

SIEMENS



DESIGO™ PX PXM20 operator unit User's Guide

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1 About this manual

1.1 Target readers

This user guide is intended for those responsible for the HVAC plant in a building and for other qualified staff including commissioning and service engineers. It is assumed that the users of this manual already have the level of knowledge required before carrying out the tasks described.

1.2 Contents

The manual starts with a description of the display and control panel of the PXM20 operator unit and introduces the generally applicable procedures for navigation and for editing values. The second part of the manual leads you step by step through the various activities involved in commissioning and maintaining the plant.

As there may be significant differences between one plant and another, and between the read and write access of one user and another, it follows that it is not possible to provide a description which is generally valid for every individual case.

"Favorite" objects, for example, are special objects containing important values, which can be accessed with a short-cut operation. The question of exactly which objects and which values these are, is determined in the engineering phase according to the individual needs of the plant operator.

Important	For this reason, the steps described in this manual are intended as examples, designed to clarify the basic operating principles of the PXM20 operator unit.
------------------	--

1.3 Printing conventions

Text	Bold text is used for text exactly as it appears in the display, e.g. START , ACKNOWLEDGE , Settings etc.
Keys	Key names are indicated as follows: <ul style="list-style-type: none">• Brackets < > indicate that the description appears on the key itself. This convention is used for the <?> key (Info), the <-> key and the <+> key. Example: <i>Press the <?> key.</i>• The OK key and ESC key are referred to without brackets; their name is marked on the unit housing. Example: <i>Press the ESC key or: Acknowledge with OK.</i>• The "direct access" keys are referred to as such. These keys have no names, either on the keys themselves, nor on the housing. <i>Example: Use the direct access key to go to the next value.</i>• The same applies to the Page Up and Page Down keys. <i>Example: Go to the next dialog box using the Page Up key.</i>

2 Display and control elements

2.1 Housing

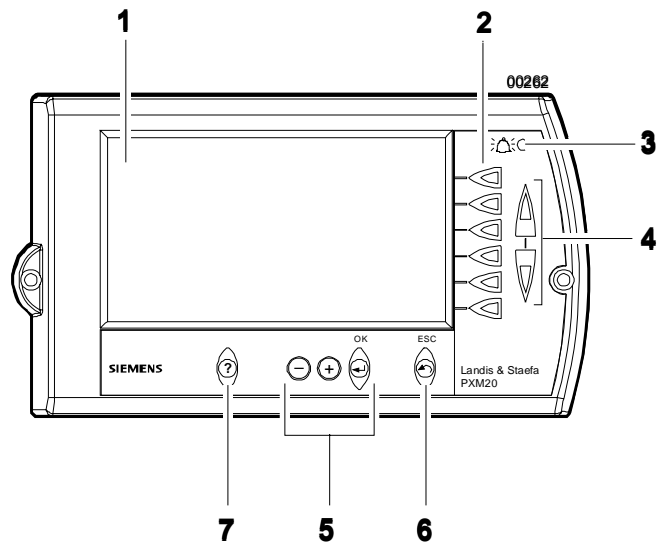


Figure 2-1 Housing

Key:

1. Display panel (Section 2.2)
2. Direct access keys (Section 2.1.3.1)
3. Alarm LED (Section 2.1.1)
4. Page Up & Page Down keys (Section 2.1.3.2)
5. OK key, <+> and <-> editing keys (Section 2.1.3.3)
6. ESC key (Section 2.1.3.4)
7. <?> key (Section 2.1.3.5)

2.1.1 Alarm LED

The alarm LED lights up or flashes when an alarm is tripped in the system. As soon as all alarms have been acknowledged, the LED stops flashing and remains on continuously. For further information on alarm signals refer to Section 5.

Exception

The LED does not flash in response to an event.

2.1.2 Audible signal

If the **Buzzer** is set to **On** under **Settings** (Section 3.2.4), an incoming alarm will be accompanied by an audible alarm signal.

2.1.3 Keys

2.1.3.1 Direct access keys

An arrowhead symbol at the end of a line indicates that you can use the direct access key adjacent to that line to carry out a number of actions:

The direct access keys have a dual function.

- **Navigation:**
Direct access to the view at the next level down.
Refer to Section 5 for detailed instructions on navigating in the PXM20.
- **Editing a value**
Your user rights determine whether you can edit values, or only read them. Refer to Section 6 for detailed instructions on navigating in the PXM20.

2.1.3.2 Page Up and Page Down key

If there are several pages in one display, use the Page Up and Page Down keys to change to the next or previous page. In addition to the <+> and <-> keys you can use the Page Up and Page Down keys to edit numerical values.

2.1.3.3 The OK key and editing keys <+> and <->

As soon as you access a value with the direct access key, the value concerned begins to flash, indicating that it can be edited with the <+> and <-> keys. Confirm each change by pressing OK. In addition to the <+> and <-> keys you can use the Page Up and Page Down keys to edit numerical values.

The step-by-step procedure for editing is described in Section 6.

2.1.3.4 The ESC key

By pressing the ESC key, you can cancel a current process (e.g. the editing of a value) at any time, switch to the view at the next higher level, or close a pop-up window..

Holding the ESC key down for more than 2 seconds ("Long ESC") closes all the active pop-up windows.

2.1.3.5 The <?> key (Info key)

Info mode

Pressing the <?> key once takes you into "Info" mode. A question mark at the end of a line indicates that you can display information about this line. To do this, press the associated direct access key.

```
▪ Stufe Hand = Stufe 1?
```

Pressing the <?> key again, displays a dialog box with general information about the associated window.

2.2 The display panel

All the elements of a plant are shown in the display, with values or information which you can read or overwrite, depending on your user rights. Figure 2-2 shows the layout of the display. The next section describes the areas of the display and the symbols used.

The keys used for navigation and editing are outside the display panel, and set into the housing itself. These keys are also described below in more detail.

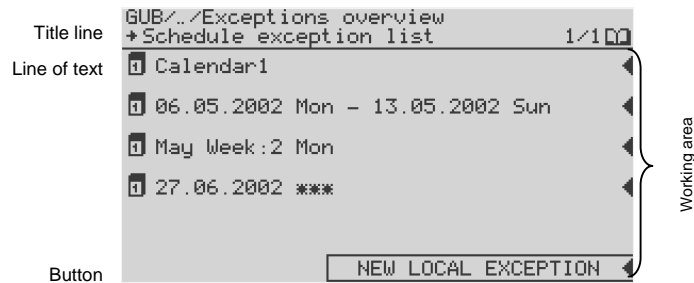


Figure 2-2 Display layout

2.2.1 Title line

The current level within the tree structure is shown at the top left in the display panel and is marked with an arrow →. The current page and the total number of pages is shown on the right. The title line is separated from the rest of the display with a horizontal line.

```
GUB/./Exceptions overview
+Schedule exception list 1/1
```

In the example above, you are in the **Schedule exception list** dialog box, on page 1 of 1.

2.2.2 Working area

Below the title line is the working area, which may contain either several lines of alphanumeric text, or a graph.

Text lines

A maximum of six lines of text can be displayed in the working area. If there are more than this, the remaining lines appear on the next page.

Calendar1

An ellipsis (...) indicates that the text is too long to fit on the line.

Aktueller Wert Luftk... 0.0 %

To see the rest of the information, use the <?> key followed by the direct access key.

Each line comprises the following elements from left to right:

- Symbol
- Values, alarms, events, entries, functions, hierarchical elements etc.
- An arrowhead symbol, for values which you can edit.

Graphs

Trends and heating curves are displayed in graph form.

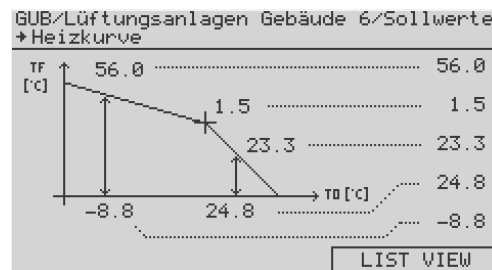


Figure 2-3 Heating curve graph

Buttons The "Button" field provides access to other functions or dialog boxes; you can gain access to these by pressing the associated direct access key. Buttons are always displayed in upper case text in a box.



Pop-up A "pop-up" window is a dialog box used to display an alarm or an event. The **ALARM VIEWER** button provides direct access to the list of active alarms.

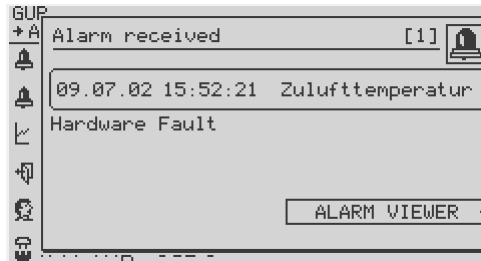


Figure 2-4 Pop-up

Dialog box A dialog box is displayed after an action, for example, a dialog box will appear with a prompt which must be acknowledged before the required action is carried out or cancelled. Dialog boxes with the relevant information are also displayed when you press the <?> key.

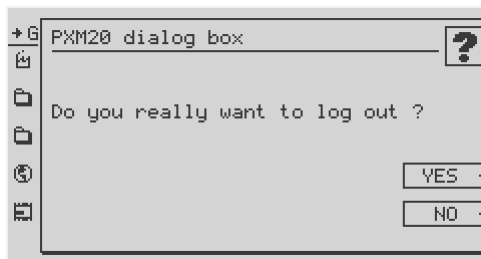



































Figure 2-5 Dialog box with confirmation prompt

2.2.3 Symbols

The following is a list of all the symbols used in the display, and their meanings. The same symbol may represent different entries, or have a different meaning, depending on the context.

Symbols	Description
	Arrowhead symbol. Values on this line can be accessed with the direct access key directly to the right of the line.
	This line contains additional information about the highlighted object. The information appears when you press the Info key <?>. Refer also to Section 2.1.3.5.
	Parameter
	Input
	Output
	Calendar / Calendar entry
	Forced control symbol
	– Alarm for "Off Normal" or fault state; flashing indicates unacknowledged alarm 1 Alarm viewer 2 Alarm & event history
	Acknowledged alarm state
	Alarm for "Normal" state; flashing indicates unacknowledged state.
	Normal state not reset
	System event
	Site
	Hierarchical element
	Device
	Interface variable

Symbols	Description
	Acknowledged alarm or event in Alarm & event history
	Reset alarm or event in Alarm & event history
	Alarming & functions
	Trend
	Logout
	Edit user
	Add new users
	Delete user
	Change password
	Wiring test (commissioning and service engineers only)
	1. Time schedules 2. Set date and time
	Set daylight savings
	Settings
	Debug information (commissioning and service engineers only)
	Global objects. Contain data which is globally available (within a given site, across controllers)
	Favorites. These are defined in the engineering phase and contain frequently interrogated elements with short-cuts for operator access.
	Page(s)
1 / 1	Page <i>n</i> of total <i>n</i> pages.

3 Settings

To be able to carry out settings and modifications, you must be in a site (see Section 4).

In the Site dialog box, select the entry **Alarming & functions**.

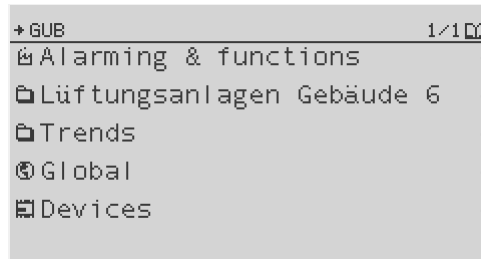


Figure 3-1 Site overview

Alarming & This is where you will find all the entries via which you can modify settings in the system with your PXM20 operator unit.

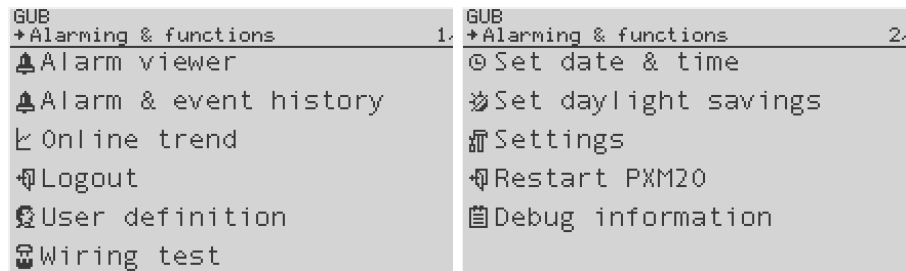


Figure 3-2 Alarm list

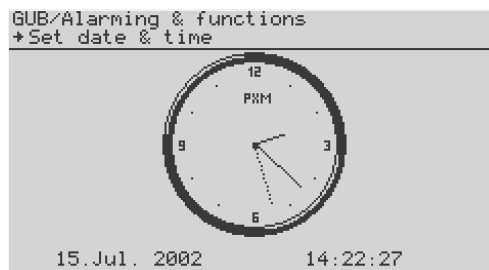
3.1 System

Note	You can only make system settings if a primary server has been defined in the network.
------	--

3.1.1 Set date & time (system time)

The system time is always applicable to one site. To change the system time, proceed as follows:

- ⊙ Set date & time
1. Select **Set date & time**.



2. Set the required time using the direct access key adjacent to the numerical time display.
3. Confirm your input.

3.1.2 Set daylight savings

This option is used to define the requirements for an automatic daylight savings time change.

☛ Set daylight

1. Select **Set daylight savings**

GUB/Alarming & functions		
+Daylight savings		
Daylight savings	=	Enabled
Is active	=	True
Begin time	=	2:00
Begin date		
End time	=	3:00
End date		

2. You can start by accepting or rejecting the current automatic summer time change.
3. You then define the date and time at which summer time is to begin and end. The basic settings are the last Sunday in March at 0200 hours for the start of summer time and the last Sunday in October at 0300 hours for the end of summer time.

3.2 PXM20 operator unit

Note The procedure for defining or modifying settings in the PXM20 is always the same. It is therefore described here once only. The same procedure applies to Sections 3.2.1 ... 0.

Settings

1. Select **Alarming & functions/Settings** on the current site.

```
GUB/Alarming & functions
+Settings 1/3
Language = English
Date format = DD.MM.YY
Time format = HH:MM
Contrast = 8
Buzzer = Off
Alarm popup = On
```

```
GUB/Alarming & functions
+Settings 2/3
Alarm text mode = Description
Relogin = Off
Display saver on = 60 min
Main value = On
Welcome window = Off
3rd-Party Site = On
```

```
GUB/Alarming & functions
+Settings 3/3
Domain ID
Network scope = Global
```

2. Select the required entry; the value will start flashing.
3. Configure the value as required.
4. Confirm your entries.

3.2.1 Language

Language

Select the language here. The basic setting is English.

3.2.2 Date & time format

Date format

Time format

Select either the American or the European date and time format.

3.2.3 Contrast

Contrast

The display contrast can be set here:

3.2.4 Buzzer

Buzzer

Use this option to specify whether or not alarms are to be indicated with an audible signal. This is only possible, however, provided that the alarms are displayed in pop-up windows.

3.2.5 Alarm pop-up

Alarm popup

Here, you can determine whether or not alarms and events are to be displayed in an alarm pop-up window.

3.2.6 Alarm text mode

Alarm text mode

This allows you to specify how alarms and events are to be displayed in the **Alarm viewer** and **Alarm & event history**.

1. If you select **Message text**, the text of notifications will be displayed in the overview.
2. If you select **Description**, the generic description of the object will be displayed.

3.2.7 Relogin

Relogin

This setting enables you to specify that a user must log in again after the display saver has been activated.

3.2.8 Display saver on

Display saver on

Use this option to specify the time period (5 – 60 mins in 5-minute increments) after which the display saver is to be activated.

3.2.9 Main value

Main value

This setting lets you specify that when operating the plant, the main value is to be displayed at the end of the line for the object concerned.

3.2.10 Welcome window

Welcome window

Here you can define whether a "Welcome" window is to appear when a user logs in.

3.2.11 3rd party site

3rd-Party Site

Use this option to specify whether or not third-party devices are to be operated with the PXM20.

3.2.12 Domain ID

Domain ID

Set the Domain ID for the PXM20 here.

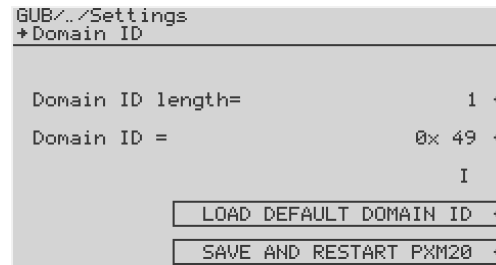


Figure 3-3 Domain ID

Important	This setting should be modified by fully qualified personnel only.
------------------	--

3.2.13 Network scope

Network scope

Specify here whether the PXM20 is to allow connections beyond the LON network.

Important	This setting should be modified by fully qualified personnel only.
------------------	--

4 Login and logout

As soon as you connect the PXM20 operator unit to an automation and control station or to a connection point in the LON network, the "Start" window will appear in the display panel.

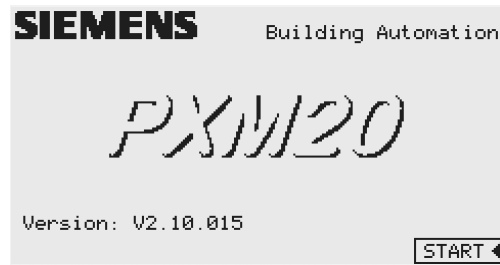


Figure 4-1 "Start" window

Press the direct access key adjacent to **START**.

4.1 Connecting to the network

START

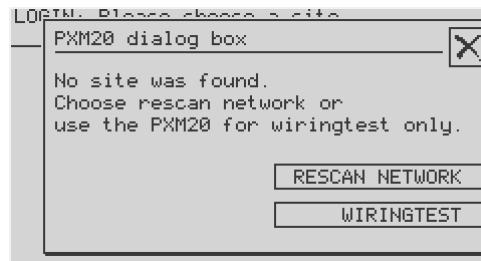
A connection is established with the network. The PXM20 starts by looking for an automation and control station defined as the primary server.

The login procedure is in two steps:

1. Select a site.



If no sites are listed, this means that no automation and control station in the network has been defined as the primary server.



RESCAN NETWORK

Use **RESCAN NETWORK** to scan all the devices in the network. In this case, access to the system will be via an automation and control station defined as the back-up server.

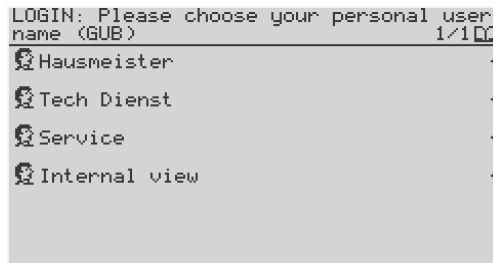
WIRINGTEST

Commissioning and service engineers can carry out a wiring test with the **WIRINGTEST** option (see Section 11)

4.2 Login

GUB

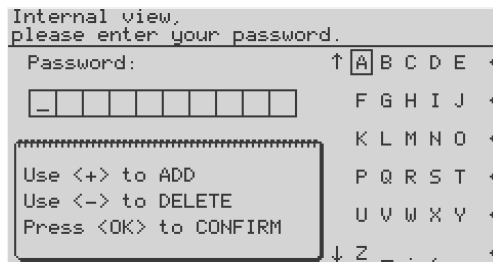
1. Log in to the selected site with your user name.



```
LOGIN: Please choose your personal user
name (GUB) 1/100
Hausmeister
Tech Dienst
Service
Internal view
```

Hausmeister

2. You will then be asked to enter your password.



```
Internal view,
please enter your password.
Password:
_ _ _ _ _
Use <+> to ADD
Use <-> to DELETE
Press <OK> to CONFIRM
A B C D E
F G H I J
K L M N O
P Q R S T
U V W X Y
Z _ . ,
```

3. Select the required letters, numbers or characters, using the <+> key to enter them in the password field. These inputs can be deleted using the <-> key.

Note	Note that wildcard characters (*) are used to represent the password in the password field. You can cancel password entry at any time by pressing ESC.
------	--

4. Press OK to confirm the password entered.

Logging in to another site

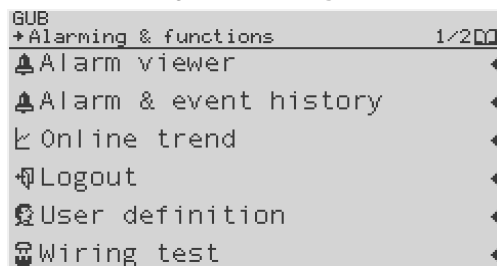
Before you can log in to a new site, you must first log out from the current site (see the next section).

4.3 Logout

Note	If you disconnect the PXM20 from the network without first logging out, this can temporarily impair the performance of the plant (e.g. by delaying the transfer of alarms). You should therefore always log off properly as described below.
------	--

Alarming &

1. Within the site, go to **Alarming & functions**.



Logout

2. Select **Logout**.
3. Confirm that you really do want to log out.
4. The site overview appears again (Figure 3-1).

5 Navigation

- Tree structure** The structure for navigating with the PXM20 operator unit is displayed as a tree structure.
- Down one level** The arrowhead symbol at the end of a line indicates that you can move to a dialog box at the next level down by pressing the associated direct access key.
- Up one level** Press ESC to leave the current dialog box and move to a dialog box at the next higher level.
- Closing windows** Press ESC to close pop-up windows or dialog boxes.
- Moving from page to page** If there are several pages in one display, use the Page Up and Page Down keys to change to the next or previous page. The total number of pages is shown in the top right corner of the display:
1/100

6 Reading and editing values

In order to edit values, you must have Write access rights. If you only have Read access, you can view a value, but not modify it.

In the example below, the values which you can edit are indicated as follows:



GUB/Lüftungsanlagen Gebäude 6		1/600	
• Stufe Hand	=	Stufe 1	◀
• Aktuelle Stufe	=	Stufe 2	▶
• Raumlufttemperatur	=	11.8 °C	▶
• Aktueller Wert Vorer...	=	0.0 %	▶
• Aktueller Wert WRG	=	100.0 %	▶
• Aktueller Wert Luftk...	=	0.0 %	▶

Figure 6-1

Key:



Arrowhead

The arrowhead symbol at the end of the first line in the example indicates that you have the necessary Write access rights to edit this value. Press the direct access key to switch to edit mode. There is no arrowhead symbol adjacent to any of the other values; this means that you have no access to these values.



Direct

access key

To edit a value to which you have Write access, press the direct access key adjacent to the line concerned.

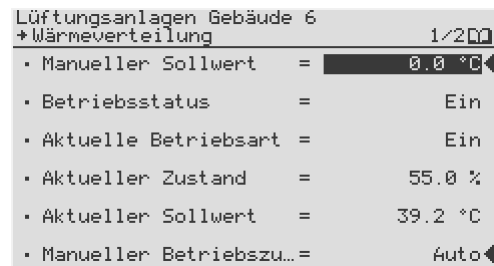
Note	<p>As the procedure described below is applicable to all cases, it is described once only, in order to keep this manual as easy to read as possible. If you are required to edit a value in any subsequent routines, the procedure referred to is the one described here.</p> <p>To keep the manual as clear as possible, the instruction "Press the direct access key" is not repeated. Example: "Select the month and the year".</p>
------	--

When editing always proceed as follows:

1. Press the direct access key adjacent to the required line. The first value to be edited will now start flashing. (Optional: Repeated operation of the direct access key allows you to jump from one input field to the next.)
2. Edit the required value with the <+> and <-> keys. Numerical values can also be edited using the Page Up and Page Down keys.
3. Acknowledge the changes you have made by pressing the OK key.
4. You can also acknowledge an input by pressing the direct access key itself.
5. If there are several values on one line, press the key repeatedly until all the values stop flashing.

6.1.1 Example: Setting a setpoint

Navigate to the value that you want to edit. Set the required value.



Parameter	Value
Manueller Sollwert	0.0 °C
Betriebsstatus	Ein
Aktuelle Betriebsart	Ein
Aktueller Zustand	55.0 %
Aktueller Sollwert	39.2 °C
Manueller Betriebszu...	Auto

Figure 6-2 Setting a manual setpoint

6.1.2 Example: Modifying a heating curve

The heating curve is used to determine the flow temperature setpoint for weather-compensated flow temperature control.

Two display formats

There are two ways of setting the heating curve values using the PXM20 operator unit. Either the main parameters can be displayed in graph form, or all the parameters, inputs and outputs can be displayed in list form.

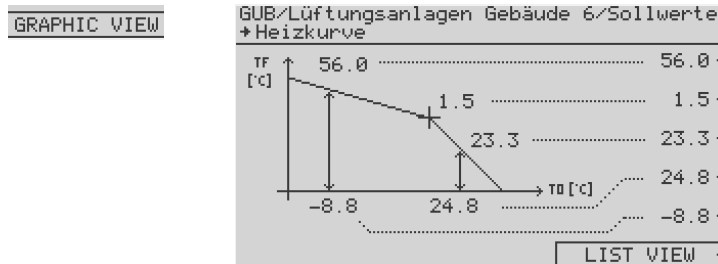


Figure 6-3 Graphic view of heating curve

List view of heating curve

LIST VIEW

Select **LIST VIEW** for access to a list of all parameters, inputs and outputs.

GUB/.../Sollwerte		1/200
+ Heizkurve		
• Heizkurve	=	29.4 °C
• Sollwert Vorlauf an ...	=	36.7 °C
• Heizkurve	=	20.9 °C
• Aussentemperatur Ums...	=	16.2 °C
• Basispunkt Aussentem...	=	26.9 °C

GRAPHIC VIEW

Figure 6-4 Heating curve: list view, page 1

GUB/.../Sollwerte		2/200
+ Heizkurve		
• Normaussentemperatur	=	-8.8 °C
• Vorlauftemperatur fü...	=	56.0 °C
• Höchste Aussentemper...	=	24.8 °C
• Vorlauftemp. für höc...	=	23.3 °C
• Heizkörperexponent	=	1.5

GRAPHIC VIEW

Figure 6-5 Heating curve: list view, page 2

Select **GRAPHIC VIEW** to return to the graph.

6.1.3 Forced control

"Forced control" refers to the process of setting inputs and outputs manually to a given value.

The inputs and outputs are edited in the normal way. As soon as you select the required value you will be prompted in a dialog box to confirm that you want to force this value.

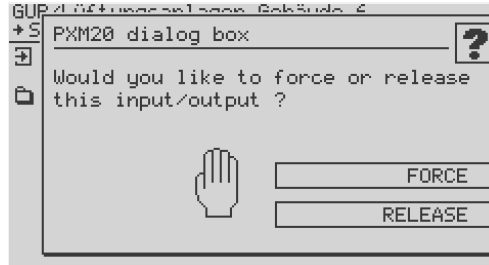


Figure 6-6 Prompt for acknowledgement of forced control

You can use the direct access key to cancel the forced control in the dialog box again.



Forced control symbol

The forced control symbol is displayed after the input or output has been forced.

7 Alarms

7.1 Occurrence of alarms and events

Signals

Attention is drawn to the presence of alarms and events by use of pop-up windows (Figure 7-1); in the case of alarms, there is also an audible signal and the LED display starts flashing. The use of pop-up windows and audible signals for this purpose is optional and can be enabled in **Settings** (Section 3.2.5).

Info in pop-up windows

The main information on the current event is displayed in a pop-up window:

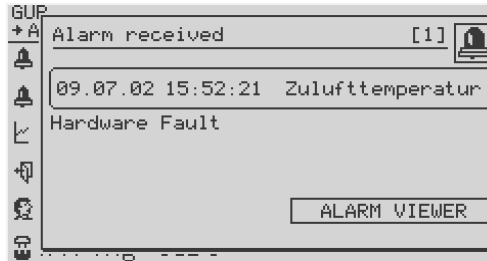







Figure 7-1 Alarm pop-up with unacknowledged alarm

The display shows a time stamp, the object name, the notification text and the alarm priority. In the case of alarm messages, you can display the **Alarm viewer** directly (see Section 7.2.1).

Symbols in an alarm pop-up window

-  Unacknowledged alarm
-  Alarm state acknowledged
-  Normal state; existing alarm unacknowledged
-  Normal state, unset
(only used for Extended alarms. In such cases, reset the alarm.)
-  System event

Deleting a pop-up window

Press ESC to delete a pop-up window without affecting the alarm or event.

Canceling the audible signal

An audible signal can also be cancelled by deleting the associated pop-up window with ESC.

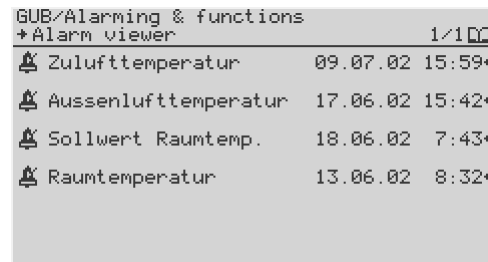
7.2 Alarm acknowledgement

All alarms still requiring acknowledgement are listed in the **Alarm viewer**.

7.2.1 Displaying the Alarm viewer

Alarm viewer

Go to the **Alarm viewer** in the **Alarming & Functions** dialog box..







GUB/Alarming & functions		1/1	
+Alarm viewer			
	Zulufttemperatur	09.07.02	15:59
	Aussenlufttemperatur	17.06.02	15:42
	Sollwert Raumtemp.	18.06.02	7:43
	Raumtemperatur	13.06.02	8:32

Figure 7-2 **Alarm viewer**

The Alarm viewer displays all the most recently received alarms.

Each line consists of an alarm symbol, the object name or notification text, and the date and time.

Tracking the alarm state

The **Alarm viewer** tracks the alarm state as follows: If the alarm state changes (e.g. an alarm is acknowledged) the associated entry also changes.

Note

Note that for each object, only the current alarm, i.e. the last alarm received, is displayed.

When a fault has been cleared and acknowledged the relevant entry disappears from the list.

7.2.2 Selecting an event or alarm

 Aussenlufttemp

1. Select the alarm which you wish to acknowledge. The **Alarm message** dialog box opens.
2. You can now select either **ACKNOWLEDGE** or **DETAILS**.

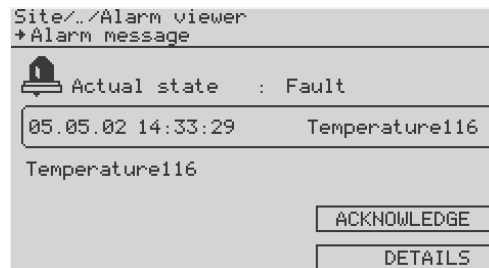


Figure 7-3 Alarm message

The procedure for events is basically the same as for alarms. Unlike alarms, however, you do not need to acknowledge events.



Figure 7-4 Event message

7.2.3 Alarm acknowledgement /

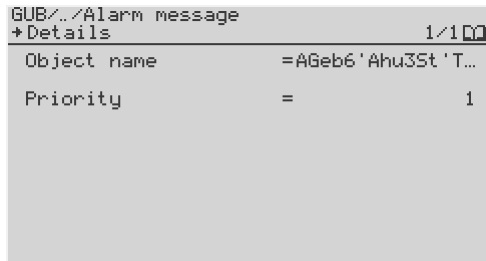
Alarm & event details

ACKNOWLEDGE

Use **ACKNOWLEDGE** to acknowledge the alarm. The **Alarm viewer** dialog box will re-appear (Figure 7-2).

DETAILS

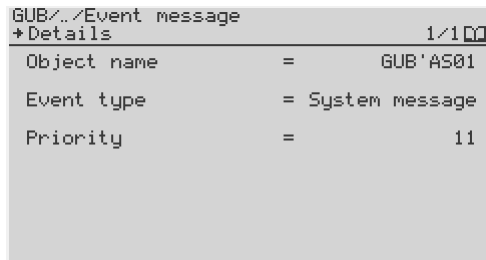
By selecting **DETAILS** you can switch to a dialog box which provides more information about the object responsible for triggering the alarm or event, and which displays the priority of the alarm message.



The screenshot shows a dialog box titled 'GUB/.../Alarm message' with a '+Details' button and a '1/1' indicator. The dialog contains the following information:

Object name	=	AGeb6'Ahu3St'T...
Priority	=	1

Figure 7-5 Alarm details



The screenshot shows a dialog box titled 'GUB/.../Event message' with a '+Details' button and a '1/1' indicator. The dialog contains the following information:

Object name	=	GUB'AS01
Event type	=	System message
Priority	=	11

Figure 7-6 Event details

Extended alarm After acknowledgement, Extended alarms will also need to be reset with the **RESET** option. You cannot do this until the object has returned to normal.

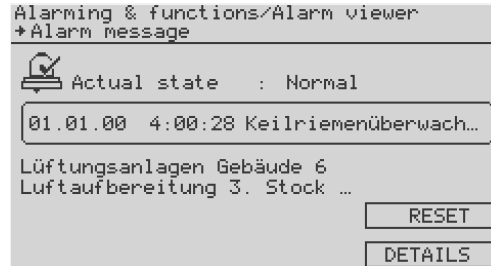


Figure 7-7 Example of Extended alarm



After the reset, the display reverts to the **Alarm viewer** dialog box.

7.3 Alarm & event history



Select **Alarm & event history** from the **Alarming & functions** dialog box.

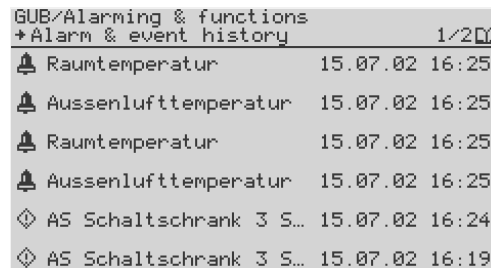


Figure 7-8 Alarm & event history

The Alarm & event history dialog box displays not only the current alarm, but all alarms which have occurred in relation to the selected object.

As with the **Alarm viewer**, a line consists of a symbol, the object name and the date and time.

The following information is displayed for a maximum of 30 entries:

- 3 All the most recently received alarms
- 4 The most recent alarm acknowledgements
- 5 The most recent events

Note

Note that it is not possible to acknowledge or reset alarms in the **Alarm & Event history**.

Unlike the **Alarm viewer**, the **Alarm & event history** only logs incoming alarms, but does not update the entries with any changes.

As with **Alarm viewer**, you can invoke an individual alarm or event here, and view the details.

Symbols in the Alarm & event history



Unacknowledged alarm



Normal state; existing alarm unacknowledged



System event



Acknowledged



Reset

8 Access rights

8.1 Introduction

There are seven user levels in the system. In the engineering process, each user group is defined with the associated Read and Write access rights (user level). Individual users are then assigned to one of these user groups.

8.2 Password

When the plant is handed over, you will be informed about which users have been set up, and notified of the associated passwords. Users can then change their own passwords to suit their own preferences. The procedure is as described in Section 8.5.

8.3 Add new user

Members of a group are authorized to add new users to groups at a lower hierarchical level.

- User defini
1. Within the current site, go to **Alarming & functions** and select **User definition**.
 2. Select **Add new user**.

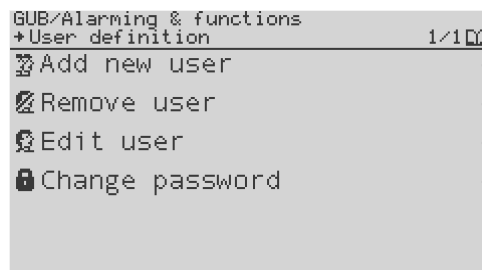


Figure 8-1 User definition

3. You will be prompted in the next dialog box to enter the user name:
Please enter the USERNAME.
Select the required characters and use the <+> key to enter them in the field. Use the <-> key, if required, to delete characters.
4. Acknowledge the user name with OK.
5. You will then be prompted to enter the password:
Please enter the PASSWORD
6. Enter the required password and confirm with OK. A list of all the information describing the newly defined user will now appear. You now have the option of modifying or adding to the information or settings:

Save user or edit it			
User name	=		A
Password	=		A
User group	=	Hausdienst	
User visa	=		A
User scope number	=		0
			SAVE USER

User Group

7. Select the required user group.
User visa
8. Select initials for the user you have defined.
User scope number
9. Scopes are not yet supported in Version 2.1.
10. Answer the prompt to save the new user entry:
SAVE USER
The display will revert to the **User definition** dialog box (Figure 8-1).

8.4 Remove user

To remove a user, proceed as follows:

Note	You can only remove users at a lower level in the hierarchy.
------	--

1. In the current site, select **Alarming & Functions** (Figure 8-1).
2. Select **Remove user**. The next dialog box displays a list of all the users which your access rights entitle you to delete.
3. Select the user which you want to delete.
4. In the next pop-up window, confirm that you want to delete this user.

8.5 Change password

To change your own password, proceed as follows:

1. In the current site, select **Alarming & functions / User definition** (Figure 8-1).
2. Select **Change password**.
You will be prompted as follows:
Enter OLD password:
3. Enter your old password and confirm with OK.
The following prompt will then appear:
Enter NEW password:
4. Enter your new password and confirm with OK.
5. The change of password is confirmed in a pop-up window.

8.6 Edit user

Proceed as follows to change the data for a given user:

1. In the current site, select **Alarming & functions / User definition** (Figure 8-1).
2. Select **Edit user**.
The next dialog box displays a list of all the users which your access rights entitle you to modify or delete.
3. Select the user, for which you want to edit the data.
4. Make the required changes and confirm them by selecting **SAVE USER**.

9 Setting time schedules

The time schedules consists of a 7-day schedule and an exception schedule. You can use the time schedules to program the following:

- Time-dependent on/off switch control
and/or
- Time-dependent setpoint adjustment

In the 7-day schedule, you can define daily profiles which are repeated week after week. In the exception schedule, you define days which deviate from those defined in the 7-day schedule.

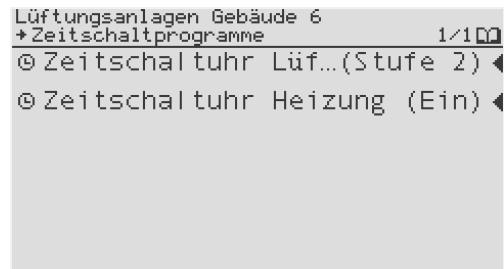
The names and locations of these time schedules are defined on a plant-specific basis. The following illustrations are examples only.

9.1 7-day schedule

It is possible to define a particular profile for each day of the week within the 7-day program.

 Zeitschaltp

1. Navigate to the required time schedule.



- In this example, select **Zeitschaltuhr Lüf... / Stufe 2** (Time switch Ventila... / Stage 2)

@ Zeitschaltu



- Use the direct access key to select the required day of the week. The selected day is marked with a rectangle (Monday in the example above).

A graphics-based display of the selected day appears on the second line. You can select the individual switching points with the associated direct access key. The next line displays the values for the selected switching point.

9.1.1 Editing the switching points

The exact time and the state which comprise the entry are shown on the next line, and can be selected for editing. Confirm your entry by pressing OK.

CHANGE PROGRAM

- To change the schedule for this day, select **CHANGE PROGRAM**.

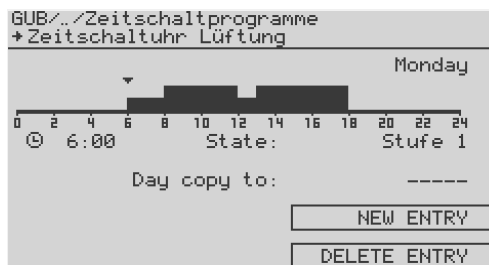


Figure 9-1 24-hour profile

2. Move from one entry to the next within the 24-hour schedule. The selected entry is marked by a small black arrowhead above the 24-hour schedule.

9.1.1.1 Editing an existing entry

Edit existing entries in the normal way, using the associated direct access keys (the procedure is described in Section 6).

9.1.1.2 Copy 24-hour profile

To copy a 24-hour profile to other days, navigate to the day which is to be used as a template.

Then go to the line **Day copy to** and select the days to which you want to copy the profile, acknowledging with OK for each day.

9.1.1.3 New entry

NEW ENTRY

To add an entry select **NEW ENTRY** and edit the new entry.

9.1.1.4 Delete entry

DELETE ENTRY

To delete an entry, first select the entry to be deleted, and then select **DELETE ENTRY**.

9.2 Exception schedules

The exception schedule contains two kinds of exception:

- Exceptions which are stored locally in the time schedule and apply only to that specific time schedule; these are identifiable by the date information.
- Exceptions which are stored in a calendar object and used by various time schedules. These are recognizable by their names, e.g. holidays without date information.

Identification of exceptions in lists:

1

Symbol for an exception with a 24-hour profile and a date period

There are two ways of invoking exceptions in a list:

- Via an individual day in the Exceptions overview (see Section 9.2.1)
- Via the **EXCEPTIONS** button (see Section 9.2.2).

9.2.1 Listing the exceptions for a given day

EXCEPTION OVERVIEW

In the 7-day schedule, navigate to the exceptions overview via **EXCEPTIONS OVERVIEW**.



Figure 9-2 Exceptions overview

Select the month and the year from the top line. All the days of the selected month will then be displayed. Days on which exceptions are programmed appear on a black background.

Select the required day and confirm with OK. A list of all the exceptions for the selected day is displayed. You can edit this display directly.



Figure 9-3 Schedule exception list

9.2.2 Listing all the exceptions



Use the **EXCEPTIONS** button in the Exceptions overview (Figure 9-2) to display a list of all the exceptions defined in the selected time schedule. You can access these with the associated direct access keys.



Figure 9-4 Schedule exception list

Wildcards

You can use wildcards (*) to enter the date period. Note the wildcards used in the illustration above.

9.2.3 Create new local exception

NEW LOCAL EXCEPTI

NEW LOCAL EXCEPTION allows you to create a standard exception with the current date and add it to the **Schedule exception list** (Figure 9-4). The next section describes how to adapt this exception to your own particular needs.

9.2.4 Editing a local exception

From the Figure 9-4 and Figure 9-3 select a date entry. A dialog box will appear (Figure 9-5), from which you can select all the required editing functions.

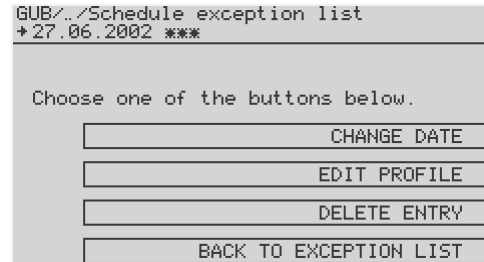


Figure 9-5 Editing functions

CHANGE DATE

Select **CHANGE DATE** to display the following dialog box:

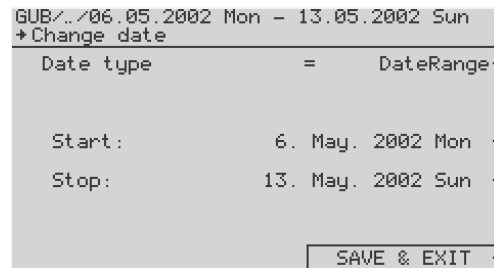


Figure 9-6 Changing the date of an exception

Enter the required information and return to the editing functions via **SAVE & EXIT** (Figure 9-5).

EDIT PROFILE

Select **EDIT PROFILE** for access to the 24-hour profile of an exception. In this dialog box, you can select whether you want to modify the program or to delete all entries.



Figure 9-7 Changing the profile of an exception

CHANGE PROGRAM

Select **CHANGE PROGRAM** to invoke the editing mode.

Select **New entry** to add a new line, in which you can specify the required values. Modify the priority to suit your requirements.

Warning	The priority should only be modified by fully-qualified personnel.
---------	--

DELETE ALL ENTRIES

Select **DELETE ALL ENTRIES**. Acknowledge the data protection prompt. All entries will be deleted from the system.

DELETE ENTRY

This button is used to delete the selected exception.

BACK TO EXCEPTION

Use this button to revert to the **Schedule exception list** (Figure 9-4).

9.2.5 Editing a calendar entry

Select a calendar object from the **Schedule exception list**.

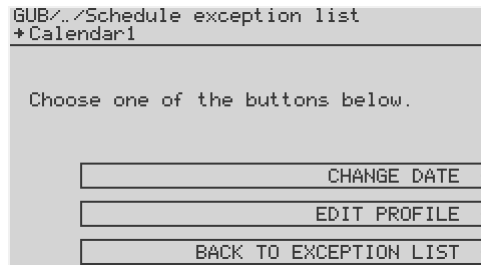


Figure 9-8 Editing the calendar object

You can edit the date and profile as described in Section 9.2.4.

10 Trend function and trend settings

The PXM20 operator unit provides the user with five channels for trend logging, enabling 5 data points to be logged.

The same dialog is used for basic trend settings in all types of trend view (refer to Section 10.3). This dialog box is invoked when you set up a new data point (see Section 10.1). For channels which have already been set up, it can also be invoked by selecting **Alarming & functions / Online Trend** (see Section 10.1).

There are three separate ways of viewing the trend data:

- 6 Graphical view (Section 10.3.2)
- 7 Online graphical view (Section 10.3.3)
- 8 List (Section 10.3.4)

10.1 Setting up a new trend

Navigate to the data point for which you want to log a trend. Display the "Info" pop-up window.

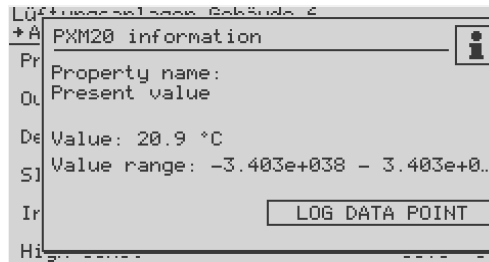


Figure 10-1 "Info" pop-up window

LOG DATA POINT

Use the **LOG DATA POINT** button to set up the required trend. The dialog box with the trend settings opens (Figure 10-3). Section 10.3 describes how to set the trend parameters and define the type of view required.

The data point is automatically assigned to the first free channel.

10.2 Displaying an existing trend



Select the required channel via **Alarming & functions / Online trend**. The flashing symbol indicates that trend logging is in progress.

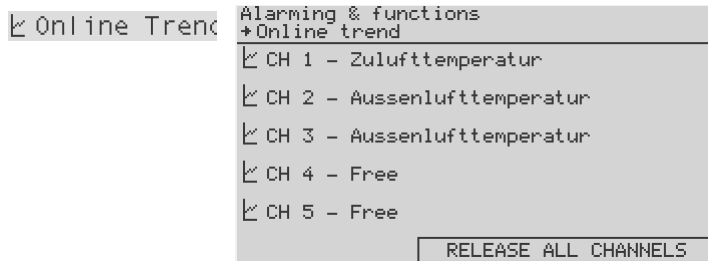


Figure 10-2 Overview of active trend logging and spare channels.

Ka 1 - Zuluftte

Select the required channel. The main dialog box for the trend channel will appear (Figure 10-3). From here, you can view graphs and edit parameters.

The next section describes how to set the trend parameters and define the type of view required.

RELEASE ALL CHAN

This button allows you to stop all trend logging and delete all configured trend charts.

10.3 Main trenddialog box

The main trend dialog box gives you access to the **Trend configuration** dialog box and to the various trend data views.

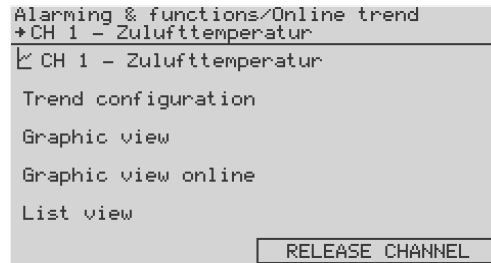


Figure 10-3 Setting trend parameters and defining the view

RELEASE CHANNEL

RELEASE CHANNEL stops trend logging and deletes the trend configuration.

10.3.1 Trend configuration

Trend configurati

In the main trend dialog box (Figure 10-3) select **Trend configuration**. You can now modify the parameters for the required trend logging.

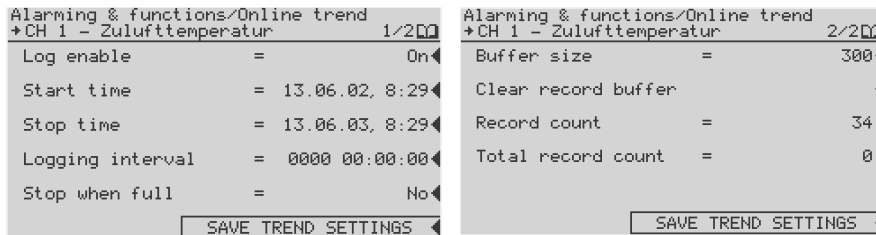


Figure 10-4 Trend configuration, Pages 1 and 2

The individual parameters have the following meanings:

Log Enable	On/Off
Start time	Here, you should define the length of time over which the
Stop time	trend values are to be logged.
Logging interval	Enter the sampling rate (logging interval) in days, hours, minutes and seconds. A logging interval of 0 results in COV logging (Change of Value).
Stop when full	Define here what should happen to the trend logging when the memory is full. If you select No , the first values will be overwritten by new values. With Yes , trend logging will stop.
Buffer size	Number of values that can be stored
Clear record buffer	Delete all logged values
Record count	Number of sampled values in the current trend log
Total record count	Total number of logged values

SAVE TREND SETTING

SAVE TREND SETTINGS lets you save your inputs, after which the PXM20 will start logging these values. The display reverts to the main dialog box.

Note	The flashing symbol at the beginning of the line in the Online Trend dialog box indicates that trend logging is actually running. If Log enable is set to On , but the symbol is not flashing despite this, you should check your settings (start time, stop time and referenced data point).
------	--

You can display the trend data in three different views, as described in the next section.

10.3.2 Graphic view

The **Graphic view** displays a graph of all the values in the PXM20 for the logged data point.

Note	The graph which is displayed represents the past. To view the values in real time, select Graphic view online (Section 10.3.3).
------	--

GRAPHIC VIEW

Before displaying the sampled values in a graph, you can adapt their display in **Graphic view** to your requirements, by modifying the following parameters in the **Trend configuration** dialog box (Figure 10-3).

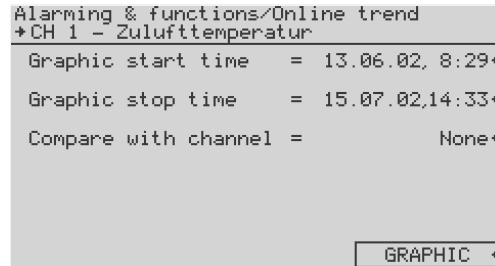


Figure 10-5 Parameters for the Graphic view

The two parameters **Graphic start time** and **Graphic stop time** can be used to reduce the display window to a time-window of particular relevance to you. As default values for the **Graphic start time** and **Graphic stop time**, enter the start and end of logging.

Use **Compare with channel** to compare the selected trend with another trend you have set up (see Figure 10-9).

Select **GRAPHIC** to confirm your settings and display the trend.

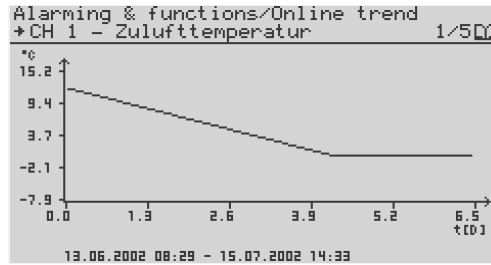


Figure 10-6 Graphic view with a single channel

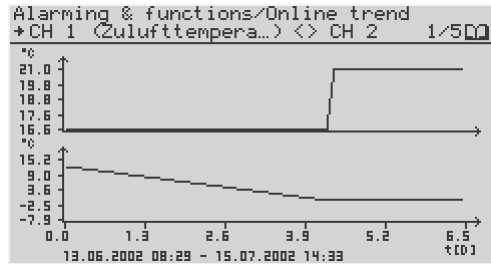


Figure 10-7 Graphic view with two channels

Setting guides

A guide line can be set and moved by use of the <+> and <-> keys. The data display is also refreshed.

10.3.3 Graphic view online

The **Graphic view online** displays the required value dynamically, i.e. in real time.

Note To view all the values so far stored in the PXM20, select **Graphic view** (Section 10.3.2).

Graphic view online

Here, you can define the duration and the high and low range limits for the value.

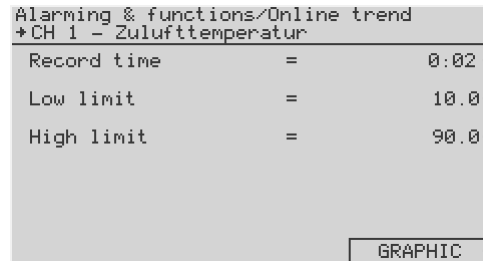


Figure 10-8 Settings in the Graphic view.

Under **Record time** you can define the period of time over which you want to this dynamic trend to be displayed.

Low limit and **High limit** represent the upper and lower limits for the value range to be displayed.

GRAPHIC

The trend is displayed soon as you confirm your entries via **GRAPHIC**.

You can reset the graphic display by pressing OK.

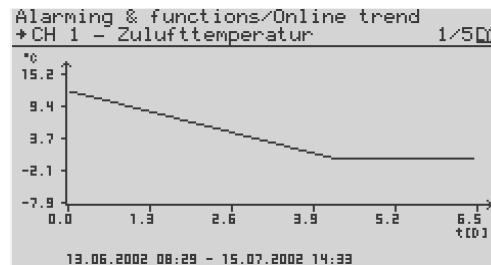


Figure 10-9 Online trend display

Setting guides

A guide line can be set and moved by use of the <+> and <-> keys. The value corresponding to the guide line is also displayed.

10.3.4 List view

Instead of displaying the logged values in graph form, you can view them in list form.

LIST VIEW			
Alarming & functions/Online trend			
+CH 1 - Zulufttemperatur 4/6			
Value:	0.0°C	09.07.02	15:57
Value:	15.2°C	09.07.02	15:58
Value:	-7.9°C	09.07.02	15:59
Logging stopped		09.07.02	16:06
Logging restarted		11.07.02	11:08
Value:	0.0°C	11.07.02	11:08

Figure 10-10 List view of trend values

11 Service support

11.1 Wiring test

Note	The wiring test must be carried out only by service and commissioning engineers when commissioning the system.
------	--

Prerequisite The automation and control station which is the subject of the test must not be integrated into a site and must not be loaded with application software.

Procedure

A. No site exists yet, i.e. no program has yet been loaded by an automation and control station.

- Start the PXM20 operator unit and select **Wiring test** from the dialog box.

B. A site already exists and you want to extend the network by one automation and station:

 Wiring test

- Log in to the required site.
- Go to **Alarming & functions** and choose **Wiring test**.

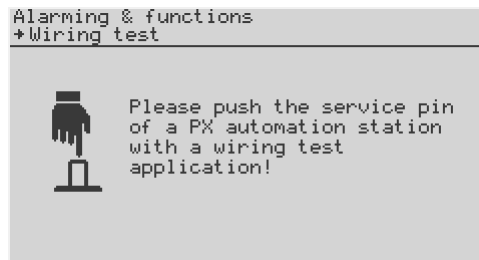


Figure 11-1 Instruction to press the Service pin.

- Follow the instructions in the display, and press the service pin of the required automation and control station.

Position of service pin

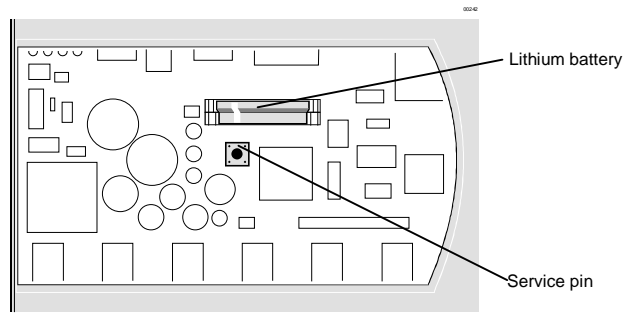


Figure 11-2 Position of service pin in a PX compact automation station

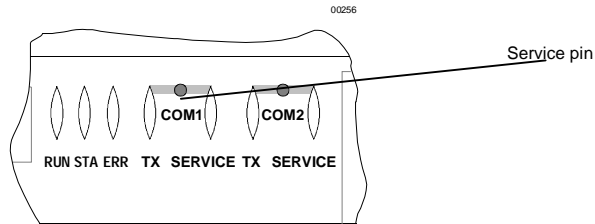


Figure 11-3 Position of the service pin in a PX modular automation station

The wiring test is complete.

List of all inputs and outputs

For your information, the PXM20 operator unit displays a list of all inputs and outputs of the tested automation and control stations, grouped according to signal type (analog, binary or multi-state, see Figure 11-4 .

Alarming & functions/Wiring test			Module No.
+MDC00			1/200
AI001	=	20.0 °C	
AI002	=	0.0 °C	
AI003	=	0.0 °C	
AI004	=	0.0 °C	
AI005	=	0.0 °C	
AI006	=	0.0 °C	

Signal:
 AI= analog input
 AO= analog output
 BI= binary input
 etc.

Figure 11-4 List of analog signals

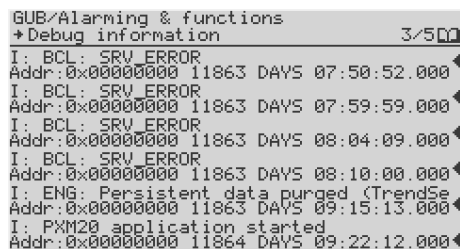
From here you can select the various inputs and outputs and also display further information.

11.2 Debug information

Debug information is helpful for troubleshooting, and is intended exclusively for development engineers. The latest entries are always displayed at the end of the list.

Note	The time entry is only valid once a PXC automation and control station has been identified.
------	---

 **Debug Infor** Select **Debug information** from the **Alarming & functions** dialog box.



```
GUB/Alarming & functions
+Debug information 3/500
I: BCL: SRV_ERROR
Addr:0x00000000 11863 DAYS 07:50:52.000
I: BCL: SRV_ERROR
Addr:0x00000000 11863 DAYS 07:59:59.000
I: BCL: SRV_ERROR
Addr:0x00000000 11863 DAYS 08:04:09.000
I: BCL: SRV_ERROR
Addr:0x00000000 11863 DAYS 08:10:00.000
I: ENG: Persistent data purged (TrendSe
Addr:0x00000000 11863 DAYS 09:15:13.000
I: PXM20 application started
Addr:0x00000000 11864 DAYS 09:22:12.000
```

Figure 11-5

This dialog box contains the following information:

Error category Error category (letter at the beginning of the line):

I: Information **E:** Error
F: Fatal error **B:** Reboot

Message text The following is an example of message text:

PXM20 application started

Address in the program This address indicates where the error occurred. This information can be useful for troubleshooting.

Example:
Addr: 0x8C6434

Time of occurrence The time at which the error occurred. The format is as follows:

Day, month, minute, second and millisecond since
01.01.1970 00:00.

Example:
11801 DAYS 09:25:06.000

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PXM20 operator unit

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