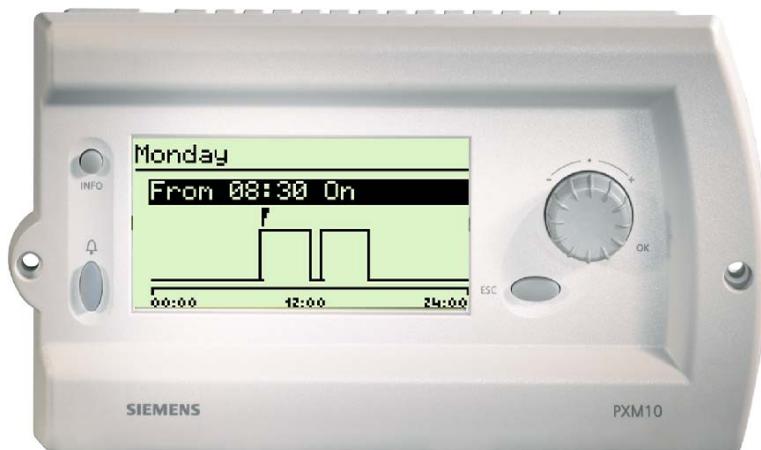


# SIEMENS



## DESIGO™ PX PXM10 operator unit User's guide Version 2.3



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# 1 About this manual

## 1.1 Target readers

---

This user's guide is written for the users of the plant and for service engineers. It is assumed that the users of the manual will have the necessary understanding of the system and plant.

## 1.2 Content

---

The descriptions in this manual cover the commissioning, basic configuration and use of the PXM10 operator unit.

As there may be significant differences between one plant and another, and between one object and another, it follows that it is not possible to provide a description which is generally applicable to every individual case. The question of exactly which objects are integrated with which values in a plant, is determined in the engineering phase according to the individual needs of the plant operator.



Important

The descriptions in this manual are intended as examples only, and are designed to clarify the basic operating principles of the PXM10 operator unit.

## 1.3 Printing conventions

### 1.3.1 Text in display panel

---

**Bold** text is used to denote the exact text which appears in the display, e.g. **Main menu** or **Settings**.

### 1.3.2 Labeling of the push-dial and buttons

---

The main operator control element, the "push-dial", is not named on the housing.

The "Acknowledge" function ("OK") is integrated into the push-dial.

The "Info" and "Esc" buttons are labeled accordingly on the housing.

The "Alarm" button is not named on the housing, but can be identified by the alarm symbol.

*Examples:*

*Press the Info button or, more briefly Confirm with OK.*

### 1.3.3 Notes

---



Caution

The symbol shown here acts as a warning in cases where an action may result in permanent loss of data.



Important

This indicates an important statement which requires your special attention.

*Note*

A "Note" qualifies an immediately preceding statement or statements.

## 2 Display and control elements

### 2.1 Layout

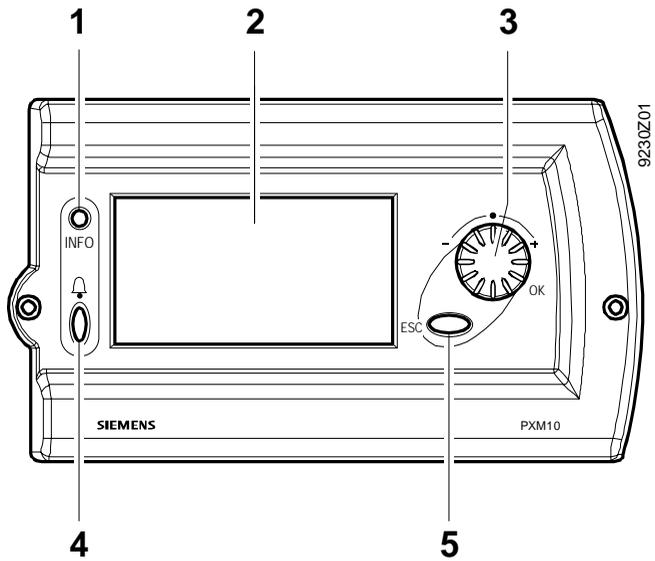


Figure 2-1 Housing

Key:

1. Info button
2. Display panel
3. Push-dial
4. Alarm button with alarm LED
5. Esc button

## 2.2 Push-dial and buttons

### 2.2.1 Push-dial

---



Figure 2-2 Push-dial

The push-dial is the main operator control element.

#### **Rotary action**

By rotating the dial, you can move from top to bottom of the text field and set or modify setpoints.

#### **Push action**

By pushing the dial, you can navigate to the next level down, and acknowledge a selected option or input; this function is equivalent to selecting "OK".

### 2.2.2 Esc button

---



Figure 2-3 Esc button

Pressing the "Esc" button lets you abandon a process you have already started (e.g. editing a value), navigate to the next higher level or close a pop-up window.

### 2.2.3 Info button



Figure 2-4 Info button

You can use the Info button to display a pop-up window containing all the available information about the selected line. You can close the pop-up window by pressing the Info button (or Esc button) again.

### 2.2.4 Alarm button with alarm LED



Figure 2-5 Alarm button with alarm LED

The alarm LED lights up or flashes when an alarm or event is tripped in the system. The alarm button takes you straight to the alarm list.

#### Alarm LED response

Alarm LED	Symbols	Event
Flashing		Pending alarm, unacknowledged (pop-up window and alarm list)
Steady light		Incoming event (pop-up window only)
		Pending alarm, acknowledged, and extended alarm, acknowledged but not reset (alarm list)
Off		No active alarms

#### Note

Alarms are operated by use of the push-dial (see Section 5).

## 2.3 Display panel

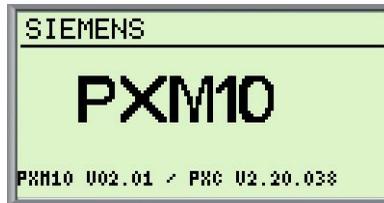


Figure 2-6 Opening screen

The PXM10 has a five-line display. It can be used to view all the visible elements of a plant with values or other information. Figure 2-7 shows the layout of the display. The areas of the display and the symbols used are described in the next section.

The push-dial and buttons used for navigation and editing are adjacent to the display panel, set into the housing itself. These buttons are described in Section 2.2.

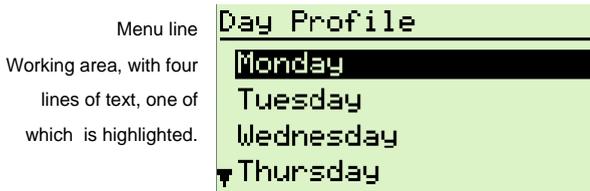


Figure 2-7 Layout of display with one line of text highlighted

### 2.3.1 Menu line

---

A screenshot of a digital display showing the word "Settings" in a monospaced font. The text is white on a dark background and is underlined by a thin white horizontal line.

Figure 2-8 Menu line

The line at the top of the display shows you the menu in which you are currently located. The menu line is underlined, separating it from the rest of the display with a horizontal line.

#### Exception

Under **Scheduler** > **Special period** you will see the entry **Others** which, as a submenu, is also underlined:

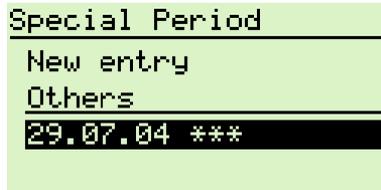
A screenshot of a digital display showing a submenu titled "Special Period". The title is underlined. Below it are three lines of text: "New entry", "Others" (which is underlined), and "29.07.04 \*\*\*".

Figure 2-9 Submenu

### 2.3.2 Working area

---

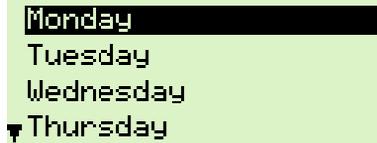
A screenshot of a digital display showing a list of days of the week: "Monday", "Tuesday", "Wednesday", and "Thursday". The text is white on a dark background. A small downward-pointing arrow is visible to the left of "Thursday".

Figure 2-10 Working area

Below the menu line is the working area, which consists of a maximum of four alphanumeric lines of text.

#### Note



Graphs are only displayed in the Scheduler menu.

If there are more lines than can be displayed at once, this is indicated by the scroll arrows.

## Highlighted line

A line highlighted in inverse video (light print on dark background) indicates an option associated with one or more hierarchically subordinate lines; you can display these with the push-dial.



Figure 2-11 Text lines, one of which is highlighted

## Outlined text

If a line of text is outlined, this indicates that you are at the lowest level, and you can only read, but not edit the value on this line. Use the Esc button to navigate back to the next higher level.

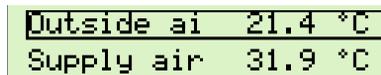


Figure 2-12 Outlined text at the lowest level

## Pop-up

A "pop-up" is a dialog box used to display an alarm or an event. The alarm button provides direct access to the list of pending alarms.

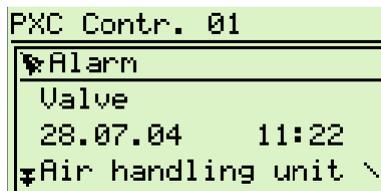


Figure 2-13 Pop-up display for an alarm

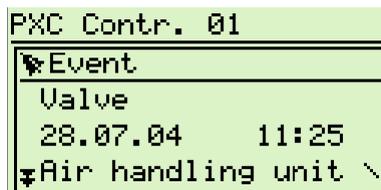


Figure 2-14 Pop-up display for an event

## Graphs

Time schedules are displayed in graph form .



Figure 2-15 Time schedule graph

### 2.3.3 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.

Symbol	Description
	<b>Favorite objects</b> These are defined at the engineering stage .
	Pop-up window: Alarm or event
	Alarm list: Uncleared alarm, neither acknowledged nor reset
	Uncleared but acknowledged alarm
	Alarm cleared but not acknowledged
	Alarm cleared, acknowledged but not reset
	Info window Info symbol
	Override Manually overwritten (forced) value
	Cursor Only used in Scheduler graphs.
	Wildcards Only used in <b>Scheduler &gt; Special period.</b> Description in Section 6.2.

### 3 Commissioning the PXM10

The PXM10 is used for local operation of a compact or modular DESIGO PX automation station. No user login is required. The PXM10 allows you to work at the "Basic" and "Standard" operating levels.

All the objects from these operating levels are mapped in the device.

*Note*

"Favorite" objects are defined at the engineering stage and mapped separately.

Step	Action
1	Mount the PXM10 on the housing of the modular automation station.
or	Connect the PXM10 to the compact or modular automation station with a PXA-C1 cable.
2	<p>After a few seconds, the display will light up and the opening screen will appear. The PXM10 is now ready for operation:</p>  <p>Figure 3-1 Opening screen</p>
3	Either open the plant data with OK
or	Press the alarm button to go directly to the alarm list.

*Notes*

The PXM10 and PXM20 can be used in parallel for operation and monitoring of a PXC...-U automation station by mounting the PXM10 directly on the automation station and connecting the PXM20 to the MMI/tool socket with a PXA-C1 cable.

If the PXM10 connection is interrupted briefly, it may take up to 15 seconds for the polling cycle to resume. The display can be re-enabled by operating any of the operator controls.

**Logout**



Caution

There is no need to log out.

Wait 30 seconds before reconnecting.

### 3.1 Settings on the device

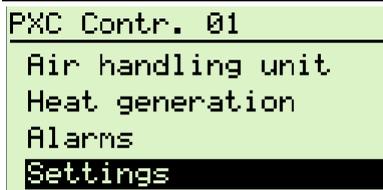


Figure 3-2 Display showing plant data

Step	Procedure
1	<p>Press OK to open the <b>Settings</b> menu.</p>
2	<p>Set individual values by rotating the dial and acknowledge the settings with OK. You can also use OK to move from one input field to the next within a value.</p>

Figure 3-3 Individual entries

Step	Procedure
3	When the last value has been acknowledged, the plant data screen is displayed automatically.

Contrast	100 = High; 0 = Low Default = 50
Time	Digital display, format: hh.mm
Date	Digital display, format: dd.mm.yy
Event pop-up	Active/inactive
View	Favorites / Both <b>Both</b> lets you display both the Favorite objects and all the objects in the "Standard user" view.

# 4 Reading and editing values

## 4.1 Example: Setting a setpoint

The screenshots below illustrate which values you can edit and which you can only read:

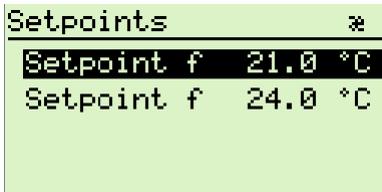


Figure 4-1 Highlighted values can be edited

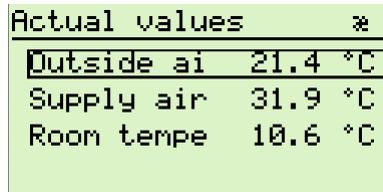


Figure 4-2 Outlined values are read-only

Step	Procedure
1	Navigate to the required setpoint (the relevant line is highlighted)
2	Select setpoint with OK.
3	A dialog box opens, in which you can set the value. <div data-bbox="437 823 817 1015" data-label="Image"> <pre> Setpoints      * ----- Setpoint for heating                 21.5 °C     </pre> </div> <div data-bbox="432 1029 930 1082" data-label="Caption"> <p>Figure 4-3 Setting a manual setpoint, with one input field only</p> </div> <div data-bbox="437 1094 817 1286" data-label="Image"> <pre> Settings ----- Time          11:18                 11:18     </pre> </div> <div data-bbox="432 1308 889 1337" data-label="Caption"> <p>Figure 4-4 Setting the time, with two input fields</p> </div>

*Note*

<b>4</b>	Rotate the dial to set the required value in the input field. Acknowledge with OK. If a value is made up of two or more input fields, the input focus will then switch to the next field.
<b>5</b>	Confirm with OK or press Esc to cancel. Press the Esc button to return automatically to the <b>Setpoints</b> screen (Figure 4-2).

# 5 Alarms and events

Difference between alarm and event

The LED display in the alarm button lights up in response to incoming alarms and events, and, in the case of alarms, starts flashing.

Events do not require acknowledgement, nor do they appear in the alarm list.

## 5.1 Pop-up windows

If an alarm or event occurs while the PXM10 is in operation, you will be notified accordingly in a pop-up window (Figure 5-1). If the PXM10 is only switched on after the occurrence of the alarm or event, there will be no pop-up window. These alarms do, however, appear in the alarm list.

### Activating event pop-up windows

If you want to be notified of events in a pop-up window, you can activate this option under **Settings > Event popup**.

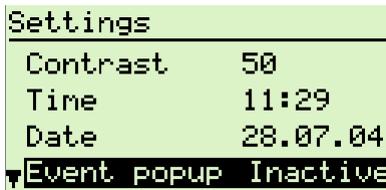


Figure 5-1 Settings screen



Figure 5-2 Activate event pop-up window

A pop-up window contains the main information about the event or alarm concerned:

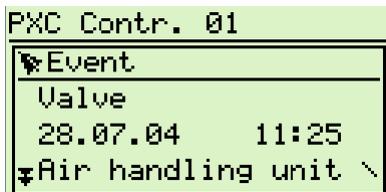


Figure 5-3 Pop-up window with event

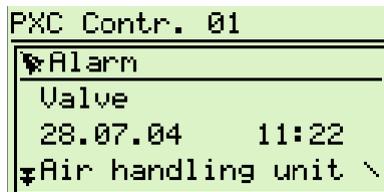


Figure 5-4 Pop-up window with unacknowledged alarm

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 list** directly (see Section 5.2).

### Deleting a pop-up window

Press Esc to delete a pop-up window without affecting the alarm.

## 5.2 Displaying the alarm list

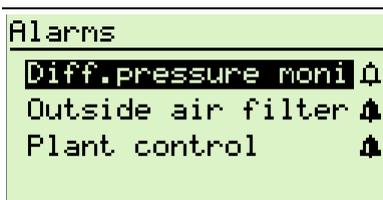


Figure 5-5 The **Alarms** menu (alarm list)

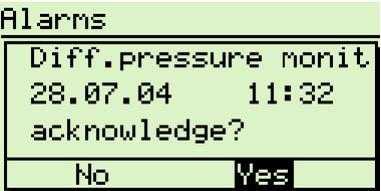
The alarm LED lights up and flashes.



Step	Procedure
1	Display the alarm list either by use of the alarm button.
or	by selecting the <b>Alarms</b> option.
	<p>The image shows a terminal-style display with a light green background. At the top, the text "PXC Contr. 01" is displayed. Below it, there are four lines of text: "Air handling unit", "Heat generation", "Alarms", and "Settings". The "Alarms" line is highlighted with a black background.</p>
	Figure 5-6 <b>Plant data</b> screen
2	<p>The alarm list opens. Unacknowledged alarms and alarms that have been acknowledged but not yet reset are displayed here.</p> <p>Each line contains the object name and the alarm symbol. All the associated information can be displayed by use of the Info button.</p>

<i>Notes</i>	Note that for each object, only the current alarm, i.e. the last alarm received, is displayed.  Acknowledged alarms and reset alarms are removed from the PXM10 display.
Exception	Acknowledged extended alarms (which require a reset) continue to be displayed in the alarm list until they are reset.

### 5.3 Acknowledging alarms

Step	Procedure
1 	Highlight the required alarm in the alarm list (Figure 5-3). The "bell" symbol shows the status of the alarm (see the symbol in Section 2.3.3):
2 	Acknowledge the next alarm.  <p>Figure 5-7 Prompt for acknowledgement</p> Use the push-dial to select <b>No</b> or <b>Yes</b> and acknowledge with OK.  The alarm LED will stop flashing and switch off. The bell symbol is marked with a tick, representing "acknowledged".  With extended alarms, which require a reset once the fault has been cleared, the alarm LED stays on (see Section 5.4).
3 <b>or</b>	Acknowledge the next alarm  Press Esc to close the alarm list.

*Note* Basic alarms disappear when the fault has been cleared: they do not require acknowledgement.

## 5.4 Resetting extended alarms

Extended alarms additionally require a reset. Delete the associated pop-up window by pressing Esc.



Caution

The alarm can only be reset after the fault has been cleared.

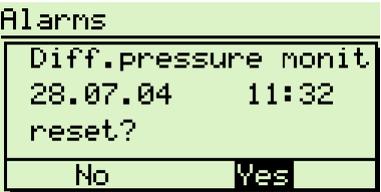
Step	Procedure
1	Navigate to the <b>Alarms</b> option (Figure 5-4)
2	Confirm with OK. The alarm list opens (Figure 5-3)
3	Highlight the required alarm and confirm with OK.
4	Clear the fault
5	Open the alarm list again
6	Select the required alarm and confirm with OK.  <p>The screenshot shows a green dialog box titled "Alarms". Inside, it displays "Diff.pressure monit", the date "28.07.04", and the time "11:32". Below this, it asks "reset?". At the bottom, there are two buttons: "No" and "Yes".</p>
7	Use the push-dial to select <b>No</b> or <b>Yes</b>
8	Confirm with OK to reset the alarm.
9	The alarm disappears from the alarm list.

Figure 5-8 Resetting an alarm

# 6 Scheduler

---

The Scheduler consists of a "Day profile" option (for 7-day programs) and a "Special period" option for exceptions.

- In the "Day profile" you can define switching operations to be repeated week after week.
- In the "Special period" menu, you define individual days which deviate from those defined in the day profile.

*Note*

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

## 6.1 Day profile

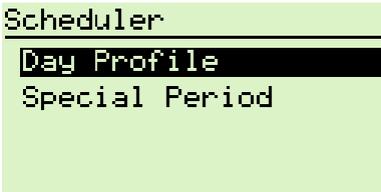
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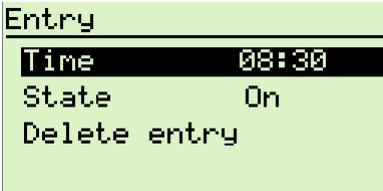
In the **Day profile** you can define separate switching periods for each day of the week, which are then repeated week after week..



Figure 6-1

## 6.1.1 Editing an existing profile

Step	Procedure
1	<p>Highlight the <b>Day Profile</b> option and click OK to open it</p>  <p>The screenshot shows a menu titled 'Scheduler' with three options: 'Day Profile', 'Special Period', and 'Special Period'. The 'Day Profile' option is highlighted with a black background and white text.</p> <p>Figure 6-2</p>
2	<p>In the <b>Day profile</b> menu, highlight the required day and click OK to open it.</p>  <p>The screenshot shows a menu titled 'Day Profile' with four options: 'Monday', 'Tuesday', 'Wednesday', and 'Thursday'. The 'Thursday' option is highlighted with a black background and white text.</p> <p>Figure 6-3</p> <p>A screen appears with a graph representing the day profile.</p>  <p>The screenshot shows a graph titled 'Monday' with the text 'From 08:30 On'. The graph has a horizontal axis representing time from 00:00 to 24:00, with a vertical tick mark at 12:00. The profile shows a high level from 08:30 to 12:00, a low level from 12:00 to 13:00, and a high level from 13:00 to 18:00, with a low level from 18:00 to 24:00.</p> <p>Figure 6-4 Day profile</p>

Step	Procedure
3	<p>Click OK to open the input window</p>  <p>Figure 6-5 Input fields for the day profile</p>
4	<p>Rotate the dial to set the required time and switch status. Move to the next input field by pressing OK in each case.</p>
5	<p>Finally, confirm the inputs with OK.</p>

### 6.1.2 Adding a new entry

Step	Procedure
1	<p>Highlight the <b>Day Profile</b> option and click OK to open it</p>  <p>Figure 6-6</p>
2	<p>Highlight the required day and open it with OK.</p>  <p>Figure 6-7</p>

A screen appears with a graph representing the day profile.

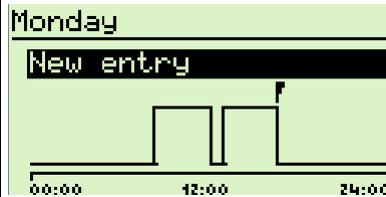


Figure 6-8

- 3 Rotate the push-dial until the cursor marks **New entry**, and then define the new switching operation.

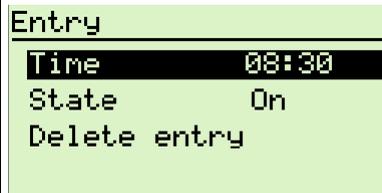


Figure 6-9

## 6.2 Special periods

The **Special period** option is used to define individual days which deviate from those defined in the "Day profile".

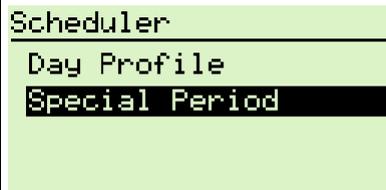
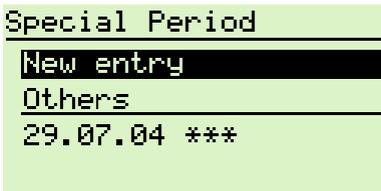
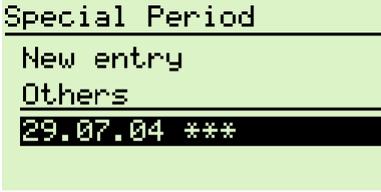
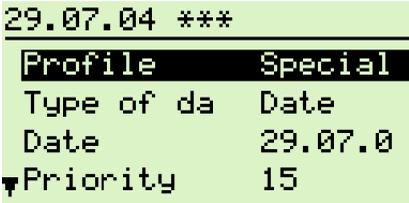
Step	Procedure
1	Highlight the <b>Special period</b> option and open it with OK. 

Figure 6-10 Special period

<p><b>2</b></p>	<p>A window opens, containing the following options:</p> <ul style="list-style-type: none"> <li>• <b>New entry</b> Define a new special period</li> <li>• <b>Others</b> Edit an existing special period</li> </ul>  <p>Figure 6-11 <b>Special period</b> screen</p>
<p><b>3</b> <b>or</b></p>	<p>Continue as described in Section 6.2.1 Others as in Section 6.2.1, Adding a new entry</p>

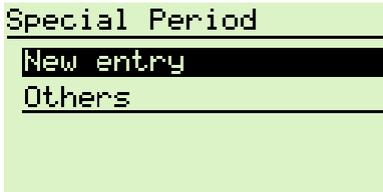
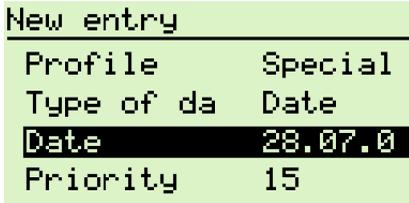
## 6.2.1 Others

Step	Procedure
1	<p>Open the required entry and confirm with OK.</p>  <p>Figure6-12 Existing entry under <b>Others</b></p>
2	<p>Edit the individual values as required and confirm with OK.</p>  <p>Figure 6-13 Individual entries</p> <p>The date type and priority should be modified only by a fully trained person.</p>



Caution

## 6.2.2 Adding a new entry

Step	Procedure
1	<p>In the <b>Special period</b> field highlight the <b>New entry</b> option and confirm with OK..</p>  <p>Figure 6-14</p>
2	<p>The <b>New entry</b> screen will appear.</p>  <p>Figure 6-15</p>
3	<p>Open the individual entries. Rotate the push-dial to set the required values. Move to the next input field by pressing OK in each case.</p> <p>The profiles are defined individually at the engineering stage.</p>
	<p>The date type and priority should be defined only by a fully trained person.</p>
4	<p>Confirm inputs with OK and use the Esc button to back out again.</p>

Note



Caution

### Wildcards

\*\*\*

You can use wildcards when entering the date type, week & day, and the date. Each wildcard represents any value in the day, month or year. To enter wildcards, rotate the push-dial anticlockwise until the wildcard "stars" appear. Wildcards

appear in the display panel in the form of the symbol shown to the left.

Example:

A new special period is to be defined, which is to take effect on New Year's Day, i.e. on 1<sup>st</sup> January of every year. The calendar year values change annually. You should therefore enter the date as follows:

**01.01. \*\*\***

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