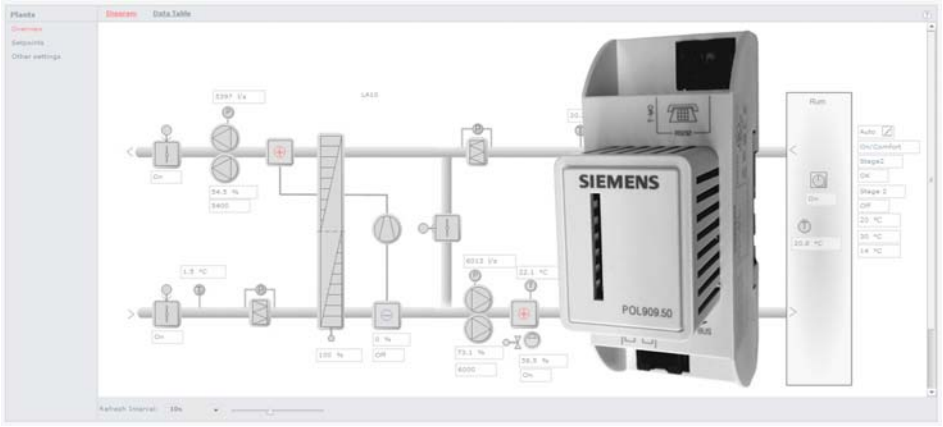
Control Equipment

Climatix

Advanced Web Module (AWM)
POL909.50/STD
Documentation on basics



PRODUKT

Air handling with the focus on LCC

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PRODUKT

Air handling with the focus on LCC

1 About this document

1.1 Revision history

Version	Date	Changes
.00	2012-04-xx	First edition

1.2 Before you start

Validity

This document applies to the following product:

Name	Type (ASN)	Short name
Advanced Web Module	POL909.00/STD	AWM module
Advanced Web Module	POL909.50/STD	AWM module HW2

Product versions

Description and functional scope of the products are based on the Climatix Valid Version Set 7.0 or higher.

Target audience

This documentation is intended for:
- MSR project planning specialists from Siemens and OEM customers
- Sales and start up personnel from OEM customers
- SIEMENS employees in sales and support

Use

The documentation is to be used by the target audience for the following purpose:
- Creation of offers for Web operations with ventilation and air-conditioning systems fitted with Climatix POL6XX controllers AWM modules.
- Project planning and commissioning of ventilation and air conditioning systems fitted with the aforementioned device combinations.

Prerequisites

The target audience mentioned above has:
- General specialist knowledge of the planning and commissioning of MSR solutions in HVAC technology
- Familiarity with the SAPRO programming tool and SCOPE commissioning tool (applies to personnel that programs and starts applications)

1.3 Document conventions

Symbols used

Below is an overview of all symbols used in this document denoting risks or important information:

This symbol draws your attention to special safety notes and warnings. Failing to observe these notes may result in injury and/or serious damages.

This symbol denotes special information that, when failed to observe, may result in faulty functionality *or loss of data*.

Notes with this symbol provide important information that requires appropriate attention.

This symbol marks passages containing tips and tricks.

Abbreviations

The following abbreviations are used in text and illustrations:

Abbreviation	Meaning
AWM	**A**dvanced **W**eb **M**odule POL909.00
BSP	**B**oard **S**upport **P**ackage (operating system)
Climatix	Siemens controller family with common tools
DHCP	Dynamic Host Configuration Protocol
HVAC	**H**eating **V**entilation **A**ir **C**onditioning
IPSM	**I**ntel **P**ersistent **S**torage **M**anager
ISP	**I**nternet **S**ervice **P**rovider
RAS	**R**emote **A**ccess **S**ervice (typically via a dial-up line)
RMS	**R**emote **M**anagement **S**ervice
SAPRO	SAPRO programming tool
SCADA	**S**upervisory **C**ontrol **a**nd **D**ata **A**cquisition
SCOPE	SCOPE start up and service tool
SELV	**S**afety **E**xtra **L**ow **V**oltage
WAN	**W**ide **A**rea **N**etwork

1.4 Important information on safety

Field of application

Use LON communication modules only for control and monitoring functions in ventilation, air conditioning and refrigeration plants.

Intended use

Trouble-free and safe product operation of the above products presupposes transport, storage, mounting, installation, and commissioning as intended as well as careful operation.

Electrical installation

Fuses, switches, wiring and grounding must comply with local safety regulations for electrical installations.

Wiring

When wiring, strictly separate AC 230 V mains voltage from AC 24 V safety extra-low voltage (SELV) to protect against electrical shock!

Commissioning and maintenance

Only qualified staff trained accordingly may prepare for use, commission, and maintain LON communication modules.

Maintenance

Maintenance of LON communication modules generally only means regular cleaning. We recommend removing dust and dirt from system components installed in the control panels during standard service.

Faults

Only authorized staff may diagnose and correct faults and recommission the plant. This applies to working within the panel as well (e.g. testing or changing fuses).

Storage and transport

Refer to the environmental conditions specified in the respective data sheets for storage and transport.
If in doubt, contact your supplier.

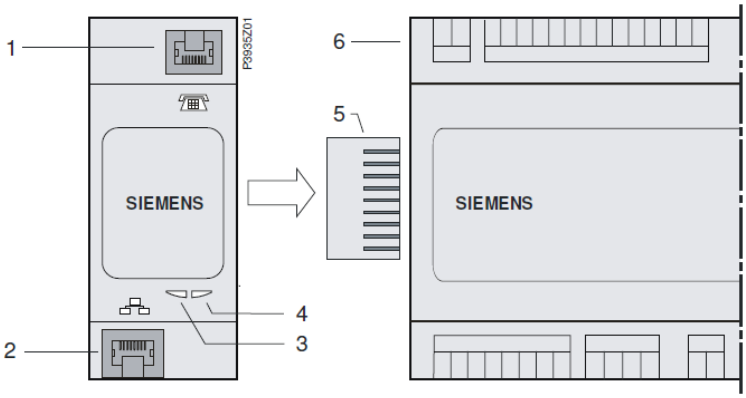
Disposal

Devices contain electrical and electronic components; do not dispose of them in household garbage.
Observe all local and applicable laws.

2 Brief, general description

2.1 Web module, installation and setup

General



1 Connection for modem RS232 to RJ45
2 Ethernet interface to RJ45
3 BSP indicator
4 BUS indicator
5 Contact
6 Climatix process unit

Installation

Install the Web module as follows:

1. Disconnect the power supply to the controller.
2. Mount the POL909.50 (Web module) as shown in figure. Make sure the module is firmly against the controller. The distance between the controller and Web device should not be larger than about 1 mm.
3. Turn power on.
4. The BSP indicator will glow orange for half a minute and then turn green. Then the BUS indicator will light orange one minute, then turn green.
5. Log on to the HMI with password *2000*.
6. Navigate to menu:
   Main index _ System overview _ Communication _ Comm module overview.
   Here it should now read: *Module1 web OK* and *Com.module changed OK*.
   If it does not, then execute a restart from menu row 1 on the display. When it is OK on both lines, both LED indicators on the module should turn green.

Setup

To setup the Web module, navigate to menu: *Main index _ System overview _ Communication _ Comm module overview. _ Module1 Web:*

1. Select DHCP _ Passive.
2. Set IP. Enter the IP address "*Given IP*" that the unit will have to connect to the network. NOTE! If not all 12 fields are filled in with numbers, you have to exit the field with a #.
3. Set Mask. Enter the Subnet Mask "*Given Mask*" that the unit will have to connect to the network. NOTE! If not all 12 fields are filled in with numbers, you have to exit the field with a #.
4. Set Gateway. Enter the Gateway "*Giv Gateway*" that the unit will have to connect to the network. NOTE! If not all 12 fields are filled in with numbers, you have to exit the field with a #.
5. Save the settings. Select "*Write settings" _ Active*.
6. Restart. Choose *Execute* from menu row 1 on the display.
7. Plug the network cable into the network jack on the module (pos 2 in figure). When both the BSP and the BUS indicator lights green again, it should be ready to connect to the unit via a networked computer.

2.2 Web browser

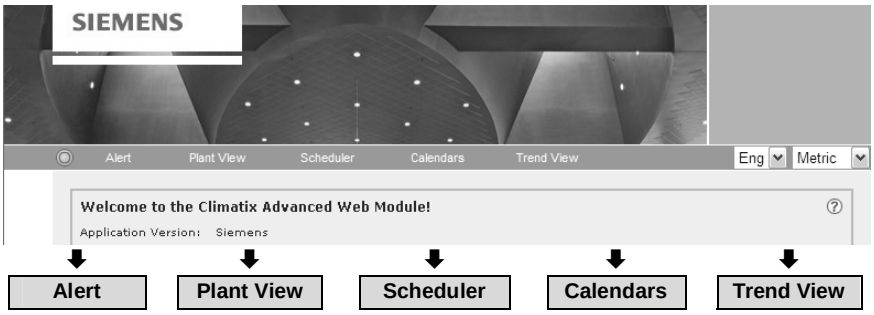
Default login: User name: USER Password: user

2.2.1 Overview

"SCADA" window

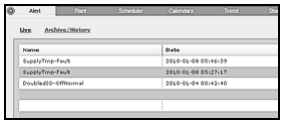
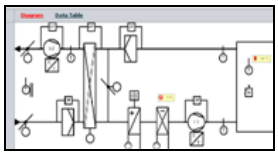
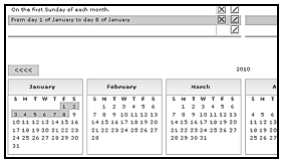
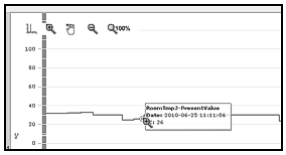
If a SCADA configuration has been performed in line with chapter 4, then the "SCADA" window contains the following menus to enable the user to operate and monitor the associated plants.

Browser > IP Address > Home Page > SCADA Menu > SCADA Window



Menus / contents

The menus with their windows and contents are as follows:

Menu	Window	Contents
Alert		All active and historical alerts with timestamp and information about the alert point.
Plant View		Plant images with the current values for the data points and alert status display.
Scheduler		Set the schedule for switching the system in line with requirements.
Calendars		Define public holidays and rules.
Trend View		View important data points in the trend when and export data.

Controls

Element	Description
“Language” selection list	The translated languages according to section 3.4.2 "Defining languages and links"
“Mass System” selection list	Metric or English ("Metric" in the image above)
?	Call online help

2.2.2 Alarm window

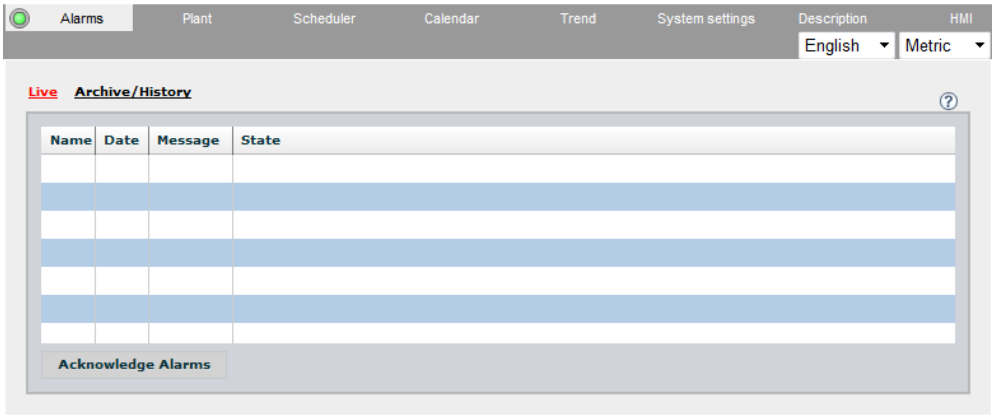
Purpose

The “Alarm” tab contains these two windows:

- "Live" List of current, pending alerts
- "Archive/History" List of alerts that have occurred

"Live" window

The following screenshot shows an example:

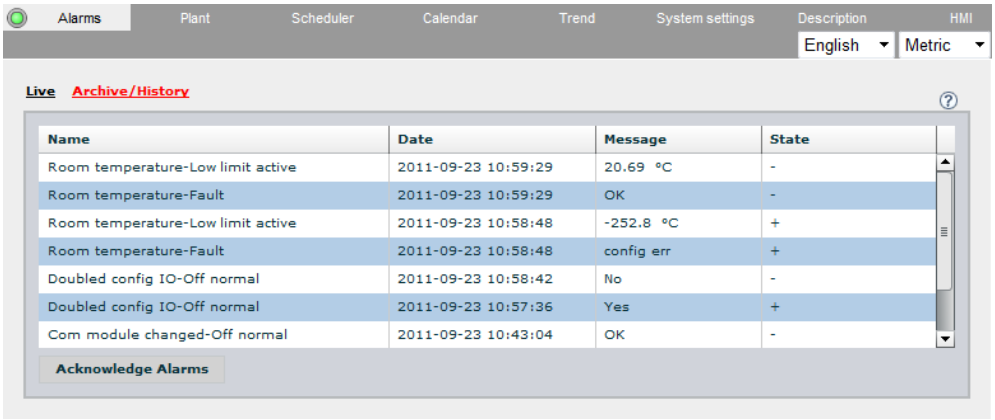


Information elements and controls

Element	Information / Purpose
“Name” column	Name of the alarm
“Date” column	Timestamp for the alarm
"Message" column	Display alarm text.
“State” column	Status: – outgoing ; + incoming
"Acknowledge Alarms" button	Confirm a marked alarm.

"Archive/History" window

The following screenshot shows an example:



Information elements and controls

Element	Information / Purpose
“Name” column	Name of the alarm
“Date” column	Timestamp for the alarm
"Message" column	Display alarm text.
“State” column	Status: – outgoing ; + incoming
"Acknowledge Alarms" button	Confirm a marked alarm.

2.2.3 Plant view

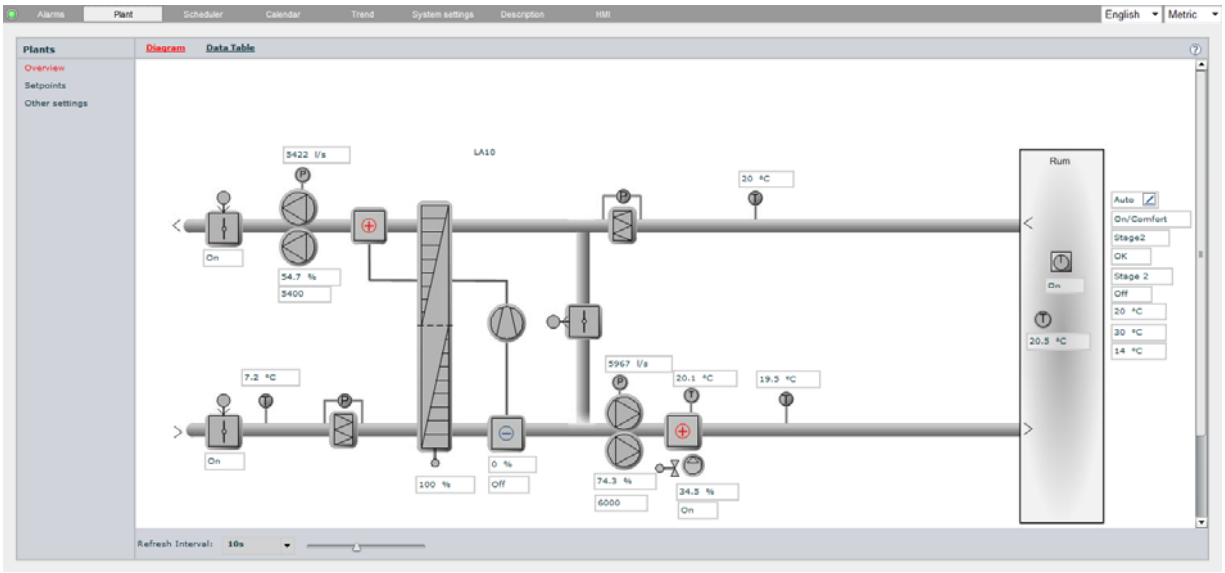
Purpose

The plant view enables the user to:
- select plants (plant views)
- view and operate data points

Two views are available for this purpose:
- "Diagram" view
- "Data Table" view

"Diagram" view

The existing plant views can be selected in the "Diagram" view and the data points embedded there can be operated.
Example of a plant view with full access rights ("0"):



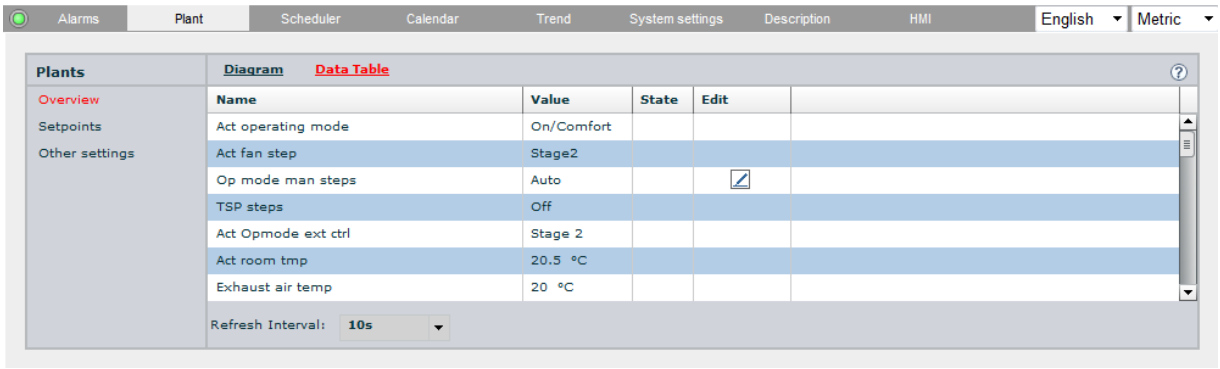
Information elements and controls

Element	Information / Purpose
Plants	Existing plant views. Click to select the required view (in this case "Plant1").
Data point fields	These show the current states of the data points, e.g. "OK" for the ZL/FL values or "24" °C for the ambient air temperature. Data points with the ☑ icon in the data point field can be edited; see the following examples.
Refresh Interval (bottom of the screen)	Dropdown list with the selection: 10 sec / 20 sec / 60 sec / disabled
Slide control (bottom of the screen)	For adjusting the image size within the window. If the image is made larger than the window, then scroll bars appear at the bottom of the screen and on the right hand side. If the required section of the screen has disappeared because of the enlargement, this can be made visible again either using these controls or by means of the mouse pointer in the screen (click and hold).

Plant view, *continued*

"Data Table" view

The existing plants can be selected in the "Data Table" view. The table lists the data points according to the “Diagram” view:



The selected plant is retained when switching between the views.

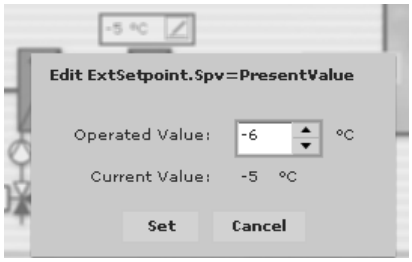
Information elements and controls

Element	Information / Purpose
Plants	Existing plants, click to select the required plant.
Name	Visible data points (selected when configuring the plant view)
Value	Current values of the data points.
State	Current states of the data points (if a status element was assigned while configuring the plant view).
Edit	Adjust set values, change states to be monitored, etc., see below.

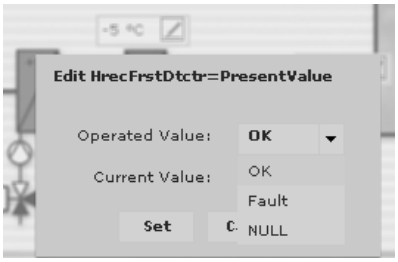
Examples for "Edit"

Here are some examples for the Edit function in the "Diagram" and "Data Table" views:

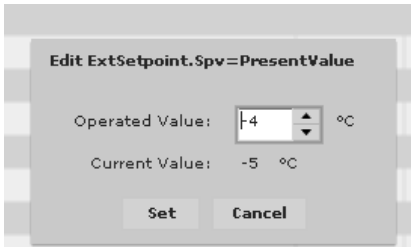
Adjust set value (diagram):



Change monitoring status:



Adjust set value (data table):



No access right for editing:

2.2.4 Scheduler program

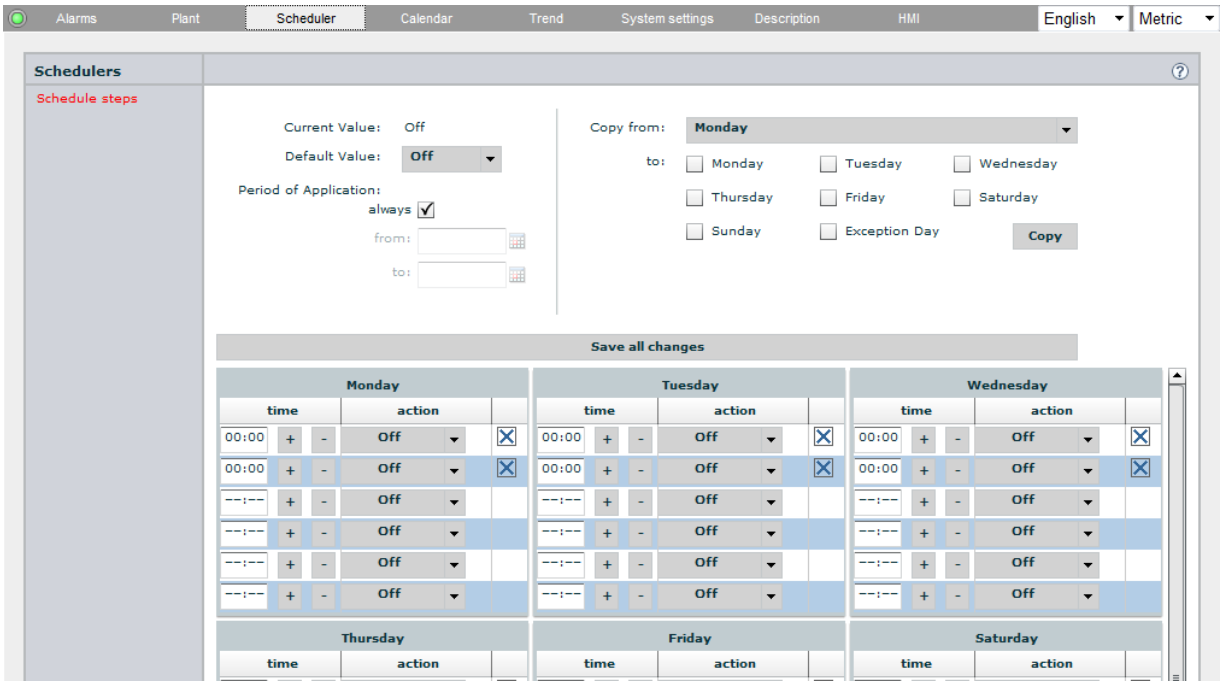
Purpose

When used in conjunction with the calendar, the scheduler allows different scheduling programs to be created to control plants and parts of plants in accordance with the:

- Weekday
- Date
- Time

View

The screenshot shows part of the scheduler:



Information elements and controls

Element	Information / Purpose
"Schedulers" group field	List of the scheduler programs created
Current Value	Current status of the scheduler program
Default Value	Default for the status (Off / On)
Period of Application	Program period (always / date from-to)
Copy from: … to:	Copy entries for one weekday to another weekday.
Save all changes	Save all the changes made
Weekdays: "Monday", "Tuesday" etc.	Scrolling down means that the screens for all seven days and an exception day can be seen.
time	Time specification
action	Choice of the associated action (on, off, level 1 etc.)
☒	Delete entry

2.2.5 Calendar

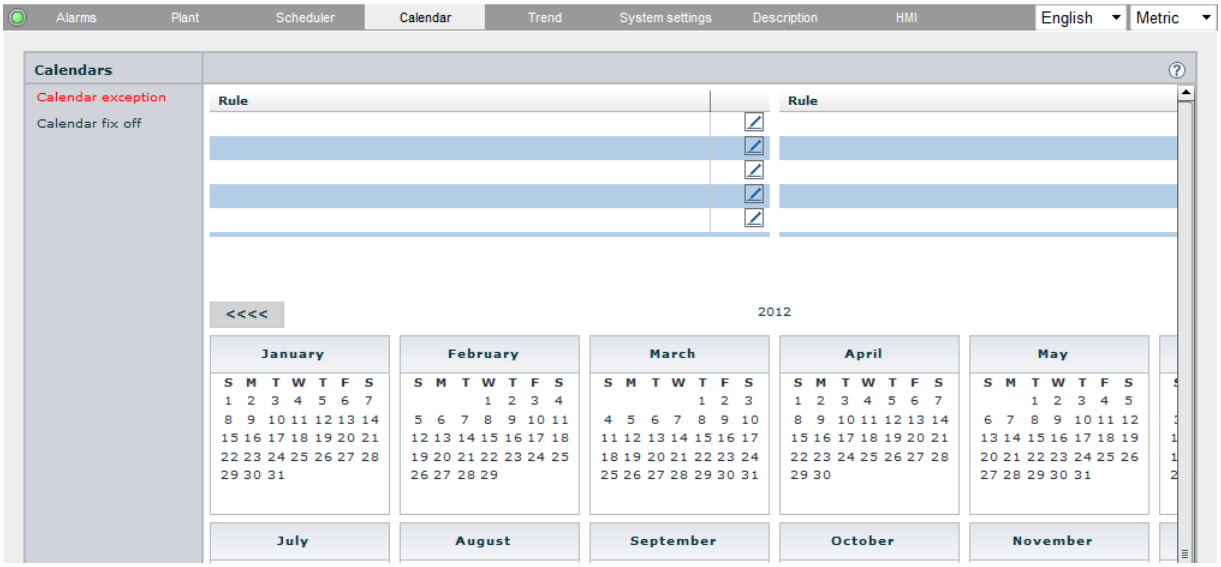
Purpose

When used in conjunction with the scheduler, the calendar allows different scheduling programs to be created to control plants and parts of plants in accordance with the:

- Weekday
- Date
- Time

View

The screenshot shows part of the calendar:



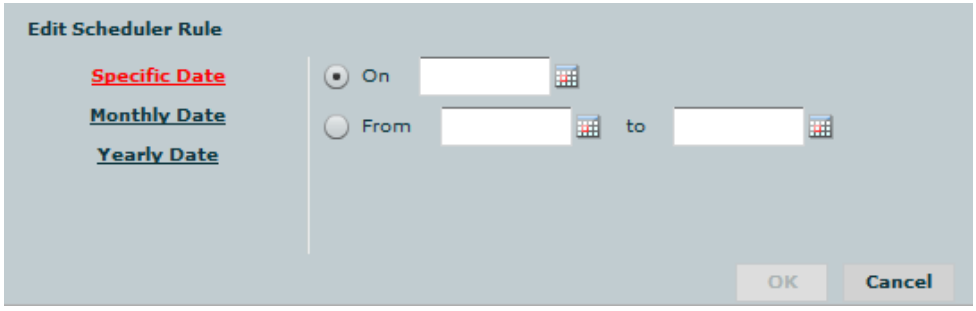
Information elements and controls

Element	Information / Purpose
"Calendars" group field	List of calendars
Rule	List of the rules created for the exception day (2 columns of 5 entries each possible)
☒	Delete rule
✎	Edit rule, see the following input screens.
"<<<<" button	Go to previous year
">>>>" button	Go to next year
Monthly calendar: January, February etc.	Scrolling enables all 12 months to be displayed.

Input masks

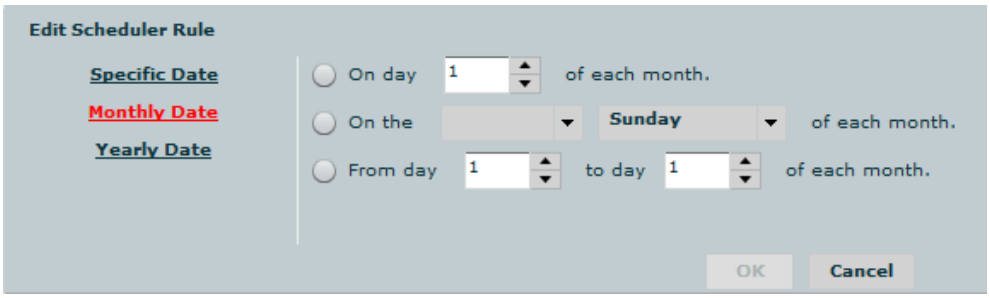
The following input masks appear when you click the Edit icon in the required line for the rules.

Specific date

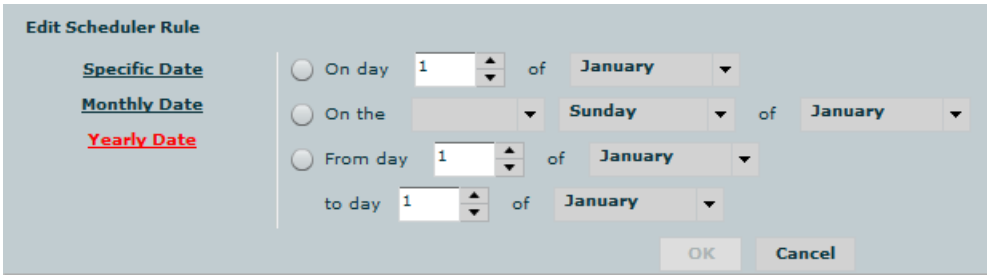


Calendar, *continued*

Monthly date



Annual date



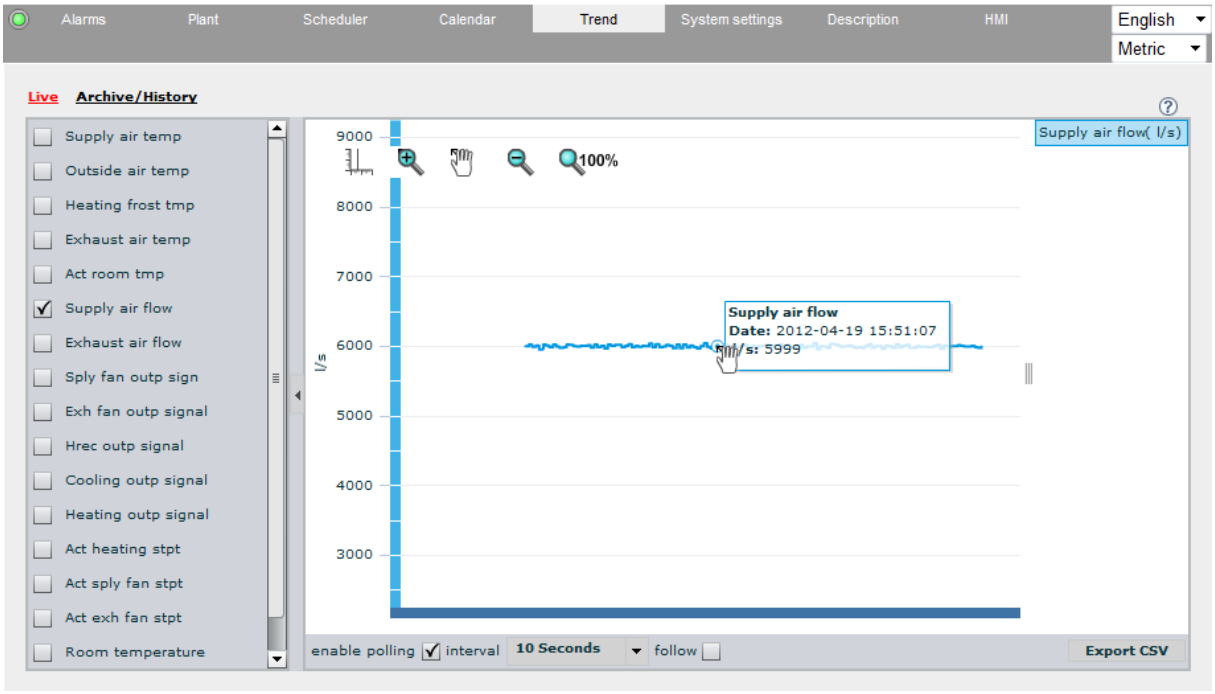
2.2.6 Trend window

Purpose

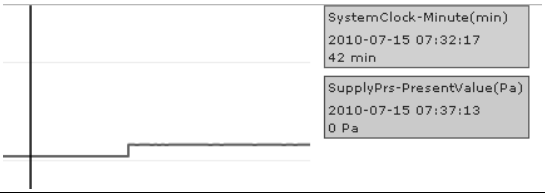
The "Trend" tab contains two menu items:
- "Live" window
- "Archive/History" window

"Live" window

Trend recordings can be defined and viewed in the “Live” window:



Information elements and controls

Element	Purpose / Information
List box left	Defined trend records
☐ / ☑	Hide / show record
	Display values at the point on the diagram shown with the vertical ruler. Example: 
	8. Enlarge the selected area 9. Display the information window for a particular point, see the example above.
	Move the diagram in the window
	Reduce the view in stages by clicking.
	100% view
	Enable / disable data point polling
	Select the polling interval: 1 s / 2 s / 5 s / 10 s / 30 s / 1 min / 2 min / 5 min
	When selected: diagram follows the recording
	Export recorded data in CSV format.

Trend window, *continued*

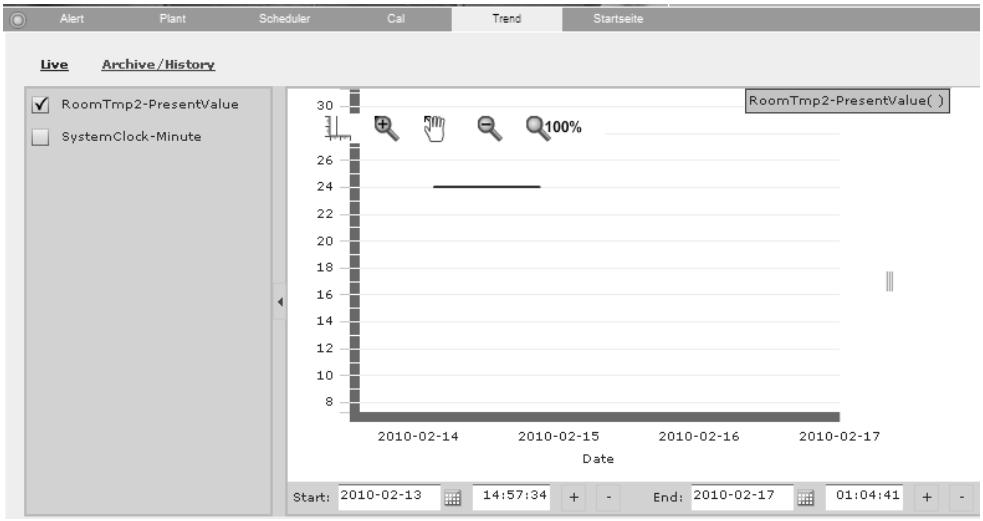
Export CSV

Clicking the **Export CSV** button opens a dialog box of this type:

Open button: Opens the file manager to select the destination location.
Save button: Saves the **export.csv** file under the name entered in the file namer that subsequently opens.

"Archive/History" window

Saved trend records can be displayed in the "Archive/History" window:



Information elements and controls

Element	Purpose / Information
List box left	Saved trend records
☑	Select the trend record to be displayed.
Toolbar	Same as for the "Live" tab, see the previous page.
Start: input	Enter the starting date and time for the recording to be displayed in the text field or calendar.
End: input	Enter the end date and time for the recording to be displayed in the text field or calendar.
+ / **-** buttons	Increase or decrease the time by one. The default setting is minutes. However if the cursor is placed in the seconds, minutes or hours then the time is increased or decreased by the relevant unit.
Export CSV	Export recorded data in CSV format (all data for the relevant recording).

3 In-depth description

3.1 Web module

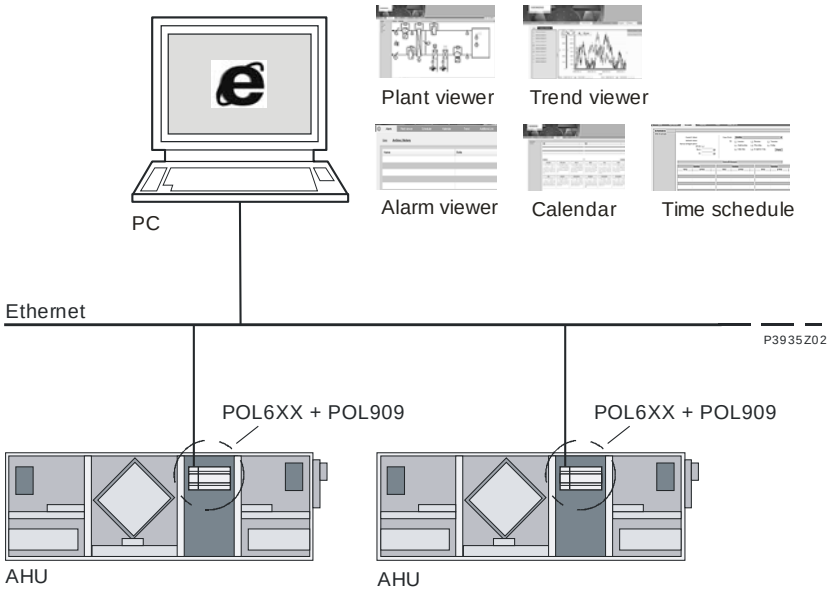
3.1.1 Purpose of the module

Operation and monitoring

The Advanced Web Module (AWM) offers a complete solution for operating and observing plants via a web browser – both locally and via the web.

Principle setup

The diagram illustrates the principle setup and basic functions of operation based on a locally operated plant. It consists of a number of air conditioning devices controlled and regulated by Climatix controllers. A Climatix AWM communication module is connected to every controller:



PC	PC with web browser	POL6XX	Climatix controller
AHU	Air conditioning devices	POL909	Climatix Advanced Web Module

Operational functions

If the SCADA application is configured, then the menus and operating functions shown above are available. These are:

Menu	General function
Plant viewer	Monitor and operate data points via plant images.
Alarm viewer	Table of all alarms with timestamp, value and status information.
Trend viewer	Log and graphical presentation of data point values.
Calendar	Calendar for creating timer schedules in conjunction with the "Time Schedule" menu
Time schedule	Creation of timer schedules in conjunction with the "Calendar" menu

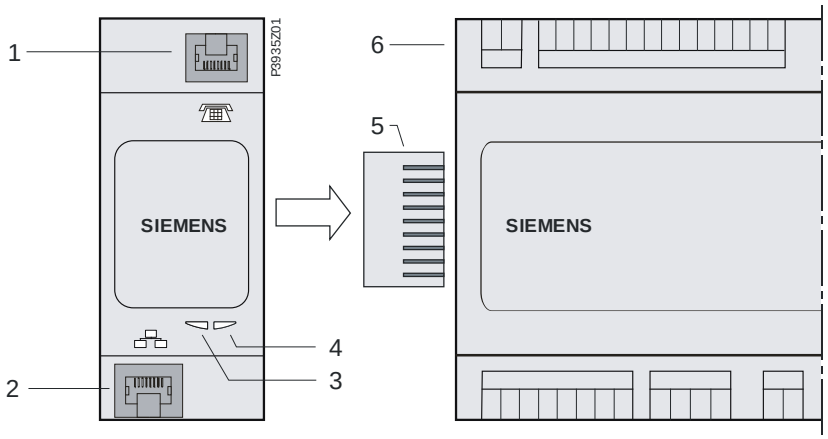
Generic tree view

As soon as a POL909 Advanced Web Module is loaded with a basic package available on the Siemens web and connected to a Climatix POL6xx controller, all data points can be accessed without engineering in a generically produced tree view. The data points can be read out and written, provided this is permitted by the SAPRO application program.

3.1.2 Mechanical design

Setup

The diagram shows Advanced Web Module POL909.00/XXX. It is connected to the Climatix controller by means of the internal communication expansion bus. This is achieved directly by means of a plug-in connection to the left side of the controller.



Elements and connections

The elements and connections shown in the diagram are as follows:

Pos.	Element / Connection
1	Modem interface RS232 to RJ45
2	10BaseT Ethernet interface to RJ45
3	"BSP" LED
4	"BUS" LED
5	Connector
6	Climatix controller

Status displays

Status displays "BSP" and "BUS" can be red, green or yellow.

"BSP" LED

This LED provides information about the status of the "Board Support Package" (BSP). The colour and frequency with which the LED flashes have the following meaning:

Colour	Flash frequency	Significance / Mode
Red / Yellow	1 s "on" / 1 s "off"	Upgrade mode
Green	Continuously "on"	BSP running and communication in progress with the controller.
Yellow	Continuously "on"	BSP running but no communication in progress with the controller.
Red	Flashing at 2 Hz	BSP error (software error)
Red	Continuously "on"	Hardware fault

"BUS" LED

This LED shows the status of external communication with the bus, not communication with the controller. The colour and frequency with which the LED flashes have the following meaning:

Colour	Flash frequency	Significance / Mode
Green	Continuously "on"	Communication is active
Red	Continuously "on"	Communication interrupted

When both LEDs are dark, then the power supply is outside the permissible range.

3.2 Climatix web visualization

3.2.1 Start page and main menus

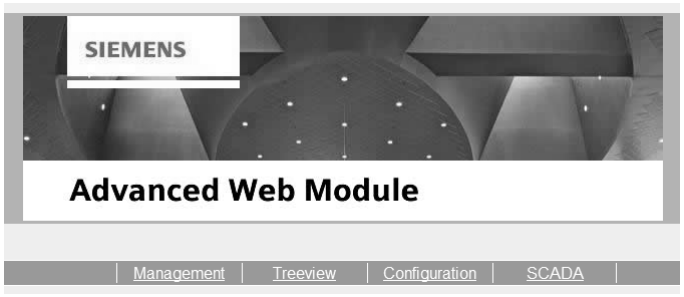
Introduction

Chapter 3 deals with the following topics:

- Start page and main menus
- Putting the AWM into operation
- The "Treeview" menu
- Determining the IP address of the AWM

Start page

The picture shows the **start page** of the Climatix web visualization via Advanced Web Module. This contains the menu bar at the bottom with the links to the main menus:



P3935O01

Management | **Tree view** | **Configuration** | **SCADA**

Menus / contents

The main menus and their contents are as follows:

Menu name	Contents	Section
Management	Set up and manage AWM: network, communication, user profiles, diagnosis, SCADA application.	3.3
Configuration	Leads to the SCADA configuration menu. Link only becomes active after SCADA has been installed.	3.4
SCADA	User interface for operating and monitoring the plant: alarms, graphical operation, timer schedule, trend, etc. Link only becomes active after SCADA has been installed.	3.5

To ensure that the start page of the Climatix web visualization opens, the AWM must first be put into operation; see next section.

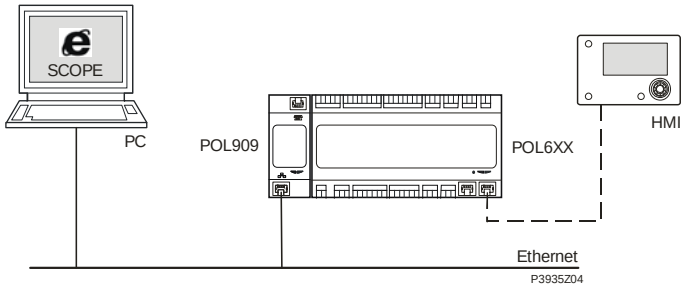
3.2.2 Putting the AWM into operation

Contents

There are two steps involved when putting the AWM into operation:
- Install the AWM
- Initiate the connection

Devices

The devices involved are:



PC	PC with web browser and SCOPE	HMI	POL... operating device
POL909	Advanced Web Module	POL6XX	Climatix controller

Starting point

The AWM is loaded with the current Board Support Package (BSP) ex works. This can be used to carry out the first commissioning operation. Any possible update that may be required can be carried out immediately after commissioning; see section 3.2.3 "Determining the IP address of the AWM".

Install the AWM

To install the AWM, proceed as follows:

Step	Action
1	Controller **OFF**
2	Use a connector to attach the AWM module to the controller.
3	Use an Ethernet cable to connect the AWM module and PC to the Ethernet.
4	Controller **ON**: → The module starts/ initialization takes place. → As soon as the "BSP" and "BUS" LEDs on the AWM light up green, communication with the controller and with the Ethernet is active once again.

Initiate the connection

To initiate the connection to the AWM, proceed as follows:

Step	Action
1	Start the browser and enter the **default name** of the AWM in the address line, e.g.: **http://POL909_FF32F9**
2	Confirm your entry with **Enter**: → The **start page** of the AWM will open → The **Management** and **Tree view** menus are visible

Default name of the AWM

The default name of the AWM always has the following format:
POL909_xxxxxx
Here xxxxxx stands for the last 6 hexadecimal characters of the MAC address. The MAC address can be found on the sticker on the left side of the AWM.

If the connection is not established by means of the default name or for subsequent, direct access to the AWM files by means of the FTP client, then the **IP address** of the AWM is to be determined. This can be achieved with SCOPE or HMI, see section 3.2.3 "Determining the IP address of the AWM".

3.2.3 Determining the IP address of the AWM

Purpose

The IP address must be known in both cases:

- If the connection cannot be established using the default name.
- For direct access to AWM files with an FTP client.

Procedure with the HMI

The individual steps for reading the IP address of the AWM are:

Step	Action
1	Connect the **HMI** to the controller.
2	Wait for the data to load. → Note the messages / status bar on the HMI display.
3	Display: **Start page** (restricted) → go to **Password enter** **Start page** ▸ Password enter ▸
4	Enter the password (PW:6006) **Enter Password** ▸ Entry ** ▸
5	Display: **Main index** → go to **System overview** **Main index** ▸ Unit1 ▸ GlobalFnct ▸ Alarms ▸ Integrations ▸ System overview ▸
6	Display: **System overview** → go to **Communication** **System overview** ▸ 27. 3.2004 20:52:57 ▸ Language selection ▸ Application info ▸ Save / restore ▸ Communication ▸
7	Display: **Communications** → go to **Comm module overview** **Communications** ▸ Comm module overview ▸
8	Display: **Comm module overview** → go to **1–AWM** **Comm module overview** ▸ 1-LON OK ▸ 1-BACnetIP OK ▸ 1-BACnetMSTP OK ▸ 1-Modbus OK ▸ 1-AWM OK ▸
9	Display: **Web module** → Read IP address, in screenshot, e.g. **139.16.76.179** **Web module** ▸ State OK Comm failure Passive DHCP Active WINS name - POL909_FF32F9 IP 139.16.76.179 Mask 255.255.252.0 Gateway 139.16.79.254

3.3 Set up and manage AWM

3.3.1 Overview

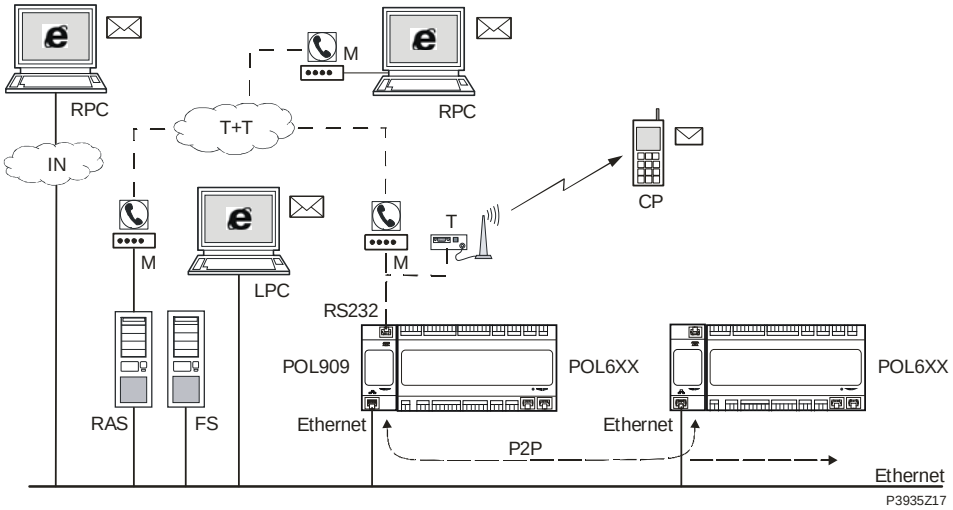
Introduction

This section deals with the setting up and management of the AWM. It mainly covers:

- How to configure communication channels
- How to specify communication media
- How to manage users
- How to perform a diagnosis
- How to install a SCADA application

Participating communication channels

The diagram below contains an overview of the communication channels involved, with the devices and services:



LPC	Local operating station	RPC	Remote operating station
POL909	Advanced Web Module	POL6XX	Climatix controller
IN	Intranet/Internet (Web)	T+T	Telephone network
M	Dial-up modem	T	GSM modem or terminal
RAS	Remote Access Server	FS	File Server

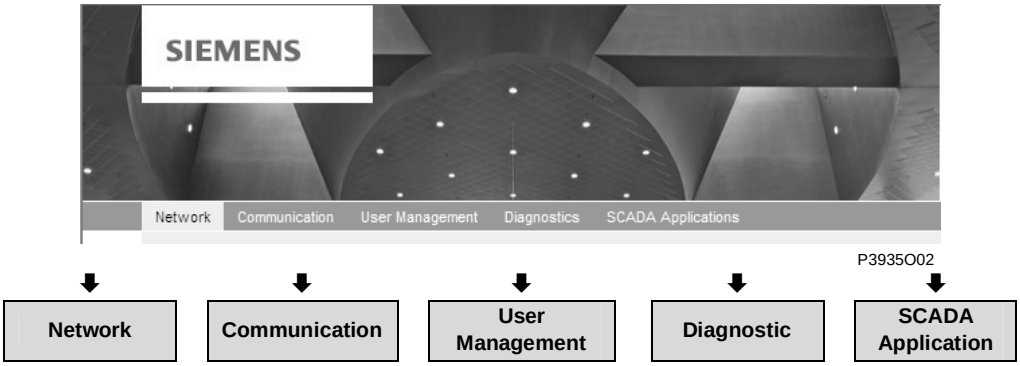
Topics covered in this section

Topic	Section
The "Management" menu	4.2
Layout of the menus and input pages	4.3
Making network settings	4.4
Configuring the modem	4.5
Defining dial-up lines	4.6
Peer-to-peer settings	4.7
Configuring mail servers	4.8
E-mail settings	4.9
SMS settings	4.10
Managing users	4.11
Diagnostics – log files	4.12
Diagnostics – system status	4.13
Diagnostics – restarting the AWM	4.14
Installing a SCADA application	4.15

3.3.2 The "Management" menu

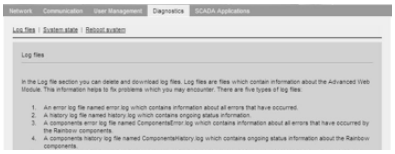
Purpose

The "Management" menu is called using the start page of the web visualization. It contains the tabs with the menus for configuring the AWM.



Tabs / menus

The tabs with their overview pages and menus are:

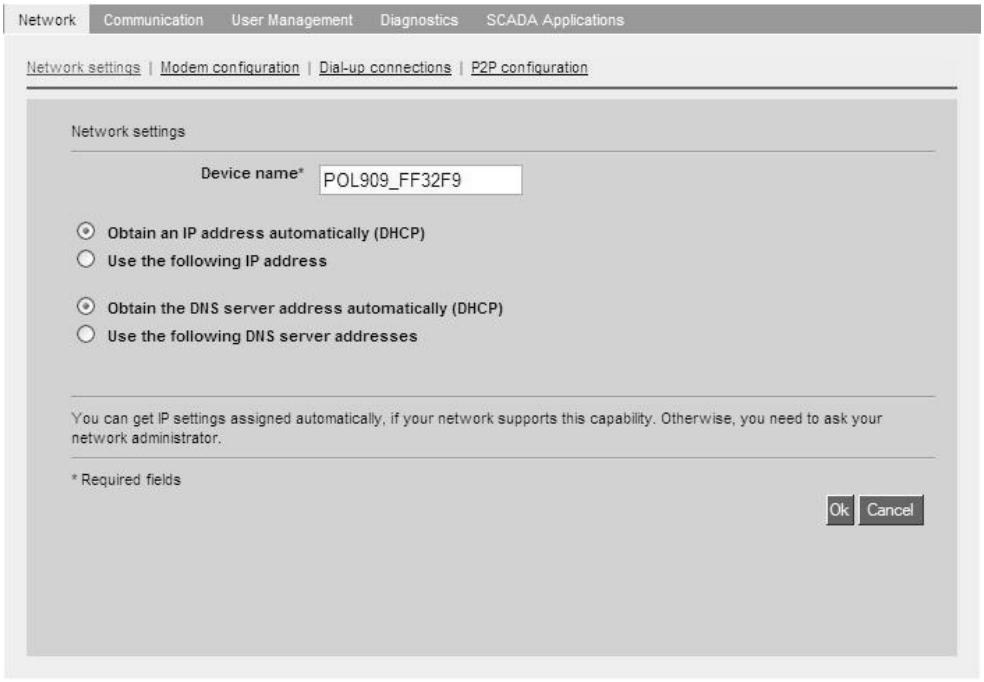
Tab	Overview page	Menu
Network		• Network settings • Modem configuration • Dial up connection • P2P configuration
Communication		• Mail server config • Email settings • SMS settings
User Management		• Set up user profiles
Diagnostic		• View log files • System state • Reboot system
SCADA Application		• Install SCADA • Neighbourhood system

The contents of the overview pages shown here are reproduced in text form in the sections below.

3.3.3 Layout of the menus and input pages

Example "Network settings"

Select a tab in the **Management** menu (e.g. **Network**) and then choose the required menu on the relevant **overview page** (e.g. **Network settings**):



P3935O03

Explanations

The menus and input pages mainly have the following layout:

Element	Description
Tab	e.g. **Network**
Menus	e.g. **Network settings**
Input pages	Text, dialog and option field for entry or selection.
Help texts	Example above: "You can get IP settings assigned …" These explanations are contained in the document text.
…*	Required inputs
Buttons	Example: **OK**: see below Example: **Cancel**: Back to overview page

OK button

Clicking **OK** opens the following dialog box:

P3935O29

Effects

Clicking one of the buttons has the following effect on all dialog windows of the same name:

Buttons	Effects
OK	A restart takes place. The entries made are subsequently effective.
Cancel	The inputs made are saved, but only become effective at the next restart.

3.3.4 Making network settings

Purpose

You can carry out the IP configuration of the AWM in the network in the **Network settings** menu, i.e.:
- Assign IP address
- Assign DNS server address

Prerequisites

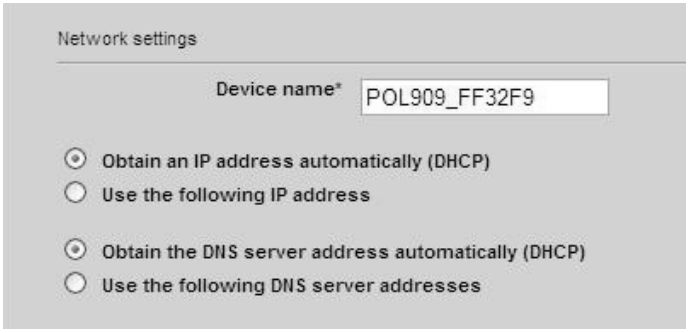
The AWM is installed and the connection is initiated, see section 3.2.2 "Putting the AWM into operation".

Two options

There are two options for assigning the addresses:
- Automatically via a DHCP server (if available and supported by the network).
- Manual entry

Automatic assignment

Automatic assignment is performed as described below:

Step	Action
1	Select the **Network settings** menu in the **Network** tab. → The **Network settings** input page opens:  P3935O04
2	Select the required options. The two automatic options were left unchanged in the screenshot above (default setting).
3	Complete the inputs by pressing **Ok** and confirm the "Network settings saved successfully" message in the subsequent **Message from webpage** dialog box with **Ok** or **Cancel**. See the paragraph on the "OK button" on the previous page.

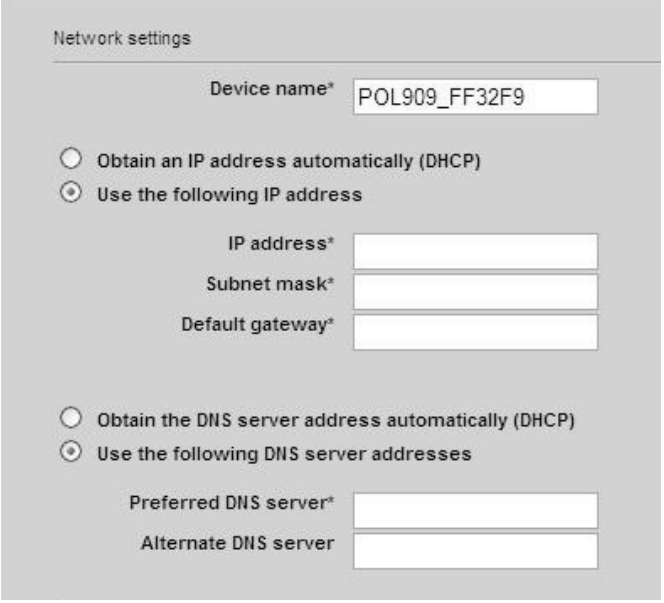
Explanations

Element	Description
Device name	Factory entry. Supplied by the AWM. This can be changed here, e.g. on a plant-specific basis.
Obtain an IP address automatically	Have the IP address assigned by the DHCP server.
Use the following IP address	Enter the IP address manually; see next page.
Obtain the DNS server address automatically	Have the DNS server address assigned by the DHCP server.
Use the following DNS server address	Enter the DNS server address manually; see next page.

Making network settings, *continued*

Manual assignment

IP and DNS server addresses are manually assigned as follows:

Step	Action
1	Select the **Network settings** menu in the **Network** tab and then choose the required options for manual assignment, i.e.: – Use the following IP address – Use the following DNS server address  P3935O05 The two manual assignments were selected in the example above.
2	Enter the required addresses in the text fields; see the explanations below.
3	Complete the inputs by pressing **OK** and confirm the "Network settings saved successfully" message in the subsequent **Message from webpage** dialog box with **OK** or **Cancel**.

Assignment of the IP address

Explanations of the entries in the text fields:

Text field	Description
IP address	Static IP address of the AWM
Subnet mask	Subnet mask to be used
Default gateway	Gateway to be used

STOP

Take care when defining and changing these settings. Ask your network administrator about the valid addresses.
If you make incorrect entries, you can no longer access the AWM via the network.

Assignment of the DNS server

Explanations of the entries in the text fields:

Text field	Description
Preferred DNS server	Address of the (preferred) DNS server
Alternate DNS server	Address of an alternative DNS server (optional) This is used if the preferred server is unavailable.

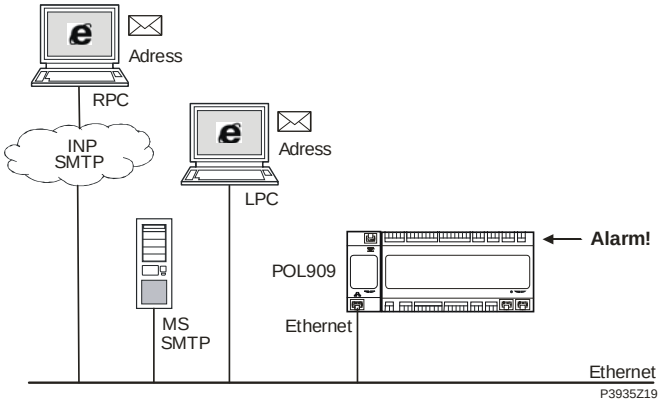
3.3.5 Configuring mail servers

Purpose

The settings for the mail server can be made on this page. These involve:
- Configuring the SMPT server
- Authenticating POP3 before SMTP (optional)

Participating elements

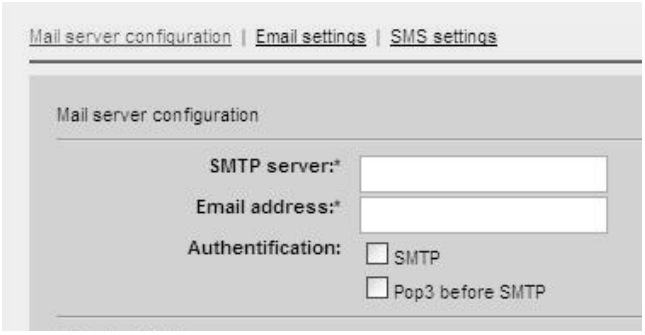
The elements involved in the configuration are:



INP	Internet Provider	MS	Mail Server
RPC	Remote PC	LPC	Local PC

Configuration SMTP server

To configure the SMTP server, proceed as follows:

Step	Action
1	Select the **Mail server configuration** menu in the **Communications** tab.  P3935O13
2	Make the entries in the text fields and select the relevant checkboxes.
3	Confirm your entries with **OK.**
4	Confirm the completion message in the popup window with **OK**.

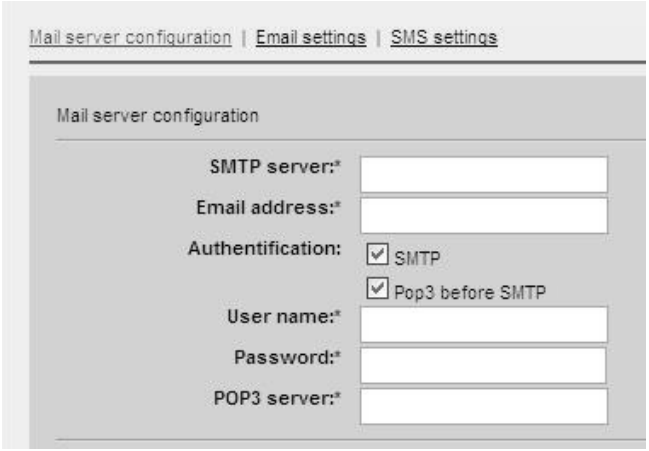
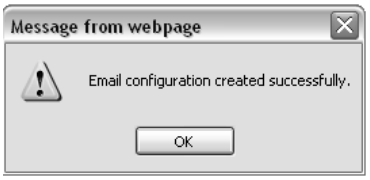
Explanations for the entries

Entry	Description
SMTP server	Server for outgoing mails from the e-mail sender (e.g. mail.gmx.net)
Email address	The sender's e-mail address (e.g. **AWM**Test@gmx.ch) This address must already exist!
Authentications	Select the required method. If **POP3 before SMTP** is selected, then open additional text fields, see next page.

Configuring mail servers, *continued*

Authenticating POP3

To authenticate POP3 before SMTP, proceed as follows:

Step	Action
1	Select the **Mail server configuration** menu in the **Communication** tab and then the **POP3 before SMTP** checkbox:  P3935O14
2	Make the entries in the additional text fields for “POP3 before SMTP”.
3	Confirm your entries with **OK.**
4	Confirm the completion message in the popup window with **OK**.  P3935O105

Explanations for the entries

Entry	Description
User name	Example: AWMTest@gmx.ch
Password	Personal password of the mail account
POP3 server	Name of the server Example: pop.gmx.net

3.3.6 E-mail settings

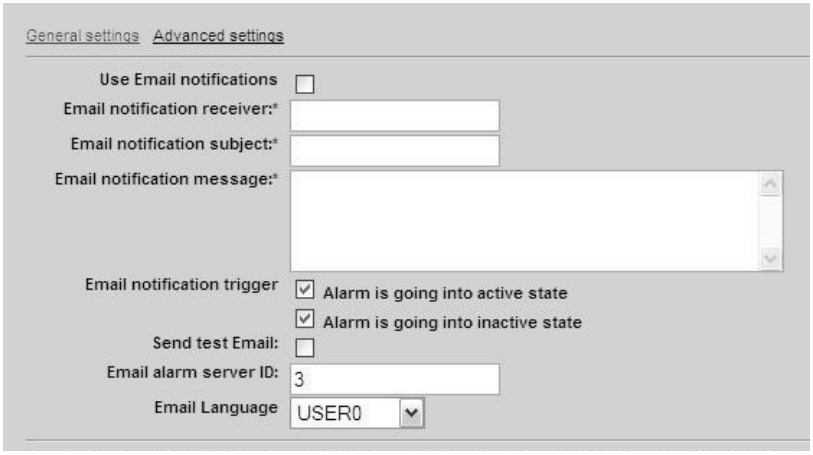
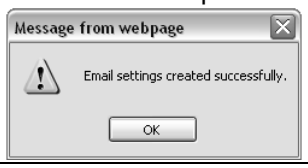
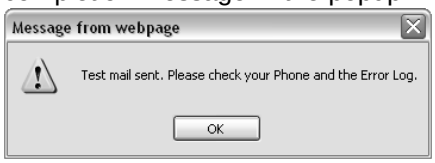
Purpose

This page is where the settings are made for sending e-mails via the AWM. These involve:

- General settings
- Advanced settings for multiple addresses

General settings

To enter the generally required settings, proceed as follows:

Step	Action
1	Select the **Email settings** menu and then **General settings** in the **Communication** tab:  P3935O15
2	Select the required checkboxes and complete the text fields.
3	Select the appropriate language for e-Mails in the dropdown list box.
4	Confirm your entries with **OK.**
5	Confirm the completion message in the popup window with **OK**. 
6	If the **Send test Email** checkbox has been selected, then confirm the completion message in the popup window with **OK**: 

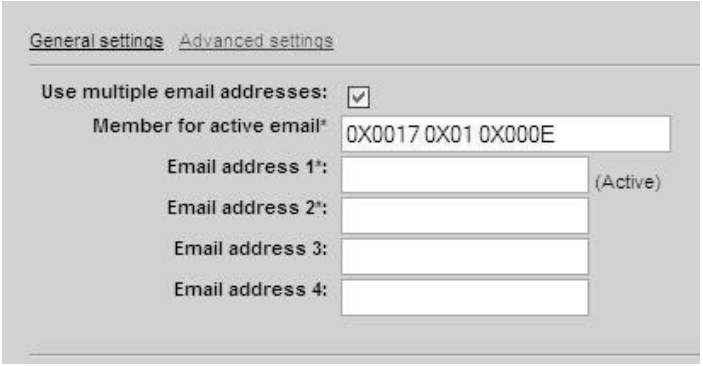
Explanations for the entries

Entry	Description
Use Email notifications	Activate/deactivate the e-mail function
Email notification receiver	Address of the e-mail recipient
Email notification subject	Subject line in the e-mail
Email notification message	Text output in the e-mail Entry **%s** required if alarm texts are also to be sent.
Email notification subject	Trigger if alarm is incoming or outgoing or both.
Send test Email	If this is selected, a test mail is sent when the page is confirmed.
SMS alarm server ID	Alarm server ID for e-mail (member 0x0003)
Email Language	Current language column (i.e. the language used for e-mails) from the language support file “ObjLang.csv".

E-mail settings, *continued*

Advanced settings

To enter the advanced settings for several addresses, proceed as follows:

Step	Action
1	Select the **Email settings** menu and then **Advanced settings** in the **Communication** tab:  P3935O16
2	Select the **Use multiple email addresses** checkbox if necessary.
3	In the text fields enter the member and the e-mail addresses.
4	Confirm your entries with **OK.**
5	Confirm the completion message in the popup window with **OK**.

Explanations for the entries

Entry	Description
Use multiple email addresses	This option must be selected when multiple target addresses are used.
Member for active email	The value of this member is used to select the appropriate e-mail address.
Email address 1 und 2	The "Use multiple email addresses" option requires at least two e-mail addresses to be entered.
Email address 3 und 4	Enter additional e-mail addresses.

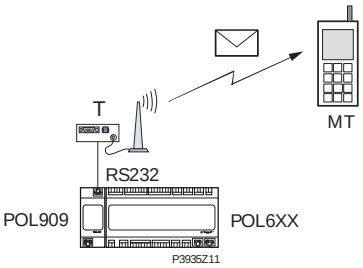
To enable alarm messages (e-mail notification messages) to be sent by the Climatix controller, the "ObjLang.csv" language support file for the project must be expanded to include the relevant information.

These messages are sent when the entry **%s** has been made in the general settings under "Email notification message".

3.3.7 SMS settings

Purpose

This page is where the settings are made for sending SMS messages via the AWM.

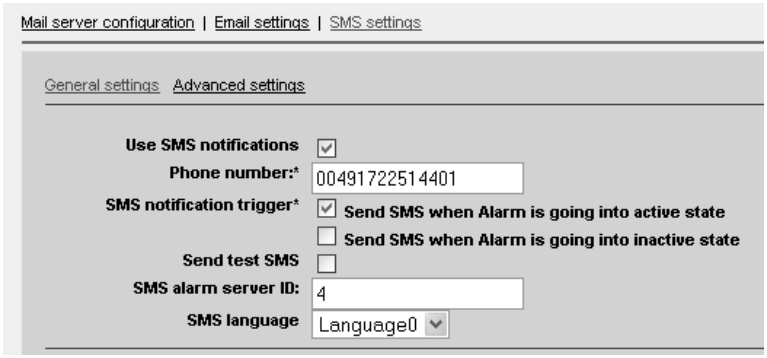
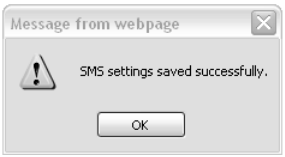


The settings include:

- General settings
- Advanced settings

General settings

To make general settings, proceed as follows:

Step	Action
1	Select the **SMS settings** menu and then **General settings** in the **Communication** tab: 
2	Select the required checkboxes and complete the text fields.
3	Select the language in the dropdown list box.
4	Confirm your entries with **OK.**
5	Confirm the completion message in the popup window with **OK**. 

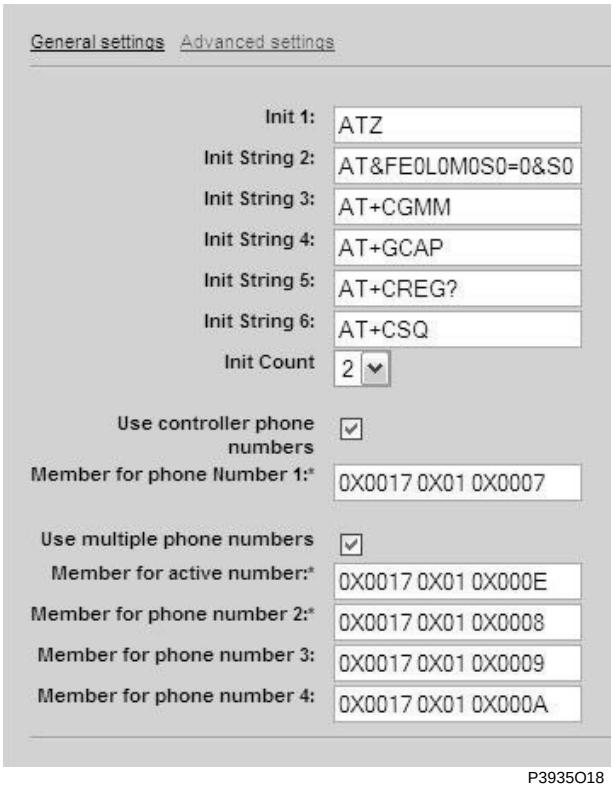
Explanations

Entry	Description
Use SMS notification	Activates the functions for sending SMS messages.
Phone number	Recipient's telephone number.
SMS notification trigger	Choose whether SMS messages are to be sent when an alarm switches to active or passive status or in both cases.
Send test SMS	AWM sends a test SMS to the recipient.
SMS alarm server ID	Alarm server ID (0…7). Attention: Only one alarm server is allowed to log on to an ID. In the example above the SMS alarm server with ID4 would log on. Check also the history log and error log respectively whether the log on has taken place and whether the ID was not taken by another alarm server (SCOPE, email etc.)
SMS language	Selection of language0 or language1.

SMS settings, *continued*

Advanced settings

To make advanced settings, proceed as follows:

Step	Action
1	Select the **SMS settings** menu and then **Advanced settings** in the **Communication** tab:  P3935O18
2	Enter the details for initializing the modem (GSM on AWM).
3	Enter the details for members and telephone numbers.
4	Confirm your entries with **OK.**

Explanations

Entry	Description
Init 1	Consult the manual for the modem used.
Init String 1 … Init String 6	
Init Count	
Use controller phone numbers	
Member for phone number 1	
Use multiple phone numbers	
Member for active number	
Member for phone number 1 … 4	

To enable SMS messages to be sent by the Climatix controller, the "ObjLang.csv" language support file for the project must be expanded to include the relevant information.

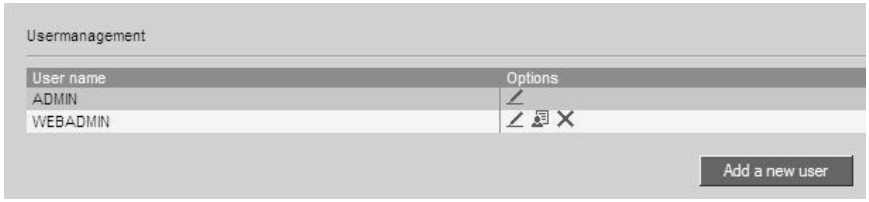
3.3.8 Managing users

Overview

User management involves the following activities
- Create a list of users
- Edit the user name and password
- Define the user group to which the user belongs

List of users

The list of users is created or changed as follows:

Step	Action
1	 P3935O19
2	Create new users and edit existing lines; see the explanations below.
3	Confirm your entries with **OK.**

Explanations

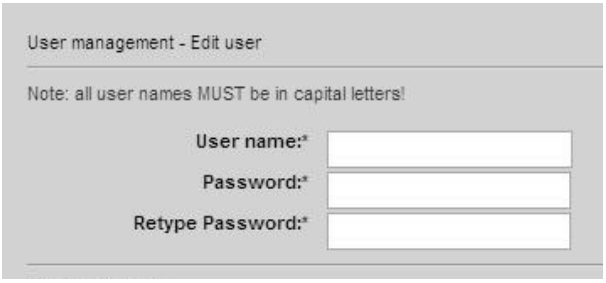
Element	Description
User name column	List of all users of the web visualization. Users ADMIN and WEBADMIN are included by default. ADMIN is authorized to perform all operations. It cannot be deleted.
Options column	Tools for creating and changing entries.
(Edit user)	Opens the page for the relevant user to enable the name and password to be edited.
(Edit group membership)	Opens the page for the relevant user to enable the group membership to be edited. This icon appears as soon as a new user has been added.
(Delete user)	Deletes the user entry.
Add a new user	Opens an empty page to enter a user name and password.

Managing users, *continued*

Name and password

These text fields are used to define new users and to change existing entries.

Procedure

Step	Action
1	In the **User Management** tab/ list of users: – click the Add a new user button – or select an existing line and click Edit → the **Edit user** input page opens:  P3935O20
2	Complete or change the text fields.
3	Confirm your entries with **OK.**

Explanations

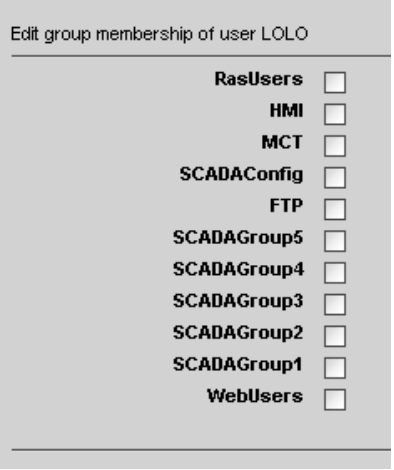
Entry	Description
User name	User names.
Password	Passwords must contain at least 3 characters. Case sensitive. Otherwise there are no other rules.
Retype password	Repeat the password.

Managing users, *continued*

Group membership

This group field can be used to assign the defined users membership of different groups with their respective access rights.

Procedure

Step	Action
1	Select an existing line in the **User Management** / List of Users tab and click there on the **Edit group membership** icon → the input page opens (shown in this case for user "LOLO"):
	 P3935O21
2	Select the required checkboxes.
3	Confirm your entries with **OK.**

STOP The "WebUsers" checkbox must be selected so that it is possible to access the AWM via WEB.

Explanations

Option	User has access rights …
WebUsers	… to the Web (World Wide Web)
SCADAGroup1 … 5	… to the selected SCADA groups, see section 3.4.5 "Assigning access rights".
FTP	… to the data as per data structure, via FTP client.
SCADAConfig	… to the "SCADA Configuration" menu
MCT	… to the "Management" menu on the start page
RasUsers	… to the "Management" > "Network" menu
HMI	… to the HMI@WEB

3.4 Configuring SCADA

3.4.1 Calling up the configuration menu

Call up the configuration menu

The procedure for calling up the Configuration menu is as follows:

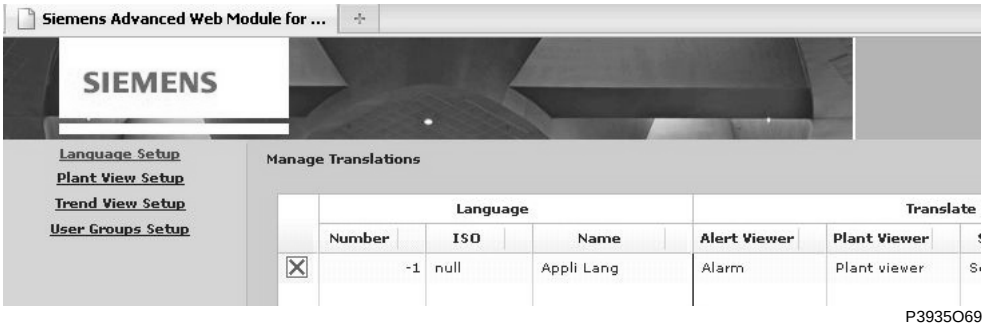
Step	Action
1	Start the web visualization of the AWM: **http://yourAWMIp/** → The **start page** opens *Note:* If the menu bar only shows the two menus "Management" and "Tree view" despite the configuration of the AWM in accordance with chapter 3.3, press [**Ctlr**] + [**F5**].
2	Select the **Configuration** menu and then enter the access code (if necessary): → The SCADA configuration menu opens up. → The available data points are read from the AWM module.

Error messages

The following two error messages can appear in step 2:
– "Critical error: Filter file not loaded"
– "Config inconsistency found"
For explanations see the next page.

Configuration menu

The screenshot shows part of the Configuration menu with the four menu items:



P3935O69

Menu items

The menu items lead to submenus for the following tasks:

Menu item	Submenu/ function	Section
Language Setup	Define languages and translate associated menu texts. Add additional navigation links.	5.4
Plant View Setup	Configure the plant views: Select and insert data points. Manage plant views.	5.5
Trend View Setup	Configure trend views for archive and trend data.	5.6
User Group Setup	Assign the access authorizations to the 5 available SCADA user groups.	5.7

Buttons

These two buttons are available for all submenus, bottom left:

Buttons	Function
Save Changes to Controller	Saves the configured SCADA application. This updates the "scadacnf.xml" XML configuration file in the AWM.
Import OEM Settings	For how to upload the "MemLang.csv" file see the next page.

Calling up the configuration menu, *continued*

Error message

The following error message may appear when calling and opening the Configuration menu:

"Config inconsistency found"

Config inconsistency found

Certain data points required by the current configuration are not available in the AWM. The relevant members are listed in the error message:

P3935O55

Remedy:
Adjust/correct the entries in the "ObjLang_AWM.csv" mapping file.

3.4.2 Defining languages and links

Define languages

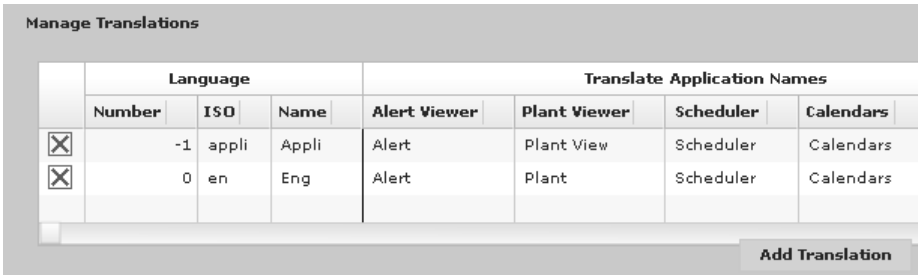
The languages to be supported by the SCADA application are defined in this menu. Proceed as follows:

Step	Action
1	Select the **Language Setup** menu on the **SCADA configuration page**: → The **Manage Translations input page** opens up
2	In the **Language** area, specify the languages to be supported by the SCADA application (1 entry each according to the "ObjLang.csv" file)
3	In the **Translate Application Names** and **Translate Unit Systems** areas, enter the translations for the printouts listed in the table columns for each language (these will then appear in the web menus).

STOP The language entry with the value "-1" (appli) must always be included.

"Manage Translations" table

The screenshot shows part of the table:



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Controls

Element	Effect
☒	Delete the relevant language.
Add Translation	Add a language for translation.

Column entries

All areas and columns in the table are explained below:

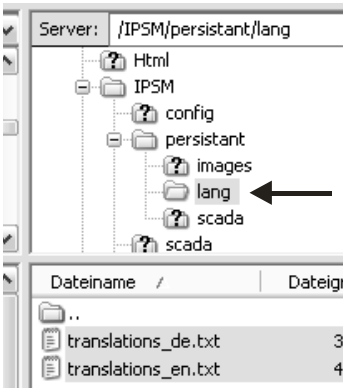
Area	Column	Description
Language	Number (Drop D list)	The ID of the language in the "ObjLang.csv" file of SCOPE.
	ISO	The ISO 639-1 code for the language, e.g. "en", "de", "fr", etc. This is used to identify the SCADA language file with the translations for the messages and descriptions in the SCADA application.
	Name	The name of the language as it is displayed in the drop-down list box for selecting the language in the SCADA user menu (section 3.5.1 "Overview").
Translate Application Names	Alert Viewer	Translation of "Alert Viewer" *)
	Plant Viewer	Translation of "Plant Viewer" *)
	Scheduler	Translation of "Scheduler" *)
	Calendars	Translation of "Calendars" *)
	Trend Viewer	Translation of "Trend Viewer" *)
Translate Unit Systems	Metric	Translation of "Metric" *)
	Imperial	Translation of "Imperial" *)

*) Translation in the relevant language

Defining languages and links, *continued*

Produce translations

Translations of messages and descriptions in the SCADA applications are implemented by means of translation files.
These files are to be found in the folder structure of the AWM under "\IPSM\persistant\lang" and are to be stored there:



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Translation files

The translation files must be saved according to the following schema:
`translations_<ISO>.txt`
In this case <ISO> is the language code, defined in the "Language" column of the "Manage Translations" table. Valid file names are (e.g.:
`translations_de.txt` or `translations_en.txt`
Both of these files are contained in the SCADA.cab basic package, see the figure above.

Format

The translations within the file are in "key=value" format:
– The "value" part is to be replaced with the word or sentence in the target language.
– Lines beginning with "#" are dealt with as comments and are not evaluated by the application.

Example

The following example shows compiled extracts from the translation file *translations_en.txt*:

```
#
general.ok=OK
general.cancel=Cancel
#
weekDay.sunday=Sunday
weekDay.monday=Monday
#
# # used by container
container.live=Live
container.archive=Archive
#
calendar.title=Calendar
calendar.help=<p>Special days can be defined here, e.g. vacation days which are handled separately in the timer schedule.</p><p>Up to 10 rules can be defined.</p>
ruleEdit.Title=Process rules
#
plant.title=Plant
plant.diagram=Diagram
plant.dataTable=Data table
plant.tableName=Name
plant.noRightsToWrite=Access refused
plant.help=<p>Plant image and data point lists.</p><p></p><p></p><p>.</p><p>.</p>
```

Explanations

#	Also used as a separator		
<p>	HTML Tag "Paragraph" start	<p>	HTML Tag "Paragraph" end

Defining languages and links, *continued*

Add navigation links

The additional navigation links lead to frequently used, helpful pages.
These can be as follows:
– Local pages in the Advanced Web Module
– External pages in other AWMs or in the Intranet

Procedure

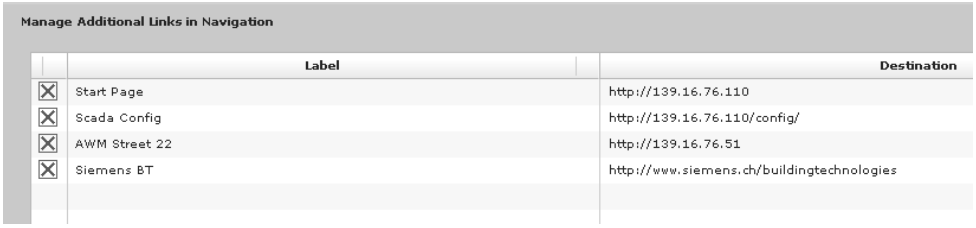
The procedure for adding navigation links is as follows:

Step	Action
1	Go to the **Manage Additional Links in Navigation** table on the **Language Setup** page.
2	Add additional navigation links for the languages defined in the "Manage Translations" table.

These links are displayed in the SCADA application when the user selects the relevant language in the dropdown list box.

"Manage Additional Links …" table

The screenshot shows part of the table with a few examples:



P3935O39

Controls

Element / location	Effect
☒ (button on the left before every line)	Delete hyperlink
Add Hyperlink to Navigation (button bottom centre of table)	Add hyperlink

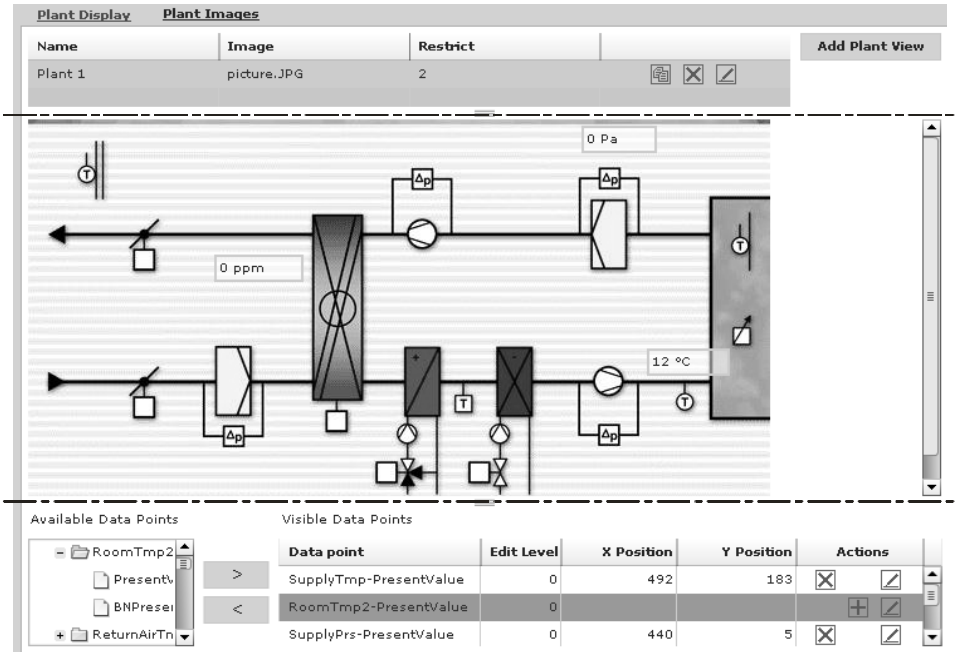
Column entries

Column	Description
Label	Text is displayed as a tab name in the navigation bar of the SCADA application. Example: Start page
Destination	Hyperlink for the page to be opened when the relevant tab is selected. Example: http://139.16.76.110

3.4.3 Configuring the plant view

"Plant Display" window

The figure shows the work window for configuring the system view:
SCADA configuration page > Plant View Setup > Plant Display



Three areas

The window is divided into three horizontal areas:

Location	Area	Purpose
Top	System table	Create a table for the systems to be operated.
Middle	Diagram editor	Select associated plant images and insert the data points to be displayed.
Bottom	Data point editor	Select the data points to be displayed from the list of available points and organize them accordingly.

Link "Plant Images"

The "Plant Images" link in the "Plant View Setup" menu takes you to the work window for providing the plant images (background images for the plant view).

Configuration work

The work involved in configuring the plant view is as follows:

Work	Designation
1	Create plant table
2	Provide plant images.
3	Select data points
4	Add data points to plant image

The various areas and work activities are explained below.

Configuring the plant view, *continued*

Create plant table

The plant table lists the plants to be operated by means of images. The steps for creating the table are as follows:

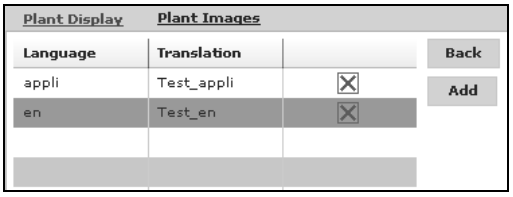
Step	Action
1	Select the **Plant View Setup** menu on the SCADA configuration page and select the **Plant Display** page there.
2	Define the plants to be displayed in the **plant table**.

Plant table

The screenshot shows part of the plant table (example):

P3935O58

Controls

Element	Effect
Copy 	Creates an identical copy of the plant.
Delete 	Deletes the plant defined in this line.
Edit 	Opens a dialog window where the names can be translated into the languages defined in the "Language setup" menu in the "Manage Translations" table:  P3935O71 **Add**: The translations for each plant view can be selected for the defined languages from a dropdown list; see User menus section 3.5.3 **Back**: Back to plant view
Add Plant View	Button, top right in the plant table: creates a new line.

Column entries

Column	Description
Name	Default name for the plant view used. This is used if there is no translation available.
Image	The name of the image to be used as the background for the dynamic plant image (with data points). For how to manage the images, see “Providing plant images” below. In the case of plans without a background image, only a data table is displayed.
Restrict	Numerical value or a list of numerical values, separated by commas. These define whether the restriction member is parameterized and whether this plant view is to be displayed. If there is no value defined, then this plant view is always visible. The value must then be blank, not ‘zero'.

Configuring the plant view, *continued*

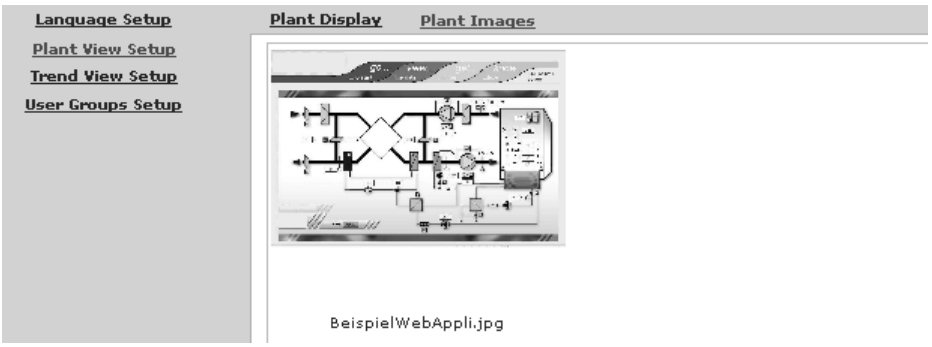
Provide plant images

The plant images are provided on the **Plant Images** page.
Siemens provides a number of typical plant images with the SCADA package. These can be uploaded for the "Plant Views" and can have data point elements added.

Display existing images

To display the existing settings, proceed as follows:

Step	Action
1	Select the **Plant View Setup** menu on the **SCADA configuration page** and select the **Plant Images** page there. → The images saved in the AWM are displayed as thumbnails and their name is shown, see "BeispielWebAppli.jpg" :



P3935O68

Add images

The procedure for adding images you have created yourself is as follows:

Step	Action
1	Click the **Upload Image** button at the bottom of the **Plant Images** page: → The file selection for the local file system opens.
2	Find and select the image created and click the **Open** button: → After a few seconds the image will appear as a thumbnail in the **Plant Images** selection window. → The name of the image will be listed in the plant table in the **Image** column. → The original image will be saved in the AWM under **\IPSM\Persistant\Images**.

Delete images

To delete images in the **Plant Images** selection window, proceed as follows:

Step	Action
1	Select the image to be deleted with the mouse and click on the **Delete Selected Image** button at the bottom of the page.
2	Confirm the dialog “Do you really want to delete the image?” with yes: → The image will be removed from the selection window and deleted in the AWM.

Create your own images

Your own project- and plan-specific images can be created in any graphical program. The requirements for the images are as follows:
– Permissible formats: JPEG, PNG and GIF
– No size limits, but:
The images should be as small as possible (for fast display in the web).
This applies to modem transmissions in particular. A 300 kB image would be very bad, for example

Configuring the plant view, *continued*

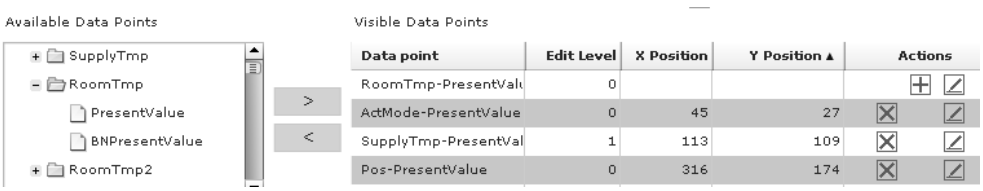
Select data points

The steps for selecting and organizing the data points are as follows:

Step	Action
1	Mark the plants to be edited in the **plant table**.
2	Move down to the **Data Point Editor** and assemble the data points to be displayed.

Data point editor

The screenshot shows an extract from the data point editor with the two areas "Available Data Points" and "Visible Data Points":



P3935O59

Areas

Area	Contents
Available Data Points	Contains all data points available for display in hierarchical order (corresponding to the members of "ObjLang_AWM.csv"). Folders symbolize objects, while documents symbolize data points (object members). Folders preceded by a "+" can be opened with a mouse click.
Visible Data Points	Contains all data points that are displayed in the selected plant. *Note:* The order of the data points in the table can be changed with Drag and Drop

The elements in the "Visible Data Points" are only shown in table form in the plant view by default.

Controls

Element	Effect
>	Adds data points from the **Available Data Points** to the **Visible Data Points** table (copy). Alternatively: Move with Drag and Drop.
<	Removes a highlighted data point from the **Visible Data Points** table.
	"Add to Diagram": Adds a data point (value field) to the plant image.
	"Delete": Deletes a data point (value field + any assigned status element) from the plant image – but not from the "Visible Data Points" table.
	"Edit": Assigns a status element to a data point in the plant image to show its dynamic status, e.g. "In Alarm", "Fault", "Out of Service". Only possible if the controller provides the relevant information.

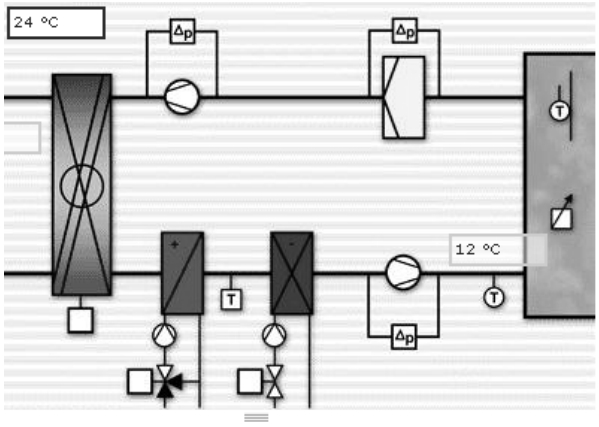
Columns in Visible Data Points

Column	Description
Data Point	Data points displayed in the plant image.
Edit Level	Access right (according to section 3.4.5) to enable the data point to be edited by the users in the list of users (section 3.3.8). *Note:* Values of data points can only be edited if this is permitted by the relevant object (access right "Manual/Auto" for the relevant data point set to "Manual" see SAPRO).
X Position	Enter the X position of the marked data point in the plant image.
Y Position	Enter the Y position of the marked data point in the plant image.

Configuring the plant view, *continued*

Add data points to plant image

Data points and the associated status elements are added in the Diagram Editor in combination with the Data Point Editor:



Visible Data Points

Data point	Edit Level	X Position	Y Position	Actions
SupplyTmp-PresentValue	0	492	183	
RoomTmp2-PresentValue	0			
SupplyPrs-PresentValue	0	440	5	

P3935O72

Procedure

The steps for selecting the plant image and for adding the data point elements are as follows:

Step	Action
1	In the navigation line at the top of the screen click the **Plant Display** menu item and then select the required image (name) in the **Image** dropdown list box in the **plant table**.
2	Place the **data points** in the plant image. – First click "+" in the required data point in the data point editor (e.g. *RoomTmp2-PresentValue*): → A value field (e.g. 24°C) appears in the top left hand corner of the plant image. – Use the mouse to drag the value field to the relevant plant element (e.g. to room temperature gauge "T" in the image above) *Alternatively:* Enter the position of the "value field" in the plant image by specifying the x/y position in the data point editor.
3	Assign a **status element** to the data points. – First click the "Edit" button for the required data point in the data point editor (e.g. *SupplyTmp-PresentVal*): → A **Check State of:** dialog box appears with the available monitoring states, e.g. "In Alarm", "Fault", "Out of Service": ☑ In Alarm ☑ Out Of Service ☑ Fault P3935O63 – Select the states to be monitored and conclude the selection with the **Close** button.
4	Save your work with **Save Changes to Controller**.

Icons for the monitoring states

The monitoring states are displayed as follows in the value field

Icon	Meaning	Icon	Meaning	Icon	Meaning
	Alarm		High Limit		Low Limit
	Error		Multistate error		OOS

3.4.4 Configuring the trend view

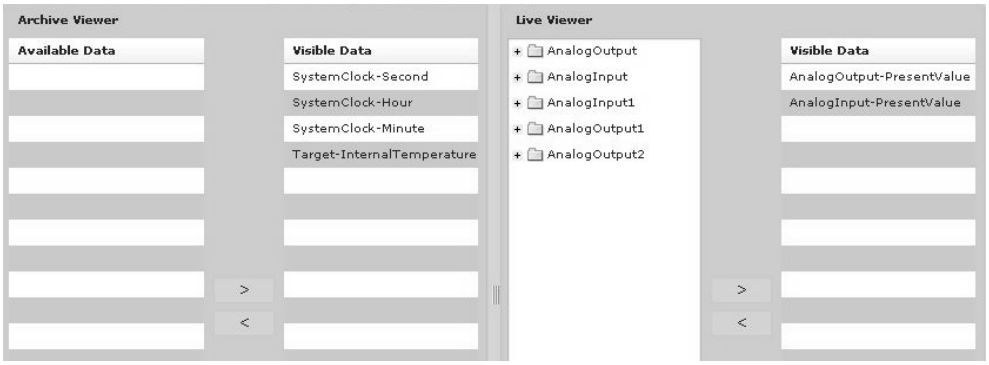
Compiling data points

Procedure for compiling data points … :

Step	Action
1	Select the **Trend View Setup** menu on the **SCADA configuration page**:
2	Select the data points that are to be available in the Trend View in the **Archive Viewer** and **Trend Viewer**.

Work window

The screenshot below shows an example of the work window:



P3935O61

The work window consists of the “Archive viewer” and the "Live viewer".

Archive viewer

This window is used to select the elements that are to be available in the "Archive Viewer" of the SCADA application. The window consists of two lists:

List	Contents
Available Data (left)	This list indicates all the available data points that can be displayed. The can be added in the "Visible Data" list. Either using the ">" button or using the mouse drag and drop technique. To ensure that the data points (members) appear, the archive must first be parameterized with SCOPE; see next page.
Visible Data (right)	This list contains the data to be displayed in the Archive Viewer. Elements can be removed from the list. They can be moved to the "Available Data" list using the "<" button or the mouse drag and drop technique. The order of the elements can be changed using drop and drop.

Live Viewer

This window is used to configure the elements that are to be available in the "Live Viewer" of the SCADA application. The window consists of two parts:

Area	Contents
File Manager (left)	Hierarchical list of all data points that can be displayed. Folders preceded by a "+" can be opened with a mouse click. Object members (identified with a document symbol) can be added to the "Visible Data" list. Either using the ">" button or using the mouse drag and drop technique.
Visible Data (right)	This list contains the data to be displayed. Elements can be removed from the list. They can be moved to the "Available Data" list using the "<" button or the mouse drag and drop technique. The order of the elements can be changed using drop and drop.

Configuring the trend view, *continued*

Show the archive for the Trend Viewer

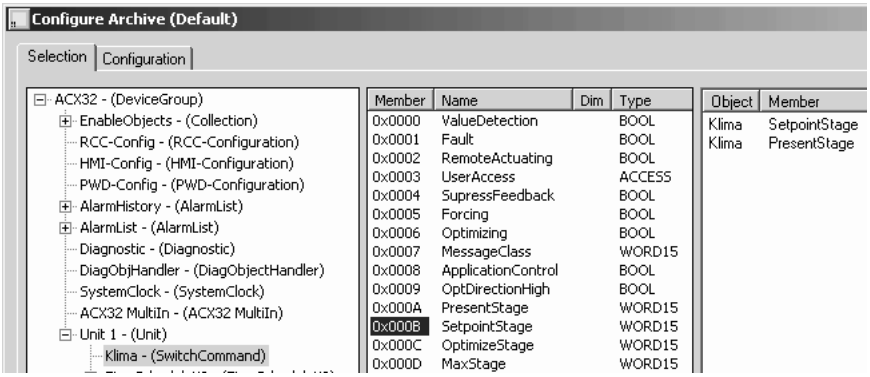
Objects (data points) can be set for the "Live Viewer" and for the "Archive Viewer" on the SCADA configuration page under **Trend View Setup**. These objects are displayed in the "Trend View" of the web visualization.

Prerequisite

Archives must already exist in the controller in order to display objects in the “Archive Viewer”, otherwise the “Available Data” table is empty.

Save archives

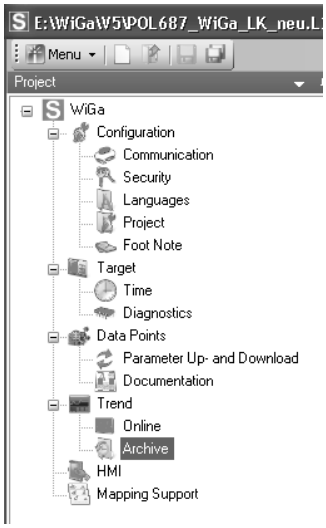
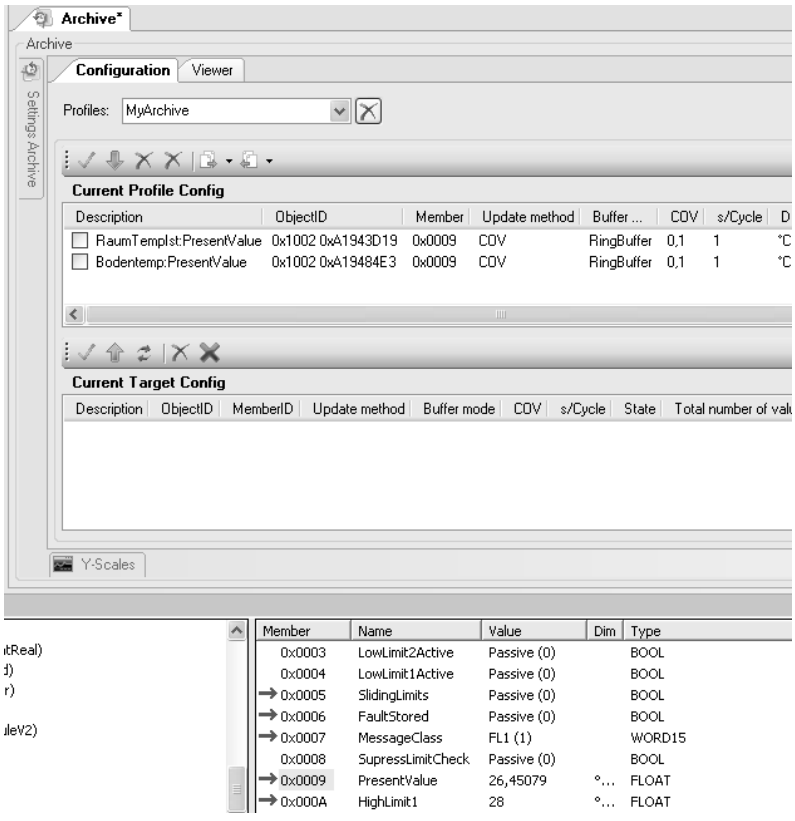
Archives can be saved in the controller as follows using SCOPE:

Step	Action
1	Open **SCOPE**.
2	Open the relevant **project** and establish a **connection** to the controller.
3	Open the configuration for archives. To do this, select the  symbol for "Config Archive…" or go to **Tools** > **Archive** > **Config Archive…** → All objects in the tree view can be seen in the left column of the **Selection** tab:  P3935O70
4	Select the required **data points** there. → The column in the middle shows all members corresponding to the data point.
5	Double-click on the required **member**: → The selected member appears in the right hand column.
6	Select the **Configuration** tab: → The list box with the selected members is displayed.
7	Select the type of update for each member in the **Update** column: **COV** or **Cycle.** If **Cycle**: Enter the cycle times in the **Cycle/s** column (e.g. 1/s).
8	Close the **Configure Archive** dialog box with **OK**: → The settings are transferred and the archiving process in the controller is started.
9	Select the **Trend View Setup** menu again on the **SCADA configuration page**: → The members (data points) previously selected in SCOPE are now also displayed in the **Archive Viewer**, in the **Available Data** table.

Configuring the trend view, *continued*

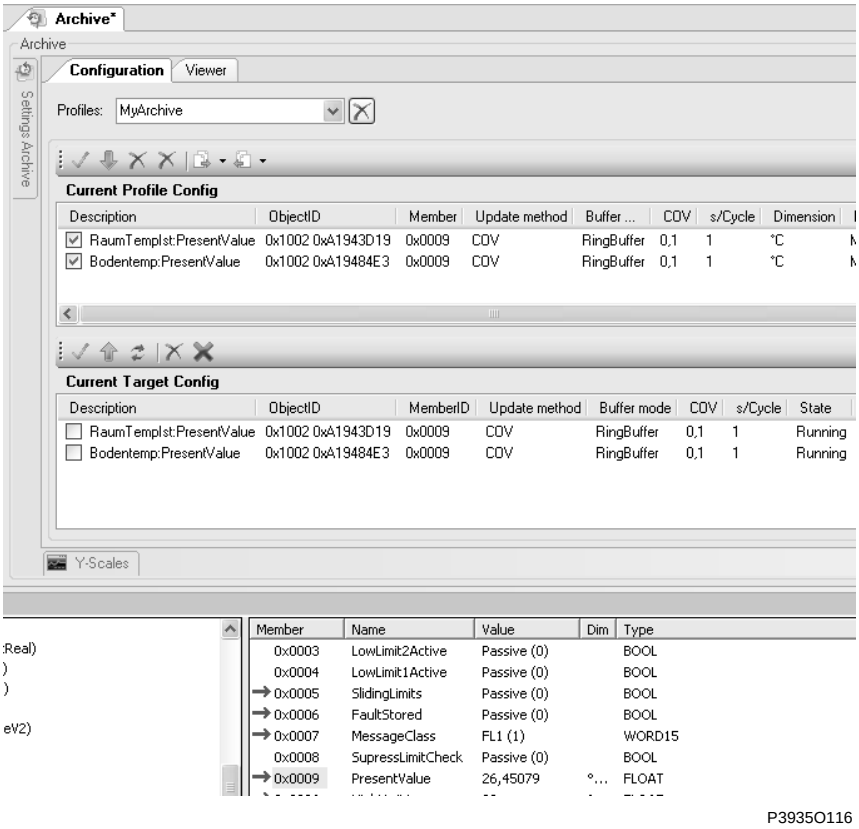
From SCOPE VVS9 forward

From this version of SCOPE forward the archives can be made visible as follows:

Step	Action
1	Open **SCOPE**.
2	Open the relevant **project** and establish a **connection** to the controller.
3	Open the configuration for archives:  P3935O114
4	Drag the required data points to the **Current profile Config**:  P3935O115

Configuring the trend view, *continued*

From SCOPE VVS9 forward, *cont.*

Step	Action
5	Register the data points by means of the **downward arrow tab**:  P3935O116
6	Select the **Trend View Setup** menu again on the **SCADA configuration page**: → The members (data points) previously selected in SCOPE are now also displayed in the **Archive Viewer**, in the **Available Data** table.

3.4.5 Assigning access rights

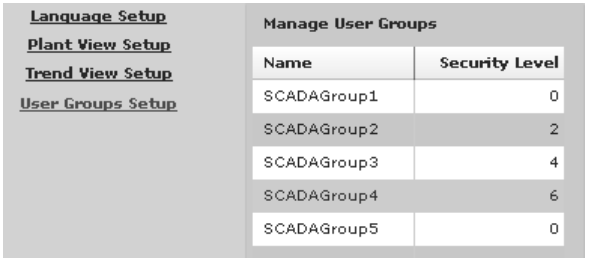
Procedure

Access rights are assigned to the **user groups** of the SCADA applications as follows:

Step	Action
1	Select the **User Groups Setup** menu on the **SCADA configuration page**: → the **Manage User Groups** window is displayed.
2	Assign access rights (0…4) to every user group in the **Security Level** column.

"Manage User Groups" window

The window shows the five predefined user groups on the left and the text fields for entering the access rights on the right:



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The number and names of user groups cannot be changed.

Explanations

Column	Description
Name	Users who log into SCADA applications are members of one or more of these user groups, see section 3.3.8 "Managing users" under "Group membership". They will be assigned the lowest access rights for the groups of which they are members.
Security Level	Assigned access rights. Recommendation according to the OEM-ACR engineering-standard: 0 = FullAccess 2 = OEM 4 = Service 6 = User The lower the number the higher the access rights. The SAPRO application determines which actions are permitted by the various access rights in detail. Access rights are applied in the “Edit level” in the “Data point editor”, for example.

Saving a SCADA application

If the configuration of the SCADA application is complete, then proceed as follows:

Step	Action
1	Click the **Save Changes to Controller** button, bottom left in the Configuration menu: → This updates the "scadacnf.xml" XML configuration file in the AWM.

3.4.6 Verifying a SCADA application

Planned contents

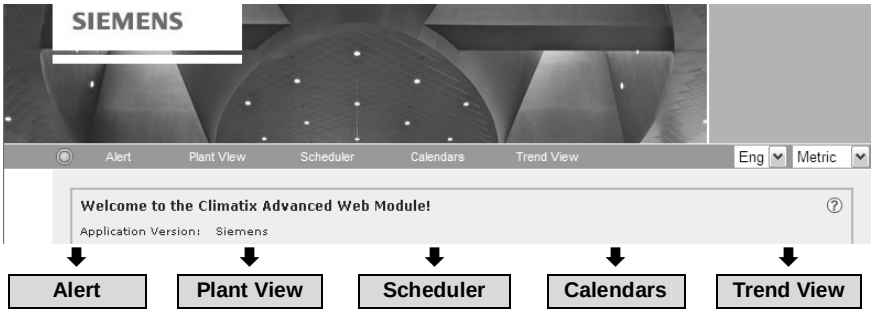
Planned for a future version of the document:
– Procedural principles
– Practical options
– Checklist

3.5 SCADA user menus

3.5.1 Overview

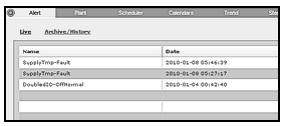
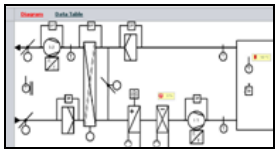
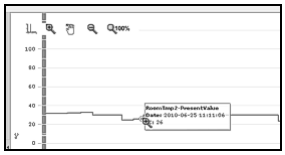
"SCADA" window

If a SCADA configuration has been performed in line with chapter 4, then the "SCADA" window contains the following menus to enable the user to operate and monitor the associated plants.
Browser > IP Address > Home Page > SCADA Menu > SCADA Window



Menus / contents

The menus with their windows and contents are as follows:

Menu	Window	Contents
Alert		All active and historical alerts with timestamp and information about the alert point.
Plant View		Plant images with the current values for the data points and alert status display.
Scheduler		Set the schedule for switching the system in line with requirements.
Calendars		Define public holidays and rules.
Trend View		View important data points in the trend when and export data.

Controls

Element	Description
“Language” selection list	The translated languages according to section 3.4.2 "Defining languages and links"
“Mass System” selection list	Metric or English ("Metric" in the image above)
ⓘ	Call online help

3.5.2 Alarm window

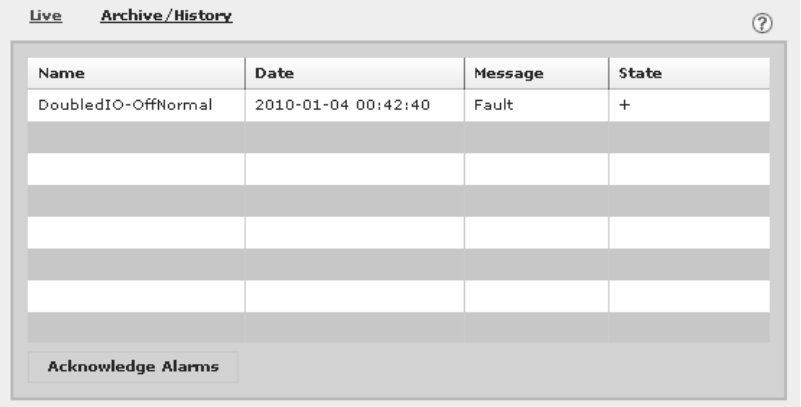
Purpose

The “Alarm” tab contains these two windows:

- "Live" List of current, pending alerts
- "Archive/History" List of alerts that have occurred

"Live" window

The following screenshot shows an example:



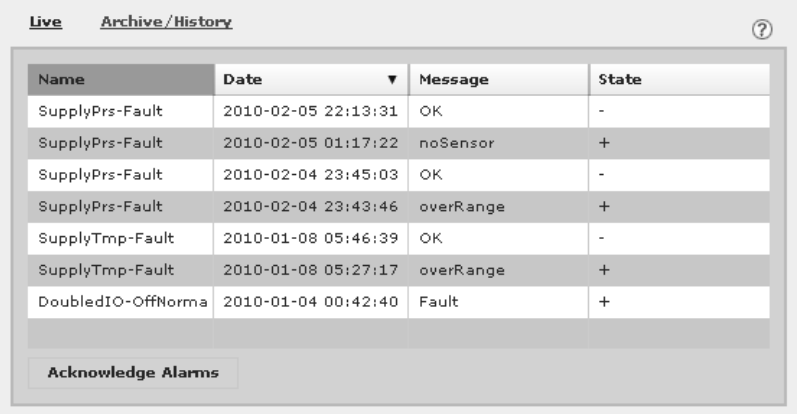
P3935O66

Information elements and controls

Element	Information / Purpose
“Name” column	Name of the alarm
“Date” column	Timestamp for the alarm
"Message" column	Display alarm text.
“State” column	Status: – outgoing ; + incoming
"Acknowledge Alarms" button	Confirm a marked alarm.

"Archive/History" window

The following screenshot shows an example:



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Information elements and controls

Element	Information / Purpose
“Name” column	Name of the alarm
“Date” column	Timestamp for the alarm
"Message" column	Display alarm text.
“State” column	Status: – outgoing ; + incoming
"Acknowledge Alarms" button	Confirm a marked alarm.

3.5.3 Plant view

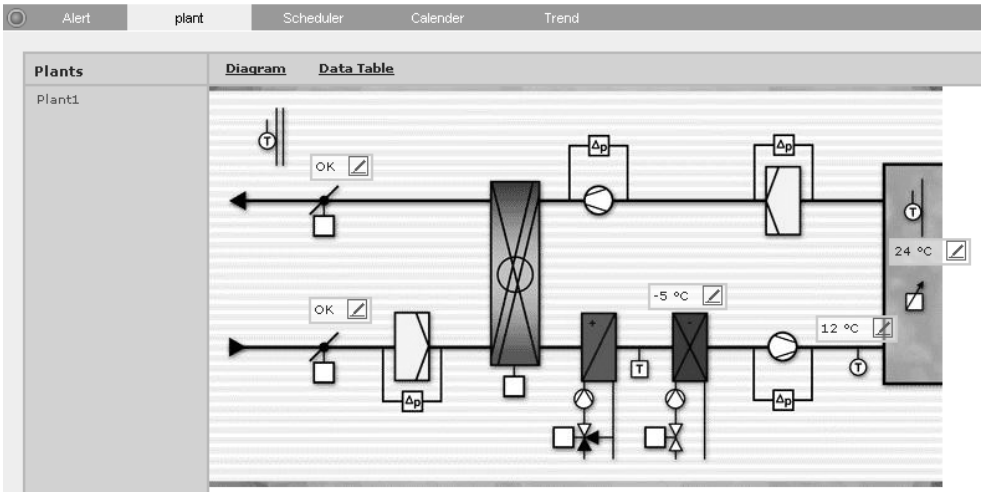
Purpose

The plant view enables the user to:
- select plants (plant views)
- view and operate data points

Two views are available for this purpose:
- "Diagram" view
- "Data Table" view

"Diagram" view

The existing plant views can be selected in the "Diagram" view and the data points embedded there can be operated.
Example of a plant view with full access rights ("0"):



P3935O95

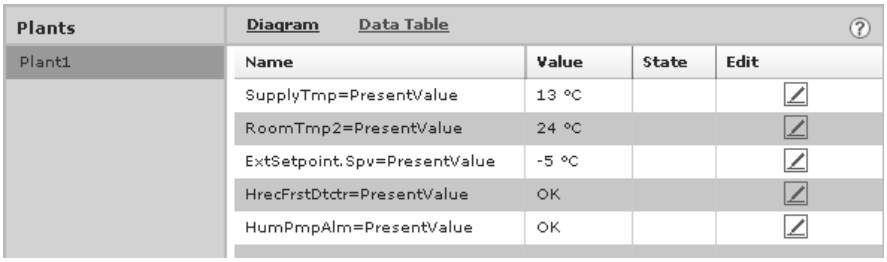
Information elements and controls

Element	Information / Purpose
Plants	Existing plant views. Click to select the required view (in this case "Plant1").
Data point fields	These show the current states of the data points, e.g. "OK" for the ZL/FL values or "24" °C for the ambient air temperature. Data points with the ⊿ icon in the data point field can be edited; see the following examples.
Refresh Interval (bottom of the screen)	Dropdown list with the selection: 10 sec / 20 sec / 60 sec / disabled
Slide control (bottom of the screen)	For adjusting the image size within the window. If the image is made larger than the window, then scroll bars appear at the bottom of the screen and on the right hand side. If the required section of the screen has disappeared because of the enlargement, this can be made visible again either using these controls or by means of the mouse pointer in the screen (click and hold).

Plant view, *continued*

"Data Table" view

The existing plants can be selected in the "Data Table" view. The table lists the data points according to the “Diagram” view:



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The selected plant is retained when switching between the views.

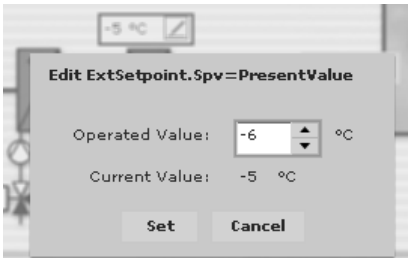
Information elements and controls

Element	Information / Purpose
Plants	Existing plants, click to select the required plant.
Name	Visible data points (selected when configuring the plant view)
Value	Current values of the data points.
State	Current states of the data points (if a status element was assigned while configuring the plant view).
Edit	Adjust set values, change states to be monitored, etc., see below.

Examples for "Edit"

Here are some examples for the Edit function in the "Diagram" and "Data Table" views:

Adjust set value (diagram):



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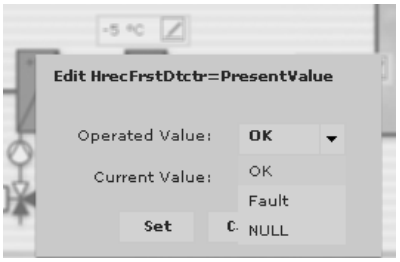
Change monitoring status:



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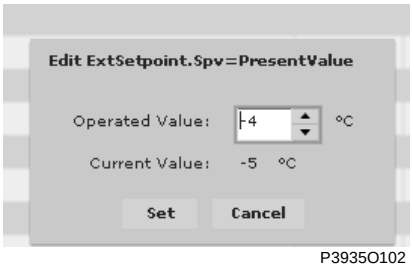
Adjust set value (data table):



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No access right for editing:

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3.5.4 Scheduler program

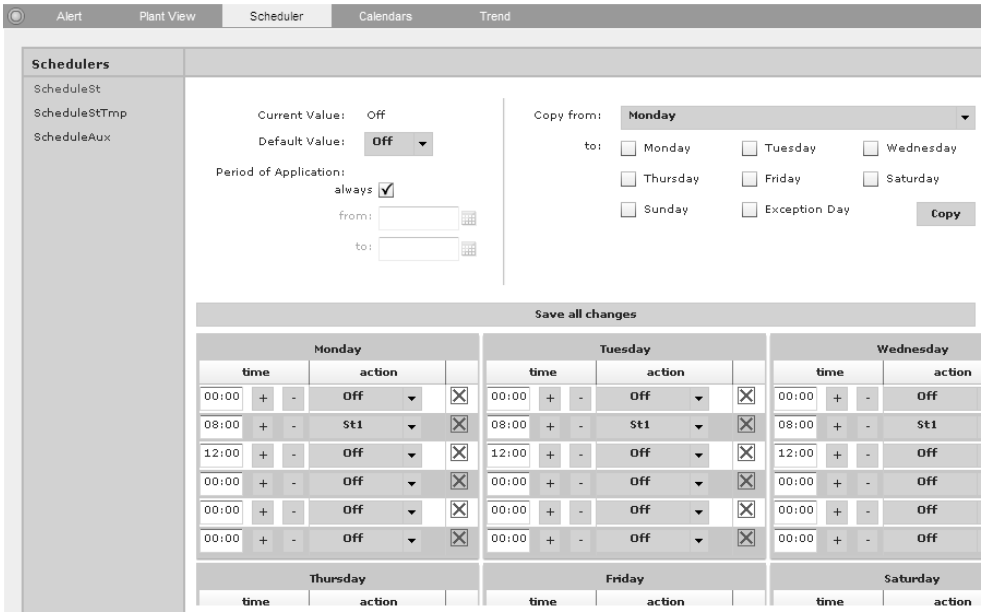
Purpose

When used in conjunction with the calendar, the scheduler allows different scheduling programs to be created to control plants and parts of plants in accordance with the:

- Weekday
- Date
- Time

View

The screenshot shows part of the scheduler:



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Information elements and controls

Element	Information / Purpose
"Schedulers" group field	List of the scheduler programs created
Current Value	Current status of the scheduler program
Default Value	Default for the status (Off / On)
Period of Application	Program period (always / date from-to)
Copy from: … to:	Copy entries for one weekday to another weekday.
Save all changes	Save all the changes made
Weekdays: "Monday", "Tuesday" etc.	Scrolling down means that the screens for all seven days and an exception day can be seen.
time	Time specification
action	Choice of the associated action (on, off, level 1 etc.)
☒	Delete entry

3.5.5 Calendar

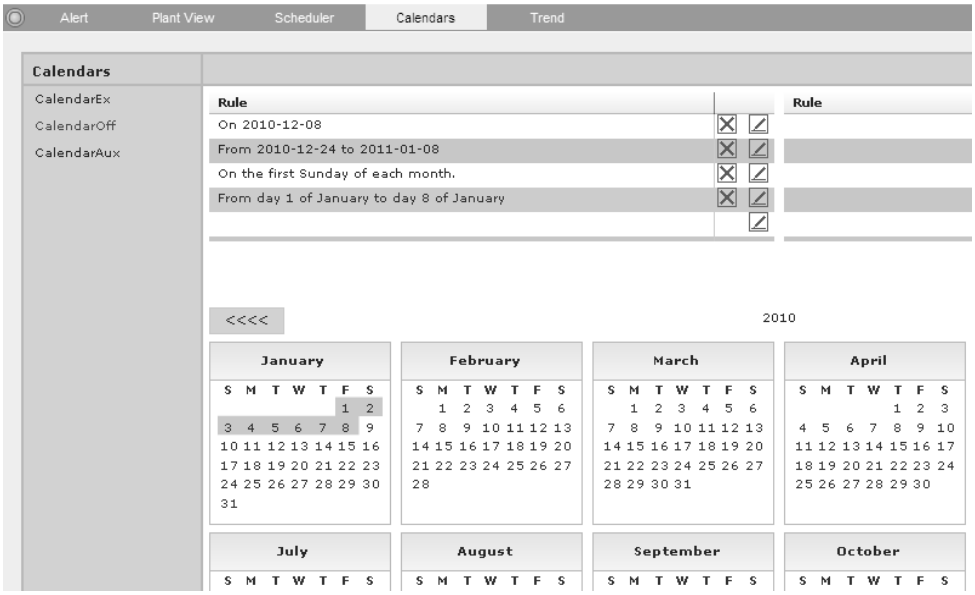
Purpose

When used in conjunction with the scheduler, the calendar allows different scheduling programs to be created to control plants and parts of plants in accordance with the:

- Weekday
- Date
- Time

View

The screenshot shows part of the calendar:



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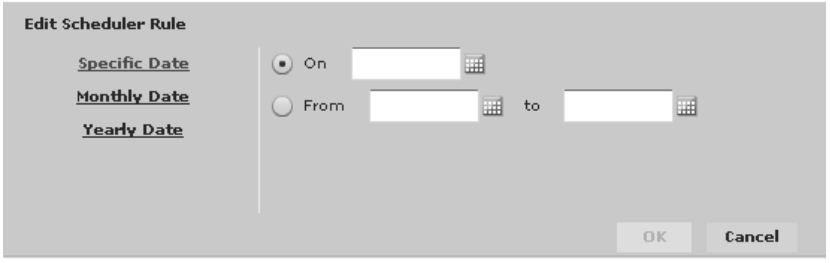
Information elements and controls

Element	Information / Purpose
"Calendars" group field	List of calendars
Rule	List of the rules created for the exception day (2 columns of 5 entries each possible)
☒	Delete rule
✎	Edit rule, see the following input screens.
"<<<<" button	Go to previous year
">>>>" button	Go to next year
Monthly calendar: January, February etc.	Scrolling enables all 12 months to be displayed.

Input masks

The following input masks appear when you click the Edit icon in the required line for the rules.

Specific date



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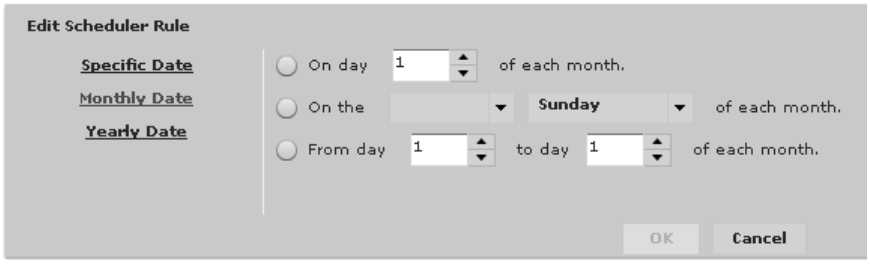
Calendar, *continued*

Monthly date



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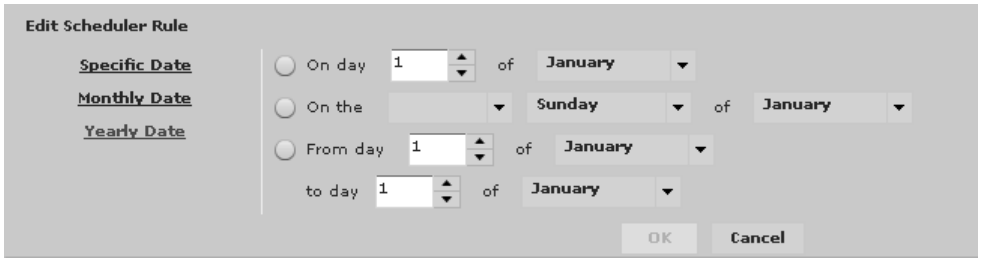
Annual date



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3.5.6 Trend window

Purpose

The "Trend" tab contains two menu items:
- "Live" window
- "Archive/History" window

"Live" window

Trend recordings can be defined and viewed in the “Live” window:

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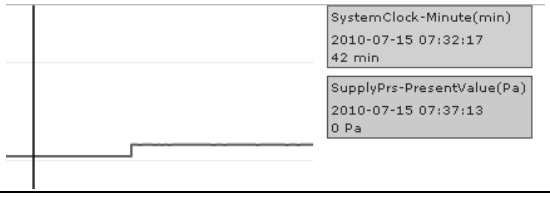
Information elements and controls

Element	Purpose / Information
List box left	Defined trend records
☐ / ☑	Hide / show record
	Display values at the point on the diagram shown with the vertical ruler. Example: 
	10. Enlarge the selected area 11. Display the information window for a particular point, see the example above.
	Move the diagram in the window
	Reduce the view in stages by clicking.
	100% view
	Enable / disable data point polling
	Select the polling interval: 1 s / 2 s / 5 s / 10 s / 30 s / 1 min / 2 min / 5 min
	When selected: diagram follows the recording
	Export recorded data in CSV format.

Trend window, *continued*

Export CSV

Clicking the **Export CSV** button opens a dialog box of this type:

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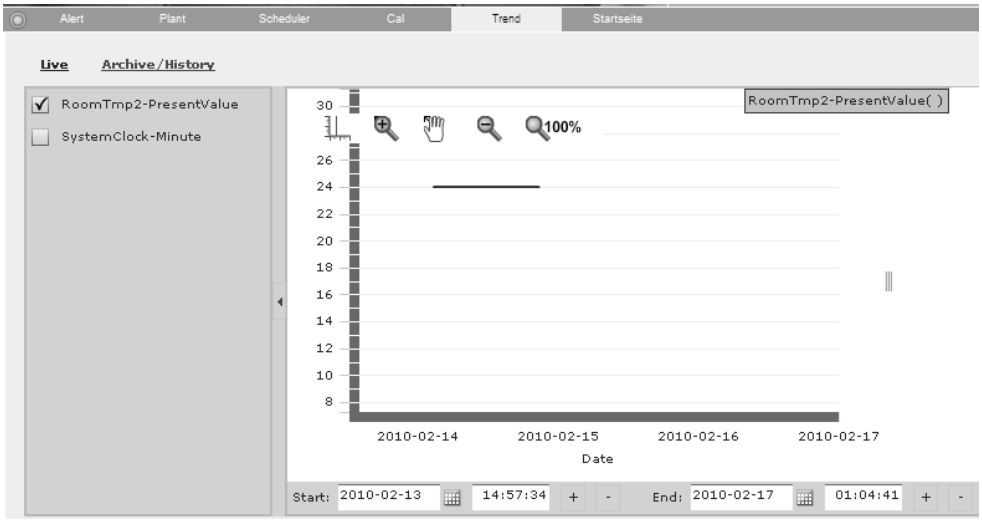
Open button: Opens the file manager to select the destination location.
Save button: Saves the **export.csv** file under the name entered in the file namer that subsequently opens.

"Archive/History" window

Saved trend records can be displayed in the "Archive/History" window:



Information elements and controls

Element	Purpose / Information
List box left	Saved trend records
☑	Select the trend record to be displayed.
Toolbar	Same as for the "Live" tab, see the previous page.
Start: input	Enter the starting date and time for the recording to be displayed in the text field or calendar.
End: input	Enter the end date and time for the recording to be displayed in the text field or calendar.
+ / **-** buttons	Increase or decrease the time by one. The default setting is minutes. However if the cursor is placed in the seconds, minutes or hours then the time is increased or decreased by the relevant unit.
Export CSV	Export recorded data in CSV format (all data for the relevant recording).

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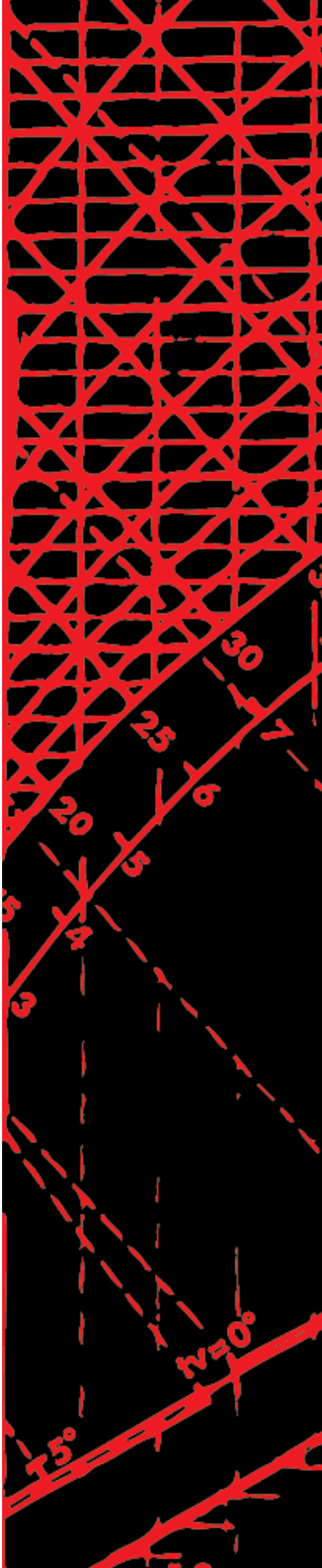

PRODUKT

Air handling with the focus on LCC

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