by using the object menu. The following atoms are used as signals by default:

- Analog object: Actual Value
- Digital: State
- Counter: Reset
- Table: All active table indexes

### Add an object to an existing graph in the process diagram

1. In the Supervise module, in the process diagram, open the graph you want to add another object to.
2. In the process diagram, right-click the object you want to add to the graph for and select **Add to Graph**. If multiple graphs are opened, you must select which graph to add the object to.
3. Right-click the graph and select **Properties** to set up graph properties if necessary

#### Example

If you need to change the **atom** used for the signal:

1. In the **Graph Properties** form, click the **Signals** tab and select the signal in the left pane
2. In the **Atom** field, select another atom to display for the signal.
4. Adjust the graph appearance by using the graph toolbar, graph menu, signal menu, X-axis menu and the Y-axis menu if necessary.
5. If you want to save the graph as an Operator graph:
  - In the graph toolbar, click the **Save** button to open the **Save As** form where you can select a location and enter a name for the new Operator graph.

### Add a new signal

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Signals** tab, click the **Add** button to open the **Object Browser** form.
3. In the right pane of the **Object Browser** form, locate and select the object you want to add and click the **Open/Select** button.
4. In the **Basic** tab, you can adjust the signal's object atom to be displayed, data source and line color
5. In the **Advanced** tab, you can adjust the Y-axis properties for the new signal
6. Click the **OK** button to save the changes and exit the **Graph Properties** form

### Remove/Replace a new signal

1. In the graph, right-click and select **Properties** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Signals** tab > **Object** field (left pane of the **Signals** tab), select the signal you want to remove.
3. Click the **Remove** button to remove the selected signal.
4. Click the **Replace** button to replace the signal with another signal, maintaining the replaced signal's appearance and placement in the signals list
5. Click the **OK** button to save the changes and exit the **Graph Prop**

### See Also

"Open an existing graph" on page 62

"Graph Properties Form" on page 43

"Set up graph properties" on page 78

"Change signal appearance" on page 69

"Adjust the Y-Axis for each signal" on page 72

"Find an object using Open by Name" on page 23

## Create an Operator Graph

You can create your own operator graphs, either creating them from the ground up or using a standard graph as a foundation, adjusting the graph properties to the graph requirements.

You can create an Operator graph for Analog, Digital, Counter and Table objects only. The following atoms are used as signals by default:

- Analog object: Actual Value
- Digital: State
- Counter: Reset
- Table: All active table indexes

You can create an operator graph in the Supervise module:

- directly from the object menu
- directly from the object in the Object Watch window
- using the Graph menu
- by converting a Standard graph
- saving an Operator graph as a new Operator graph

When creating an operator graph, you must also remember to

- Define the period the graph is to display as a default
- Define which signals (object atoms) to be displayed in the graph and the appearance of the signals.
- Define appearance of the graph, such as the graph title, legend properties, fonts, graph colors and whether to display the toolbar and/or graph status bar.

#### How to create a new operator graph

##### From the object menu

1. In the process diagram, right-click the object you want to create a graph for and select **Show Graph** to open the Operator Graph.
2. If you want, you can add another object to the operator graph by right-clicking the object and selecting **Add to graph** and then selecting the open graph.
3. Right-click the graph and select **Properties** to set up graph properties if necessary.
4. Adjust the graph appearance by using the graph toolbar, graph menu, signal menu, X-axis menu and the Y-axis menu if necessary.
5. In the graph toolbar, click the **Save** button to open the **Save As** form where you can select a location and enter a name for the new Operator graph.

##### From the Object Watch window

1. In the **Object Watch** Window, right-click the object you want to create a graph for and select **Show Graph** to open the Operator Graph.
2. Right-click the graph and select **Properties** to set up graph properties if necessary.
3. Adjust the graph appearance by using the graph toolbar, graph menu, signal menu, X-axis menu and the Y-axis menu if necessary.
4. In the graph toolbar, click the **Save** button to open the **Save As** form where you can select a location and enter a name for the new Operator graph.

##### From the Graph menu

When you create an Operator graph from the Graph menu, you must select which signals are to be displayed in the graph as well as all other graph properties such as graph periods, signal data source and chart element colors .

1. In the **Supervise** module, click **Create Operator** graph to open the **Graph Properties** form
  1. In the **Graph Properties** form
  2. In the **Period** tab, define the default graph period
  3. In the **Signals** tab, add the signals to be displayed in the graph as well as the data source and graph line appearance

4. In the **Chart** tab, define the font and placement of the signal legend and the chart title.
  5. In the **Options** tab, define the colors for chart elements and whether to display the graph toolbar and status bar.
2. Click the **OK** button to create the operator graph
  3. In the graph toolbar, click the **Save** button to open the **Save As** form where you can select a location and enter a name for the new Operator graph.

### by converting a Standard graph

1. Open a standard graph in the **Supervise** module, either by selecting the graph in the **Graph** menu or by clicking a **descriptor**<sup>1</sup> in the process diagram (button, image, graph symbol and others)
2. Right-click the graph and select **Properties** to open the **Graph Properties** form.
3. In the **Graph Properties** form, change any one of the properties in the tab pages - for example changing the line color in the **Signals** tab > **Line color** field.
4. Click the **OK** button to save the changes and close the **Graph Properties** form.
5. In the graph toolbar<sup>1</sup>, click the **Save** button to open the **Save As** form where you can select a location and enter a name for the new Operator graph.

<sup>1</sup> A Standard graph can be set up not to display the Graph toolbar. If the graph toolbar is not displayed, you cannot save the Standard graph as an operator graph.

### by saving an Operator graph as a new Operator graph

1. In the Supervise module, click **Graph > Open Operator Graph** to select an existing operator graph.
2. Right-click the graph and select **Properties** to set up graph properties if necessary.
3. Adjust the graph appearance by using the graph toolbar, graph menu, signal menu, X-axis menu and the Y-axis menu if necessary.
4. In the graph toolbar, click the **Save** button to open the **Save As** form where you can select a location and enter a name for the new Operator graph.

### See Also

"Add or remove a signal" on page 73

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<sup>1</sup>A descriptor is the graphical display of an object. IGSS includes many types of descriptors including: - Built-in standard symbols - Animated symbols (Symbol Factory library) - Graphics and animation - Drawing symbols - Windows controls - ActiveX controls An IGSS object can be represented with different descriptors on different diagrams.

"Set up graph properties" on page 78

"Graph Properties Form" on page 43

"Additional features with Object Watch" on page 128

## Set up graph properties

When creating an operator graph, you must

- Define the period the graph is to display as a default
- Define which signals (object atoms) to be displayed in the graph and the appearance of the signals.
- Define appearance of the graph, such as the graph title, legend properties, fonts, graph colors and whether to display the toolbar and/or graph status bar.

## Define the graph period

1. In the **Supervise** module, click **Graph > Create Operator Graph** to open the **Graph Properties** form.
2. In the **Graph Properties** form > **Period** tab > **Select display period** field , select period to display in the graph. You can select from the fixed periods or select a custom duration or custom period.
  1. Fixed Duration: Select a fixed (pre-defined) duration in the drop-down list.
  2. Custom Duration: Select **Custom Duration** in the drop-down list.
    1. In the **Duration** field, enter the duration interval and the duration type (Minutes, Hours, Days, Weeks, Months or Years)
  3. Custom Period: Select **Custom Period** in the drop-down list.
    1. In the **From date** field, select the start date of the graph period.
    2. In the **From time** field, select the start time of the graph period.
    3. In the **To date** field, select the end date of the graph period.
    4. In the **To time** field, select the end time of the graph period.

## Select the signal for the graph

1. In the **Graph Properties** form > **Signals** tab, click the **Add** button to open the **Object Browser** form
2. In the right pane of the **Object Browser** form, select the object you want to display in the graph and click the **Open/Select** button to add the object to the signals tab.

1. In the **Signals** tab > **Object** field, select the object. It should be selected already.
2. On the **Basic** Tab > **Signal Data** group:
  1. In the **Atom** field, select the **atom** to be displayed in the graph.
  2. In the **Data Source** field, select the data source to be used from the drop-down list:
    - **Auto:** The system selects which data files to use when rendering the graph lines based on which data files are considered best for the period being rendered.
    - **LOG:** The system will only use data from the LOG files to render the graph lines. If an object atom is not set up to store data in the LOG files, the graph line will not be rendered.
    - **Reduced:** The system will only use data from the **BCL** files to render the graph lines. If an object atom is not set up to store data in the LOG files, the graph line will not be rendered.
    - **Online:** The graph will only use line (direct) object data to render the graph lines.
3. On the **Basic** tab > **Appearance** group:
  1. In the **Line color** field, select the color of the graph line for the selected signal.
  2. In the **Legend text for signal** field, enter an additional signal text. The signal text will be added to the object/atom in the graph legend.
4. On the **Advanced** tab:
  1. Select the **Show Y-axis for this signal** check box to display the Y-axis for the selected signal. If you clear the check box, the Y-axis for the selected signal will not be displayed in the graph.
  2. In the **Axis limits** group, select which axis limits to apply to the Y-axis:
    - **Automatic:** Let the system determine the lower and upper limits of the Y-axis based on the available object data.
    - **Limits from object:** Use the minimum and maximum values defined for the object atom.
    - **Fixed limits:** Define custom limits for the graph axis in the Minimum and Maximum fields.

### Define the appearance of the graph

1. In the **Graph Properties** form > **Chart** tab > **Chart Title** field, enter the title of the graph. The title will be displayed on the top of the graph.
  1. Select the **Show legend** check box to display the legend in the graph.
  2. In the **Legend Placement** field, select where the graph legend is placed (Top, Bottom, Left or Right)

3. In the **For each signal** group,
    - Select the **Show object/atom information** check box to display the object name, description and atom name in the legend.
    - Select the **Show text defined for each signal** check box to display the signal text defined in the **Legend text for signal** field on the **Signals** tab.
  4. Click the **Font** button to open the **Font** form and select the font type, style, color and size for all texts in the graph.
2. In the **Graph Properties** form > **Options** tab:
    1. Clear the **Use automatic colors** check box to define custom colors for the graph elements:
      - **Background:** Select a color for the graph background
      - **Texts:** Select a color for the scale values of the X and Y axes.
      - **Axis:** Select a color for the X and Y axis lines
      - **Grid :** Select a color for the grid in the graph.
    2. Select the **Display graph toolbar** check box to display the graph toolbar for users. Clear the check box to hide the toolbar.
    3. Select the **Display graph statusbar** check box to display the graph status bar for users. Clear the check box to hide the status bar.
    4. Select the **Auto hide axes with the same value range** check box to only display one Y-axis for all signals that have identical measuring ranges.
  3. Click the **OK** button to create the operator graph.

#### See Also

"Graph Properties Form" on page 43

"Graph Property Menu" on page 52

## Zoom an area in the graph

You can zoom a selected area in the graph, increasing the detail and enabling you to better analyze details in the graph.

You can continue zooming the graph area, magnifying the graph line and area for increased detail.

#### To zoom a graph area

- If the **Graph toolbar** is displayed in the graph: Click the **Zoom in** button in the **Graph Toolbar**
- If the **Graph toolbar** is not displayed in the graph: Right-click in the graph window and select **Zoom in**. The mouse cursor changes to a crosshair cursor.

- Select an area in the graph and release the mouse.
  - If you press the **Shift** key while dragging an area in the graph, you can select a custom area in the graph, defining which value (Y-axis) and period (X-axis) to be zoomed.
  - If you only drag an area using the mouse, you can only determine which period (X-axis) is to be zoomed.
- The selected area is magnified and a zoom overview window will open in the upper right-hand corner of the graph displaying the graph area in miniature with the zoomed area.

Drag the zoom area in the zoom overview window to zoom an different graph area.

#### To zoom out from an area

The zoom out function will zoom out an area one step per application. If you have zoomed in twice, zooming out once will revert one 'zoom in' step.

- If the **Graph toolbar** is displayed in the graph: Click the **Zoom out** button in the **Graph Toolbar**
- If the **Graph toolbar** is not displayed in the graph: Right-click in the graph window and select **Zoom out**.
- The zoomed graph area will be zoomed one step out. If the graph is zoomed back to its original size, the overview window will be closed.

#### To return to the original graph

- If the **Graph toolbar** is displayed in the graph: Click the **Reset Zoom** button in the **Graph Toolbar**
- If the **Graph toolbar** is not displayed in the graph: Right-click in the graph window and select **Reset Zoom**.
- The graph area reverts to its original size and the overview window is closed.

#### See Also

"The Graph Toolbar" on page 50

"Graph Properties Form" on page 43

"Graph Property Menu" on page 52

### Compare two graph periods

You can compare the present graph trend with the graph trend for another period for the same set of signals in order to detect similar historic trends and developments.

The original graph period will be displayed in the lower section of the graph while the other graph period will be displayed in the upper section. The Y-axis will be split into the two sections, enabling visual orientation of the graph lines.



It is a good idea to hide all other non-relevant signals when comparing periods in order to cut down the amount of visual clutter and distractions. You can always display the hidden signals again when you are done comparing the periods.

### Comparing periods

A precondition when comparing trends is always that the basis for comparison is available and common to both trends. You must have access to object data for both periods and the data must be comparable. If your configuration is set up to delete **LOG** data that is older than 3 months, then comparing two signals using LOG data will not yield the same degree of veracity when comparing data older than 3 months. Often, the system will attempt to retrieve the **BCL** data values when querying for the period if these are the only values retrievable. This is because BCL data is often but not always maintained longer than LOG data

Likewise, if you are comparing a signal using BCL data to the same signal using LOG data, results might be skewed as BCL data is aggregated and averaged data values and LOG data is (often) absolute data values.

Finally, if data storage settings are changed on the object **atom**, comparing two periods may also yield potentially different results, depending on when the data storage setting changes were made.

### To compare two graph periods

- If the **Graph toolbar** is displayed in the graph: Click the **Compare Period** button in the **Graph Toolbar**
- If the **Graph toolbar** is not displayed in the graph
  - Right-click in the graph window and select **Compare Period** or
  - Right-click the X-axis and select **Compare Period**

The graph area will be split into two seamless sections, the upper section which can be scrolled individually and the lower section which is scrolled together with the upper section.

To compare periods, scroll the lower graph section back to the period you want to compare. You can zoom in and zoom out as well as hide other signals in the graph to remove non-relevant graph lines.

You can also shift the upper section by only scrolling the upper section of the graph, moving it backwards or forwards to compare the graph trend in other periods with the lower section.

The upper section can be scrolled seamlessly, making it easy to scroll back and forth. This also makes it easy to lose alignment with the lower section, making further comparison difficult. To restore the alignment between the upper and lower sections of the graph, click the **Single Period** button to remove the period comparison and then click the **Compare Period** button again to compare periods once again.

The upper and lower sections will now be aligned correctly on top of each other.

### To restore the original (single period) graph

- If the **Graph toolbar** is displayed in the graph: Click the **Single Period** button in the **Graph Toolbar**

- If the **Graph toolbar** is not displayed in the graph:
  - Right-click in the graph window and select **Single Period**
  - Right-click the X-axis and select **Single Period**

The split graph area will revert to one graph area, displaying the original graph signal and line.

#### See Also

"Graph Property Menu" on page 52

"Compare X-Axis Property Menu" on page 59

"Y-Axis Property Menu" on page 57

"Graph keyboard shortcuts and Mouse combinations" on page 60

## Print a Graph

You can send the graph presently displayed in the graph window to a connected printer by clicking the **Print** button in the graph toolbar.

If the graph toolbar is not displayed, you can right-click the graph and select **Print**.

Both methods will open the **Print** form where you can

- Select the printer to send the graph to
- Send the graph print to a file
- Define the print range
- Define the number of copies to send to print
- Set up additional properties for the selected printer

#### See Also

"The Graph Toolbar" on page 50

"Graph Property Menu" on page 52

## Save an Operator graph

When you have created your own operator graph, either from the ground up or using a Standard graph or another Operator graph as a foundation, you can save your changes to either create a new Operator graph or overwrite an existing graph.

Operator graphs are not write-protected from IGSS and any operator may edit and over-write existing operator graphs.



Standard graphs cannot be overwritten as any changes to the Standard graph must be saved from the Definition module.

Any operator can make changes to a Standard graph and then save the graph as an Operator graph.

- If the graph toolbar is displayed: Click the Save button to open the **Save As** form.
- If the graph toolbar is not displayed: Right-click the graph and select Save to open the **Save As** form.

If you are saving changes to an existing operator graph and want to overwrite it, find and select the graph, make sure the graph name is correct in the **File name** field and click the **OK** button.

If you want to save a new Operator graph or a new version of an existing operator graph, enter a new name in the **File name** field and click the **OK** button.

#### **See Also**

"Create an Operator Graph" on page 75

"Open an existing graph" on page 62

"Change the graph appearance" on page 70

"Change signal appearance" on page 69

"Change graph period" on page 63

"Add or remove a signal" on page 73

"Set up graph properties" on page 78

# Chapter 8: Working with Reports

## 8.1 Form Help

### The Report Formats form

Use this form to create Operator reports in the **Supervise** module.

#### Overview

The Report formats form is split into two panes. The left pane contains a tree-view of the existing Operator reports in the configuration. You can see the report headings in each report by clicking the [+] button to expand the report.

The right pane of the Report Formats form contains an overview of the objects placed under a report heading. To view the objects, expand the report headings in the left pane and select a report heading. The right pane will display all objects under that heading as well as the area in which the object is defined and the data reduction method.

Each report type is displayed with the following icons:

-  A blue report format is an alarm statistics report
-  A burgundy report format is a periodical report
-  A light red report format is a snapshot report

The default report format for each report type is clearly marked with a D.

You can right-click in the right pane to delete an object, reset the object properties or open the **Object Browser** or **Manual Report Object** form.

You can right-click in the left pane to add or edit reports and/or report headings as well as delete reports and report headings. You can also clean the report and set the report as a default.

#### Preconditions

The IGSS configuration must be started and the IGSS DataServer must be running in order to create and subsequently run any Operator reports..

#### Where do I find it?

In the **Supervise** module, click **Tools > Operator Reports** format to open the form.

## Field /button help

| Field name | Field Group    | Description  |
|------------|----------------|--|
| Create     | Report Format  | Click this button to open the <b>Report Format Properties</b> form to create a new report.   |
| Edit       | Report Format  | Click this button to open the <b>Report Format Properties</b> form to edit an existing report.<br><br>You can change the name of the format and enable or disable the Set as default option.   |
| Clean      | Report Format  | Click this button to remove all objects that are no longer defined in the configuration from the selected report.<br><br>A confirmation message will appear.   |
| Delete     | Report Format  | Click this button to delete the selected report.<br><br>A confirmation message will appear.  |
| Create     | Report heading | Click this button to open the <b>Report Heading Properties</b> form to create a new report heading in the selected report.<br><br>By default, the report headings are sorted alphabetically. However, you can change this by dragging the report heading to the desired position.  |
| Edit       | Report heading | Click this button to open the <b>Report Heading Properties</b> form to edit an existing report heading in the selected report.   |
| Delete     | Report heading | Click this button to delete the selected report heading and all its associated objects for the selected report. A confirmation message will appear.  |
| Browse     | Chosen objects | Click this button to open the <b>Object Browser</b> form to locate and add an IGSS object to the report heading of the selected report. You can add an object to the report heading by selecting the object in the <b>Object Browser</b> form and dragging the object into the right pane of the <b>Report Formats</b> form.<br><br><b>Note</b><br><br>You must select the report heading in the left pane of the <b>Report Format</b> form before clicking this button. |
| Manual     | Chosen         | Click this button to open the <b>Manual Report Object</b> form to  |

| Field name  | Field Group                     | Description   |
|-------------|---------------------------------|---|
|             | objects                         | <p>locate and add a manual report object to the report heading of the selected report.</p> <p>You can add an object to the report heading by selecting the object in the <b>Manual Report Object</b> form and dragging the object into the right pane of the <b>Report Formats</b> form.</p> <p><b>Note</b></p> <p>You must select the report heading in the left pane of the <b>Report Format</b> form before clicking this button.</p> <p>Manual report objects can only be created in the Definition module.</p> |
| Delete      | Chosen objects                  | Click this button to remove the selected object from the report heading.  |
| Description | Properties for selected objects | <p>Displays the object description that will appear in the report for the selected object. The description is defined for the object in the configuration but you can replace this with your own object description in this field if required.</p> <p><b>Note</b></p> <p>To reset the description used for the object in this report unit, click the <b>Reset Properties</b> button.</p>  |
| Unit        | Properties for selected objects | <p>Displays the unit that will appear in the report for the selected object. The unit is defined for the object in the configuration but you can insert your own unit designation in this field if required.</p> <p><b>Note</b></p> <p>To reset the unit designation used for the object in this report unit, click the <b>Reset Properties</b> button.</p>   |
| Decimals    | Properties for selected objects | <p>Displays the number of decimals used for displaying the object values in the report for the selected object. The number of decimals is defined for the object in the configuration but you can replace this with your own number of decimals in this field if required.</p> <p><b>Note</b></p>   |

| Field name            | Field Group                           | Description   |
|-----------------------|---------------------------------------|---|
|                       |                                       | To reset the number of decimals used for the object in this report unit, click the <b>Reset Properties</b> button.  |
| Reset Prop-<br>erties | Properties<br>for selected<br>objects | Click this button to reset the description, unit and number of decimals to the values defined for the selected object in the configuration.   |
| Total                 | Show values                           | Select this check box to display the actual total report value or idealized total report value in periodical reports for the selected object(s).<br><br>If you only select this check box, you get the actual total value. If you also select the <b>Idealized total</b> check box, you will get the idealized total value. |
| Total ideal-<br>ized  | Show values                           | Select this check box to display the idealized total report value in periodical reports for the selected object(s).<br><br>This check box is only accessible if you have selected the <b>Total</b> check box.<br><br>This option is only available for periodical reports.  |
| Reduced               | Show values                           | Select this check box to display the reduced report value in periodical reports for the selected object(s). The reduced value in the report will be calculated using the same data reduction method which was included in the report.<br><br>This option is only available for periodical reports.                          |
| Std. Dev.             | Show values                           | Select this check box to display the standard deviation report value in periodical reports for the selected object(s).<br><br>This option is only available for periodical reports.   |
| OK                    |                                       | Click this button to save your report and close the form.   |
| Cancel                |                                       | Click this button to close the form without saving any changes made in this form.   |

**See Also**

"Create an Operator report" on page 97

"Create a report heading in an Operator report" on page 98

"Clean an Operator Report" on page 105

"Add an IGSS object to an Operator report" on page 98

"Add a manual report object to an Operator report" on page 99

"Delete an Operator Report" on page 104

"Delete a report heading in an Operator report" on page 104

"Delete an object in an Operator report" on page 105

"About Operator Reports" on page 93

"About Report Values" on page 95

## The Report Format Properties form

### Overview

Use this form to create or edit Operator report properties.

When you create an Operator report, you must select the report type. Once an Operator report type has been selected, you will not be able to change the type afterwards.

### Preconditions

The **Report Formats** form must be open in order to open this form.

### Where do I find it?

You can access this form from the Report Formats form by clicking the **Create** or **Edit** buttons in the **Report Format** group.

### Field Help

| Field name     | Description   |
|----------------|---|
| Format name    | Type the name of the report format. This is the name that the operator sees when choosing a report to print.                            |
| Set as default | Select this check box to set the selected report as the default report for that report type (Periodical, Snapshot or Alarm Statistics). |

| Field name              | Description  |
|-------------------------|--|
|                         | The default report format will be suggested automatically to the operator when he opens the associated reporting program.  |
| Periodical report       | <p>Select this check box to create a report format to be used for periodical reports. A periodical report is a daily, weekly, monthly, quarterly or yearly report.</p> <p>You cannot change the report type of an already existing Operator report.</p>                                  |
| Snapshot report         | <p>Select this check box to create a report format to be used for snapshot reports. A snapshot report contains the current process values for the selected objects.</p> <p>You cannot change the report type of an already existing Operator report.</p>                                 |
| Alarm Statistics report | <p>Select this check box to create a report format to be used for alarm statistics reports. This type of report can also be generated by choosing File, then Alarm Statistics in the Alarm program.</p> <p>You cannot change the report type of an already existing Operator report.</p> |
| OK                      | Click this button to save your report properties and close the form and return to the <b>Report Formats</b> form..   |
| Cancel                  | Click this button to close the form without saving any changes made in this form and return to the <b>Report Formats</b> form.   |

**See Also**

[Periodical report](#)

[Snapshot report](#)

[Alarm statistics report](#)

**The Report Heading Properties form**

**Overview**

Use this form to create and edit a report heading.

### Preconditions

The **Report Formats** form must be open in order to open this form. You must select a report in the left pane of the **Report Formats** form before creating a new report heading and you must select the report heading you want to edit if you are editing a report heading.

### Where do I find it?

You can access this form from the **Report Formats** form by clicking the **Create** or **Edit** buttons in the **Report Format** group.

### Field Help

| Field name        | Description  |
|-------------------|--|
| Heading text      | Type the text you want to appear as a heading in the report. By default, the report headings are sorted alphabetically, but you can change the sequence in the Report Formats dialog box, if required. |
| Start on new page | Check this box to insert a page break before this report heading.  |
| OK                | Click this button to save your report heading properties and close the form and return to the <b>Report Formats</b> form.  |
| Cancel            | Click this button to close the form without saving any changes made in this form return to the <b>Report Formats</b> form.   |

## Manual Report Object form

### Overview

Use this form to select manual report objects to add to your Operator report.

The form lists all manual report objects that have been created for the configuration. Manual Report Objects are created in the **Definition** module but are accessible in this form.

### Preconditions

The **Report Formats** form must be open in order to open this form. You must select a report heading in the left pane of the **Report Formats** form before adding manual report objects to the report heading.

### Where do I find it?

You can access this form from the **Report Formats** form by clicking the **Manual** buttons in the **Chosen object** group.

### Field Help

| Field name    | Description   |
|---------------|---|
| Always on top | Select this check box to force this dialog box to stay on top of other windows. |
| Close         | Click this button to close this form  |

## 8.2 Use the reporting facilities

The IGSS Reporting System is a set of programs designed to help the system designers and plant operators in defining the formats of the plant reports and viewing and printing different types of reports about the plant situation.

The IGSS Reporting System consists of these three report formats:

- Operator reports
- Custom reports
- Standard reports

### Custom Reports

Custom reports are created, edited and maintained in Microsoft Excel 2007 or 2010 but are saved in the Report folder defined for the configuration in the **System Configuration** form > **Configuration** tab . Saved Custom reports are therefore also accessible to all operator stations that access the **IGSS** server configuration.

Custom reports contain less design restrictions than Standard and Operator reports and can be designed to cover nearly any aspect of the IGSS configuration, even retrieving data values from other IGSS configurations and foreign data sources.

MS-Excel is used to format and prepare report data and can be used to render the report, either as a preview or a print.

For more information, click the **Reports** help in **IGSS Master** > **Help** navigation pane.

## Standard and Operator Reports

Standard and Operator reports are nearly identical and the method of creation and editing a Standard or Operator report is nearly identical. Both use the **Report Formats** form to create and edit the report and both report formats have clearly defined functionality. Both reports use the Report parameters defined in the **System Configuration** form > **Reports** tab.

- Standard reports are created and edited in the **Definition** module only. They allows a System Designer to create system-wide reports that all operators can use but cannot edit or delete by mistake.
- Operator reports are created and edited in the **Supervise** module only. Operator reports are accessible from the **Supervise** Module and all operators can create, edit and delete any Operator report from the **Supervise** Module.

Standard and Operator reports must be one of the three report types listed below:

- [Periodical report](#)
- [Snapshot report](#)
- [Alarm statistics report](#)

Additionally, you can add manual report objects to your Standard and Operator reports, expanding the reporting functionality to include objects that are not actively monitored or scanned by **IGSS**. Data values from manual report objects must be entered manually.

### 8.3 About Operator Reports

Operator report functionality enables an operator to quickly create and run a variant of Standard reports from the Supervise Module in order to gain a better overview of the monitored process and the object values in the process.

Using Operator reports, the operator is given access to a report-creation system which enables the creation and printing of reports on the fly as the need for reporting arises. Once the need for the report is passed, the Operator report can be deleted. An Operator report can also be retained for future use or converted to a Custom Report if required.

Any operator may create Operator reports as well as edit and delete existing Operator reports.

#### Location of Operator report formats

When you create an Operator report, the report format will be saved in the STD folder in the IGSS Report folder defined in the **System Configuration** form > **Configuration** Tab. Like other report formats, you can set up an alternative **report folder** for all your reports in the **System Configuration** form.

The Operator reports will be accessible to all operator stations that access the Report folder of the IGSS server they connect to.

The Operator report format is saved as a normal text file with a GUID name and.FMT extension. Although you can open the file in a text editor, any edits to the Operator report must be made through the Supervise module in IGSS.

In a Dualized-Server set-up, each report folder will be duplicated on the two servers and synchronized in the same procedure as Standard reports are synchronized.

### Running an Operator report

Like all IGSS reports, you can run an Operator report from the IGSS **Master > Reports** Navigation pane, but since the IGSS DataServer is used to access all Operator reports, the IGSS Dataserver application must be running for the Operator reports to be accessible in the Reports Navigation pane. This means the IGSS configuration must be started in order to access any reports in the configuration.

You can also run the Operator Report as a batch job or through the Job Scheduler. You can apply the same command line parameters to the Operator Report as you can to a Standard Report.

### Differences between Standard and Operator reports

Standard and Operator reports are nearly identical and share the same report creation process and forms, but there are differences between the two report types.

- Standard reports are created in the **Definition** module and must be edited and deleted from the **Definition** module. Standard reports cannot be edited or deleted from the **Supervise** module. This allows a System Designer to create system-wide reports that all operators can use but cannot edit or delete by mistake.
- Operator reports are created in the **Supervise** module and can only be edited and deleted from the **Supervise** module. Operator reports cannot be edited or deleted from the **Definition** module. Because Operator reports are accessible from the **Supervise** Module, operators can create, edit and delete any Operator report from the **Supervise** Module.

Both report types display reduced object values (**BCL** data) in the Periodic report while the snapshot report uses actual, real-time object values.

### Operator Report types

There are three types of Operator reports:

- [Periodical report](#)
- [Snapshot report](#)
- [Alarm statistics report](#)

Each report type is displayed with the following icons:

-  A blue report format is an alarm statistics report
-  A burgundy report format is a periodical report
-  A light red report format is a snapshot report

The default report format for each report type is clearly marked with a D.

## 8.4 About Manual Report Objects

A manual report object is an object that does not have a direct connection to a PLC and thus is not monitored directly by IGSS.

Object values for Manual Report Objects are entered manually through the **Manual Report Editor** form found in the **IGSS Master > Home Tab > Manual Report Editor** button.

A Manual Report Object can be included in any Standard or Operator periodical report once it has been created.

## 8.5 About Report Values

In addition to the reduced object values, you can select to display four report values when creating a periodic Operator report:

- Total: A simple sum of all hourly values
- Total Idealized: The average of the hourly values multiplied by 24.
- Reduced: Re-uses the data reduction method selected for the object.
- Standard Deviation: The standard deviation based on the Actual values and the Average value for the object.

The report values refer to the **Transfer to History** settings for each object in the configuration and use the reduced hourly object values that have been transferred to the **HDM** database.

## 8.6 Create Operator Reports

Any operator can create Operator reports from the **Tools** menu in the **Supervise** module but the configuration must be started in order to create Operator reports.

Operator reports are saved in the Report folder specified for the IGSSS Server in the **System Configuration** form and therefore available to all operator stations that connect to the IGSS server.

When creating a new Operator report, you must define a name for each report and determine the report type (Snapshot, Periodical or Alarm Statistics report). The report type will determine what types of **IGSS** object data you can display in your Operator report.

To create a new Operator report, you must go through the following steps:

#### **Create the report**

Create a new Operator report format in the **Report Formats** form, defining a name and setting the report type (Periodical, Alarm Statistics or Snapshot). You can also set the report as the default report for the selected report type.

#### **Create the Report headings**

Once you have created the report, you must create at least one report heading to contain the IGSS objects.

The Operator report format consists of a number of user-defined headings where you can place the IGSSobjects you want displayed in the report. You can define any number of report headings in order to provide a better overview of a report, assigning IGSSobjects to each report headings, but you must have at least one heading in order to add IGSSobjects to the report.

#### **Add objects to the report**

Add any **IGSS** objects or Manual Report Objects to your report using the **Object Browser** or the **Manual Report Objects** forms.

Individual **IGSS** objects are added to the report by dragging the object from the **Object Browser** form into the **Report Formats** form and individual manual report objects are added to the report by dragging the object from the **Manual Report Objects** form into the **Report Formats** form.

The item **Current value or state** can only be used in Snapshot or Alarm Statistics reports. The data reduction method(s) can only be used in Periodical reports.

#### **Adjust the object display settings**

The key properties for the **IGSS** object (**Description**, **Unit** and **Decimals**) are automatically imported into the report format, but can be changed, if necessary.

You can determine which report value(s) to display for each **IGSS** object in the report such as.

- Total
- Idealized total
- Reduced value
- Standard deviation

### Save the report

Click the **OK** button in the **Report Formats** form to save the report. The report will be created in the **report folder** specified for the **IGSS** server in the **System Configuration** form > **Configuration** tab and made available to all operator stations in the **IGSS Master**.

### See Also

"About Manual Report Objects" on page 95

[Periodical report](#)

[Snapshot report](#)

[Alarm statistics report](#)

"About Report Values" on page 95

### Create an Operator report

To create a new Operator report:

1. In the **Supervise** module, click **Tools** > **Operator Report Formats** to open the **Report Formats** form
2. In the **Report Formats** form > **Report format** group, click the **Create** button to open the **Report Format Properties** form.
3. In the **Format name** field, enter the name of the report format. This is the name that the operator will see when he runs the report from the IGSS Master.
4. Under **Report** type, select the relevant report type (Periodical, Snapshot or Alarm statistics report)
5. Select the **Set as default** checkbox if you want the report format to be suggested as the default format to the operator.

Only one report format can be set as default per report type. The default report format will be clearly marked with a "D" in the Report Formats form.

6. Click the **OK** button to create the new Operator report and close the **Report Format Properties** form. The The new report name appears in the left pane of the **Report Format** form.

### See Also

[Periodical report](#)

[Snapshot report](#)

## [Alarm statistics report](#)

### Create a report heading in an Operator report

To create a report heading in an Operator report:

1. In the **Supervise** module, click **Tools > Operator Report Formats** to open the **Report Formats** form
2. In the left pane of the **Report Formats** form, select the report you want to create a report heading in.
3. Click the **Create** button in the **Report Heading** group to open the **Report Heading Properties** form.
4. In the **Heading Text** field in the **Report Heading Properties** form, enter the name of the report heading.

Select the **Start on new page** check box if you want to insert a new page in the report when the heading is encountered.

5. Click the **OK** button to create the report heading and close the **Report Heading Properties** form.
6. Click the **OK** button in the **Report Formats** form to save the report and close the form.

### Add an IGSS object to an Operator report

An object can only be placed under a report heading in an Operator report. If your report does not contain at least one report heading, you must create one prior to adding an object to the report.

To add an IGSS object to an Operator report:

1. In the **Supervise** module, click **Tools > Operator Report Formats** to open the **Report Formats** form.
2. In the left pane of the **Report Formats** form, select the report you want to create an IGSS object in.
3. Click the **[+]** button to expand the report headings in the report and select the heading you want to create the IGSS object in.

4. Click the **Browse** button in the **Chosen objects** group to open the **Object Browser** form.
5. In the **Object Browser** form, find the object you want to add to the report and drag the object and its data reduction method to the right pane of the **Report Formats** form.

In the **Properties for selected objects** group, you can define which report values (**Total, Total Idealized, Reduced** and/or **Standard Deviation**) to include in the report as well as edit the object properties (**Description, Unit** and **Decimals**) for each individual object data reduction method.

You can continue to drag objects from the **Object Browser** form to the **Report Formats** form until you have added all the objects you want to the report.

6. Click the **Close** button to close the **Object Browser** form and return to the **Report Formats** form.
7. Click the **OK** button in the **Report Formats** form to save the report and close the form.

The current object value or state can only be used in Snapshot or Alarm Statistics reports. The data reduction method(s) can only be used in Periodical reports.

#### **See Also**

[Periodical report](#)

[Snapshot report](#)

[Alarm statistics report](#)

"About Report Values" on page 95

### **Add a manual report object to an Operator report**

An object can only be placed under a report heading in an Operator report. If your report does not contain at least one report heading, you must create one prior to adding an object to the report.

To add a manual report object to an Operator report:

1. In the **Supervise** module, click **Tools > Operator Report Formats** to open the **Report Formats** form.
2. In the left pane of the **Report Formats** form, select the report you want to create an IGSS object in.
3. Click the **[+]** button to expand the report headings in the report and select the heading you want to create the IGSS object in.
4. Click the **Maual** button in the **Chosen objects** group to open the **Manual Report Object** form.
5. In the **Manual Report Object** form, find the object you want to add to the report and drag the object and it's **atom** to the right pane of the **Report Formats** form.

You can define which report values (**Total, Total Idealized, Reduced** and/or **Standard Deviation**) to include in the report as well as edit the object properties (**Description, Unit** and **Decimals**) for each individual object atom in the **Properties for selected objects** group in the Report Formats form.

You can continue to drag objects from the **Manual Report Object** form to the **Report Formats** form until you have added all the objects you want to the report.

6. Click the **Close** button to close the **Manual Report Object** form and return to the **Report Formats** form.
7. Click the **OK** button in the **Report Formats** form to save the report and close the form.

You cannot create manual report objects through the **Supervise** module, If you need to create manual report objects, you must use open the **Manual Report object** form from the **Report formats** form found in the **Definition** module > **Edit > Report Formats**.

#### **See Also**

"About Report Values" on page 95

## **8.7 Edit an Operator Report**

Operator Reports can only be edited from the **Supervise** module. The configuration must be started in order to edit an Operator Report.

#### **To edit an existing report:**

- Open the **Supervise** module and click **Tools > Operator Report formats** to open the **Report Formats** form.
- In the right-hand pane of the **Report Formats** form, select the report you want to edit.

### Edit the report format

- Click **Report Format** group > **Edit** button to open the **Report Format Properties** form and edit the name and default setting of the selected report.

### Edit a report heading

- In the right-hand pane of the **Report Formats** form, select the report you want to edit click the [ + ] top expand the headings of the report.
- Select the heading you want to edit and click the **Report Heading** group > **Edit** button to open the **Report Heading Properties** form to edit the name of the report heading and set the **Start on new page** check box if necessary.
- To add a new report heading, click the **Create** button in the **Report Heading** group to open the **Report Heading Properties** form.
- To delete a report heading, click the **Delete** button in the **Report heading** group. If you delete a report heading, all objects contained in the report heading will also be removed from the report.

### Edit an object in the report

- In the right-hand pane of the **Report Formats** form, select the report you want to edit click the [ + ] top expand the headings of the report.
- Select the heading which contains the object you want to edit and select the object in the right pane of the **Report Formats** form.
- In the **Properties for selected objects** group, make the required changes to the selected object properties.
- To add a new IGSS object to the report heading, click the **Browse** button in the **Chosen Objects** group to open the **Object Browser** form where you can locate the new IGSS object. Drag the object into the report heading to add it to the report.
- To add a new manual report object to the report heading, click the **Manual** button to open the **Manual Report Object** form. Drag an existing manual report object into the report heading to add it to the report. You can also create a new manual report object and drag it into the report heading.
- To delete an object, select the object and click the **Delete** button in the **Chosen Objects** group.

### Save the report

- When you have completed your edits, click the **OK** button in the **Report Formats** form to save the changes and close the form.

## Edit an Operator Report

To edit an existing Operator Report:

1. In the **Supervise** module, click **Tools > Operator Report Formats** to open the **Report Formats** form
2. In the left pane of the **Report Formats** form, select the report you want to edit
3. Click the **Edit** button in the **Report Format** group to open the **Report Format Properties** form.
4. In the **Format name** field, change the name of the report format. This is the name that the operator will see when he runs the report from the IGSS Master.

Select the **Set as default** checkbox if you want the report format to be suggested as the default format to the operator.

Only one report format can be set as default per report type. The default report format will be clearly marked with a "D" in the Report Formats form.

5. Click the **OK** button to close the **Report Format Properties** form.
6. Click the **OK** button in the **Report Format** form to save the changes and close the form.

## Edit a report heading in an Operator report

To edit an existing report heading in an Operator report:

1. In the **Supervise** module, click **Tools > Operator Report Formats** to open the **Report Formats** form
2. In the left pane of the **Report Formats** form, select the report which contains the report heading you want to edit.
3. Click the **Edit** button in the **Report Heading** group to open the **Report Heading Properties** form.
4. In the **Heading Text** field in the **Report Heading Properties** form, you can change the name of the report heading.

Select the **Start on new page** check box if you want to insert a new page in the report when the heading is encountered.

5. Click the **OK** button to create the report heading and close the **Report Heading Properties** form.
6. Click the **OK** button in the Report Formats form to save the changes and close the form.

## Edit an object in the Operator report

You can edit an object in the Operator report. the procedure is the same regardless of the object type (IGSS object or manual report object)

### To edit an object in an Operator report

1. In the **Supervise** module, click **Tools > Operator Report Formats** to open the **Report Formats** form.
2. In the left pane of the **Report Formats** form, select the report you want to edit an object in.
3. Click the **[+]** button to expand the report headings in the report and select the heading which contains the object you want to edit.
4. In the right pane of the **Report Formats** form, select the object you want to edit.
5. In the **Properties for selected objects** group, you can change the report values (**Total**, **Total Idealized**, **Reduced** and/or **Standard Deviation**) as well as edit the object properties (**Description**, **Unit** and **Decimals**) for each individual object data reduction method.
6. Click the **OK** button in the **Report Formats** form to save the report and close the form.

### Change order of the objects

You can change the placement (sorting order) of the objects in a report heading by selecting the object in the right pane of the **Report Formats** form and dragging it to a new position.

### See Also

"About Report Values" on page 95

## 8.8 Delete an Operator Report

Operator Reports and their elements (headings and objects) can only be deleted from the **Supervise** module.

The configuration must be started in order to delete an Operator Report.

## Delete an Operator Report

Operator Reports can only be deleted from the **Supervise** module. The configuration must be started in order to delete an Operator Report.

### To delete an existing report:

1. Open the **Supervise** module and click **Tools > Operator Report formats** to open the **Report Formats** form.
2. In the right-hand pane of the **Report Formats** form, select the report you want to delete.
3. Click the **Delete** button to delete the selected report.
4. Click the **OK** button to confirm the delete and close the **Report Formats** form. The Operator report format will be removed from the Reports Navigation pane in the IGSS Master.

## Delete a report heading in an Operator report

### To delete a report heading

1. Open the **Supervise** module and click **Tools > Operator Report formats** to open the **Report Formats** form.
2. In the left pane of the **Report Formats** form, select the report which contains the heading you want to delete.
3. Click the **[+]** button to expand the headings of the report.
4. In the left pane of the **Report Formats** form, select the heading you want to delete and click the **Delete** button in the **Report heading** group. If you delete a report heading, all objects contained in the report heading will also be removed from the report.
5. Click the **OK** button in the **Report Formats** form to save the changes and close the form.

## Delete an object in an Operator report

### To delete an object in the report

1. Open the **Supervise** module and click **Tools > Operator Report formats** to open the **Report Formats** form.
2. In the left pane of the **Report Formats** form, select the report which contains the object you want to delete.
3. Click the **[+]** button to expand the headings of the report.
4. In the left pane of the **Report Formats** form, select the heading which contains the object you want to delete and select the object in the right pane of the **Report Formats** form.
5. Click the **Delete** button in the **Chosen Objects** group.
6. Click the **OK** button in the **Report Formats** form to save the changes and close the form.

## 8.9 Clean an Operator Report

You can remove all objects that are no longer in the associated configuration, cleaning the Operator Report that uses the removed objects.

### To clean an existing report:

1. Open the **Supervise** module and click **Tools > Operator Report formats** to open the **Report Formats** form.
2. In the right-hand pane of the **Report Formats** form, select the report you want to clean.
3. Click **Report Format** group > **Clean** button to open the **Clean Report Format** dialog.
4. Click the **Yes** button to clean the report and close the **Clean Report Format** dialog.
5. Click the **OK** button in the **Report Formats** form to save the changes and close the form.

# Chapter 9: Viewing Object Data and Events

## 9.1 IGSS Playback

### About IGSS Playback

IGSS Playback allows you to view the entire monitored process for a specific period of time in the past (the Playback interval), effectively replaying the monitored process for all important elements.

IGSS Playback uses historical data taken from **LOG** data as input for the objects in the diagrams, allowing you to observe how the entire system reacted to the log data changes as opposed to data mining the log data to see how individual objects reacted. Objects that have not been set up to save LOG data will not be displayed when using the IGSS Playback functionality. If you want to use the IGSS Playback functionality, you must make sure to save key object values as LOG data.

IGSS Playback gives you a wider perspective and a larger picture to observe log process data, the conditions prior to an event and the consequences after an event as displayed in the process diagrams.

You must define the start and end times to be replayed (the Playback interval), and you can adjust the playback speed, pause the playback, skip forwards or backwards and redefine the playback interval as you go.

IGSS Playback is a view-only option, displaying log data only. You cannot interact with the playback interval, for instance changing object values or states to model a different outcome.

The IGSS Playback functionality uses the **IGSS Player** form to define the playback interval period and to manage the playback process.

#### Changes to IGSS when the IGSS Player is running

When the IGSS Player form is running the playback interval, the **Active Alarm** and **Event list** forms will be displayed with a red background instead of the normal white background. All events listed in the **Event list** forms will be emptied while the **Active Alarm** list will be populated with historical alarm data from the Alarm Log files. If you need to access the active alarms during playback, you can set up the alarm module to display real-time active alarms in the **Active Alarm** form during playback in the **System Configuration** form.

All diagrams in Supervise are displayed with a semi-transparent red mask and all object values will be displayed with three question marks "???" which indicate that the object values are unknown. Object values will be populated with the LOG data values they had at the start of the playback interval when the **IGSS Player** form is started. Object values that cannot be loaded from the log data will be displayed with three question marks "???" throughout the playback interval.

All menus, toolbars and dialog boxes where commands to the system or to objects can be entered or sent are disabled.

All widgets in the IGSS Dashboard will be closed and the Dashboard will indicate that IGSS is running in Playback mode.

Graphs opened in the **Supervise** module will display LOG data values up to the start of the playback interval but the graph data values and display will not be updated dynamically when the **IGSS Player** form is running the playback interval.

Even though the **IGSS Player** form is running the playback interval, important and vital IGSS functionality will not be impacted by the **IGSS Player** form. All applications (including 3rd party applications and VBA applications) which have started normally on the IGSS Server will continue to run after the **IGSS Player** form is started.

IGSS Servers and single-user stations will continue to collect data and perform calculations even when the **IGSS Player** form is running and IGSS operator stations will still be connected to the IGSS Server.

All external interfaces of IGSS (such as Maintenance, Notifier, Alarm Management) are not affected when **IGSS Player** form is running the playback interval. The external interfaces can still access online data, including alarms triggered by online data. Alarms are still registered in IGSS and will be displayed in the **Active Alarm** form when playback stops.

#### **Disturbing the IGSS Player form**

When the **IGSS Player** form is running the playback interval, be aware that certain actions will cause the form to stop the playback.

- If the IGSS station is stopped and closed down, the **IGSS Player** form will also stop and close.
- If data collection in IGSS is stopped, the **IGSS Player** form will stop. Once data collection is restarted, the form not resume playback and must be restarted.
- If you update (edit, submit changes to) the IGSS configuration when the **IGSS Player** form is running, the form will stop playback of the playback interval. When the update is finished, the **IGSS Player** form will not resume playback and must be restarted.
- If the **IGSS Player** form is running a playback interval on an operator station and the connection to the IGSS server is lost, the form will stop running. When the connection to the IGSS server is restored, the the form will not resume playback and must be restarted.
- If the **IGSS Player** form is running a playback interval on an operator station and a new connection to another IGSS server is set up, the form will stop running. When the new
- connection to the IGSS server is enabled, the form will not resume playback and must be restarted.

## See Also

"Display alarms in the Active Alarms form during playback" on page 114

## IGSS Playback forms

### The IGSS Player form

Use the Player form to display historical IGSS data in the Supervise process diagrams, gaining an overview of the system values and displays during the playback interval.

### Overview

You can define the period which you want to replay critical events and adjust the playback speed to closely monitor the controls and objects in the diagrams or you can speed up the replay speed to see the entire process unfold rapidly.

When the **IGSS Player** form is started, log data is loaded sequentially, starting from the defined start date and start time. Log data is loaded in one hour chunks at a time and the progress of the entire playback interval is displayed in the Period slider bar in the middle of the form.

When you use the **IGSS Player** form to display log data in the process diagrams of Supervise, IGSS will enter Playback mode. When IGSS is in Playback mode, the process diagrams in Supervise will change appearance and display the log data, but data will still be collected from the online monitored process.

Closing the **IGSS Player** form will bring IGSS back into the mode the application was in when the **IGSS Player** form was opened, either Runtime or Design mode.

### IGSS Player status

**IGSS Player** form status is displayed in the left-hand bottom of the form. There are the following IGSS Player status:

- Ready
- Stopping
- Reading **LOG** values
- Loading Configuration
- Awaiting IGSS Start

## Using the IGSS Player form and Multimedia keyboards

If you have a multimedia keyboard, you can use the multimedia buttons in addition to the normal keyboard shortcut keys described below.

### Preconditions

None

### Where do I find it?

Click the **IGSS Master** > **Home** tab> **Player** Button to open the **IGSS Player** form.

### Field Help

| Field name    | Description   |
|---------------|---|
| Status Button | <p>Click this button to change the status of the IGSS Player. The button color displays the current IGSS Player status.</p> <p>There are three status levels:</p> <ul style="list-style-type: none"><li>• Off /Offline (Gray): IGSS is not presently running. IGSS Playback functionality is not available and the IGSS Player form is dimmed.</li><li>• On/Online (Green): IGSS is running in normal mode (runtime or Design mode). IGSS Playback functionality is available and the IGSS Player form can be used. The IGSS Player is not running.</li><li>• Replay/Running/Playback (Red): IGSS is running in Playback mode and the IGSS Player is running, displaying the log data in the diagrams in Supervise.</li></ul> |
| Select Period | <p>Click this button to open the <b>Select Period</b> form to select the period you want the IGSS Player to display.</p>  |
| Player speed  | <p>Click the plus [ + ] button to increase the playback speed by one speed level and click the minus [ - ] button to decrease the playback speed by one speed level. You can also press the + or - keys to increase or decrease the playback speed.</p> <p>The available playback speeds are displayed in the drop-down field in the middle of the button area. You can select any playback speed by opening the drop down box in the button area and selecting the playback speed.</p>   |

| Field name        | Description  |
|-------------------|--|
|                   | <p><b>Playback Speed examples:</b></p> <ul style="list-style-type: none"> <li>• 1/10: Ten minutes are used to replay one minute of LOG data. Ten minutes are used to display one minute of LOG data.</li> <li>• ½: The playback speed is half as fast as the log data was registered. Two minutes are used to display one minute of LOG data.</li> <li>• 1: The playback interval is displayed at the same speed as the log data was registered.</li> <li>• 2: The playback speed is twice as fast as the log data was registered. 30 seconds are used to display one minute of log data.</li> <li>• 10: The playback speed is ten times as fast as the log data was registered. 6 seconds are used to display one minute of log data.</li> </ul> <p>The last used playback interval is automatically loaded when the <b>IGSS Player</b> form is opened.</p> |
| On Top Check Box  | Select this check box to always display the <b>IGSS Player</b> form on top of all other forms.   |
| Present time      | The present time of the playback interval is displayed in the middle of the form.  |
| Period Slider bar | <p>Click and drag the slider to display the values and objects in the diagrams for the selected time. The slider bar also displays the status of the data being loaded into the IGSS Player.</p> <p><b>Keyboard short cut keys :</b></p> <ul style="list-style-type: none"> <li>• Press the left/right keys or page up / page down keys to move the slider left or right.</li> <li>• Press the Home key to move the slider to the beginning of the slider bar.</li> <li>• Press the End key to move the slider to the end of the slider bar.</li> </ul> <p><b>Slider bar colors:</b></p> <ul style="list-style-type: none"> <li>• If the slider or part of the slider is green, the required log data has been loaded and the IGSS Player can display that part of the playback interval.</li> </ul>   |

| Field name    | Description  |
|---------------|--|
|               | <ul style="list-style-type: none"> <li>• If the slider or part of the slider is yellow, the log data is still loading. The IGSS Player cannot display that part of the playback interval yet.</li> </ul> <p>When an hour's worth of log data is in the process of being loaded, this is represented by a yellow color on the Period slider bar. Once the hour data is loaded and ready for playback, the color will change to green, permitting playback.</p> <ul style="list-style-type: none"> <li>• If the slider or part of the slider is red, the log data has not yet been loading and the IGSS Player cannot display that part of the playback interval.</li> <li>• If the slider is gray, IGSS is running in Runtime or Design mode and the IGSS Player is not available.</li> </ul> |
| Stop          | Click this button to stop the IGSS Player and return the slider in the <b>Period Slider</b> bar to the start of the playback interval.   |
| Jump Backward | <p>Click this button to jump 2.5% backwards in the playback interval.</p> <p><b>Keyboard Shortcut key:</b> Press the <b>F2</b> key to jump backwards.</p> <p>The entire playback interval is divided into 200 equal parts. Each time you click the <b>Jump Backward</b> button, the playback slider is moved backwards by one part (out of the 200).</p>   |
| Skip backward | <p>Click this button to skip backwards to the previous value in the log data of the playback interval.</p> <p>The playback time stamp is set to the time stamp of the log data and the object values are sent to the process diagrams for display.</p> <p><b>Keyboard Shortcut key:</b> Press the <b>F3</b> key to play the playback interval skip forward in the playback interval.</p>   |
| Reverse       | <p>Click this button to reverse the playback interval at the speed defined in the <b>Player Speed</b> field.</p> <p><b>Keyboard Shortcut key:</b> Press the <b>F4</b> key to play the playback interval in reverse.</p>  |
| Pause         | Click this button to pause the playback interval. The present  |

| Field name                            | Description  |
|---------------------------------------|--|
|                                       | <p>time slider will remain where it is.</p> <p>You can resume the playback interval by clicking the <b>Pause</b> button again. You can also resume the playback by clicking the following buttons:</p> <ul style="list-style-type: none"> <li>• Jump Backward</li> <li>• Skip Backward</li> <li>• Skip Forward</li> <li>• Fast Forward</li> </ul> <p><b>Keyboard Shortcut key:</b> Press the <b>F5</b> key to pause or resume the playback interval.</p> |
| Fast Forward                          | <p>Click this button to fast forward the playback interval at the speed defined in the <b>Player Speed</b> field.</p> <p><b>Keyboard Shortcut key:</b> Press the <b>F6</b> key to play the playback interval in reverse.</p>   |
| Skip Forward                          | <p>Click this button to skip forward to the next value in the log data of the playback interval.</p> <p>The playback time stamp is set to the time stamp of the log data and the object values are sent to the process diagrams for display.</p> <p><b>Keyboard Shortcut key:</b> Press the <b>F7</b> key to play the playback interval skip forward in the playback interval.</p>   |
| Jump Forward                          | <p>Click this button to jump 2.5% backwards in the playback interval.</p> <p><b>Keyboard Shortcut key:</b> Press the <b>F8</b> key to jump backwards.</p> <p>The entire playback interval is divided into 200 equal parts. Each time you click the Jump Forward button, the playback slider is moved forwards by one part (out of the 200).</p>  |
| Setup time interval to analyze button | <p>Click this button to open the <b>Define playback interval</b> form where you can set up the start and end date and times for the <b>IGSS Player</b> form.</p>   |

## See Also

"The Define Playback Interval form" on page 113

## The Define Playback Interval form

Use this form to specify the playback interval the **IGSS Player** form. You must select the start date and time as well as the end date and time of the playback interval.

### Overview

Once you have selected the playback interval, log data will be loaded for the **IGSS Player** form.

Please note that selecting a very long playback interval, for example many days or weeks, will affect system memory usage, slowing system performance and a longer loaded time for the **IGSS Player** form will result. If at all possible, select as narrow an interval as possible.

If you have selected a playback interval that is too long, you can change the playback interval duration by selecting new start and end dates and times, automatically pausing the playback and inserting the new playback interval.

The last used playback interval is automatically loaded when the IGSS Player is opened.

### Preconditions

The **IGSS Player** form must be opened in order to access the **Define Playback Interval** form..

### Where do I find it?

Click the **Setup time interval to analyze** button in the **IGSS Player** form to open the **Define Playback Interval** form .

### Field Help

| Field name | Description  |
|------------|--|
| Start Date | Select the start date of the playback interval from the calendar in the field or enter the date directly in the field. |
| Start Time | Enter the start time of the playback interval.   |
| End Date   | Select the end date of the playback interval from the calendar in the field or enter the date directly in the field.   |
| End Time   | Enter the end time of the playback interval.   |

## See Also

"The IGSS Player form" on page 108

## Configuring the IGSS Player

You can configure the appearance of the Supervise module when the IGSS Playback functionality is running.

By default, the Alarm list and Supervise diagrams are shaded in a semi-transparent red mask to indicate the IGSS Playback functionality is enabled. You can change the color of the IGSS Playback mask for both the Alarm List and the diagrams in the Supervise module.

### Note

IGSS uses an eight character hexadecimal color code to represent colors in the IGSS application.

The eight character hexadecimal color codes consists of 4 pairs of two-character combinations and looks like this: ##BBGGRR

An eight character hexadecimal color code consists of the following:

- The first pair (first two characters ##) is always 00.
- The next pair (characters 3 and 4, BB) defines the blue values of the background color and must be within the hexadecimal values 00 and ff
- The next pair (characters 5 and 6, GG) defines the green values of the background color and must be within the hexadecimal values 00 and ff
- The next pair (characters 7 and 8 RR) defines the red values of the background color and must be within the hexadecimal values 00 and ff

The hexadecimal code refers to the 00-ff values for the Red, Green and Blue parts of the color.

### See Also

"Configuring the Alarm List playback background color" on page 115

"Configuring the Supervise playback background color" on page 116

## Display alarms in the Active Alarms form during playback

By default, the **Active Alarm** will display historical alarm data and the **Event list** will be emptied of data. Both will be displayed with a red background during playback. Alarms and event will still be registered in the **Active Alarm** during playback and will be displayed when playback ends.

If you need to access the active alarms during playback, you can set up the alarm module to display real-time active alarms in the **Active Alarm** form during playback in the **System**

**Configuration** form. The Active Alarm form will not be displayed with an overlay mask during playback if you set up the alarm module to display real-time active alarms during playback.

### To display real-time active alarms in the Active Alarm form during playback

1. In the **IGSS Master > Design and Setup** tab, click the **System Configuration** button to open the **System Configuration** form.
2. In the **System Configuration** form. > **Alarm** tab > **Alarm Settings** group, select the **Show real alarms in playback mode** check box
3. Close the **System Configuration** form and save the new configuration settings.

The configuration must be restarted after saving new system configuration settings.

### Configuring the Alarm List playback background color

The background color of the **Alarm list** form is overlaid with a semi-transparent red mask when the IGSS Playback functionality is in use (the **IGSS Player** form is running)

You can change the default appearance of the semi-transparent red layer by defining a new indicator color.

You can change the indicator color of the **Alarm list** form layer list to another color in two ways:

- In the Registry settings of the local machine
- In the **System Configuration** form

### Using the System Configuration form

Make sure you are running in Design Mode in the **IGSS Master**.

1. In the **IGSS Master**, click **Design and Setup** tab > **System Configuration** button to open the **System Configuration** form.
2. Select the IGSS server in the left hand pane of the **System Configuration** form (Right-click the server name in the tree and select **This PC**).

3. In the **System Configuration** form, click the **Alarm** tab > **Playback mode** field and select the new color you want to display in the **Active Alarms** form Supervise when the IGSS Player is playing IGSS data.
4. In the **System Configuration** form, click **File** > **Save Project** and exit the **System Configuration** form. The IGSS configuration will re-start and deploy your changes.

## Using the Registry settings

You can change the background color of the **Alarm list** form to another color by defining a new eight character hexadecimal value for the background color in the registry settings for IGSS on the local machine.

The default value is 00d0d0ff.

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the **Windows Start** menu.
2. In the **Settings** folder in HKEY\_CURRENT\_USER\Software\Schneider Electric\IGSS32\V12.00.00 \ Player, right-click on the **Alarm List Background Colour** registry key and select **Modify**.
3. In the **Value Data** field of the **Edit String** form, enter the new eight character hexadecimal value of the background color and click the **OK** button to save.
4. Click **File** > **Exit** to exit the **Registry Editor** form and save the registry values.

### See Also

"Configuring the Supervise playback background color" on page 116

"Configuring the indicator mask for the Data Playback function" on page 118

## Configuring the Supervise playback background color

The background color of the diagrams in Supervise are overlaid with a semi-transparent red layer when the IGSS Playback functionality is in use (the **IGSS Player** form is running).

The layer consists of an indicator color, which is used to indicate when IGSS Playback functionality is in use and an indicator mask, which is used to define the form and transparency of the indicator color.

You can change the default appearance of the semi-transparent red layer by defining a new indicator color and a new indicator mask as well as define how much of the screen area is to be covered by the playback indicator mask.

You can change the indicator color of the Supervise layer list to another color in two ways:

- In the Registry settings of the local machine
- In the **System Configuration** form

### Using System Configuration form

Make sure you are running in Design Mode in the **IGSS Master**.

1. In the **IGSS Master**, click **Design and Setup** tab > **System Configuration** button to open the **System Configuration** form.
2. Select the IGSS server in the left hand pane of the **System Configuration** form (Right-click the server name in the tree and select **This PC**).
3. In the **System Configuration** form, click the **Supervise and Language** tab > **Setup indicator** mask button to open the **Setup Indication Mask** form.
4. In the **Player Mode indicator color** field, select the new color you want to display in Supervise when the IGSS Player is playing IGSS data.
5. In the **System Configuration** form > **Supervise and Language** tab > **Cover** field, define how much of the screen is to be covered by the playback indicator mask, expressed as thousandths (permille instead of percent) of the screen area.
6. In the **System Configuration** form, click **File** > **Save Project** and exit the **System Configuration** form. The IGSS configuration will re-start and deploy your changes.

### Using the Registry settings

If you use the registry editor to change the indicator color of the Supervise layer list to another color, you must define a new 8 character hexadecimal value for the background color in the registry settings for IGSS on the local machine.

The default value is 00d0d0ff.

### To change the background color of the diagrams in Supervise:

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the **Windows Start** menu.

2. In the Settings folder in HKEY\_CURRENT\_USER\Software\Schneider Electric\IGSS32\V12.00.00 \ Player, right-click on the **SuperviseMaskColor** registry key and select **Modify**.
3. In the **Value Data** field of the **Edit String** form, enter the new 8 character hexadecimal value of the background color and click the **OK** button to save.
4. Click **File > Exit** to exit the **Registry Editor** form and save the registry values.

#### See Also

"Configuring the indicator mask for the Data Playback function" on page 118

Configuring the Alarm List playback background color

### Configuring the indicator mask for the Data Playback function

The background color of the diagrams in Supervise are overlaid with a semi-transparent red layer when the IGSS Playback functionality is in use (the **IGSS Player** form is running).

The layer consists of an indicator color, which is used to indicate when IGSS Playback functionality is in use and an indicator mask, which is used to define the form and transparency of the indicator color.

You can change the default appearance of the semi-transparent red layer by defining a new indicator color and a new indicator mask.

#### To change the indicator mask for IGSS Playback functionality

Make sure you are running in Design Mode in the **IGSS Master**.

1. In the **IGSS Master**, click **Design and Setup** tab > **System Configuration** button to open the **System Configuration** form
2. In the **System Configuration** form, click the **Supervise and Language** tab > **Setup indicator** mask button to open the **Setup Indication Mask** form.
3. In the **Indication Mask** group, click the pixels to toggle the transparency on or off.

If a pixel is toggled to black, the selected indicator color will be displayed in the pixel.

If a pixel is toggled to white, the original background of the Supervise module will be displayed in the pixel.

4. You can see how the selected combinations and concentrations of pixels will look in the **Sample** field.

You can increase or decrease the degree of transparency by increasing or decreasing the concentration of black vs. white pixels in the Indication Mask pixel. If you fill the entire area with black pixels, this will correspond to 100% transparency while an all-white area will correspond to 0% transparency.

**See Also**

"Configuring the Supervise playback background color" on page 116

## Run a playback interval in the Supervisemodule

If you want to run a playback interval in the Supervise module's diagrams, you must do the following:

1. Ensure the IGSS Master is started and running.
2. Locate and open the **IGSS Player** form from the IGSS Master.
3. Open the **Define Playback Interval** form and define the playback interval
4. Start the playback and monitor the diagrams during the playback sequence
5. Once the playback is ended, close the **IGSS Player** form and return IGSS to normal running mode.

You can also start IGSS Playback from the **Tools** menu in the Supervise module.

**See Also**

"The IGSS Player form" on page 108

"Define the playback interval" on page 120

"Set playback speed in the IGSS Player" on page 120

## Define the playback interval

To define the playback interval for the IGSS Player form:

1. Open the IGSS Player form from the IGSS Master
2. In the **IGSS Player** form, click the **Setup time interval to analyze** button to open the **Define Playback Interval** form
3. In the **Define Playback Interval** form:
  1. In the **Start Date** and **Start Time** fields, enter the Start date and start time of the playback interval.
  2. In the **End Date** and **End Time** fields, enter the end data and end time of the playback interval.
4. Click the **OK** button to close the form and save the settings.

### See Also

"The Define Playback Interval form" on page 113

"Run a playback interval in the Supervisemodule" on page 119

"Set playback speed in the IGSS Player" on page 120

## Set playback speed in the IGSS Player

You can increase the playback speed of the **IGSS Player** form to run through the playback interval or slow the speed down for more in-depth analysis of the monitored process.

The playback speed in **IGSS Player** form is set in pre-defined speeds compared to a standard one second playback.

- If you set the playback speed to "1/10", this will result in a slower playback speed. Ten minutes will be used to replay one full minute of **LOG** data in the monitored process.
- If you set the playback speed to "2", this will result in a faster playback speed. One minute will be used to replay two full minutes of LOG data in the monitored process.

The available playback speeds are displayed in the drop-down field in the middle of the button area. You can select any playback speed by opening the drop down box in the button area and selecting the playback speed.

### **To change the playback speed:**

In the **IGSS Player** form, click the plus [ + ] button to increase the playback speed by one speed level and click the minus [ - ] button to decrease the playback speed by one speed level.

You can also press the + or – keys to increase or decrease the playback speed.

### **See Also**

"The IGSS Player form" on page 108

"Run a playback interval in the Supervisemodule" on page 119

"Define the playback interval" on page 120

## **9.2 Object Historian**

### **What is the Object Historian ?**

#### **Definition**

The Object Historian allows the operator to view past events in the monitored process. The operator can view four different event types in the Object Historian:

- Log data
- Alarm data
- **BCL** data
- User login/logout

#### **Use**

The Object Historian is a supplement to the traditional tools available to the operator. **LOG** and BCL data can also be viewed in a graph, alarm data can be seen in the Alarm List.

But the Object Historian binds all these data types together and provides a full chronological picture of the events in the process, including information about which user was logged in at the time in question.

### **Using the Object Historian**

#### **Introduction**

This topic serves to give you an overview of the Object Historian functionality. For step-by-step procedures, [click here](#) and choose the relevant one.

### Example

The functionality is best illustrated with an example. The dialogue below shows the **LOG** data for 24 hours for the selected objects.

The screenshot shows the 'Object Historian' dialog box. It features a table with the following columns: Time, Event type, Object, Area, Info 1, and Info 2. The table contains 17 rows of data, with the row for '23-09-2002 11:31:57:002' selected. Below the table is a row of 24 small blue squares representing a 24-hour timeline. At the bottom, there are controls for 'Time interval' (Start and End), 'Event types' (Log, Alarm, BCL, User login/out), and buttons for 'Browse...', 'Query data', 'Cancel Query', 'Print', 'Export as CSV', and 'Close'.

| Time                    | Event type | Object | Area   | Info 1                      | Info 2 |
|-------------------------|------------|--------|--------|-----------------------------|--------|
|                         |            | q1     | Global | Will be checked for events. |        |
|                         |            | q2     | Global | Will be checked for events. |        |
|                         |            | q3     | Global | Will be checked for events. |        |
|                         |            | q4     | Global | Will be checked for events. |        |
| 23-09-2002 11:31:25:316 | INPUT      | q1     | Global | 85.0                        | 2      |
| 23-09-2002 11:31:53:006 | INPUT      | q1     | Global | 80.0                        | 2      |
| 23-09-2002 11:31:53:006 | INPUT      | q1     | Global | 75.0                        | 2      |
| 23-09-2002 11:31:55:009 | INPUT      | q2     | Global | 0.0                         | 2      |
| 23-09-2002 11:31:57:002 | INPUT      | q4     | Global | 36.0                        | 2      |
| 23-09-2002 11:32:01:008 | INPUT      | q3     | Global | 40.5                        | 2      |
| 23-09-2002 11:32:39:002 | INPUT      | q1     | Global | 65.0                        | 2      |
| 23-09-2002 11:33:07:003 | INPUT      | q1     | Global | 60.0                        | 2      |
| 23-09-2002 11:33:07:003 | INPUT      | q1     | Global | 55.0                        | 2      |
| 23-09-2002 11:33:09:005 | INPUT      | q2     | Global | 13.0                        | 2      |
| 23-09-2002 11:33:11:008 | INPUT      | q4     | Global | 40.0                        | 2      |
| 23-09-2002 11:33:15:004 | INPUT      | q3     | Global | 42.0                        | 2      |
| 23-09-2002 11:33:53:009 | INPUT      | q1     | Global | 45.0                        | 2      |
| 23-09-2002 11:34:21:009 | INPUT      | q1     | Global | 40.0                        | 2      |

### Select objects for inspection

The first step is to choose the objects you want to inspect. This can be done in two ways:

- Lasso the objects on a process diagram, then select **Edit** → **Object Historian**.
- Select **Edit** → **Object Historian**, then browse through the configuration to find the objects.

The selected objects appear in the list with the text "Will be checked for events".

### Define the time period

By default, the **Object Historian** goes back one hour but you can choose any start and end time in the **Time interval** area.

But remember that you must have the corresponding data files in the configuration's **report folder**. The lifetime of the different data files may be limited as defined in the **System Configuration** program on the **Files** tab. As an example, the lifetime for .log files is set to 24 hours by default. So if you don't get any data in the list, this may be the reason.

### Choosing the event types

You can now choose between four different event types: LOG, **BCL**, Alarm data or user login/-logout information. Any combination of the four types is valid.

Once the relevant types are selected, simply click the **Query data** button.

### Printing or exporting data

Once the data is displayed in the list, you can print the data or export it to a .csv file for further processing.

### What's This? Help

When you work with the **Object Historian**, you can always click the **?** in the upper right corner of the dialogue, then click the item you want information about.

## View LOG data in Object Historian

1. Choose the objects for inspection as follows:

- Lasso the objects on the process diagram, then select **Edit → Object Historian**.
- Select **Edit → Object Historian** and click **Browse** to find the relevant objects. To add multiple objects simultaneously, select them in the **Object Browser** and drag them onto the **Object Historian** dialogue.

**Result:** The selected objects appear in the list with the text "Will be checked for events".

2. Under **Time interval**, define the relevant start and end time. IGSS goes back one hour by default.
3. Under **Event types**, select the **Log** check box.
4. Click **Query data** to view the data in the list.

**Tip:** For details on the individual columns in the list, click the **?** button, then click inside the list.

[Show picture](#)

If you don't get any data in the list, you may not have the necessary .log files in the **report folder**. The lifetime of the data files can be limited by the settings on the **Files** tab in the **System Configuration** form.

## View alarm data in Object Historian

1. Choose the objects for inspection as follows:

- Lasso the objects on the process diagram, then select **Edit → Object Historian**.
- Select **Edit → Object Historian** and click **Browse** to find the relevant objects. To add multiple objects simultaneously, select them in the **Object Browser** and drag them onto the **Object Historian** dialogue.

The selected objects appear in the list with the text "Will be checked for events".

1. Under **Time interval**, define the relevant start and end time. IGSS goes back one hour by default.
2. Under **Event types**, select the **Alarm** check box.
3. Click **Query data** to view the data in the list.
4. For details on the individual columns in the list, click the **?** button, then click inside the list.

[Show picture](#)

If you don't get any data in the list, you may not have the necessary .alm files in the **report folder**. The lifetime of the data files can be limited by the settings on the **Files** tab in the **System Configuration** form.

## View BCL data in Object Historian

1. Choose the objects for inspection as follows:

- Lasso the objects on the process diagram, then select **Edit → Object Historian**.
- Select **Edit → Object Historian** and click **Browse** to find the relevant objects. To add multiple objects simultaneously, select them in the **Object Browser** and drag them onto the **Object Historian** dialogue.

The selected objects appear in the list with the text "Will be checked for events".

2. Under **Time interval**, define the relevant start and end time. IGSS goes back one hour by default.
3. Under **Event types**, select the **BCL** check box.
4. Click **Query data** to view the data in the list.
5. For details on the individual columns in the list, click the **?** button, then click inside the list.

### [Show picture](#)

#### Note

If you don't get any data in the list, you may not have the necessary .bcl files in the **report folder**. The lifetime of the data files can be limited by the settings on the **Files** tab in the **System Configuration** program.

## Export data from Object Historian

1. Once the required data is displayed in the list, click the **Export as CSV** button.
2. In the **Save As** dialogue, give the .csv file a name. IGSS defaults to the **report folder** for the configuration, but you can choose another folder, if required.

The .csv file can be opened in another program for further processing, for example, in Microsoft Excel.

## Print data from Object Historian

1. Once the required data is displayed in the list, choose what to print as follows:
  - To print all items in the list, go to step 2.
  - To print only selected items, select the relevant items in the list.
2. Click the **Print** button.

## 9.3 Object Watch

### The Object Watch Window

The Object Watch Window form is a small separate window in IGSS where the operators can add specific object atoms. These object atoms in the Object Watch Window will be displayed on top of any present diagram.

#### Use

The Object Watch Window can be used when certain atoms has to be monitored more frequently, for example if there are two critical flow meters that must be monitored extra carefully these might be placed in the Object Watch. Then the operator would still be able to monitor the normal process in the background diagram and also keep an extra eye on the flow meters in the Object Watch window (If the multi monitor feature is enabled the Object Watch Window may be placed on a separate screen).

#### See Also

"View Object Watch" on page 127

"Add object atoms to the Object Watch Window" on page 126

"Additional features with Object Watch" on page 128

### Add object atoms to the Object Watch Window

#### Types of objects

Atoms from the following object types can be added to the Object Watch Window:

- Analog
- Digital

- Table
- Counter
- String

#### **Add atom(s) to the Object Watch window**

1. In the process diagram, right-click the object you want to add to the **Object Watch** window and select **Watch Object**.
2. In the **Atoms to show in object watch window** form, select which atoms from the object you want to display in the **Object Watch** window and click the **OK** button.
3. The **Object Watch** window will open with the selected atoms added. You can adjust the order of the object atoms and create graphs or historical data overviews from the objects displayed in the **Object Watch** window.

If the command menu does not open when you right-click an object, you must enable command menus in the **Edit > View Command Menus** and check the settings on the **Supervise and Language** tab in the **System Configuration** form in the IGSS Master.

#### **Remove atoms from the Object Watch Window**

To remove an **atom** from the Object Watch, select the atom and click *Delete* or go to the **Edit** tab and click **Remove**. You can also clear the whole list from the **Edit** tab by clicking **Clear List** (or *Ctrl+Delete*)

#### **See Also**

"What happens when you click on a process object" on page 25

"The Object Watch Window" on page 126

"View Object Watch" on page 127

"Additional features with Object Watch" on page 128

## **View Object Watch**

#### **How to open the Object Watch window**

To open the Object Watch Window, click **View > Watch Window**.

### Change Object Watch location

To change the location of the Object Watch window, select the **Window** tab and select on any of the four listed places where you want the Object Watch to be located.

You can also manually resize the Object Watch window and place it anywhere on the screen.

By default the **Object Watch Window** is set to always be on top of any other window, which is the recommended setting.

### Change list order

To change the Object Watch list order, select an **atom**, go to the **Edit** tab and click **Move Up** or **Move Down**. You can also use the hot keys *Ctrl+Up* or *Ctrl+Down*.

### See Also

"The Object Watch Window" on page 126

"Add object atoms to the Object Watch Window" on page 126

"Additional features with Object Watch" on page 128

## Additional features with Object Watch

### Find Object from the Object Watch Window

You can locate any of the objects that are currently in the **Object Watch** Window in the Supervise module..

1. In the **Object Watch** Window, select the object you want to locate in the Supervise module.
2. Click **Edit** tab > **Find** (or click *Ctrl+F*) to open the diagram in the Supervise module which contains the object. If the object resides on multiple diagrams, you must select which diagram to open.

### Save process data from the Object Watch Window

The process data collected from the objects shown in the Object Watch list can be exported to a .csv file.

1. In the **Object Watch** window and select the object you want to export process data from .
2. Click **File > Capture to File** to open the **Save As** form and select the location of the data file.
3. In the **Save As** form, select a destination and a file name for the .csv file and finish by clicking **Save**. The .csv file is now continuously updated when any object **atom** changes.
4. When you do not want to register any further changes in the .csv file go to the **File** tab and click **Stop Capture**.

#### **View Object Historian from Object Watch**

You can access the **Object Historian** form from the objects listed in the **Object Watch** Window, viewing historical object data for the selected objects..

1. In the **Object Watch** Window Select the object or objects you wish to view the object data.
2. Click **Edit > Show History** (or click *Ctrl+H*) to open the Object Historian form and enter the required parameters.

#### **View graphs from Object Watch**

You can generate Operator graphs for any of the objects listed in the Object Watch.

1. In the **Object Watch** Window, select the object or objects you wish to create an Operator graph for.
2. Click **Edit> Show Graph** (or click *Ctrl+H*) to open the **Define Graph Period** form and enter the graph parameters.

#### **See Also**

"Using the Object Historian" on page 121

"Create an Operator Graph" on page 75

"The Object Watch Window" on page 126

"View Object Watch" on page 127

"Add object atoms to the Object Watch Window" on page 126

## Chapter 9: Broadcasting a message

### 9.4 Send message to all stations

You can send a short message to all stations that are connected to the IGSS server. A message window will be displayed in the Supervise module of all operator stations.

You can prevent operators from closing the message window and you can define when the message window will automatically close.

1. In the **Supervise** module > click **Tools** > **Broadcast Message** button to open the **Broadcast Message** form .
2. Enter the message you want to send to all stations in the **Text message to display on all stations** field. You can only enter 400 characters in the message.
  1. If you want to prevent operators from closing the message window on their stations, select the **Operators cannot close this message** check box.
  2. If you want to define when the message window will automatically close, select the **Remove message after** check box and enter the number of hours the message window is to be displayed. The minimum value is 1 hour and the maximum value is 100 hours.
3. Click the **Broadcast Message** button to send the message to all connected stations.

You can also send messages to all stations from the **Home** ribbon in the IGSS Master.

#### See Also

"The Broadcast Message form" on page 130

### 9.5 The Broadcast Message form

Use the **Broadcast Message** form to define and send a message to all online IGSS stations.

#### Overview

You can define a message which you can send to all online IGSS stations. The **IGSS Broadcast Viewer** form will be displayed on all receiving IGSS stations.

The message dialog on the receiving IGSS stations will display the following information:

- the text message.
- the station from which the message was sent.
- the date and time the message was received.

IGSS stations that are offline but connect after the message is sent later will not receive the message but once the message has been received, it can remain visible even if the IGSS station disconnects from the IGSS server.

You can define parameters which can prevent an operator from closing the message dialog and you can also set how long the message dialog will be displayed on the IGSS stations.

You can only send a message that consists of 400 characters or less but you can send multiple messages and an IGSS station can receive multiple messages from many other stations.

### Preconditions

The Supervise module must be opened and IGSS must be running.

The receiving IGSS Player stations must be online and connected to the IGSS station sending the message.

### Where do I find it?

To open the **Broadcast Message** form:

- In the Supervise module, click **Tools > Broadcast message**.
- In the **IGSS Master**, click **Home** tab > **Broadcast Message**.

### Field Help

| Name   | Description  |
|--|--|
| <b>Text message to display on all stations</b> | Enter the message to be sent to all IGSS stations.<br><br>You can only send a message that consists of 400 characters or less.   |
| <b>Operators cannot close message</b>          | Select this check box to prevent operators from closing the <b>IGSS Broadcast Viewer</b> form.<br><br>If you select this checkbox, the <b>Close</b> button on the <b>IGSS Broadcast Viewer</b> form will be disabled for all IGSS stations, including the station that sent the message. |
| <b>Remove message after</b>                    | Select this check box to automatically close the <b>IGSS Broadcast Viewer</b> form on all IGSS stations after it has been dis-   |

| Name | Description   |
|------|---|
|      | <p>played for a number of hours.</p> <p>You must define the actual number of hours, setting a minimum of one hour and a maximum of 100 hours.</p> |

### Button Help

| Button Name              | Description  |
|--------------------------|--|
| <b>Broadcast Message</b> | Click this button to send the message to all connected IGSS stations. An empty message cannot be sent. |
| <b>Cancel</b>            | Click this button to close the <b>Broadcast Message</b> form without sending the message.              |

### See Also

"Send message to all stations" on page 130

# Chapter 10: Printing Process Information

## 10.1 What can you print?

IGSS allows you to print out current process information in different ways:

You may print out ...

- the complete contents of a process diagram
- the current values of the objects displayed on a process diagram
- a graph
- a plant and operations report
- the contents of the alarm list / alarm log
- all process alarms as they occur, on a special message printer reserved for continuous message logging

## 10.2 Print out a process diagram

To take a screen dump of the currently active process diagram, follow the below procedure:

1. In the menu bar, select **File** → **Print** → **Window**.
2. In the **Print** dialogue select the relevant printer, its properties and specify the print range and the number of copies you wish to have printed.

Note

- With **File** → **Page Setup** and **File** → **Print Preview** you can change the paper format and page margins, and view the print page before you actually send it to the printer.
- It is always the top process window, that is to say, the currently active one, whose contents is printed out.
- The command **File** → **Print** → **Screen** prints out the entire contents of the screen, incl. the title bar, menu bar, etc.

## 10.3 Print the current values of a process diagram

1. Do one of the following:

- To print all process values from the active diagram, select **Edit** → **Select All Objects**.
- To print the process values of specific objects, select them one by one while holding down the SHIFT button. The selected objects will be indicated by a frame around them.

2. In the **File** menu, select **Print Values**.

3. The **Save As** dialogue appears asking you to save the values in an .lst file. Save the data.

**Result:** The WordPad text editor is automatically opened. You may now edit and print the data in the form of a list.

Note

With **File** → **Page Setup** you can change the paper format and page margins before you actually send the information to the printer.

## 10.4 Print a complete graph window

You can take a picture (screen dump) of the active graph window and send it to the printer. Only the chart currently displayed in the graph window will be sent to the printer.

If you want to print another graph area or period, you must first define the graph period and display it in the graph before you can send the graph window to the printer.

### To print the active graph window

1. In the **Supervise** module, open the graph you want to print.
2. In the graph toolbar, click the Print button to open the **Print** form
3. In the **Print** form, select the printer and define print properties for the job
4. Click the **OK** button to send the graph to the printer.

Click **File** > **Page Setup** to change the paper format and page margins before you send the graph to the printer.

### See Also

Open a graph

Change graph period

## 10.5 Print a report

All reporting facilities included by the system designer can be accessed in the **User Programs** menu.

**Note:** Once you are in the selected report program you have full access to the relevant help functions.

## 10.6 Print the alarm list/alarm log

To print out the **Alarm List** or **Alarm Log** follow the procedure below:

1. If you are not in the **Alarm** program, but on a normal process diagram in the **Supervise** program, select  Active Alarms in the taskbar at the bottom of the screen,
2. In the menu bar of the **Alarm** program, select **File** → **Print**.
3. Make your selections in the **Print** dialog box.
4. Confirm with **OK**.

### Cut to Paper Width

If this function is selected, the contents of the displayed Alarm List or Log is cut off if it exceeds the right margin of the printing paper.

If this function is not selected and the contents of the list exceeds the width of one print page, printing is continued on a second page. In this way you may join two printed pages to see the entire contents of the list on paper.

Tip

Once you are in the **Alarm** program you have full access to the relevant help functions.

## 10.7 Direct message printing

The function of continuous alarm logging on a message printer is enabled or disabled in the **System Configuration** program by the system designer. The operator has no access to this function. However, if you are given the authority by the system designer, you may decide on the format of message logging using the command **File** → **Save Format for Alarm Printer** in the **Alarm** program.

## Note

Pressing  Active Alarms in the taskbar at the bottom of the process diagram automatically takes you into the Alarm program where you have access to all online explanations and help functions associated with alarm handling.

# Chapter 11: Exporting and E-mailing Process Information

## 11.1 Export functions

### Export data from Object Historian

1. Once the required data is displayed in the list, click the **Export as CSV** button.
2. In the **Save As** dialogue, give the .csv file a name. IGSS defaults to the **report folder** for the configuration, but you can choose another folder, if required.

The .csv file can be opened in another program for further processing, for example, in Microsoft Excel.

## 11.2 E-mail functions

### Email a diagram

A diagram can be sent as a JPEG file to a mail recipient. In order to send the file, a so-called MAPI client such as Microsoft Outlook must be installed and set up.

This feature is not supported by Novell and other operating systems.

1. Open the diagram you want to send.

**Note:** Before you email the diagram, make sure that no other windows lie on top of the diagram.

2. Right-click and select **Email Diagram**.

#### [Show picture](#)

3. Do the following:
  - In the **To** field, type the email address of the recipient.
  - In the **Subject** field, type a descriptive title for the mail.

- In the text field, type a message just as you would in a normal email.

The **Attachments** field contains the filename as processed by IGSS. The filename cannot be changed.

4. Click the **Send** button to send the email.

## Chapter 12: Reference and Lookup

### 12.1 Conventions in this Manual

The following typographical conventions are used:

| Convention             | Description   | Example  |
|------------------------|---|--|
| User interface element | When referring to labels and names in the user interface.   | The <b>Data Management</b> tab.  |
| User input             | When the user has to type specific data in IGSS   | Type the following description:<br><b>Incoming flow in Tank 2</b>  |
| Module name            | When referring to a module in IGSS  | Open the <b>Definition</b> module.   |
| Note                   | A note emphasizes or supplements important points of the main text. A note provides information that may apply only in special cases.   | By default, the timestamp is in universal time format, <b>UTC</b> <sup>1</sup> . This can be changed in the Driver Log Filters dialog box. |
| Tip                    | A tip suggests alternative methods that may not be obvious in the user interface. A tip also helps the user in working more effectively with IGSS. A tip is not essential to the basic understanding of the text. | Alternative to this simple find function, you can also filter on text in the messages in Driver Log Filters dialog box.                    |
| Warning                | A warning is an important note that is essential for the completion of a task. In some cases, disregarding a warning may result in undesirable functionality or loss of data.                                     | If you disregard the System alarm, you may risk loss of data in the <b>LOG</b> and <b>BCL</b> files.                                       |

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<sup>1</sup>Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.

## 12.2 Getting Help in IGSS

IGSS comes with a comprehensive help system designed to help both system designers and operators to get started with IGSS as quickly as possible.

### Documentation overview

The IGSS documentation includes the following items:

| Documentation item   | Description   |
|----------------------|---|
| Getting Started      | An introduction to IGSS and its most fundamental terms and features. Getting Started is intended to get you up and running as fast as possible. The manual provides a system and architecture overview followed by a number of real-life use cases you can go through before building your first real IGSS project. The manual is available in Adobe Acrobat format (.pdf).   |
| Module help          | For each module there is a help file with the same name as the module itself, for example, Def.chm for the Definition module.<br>The help file is invoked by clicking the  in the upper right corner of the module. The Table of Contents will then allow you to browse through the topics.  |
| Form and Dialog help | For each Form or dialog there is a help topic with the following standard information: <ul style="list-style-type: none"><li>• Overview</li><li>• Preconditions</li><li>• Where do I find it?</li><li>• Field help</li></ul> Form help is invoked by clicking the help button  in the upper right hand corner of the dialog box or located in the Table of Contents of the individual help file. |
| Thematic help        | IGSS also provides thematic help. When there is a special theme that requires special attention from the user, a dedicated help file is provided. Examples include "Driver-Specific Help" and "Database Administration Help".   |

### Where are the help files located?

The IGSS help files are located in the appropriate language folder in the installation path of IGSS, by default C:\Program Files\Schneider Electric\IGSS32\V12.0. The help files are available in English at release time.

The paths to the help files are:

| Language | Path                   |
|----------|------------------------|
| English  | [IGSS InstallPath]\ENG |
| Danish   | [IGSS InstallPath]\DAN |
| German   | [IGSS InstallPath]\DEU |

### Translated help files

Selected help files have been translated into Danish. If you require help files in your language, please contact Schneider Electric.

### Help updates

The help files are continuously updated and improved. Check regularly with the IGSS Update in the IGSS Master.

## 12.3 Version Information (IGSS Help System)

© Schneider Electric, IGSS Version 12.0

The IGSS help files are based on software build number 10305 (initial release)

### English help files

To update the help files, click the **Update IGSS Software** button on the **Information and Support** tab in the **IGSS Master**. There must be a connection from the PC to the Internet. Every time **IGSS Update** is run, IGSS help files as well as IGSS system files will automatically be updated on the PC from the web server at Schneider Electric.

You select the languages you want to update in the **Tools** menu of the **IGSS Update** form.

If you are not able to update the IGSS system directly via the Internet, the alternative is to download the updates from the Schneider Electric website as zip files. These can then be transferred onto a CD or USB memory stick, which is then the medium used to update on site.

After updating your IGSS installation, the build numbers in various IGSS modules may change to a higher number. This signifies that the module in question has been updated with newer files. Build numbers consist of four digits, where the first digit represents the



year and the last three represent the day number in the year in question. The build number can be seen in the **About** dialog box which can be activated from the **Help** menu.

An example:

**Build number = 10305**

**16 = the year 2016**

**305 = The 305<sup>th</sup> day of the year**

## Chapter 13: Glossary

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### A

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#### **Action Pane**

The left pane of the main window in the Master module. Contains shortcuts to IGSS modules and allows you to define your own shortcuts to other applications used with IGSS.

#### **Application menu**

The Application menu is the first ribbon in the IGSS Master module. Click the icon to drop down the menu. The menu contains items that were typically found in the File menu in previous versions of IGSS. In most modules, an "Options" item allows the user to define global module settings. The Application menu was introduced in the Microsoft Office 2010 package. It replaces the Application button (nicknamed Doughnut) which was introduced in IGSS V7 and V8.

### D

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#### **descriptor**

A descriptor is the graphical display of an object. IGSS includes many types of descriptors including: - Built-in standard symbols - Animated symbols (Symbol Factory library) - Graphics and animation - Drawing symbols - Windows controls - ActiveX controls An IGSS object can be represented with different descriptors on different diagrams.

### R

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#### **Ribbon**

The Ribbon is a new term/element in the Microsoft universe. The Ribbon replaces the well-known toolbars in applications. The Ribbon provides quick access to the most commonly used functions in the application. The Ribbon is divided into logical groups (the tabs) and each tab is divided into sections (the blocks in the tab). The Ribbon is context-sensitive which means that only relevant functions are accessible dependent on the current user action.

### S

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#### **SCADA**

Supervisory Control & Data Acquisition

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## **U**

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### **UTC**

Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.

## **W**

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### **Windows Shell**

The Master module can be set as the Windows shell application. This will mean that the operator cannot access normal Windows functions. Only functions accessible through the IGSS .NET will be available.