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1 Introduction

1.1 What is EIB?

EIB, the European Installation Bus, is the leading system worldwide for the intelligent networking of electrical installations. The most significant European manufacturers of electrotechnical devices are members of EIBA*, the EIB association.

*In the future, EIBA will be merging with other European organisations of bus manufacturers to form the Konnex Association and the new KNX logo will be used.

The EIB devices of these manufacturers are certified according to strict guidelines. They are interchangeable and can therefore communicate with each other via a bus cable regardless of the manufacturer.

The bus cable that is laid in addition to the network cable links the devices and supplies them with voltage.

This networking of devices enables new functions to be implemented which were previously not possible in a conventional installation or only with difficulty.

The EIB system is used for the automatic control of devices and installations in both residential and office buildings as well as functional and commercial buildings.

Sensors such as push buttons, movement detectors or thermostats send telegrams with information via the bus cable to actuators which for example switch luminaires or control the heating in the room.

The EIB installation is configured and put into operation by your electrical installer. Sensors and actuators can be programmed and linked by him as required. Later modifications or extensions to the system are also possible at any time.

The occupants of the house conveniently operate the functions of the EIB installation via conventional switches. EIB brings them convenience, flexibility, economic efficiency and security.

Many functions can be implemented with EIB such as:

- control and dimming of the lighting and the selection of lightscenes
- switching of luminaires via movement detectors according to requirements
- control of external shutters and awning including protection via wind sensors
- control of shutters and blinds dependent on time and external light
- individual room control of the heating dependent on requirement and room usage
- control of skylights and protection via rain sensors
- connection to an alarm system
- central visualisation of signals
- central control of lighting and shutters
- constant lighting control
- and many more...

1.2 Product and functional description



AB/S 1.1

The application unit is a DIN rail mounted device for insertion in the distribution board. The connection to the EIB is established via a bus connecting terminal at the front of the device.

The device must be downloaded with the application program **Times Groups/1** by the installer of the EIB system and parameterised with your required functions.

The application program **Times Groups/1** contains a year time switch program which allows day routines and week routines to be defined individually. As a system operator, you can adapt the time switch program that has been created by the installer under Windows' to your own requirements.

Further application programs are available for the application unit.

For example:

Using the application program **Logic Time 200 IO/1**, gates and timing elements can be positioned in a very simple way using an integrated graphical interface in ETS2 and then linked in order to implement control systems.

The application program **Logging/1** enables textual information to be printed out via the ABB i-bus® EIB to one or more logging printers. The printers are connected via RS 232 interfaces which are downloaded with the corresponding application program. A typical application is the printing out of faults that have occurred in the relevant services.

This user manual describes the functions which are possible with the parameterisation software **PZ/M 1**.

2 Application of the parameterisation software PZM 1

2.1 Area of application

The application program **Times Groups/1** of the application unit AB/S 1.1 enables the installer to implement complex time switch programs for building automation via the EIB.

As the user of the system, you can simply adapt the time switch program of the application unit AB/S 1.1 to your requirements with the parameterisation software **PZM 1** and are thus able to guarantee the flexibility of operation of the installation.

2.2 The programming software PZM 1 for the system user

The parameterisation software **PZM 1** runs under Microsoft Windows™ from version 95/98/2000/ME/NT/XP upwards.

The programming software PZM1 offers you the following possibilities:

- adapt the time switch program created by the installer of the system to your own requirements,
- read in the file that has been transferred by the installer,
- modify the time switch program according to your requirements and download it into the application unit via the EIB,
- store the modified time switch program as a file,
- print out the time switch program completely or partially
- read out and set the date and time in the application unit and read out specific information from the device.

2.2.1 System requirements

The following system configuration is required for the use of the parameterisation software **PZM 1**:

Hardware:

CPU Pentium 133 MHz

Hard disk 64 MB RAM

CD-ROM drive

One free serial interface

Printer

Parameterisation software PZM 1 for application unit AB/S 1.1

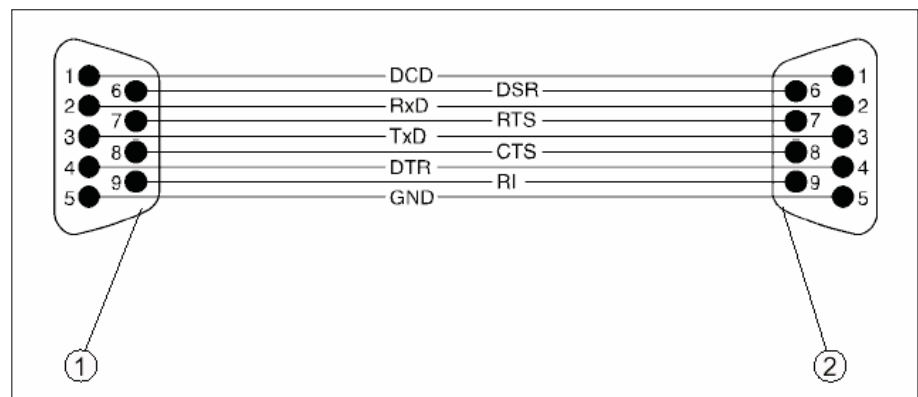
A connecting cable and an RS 232 interface e. g. **EA/S 232.5** are required for data transfer between the PC and the application unit **AB/S 1.1**.

You can obtain the RS 232 interface (e. g. **EA/S 232.5**) from your electrical installer.

The connecting cable links the serial interface of the computer (COM1 or COM2) with the RS 232 interface of the EIB installation. The RS 232 interface establishes the connection with the bus.

Connection to a PC with D-SUB-9 socket connector

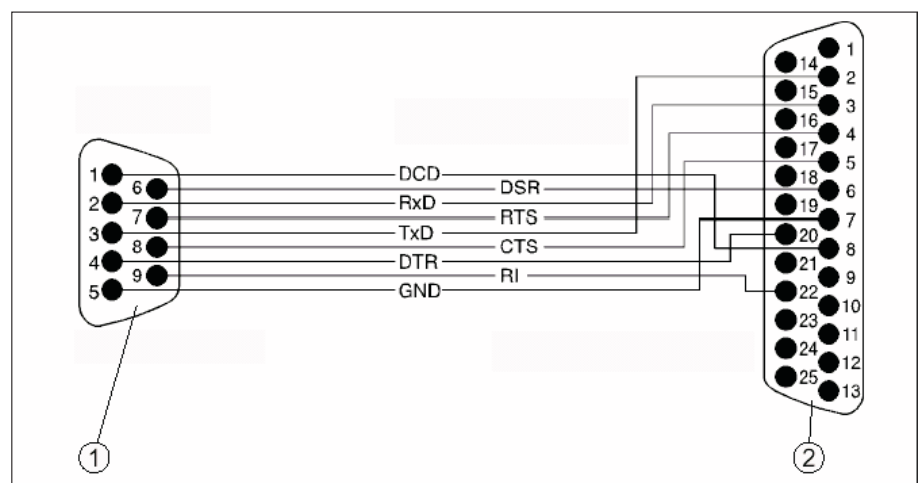
The connecting cable must be wired 1:1 if the PC interface is designed as a 9-pole D-SUB plug.



1 D-Sub-9 plug connector

2 D-Sub-9 socket connector

Connection to a PC with D-SUB-25 socket connector



1 D-Sub-9 plug connector

2 D-Sub-25 socket connector

If the PC interface is designed as a 25-pole D-SUB plug, an adapter or an appropriate connecting cable is required for the link to the 9-pole terminal of the RS 232 interface.

Software:

Microsoft Windows™ from version 95/98/2000/ME/NT/XP upwards

Parameterisation software **PZM 1**

2.2.2 Delivery format

You will receive the parameterisation software **PZM 1** from the installer of the system when the time switch program is handed over.

It can be found on the ABB STOTZ-KONTAKT CD-ROM under „Software“

or

You can download the parameterisation software **PZM 1** from the ABB STOTZ-KONTAKT home page www.abb.de/stotz-kontakt

2.2.3 Installation of the parameterisation software PZM1

Prerequisites

Familiarity with Microsoft Windows™ is a prerequisite in this manual. A detailed description of the operation of this program is therefore not included. We refer you in this context to the appropriate information in the Microsoft Windows manual and the corresponding specialist manuals.

Installation

The parameterisation software PZM 1 is installed using the following steps:

- (a) Open the directories **Software** and **PZM 1** in succession on the CD-ROM using Windows Explorer. Start the file **setup.exe** with a double click and follow the instructions of the setup program on the screen.
- (b) Start the file downloaded by the ABB STOTZ-KONTAKT home page and follow the instructions of the setup program on the screen.

3 Working with the parameterisation software PZM1

3.1 Introduction

If you have installed the parameterisation software on your PC, start the **PZM 1** program.

Operation of the parameterisation software is simplified if you use the context-sensitive Help function.

3.2 Working with the context-sensitive Help function

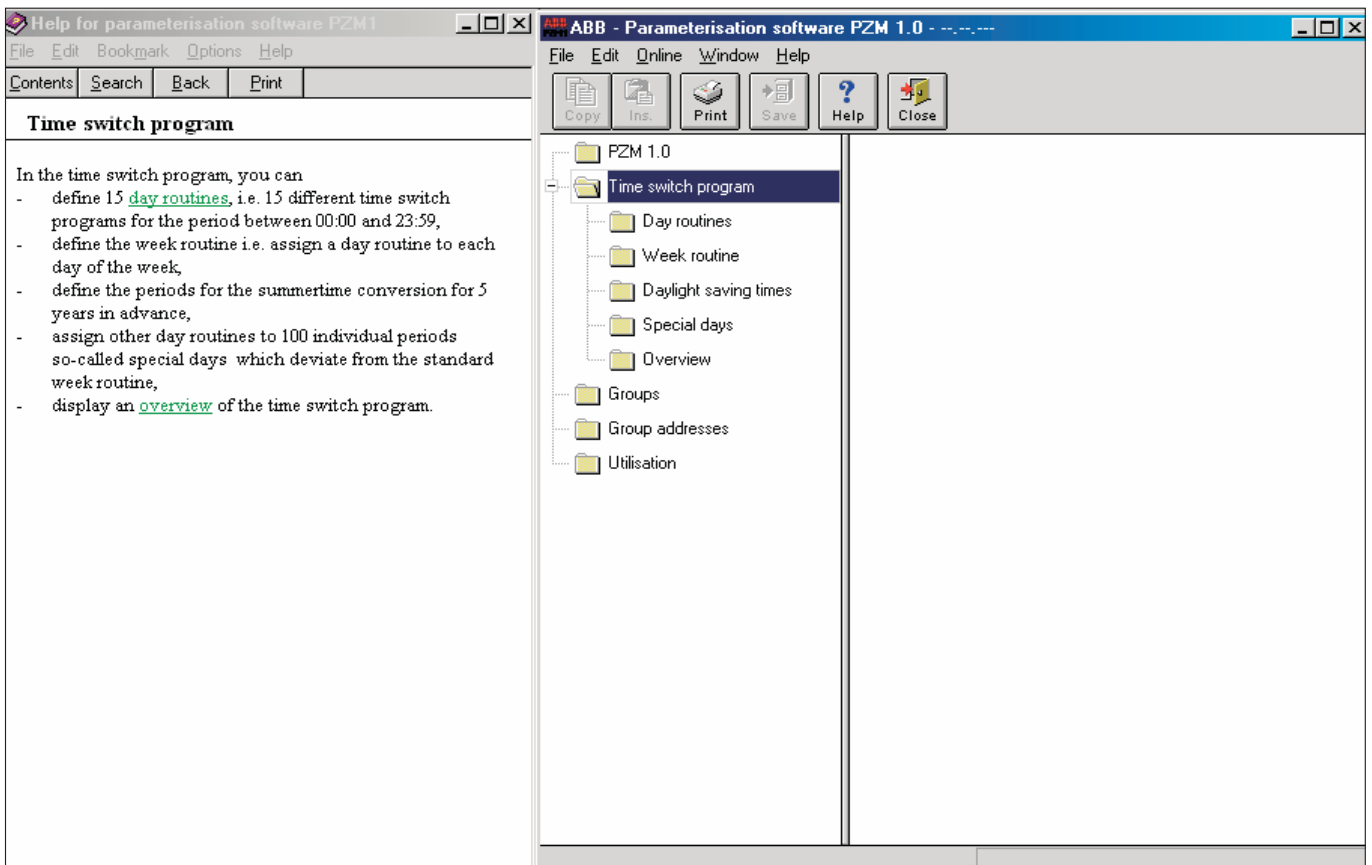
The context-sensitive Help function provides you with the necessary information for each step involved in the modification of the time switch program with the parameterisation software **PZM 1**.

The Help function is retrieved as follows:

- Press the **Help** button in the dialog window or
- Press the right mouse button in the table area and select **Help about**
- Press **F1** on the keyboard or
- Press the **Help** button in the toolbar.

The following procedure is the best way of using parameterisation software **PZM 1** and its Help function:

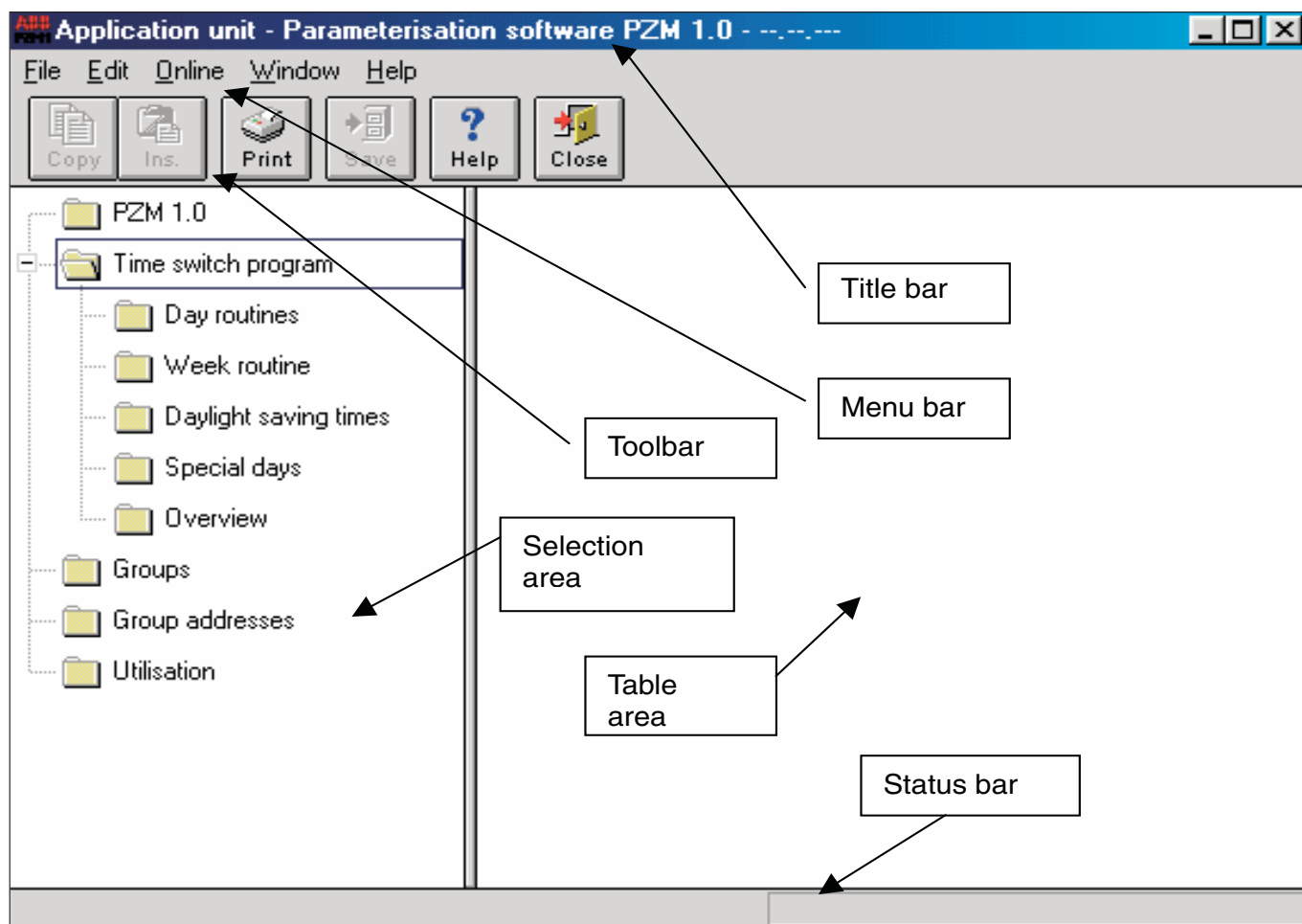
After starting the parameterisation software **PZM 1**, minimise the window and move it to the right-hand side of the screen so that about a third of the screen width remains free. Now call up the **Help for Software** option and position the open window in the unoccupied area on the left-hand side.



When you call up the Help function for information, you can now see the relevant Help page on the left-hand side for each editing step.

By clicking on the underlined terms marked in green, you can receive further explanations for these terms. You can return to the previous Help page using the **Back** button.

3.3 Parameterisation interface of the parameterisation software PZM 1



3.3.1 Title bar

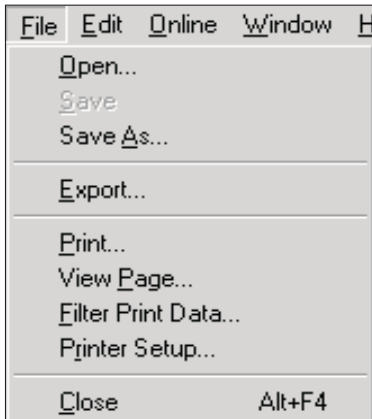


The title bar contains **Windows™-icons** for minimising, restoring/maximising and closing the window as well as information about the manufacturer and the name of the application program. If you have opened a .zm1 file, the physical address of the application unit AB/S 1.1 is also indicated.

3.3.2 Menu bar



The menu bar contains the selection menus **File**, **Edit**, **Online**, **Window** and **Help**.



File selection menu

Some of the menu items are context-sensitive and are only activated in specific configurations. Inactive menu items are greyed out.

An important prerequisite for the availability of many menu options is that a time switch program must previously be read in as a .zm1 file.

Open

By selecting the menu item **Open**, the time switch program that has been created by the installer via the application program **Times Groups/1** or that you have exported with the parameterisation software **PZM 1** can be read in as a .zm1 file.

Save

The time switch program is stored under the current filename with the file extension **.zm1** by selecting the menu item **Save**.

Save As

By selecting the menu item **Save As**, the time switch program can be stored under a name that you have specified with the file extension **.zm1**.

Export

By selecting Export, the time switch program can be stored as a **.zm1** file or in **.csv** format. Select the required format from the list field.

Files with the extension **.zm1** can be imported into the parameterisation software **PZM 1** where the time switch program can be edited.

Files in **.csv** format can be imported into other word processing or spreadsheet software where the parameterisation data can be edited and printed out.

Print

The time switch programs can be printed out in table format by selecting **Print**.

View Page

Under **View Page**, you can display the layout of the parameterisation data on the screen before it is printed.

The menu item **Filter Print Data** enables you to select the sections of the parameterisation which should be printed out.

Filter Print Data

Select the **All** button if you wish to print out all the parameter settings.

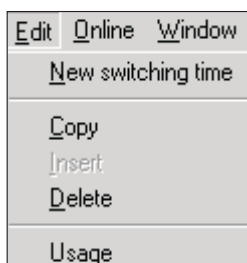
To print out specific sections of the parameterisation, choose the **Selection** option, press the **Ctrl** key and select the entries which you wish to print out with the left mouse button.

Printer Setup

The option **Printer Setup** allows you to select and configure a printer.

Close

By selecting **Close**, you can exit the parameterisation software **PZM 1**. You are then requested to save the data if required.



Edit selection menu

Some of the menu items are context-sensitive and are only activated in specific configurations. Inactive menu items are greyed out.

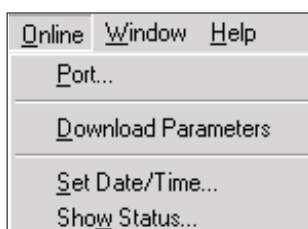
New creates either a new day routine, new switching time, new daylight saving time, new special day, new group, new group triggers or new group members, depending on the context.

Copy copies the marked line to the clipboard.

Insert pastes the contents of the clipboard as a new entry.

Delete removes the marked line.

Usage indicates the function of a marked parameter.



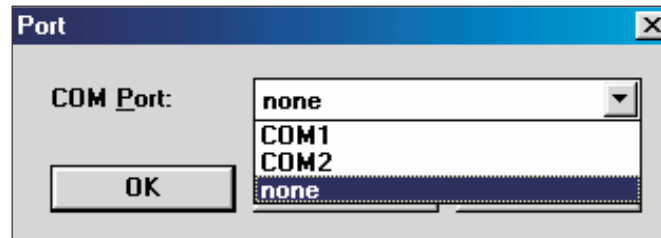
Online selection menu

The menu items **Port**, **Download Parameters**, **Set Date/Time** and **Show Status** are context-sensitive and are only activated in specific configurations. Inactive menu items are greyed out.

Parameterisation software PZM 1 for application unit AB/S 1.1

Port

By selecting the menu item **Port**, you can select the serial port (COM port) of your PC so that you can transfer the parameterisation data via the EIB interface to the application unit.



In the dialog field, you can select the options **COM1**, **COM2** or **none** from the list field. Confirm your entry with **OK**.

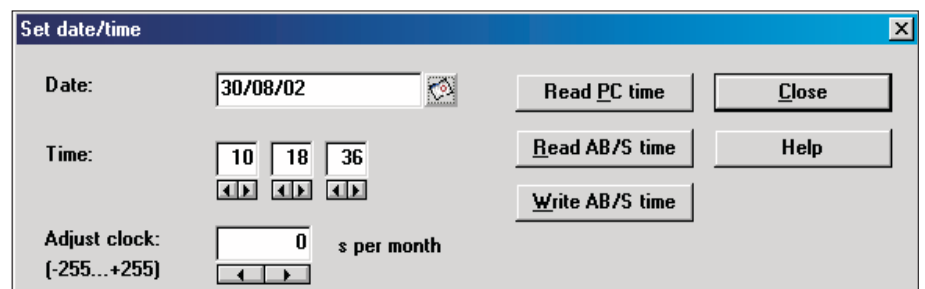
Download Parameters

A prerequisite for transferring the parameterisation data is that the selected serial port of your PC is linked with the EIB RS 232 interface e. g. **EA/S 232.5** to the EIB installation via a 1:1 connection cable and that a PC port has been selected.

Using **Download Parameters**, you can transfer the current parameterisation data into the application unit. Once the parameters have been downloaded, a dialog window is opened in which you can read out or set the date and time.

Set Date/Time

By selecting the menu item **Set Date/Time**, you can read out or set the date and time of the internal clock of the application unit. The relevant dialog window opens.



A prerequisite is that the physical address and the application have previously been downloaded into the application unit AB/S 1.1.

Parameterisation software PZM 1 for application unit AB/S 1.1

The current date and time of the PC are read and displayed automatically when the dialog field is opened.

With the buttons **Read PC time** and **Read AB/S time**, you can update the fields **Date** and **Time** to match the corresponding time.

You can also enter a date and a time to set the time in the application unit.

The date can be set in a range between 01/01/1970 and 31/12/2035. It is displayed as two-digit numbers which are separated in the format day/month/year. Entries for the year between 36 ... 69 are rejected.

There is a button to the right of the entry field for the date which enables the relevant pages of the calendar to be displayed for the current date.

The date can be entered either directly or by selecting a date in the calendar.

Please note that the time switch Programm is updated when the clock is adjusted and switching operations can be triggered as a result.

The accuracy of the internal clock is primarily dependent on the ambient temperature and it can gain or lose up to 1 minute per month. You can improve the accuracy of the internal clock by entering an offset value in the text field **Adjust clock**. If the clock for example gains 20 seconds during the month, this inaccuracy can be compensated by entering an offset value of -20 seconds.

◀ March 2002 ▶						
Su	Mo	Tu	We	Th	Fr	Sa
24	25	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

Show Status

After selecting **Online** and **Show Status**, the device status is read out from the application unit and a message field opens.

Device status ✕

Address: 1.1.1

Last parameter download: 30/08/02 10:16:20

User program status: Program is initialised and running

AB/S time: 02/08/00 21:08:56

Switch program status

Time set, switch program is running: Yes

Current day routine: 0

Day routine type: Week routine

Summertime/wintertime: undefined

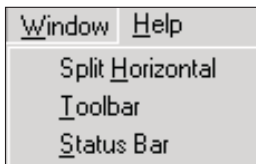
Read Status
Close
Help

The message field indicates:

- the address of the application unit in the EIB installation
- the date and time when the parameterisation data was last downloaded into the application unit
- the status of the application program that is running in the application unit
- the date and current time of the internal clock in the application unit
- the status of the time switch program
- the current day routine
- the type of the current day routine
- the status of the summertime/wintertime conversion

The message field can be updated by pressing the **Read Status** button.

You exit the message field by pressing the **Close** button.



Window selection menu

Split Horizontal

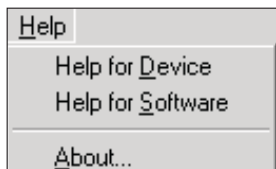
The window of the table view can be divided. The same parameterisation data is displayed in both partial views. This simplifies the copying of elements e. g. entries are copied into partial view 2 from day routine 5 and inserted into day routine 7 of partial view 1 using „drag & drop“ or „copy & insert“.

Toolbar

The toolbar can be activated or deactivated here.

Status Bar

The status bar can be activated or deactivated here.



Help selection menu

Help for Device

By selecting the menu item **Help for Device**, you can obtain a brief description of the hardware of the application unit.

Help for Software

This option gives you comprehensive information about the parameterisation software **PZM 1**.

About

About ... provides you with information about the parameterisation software **PZM 1**.

3.3.3 Symbolleiste



The toolbar contains buttons with the most important commands for rapid retrieval with the mouse. The buttons are context-sensitive and only activated in specific configurations.

The toolbar can be activated or deactivated by pressing **Toolbar** in the **Window menu**.

Copy copies the marked line to the clipboard.

Insert pastes the contents of the clipboard as a new entry.

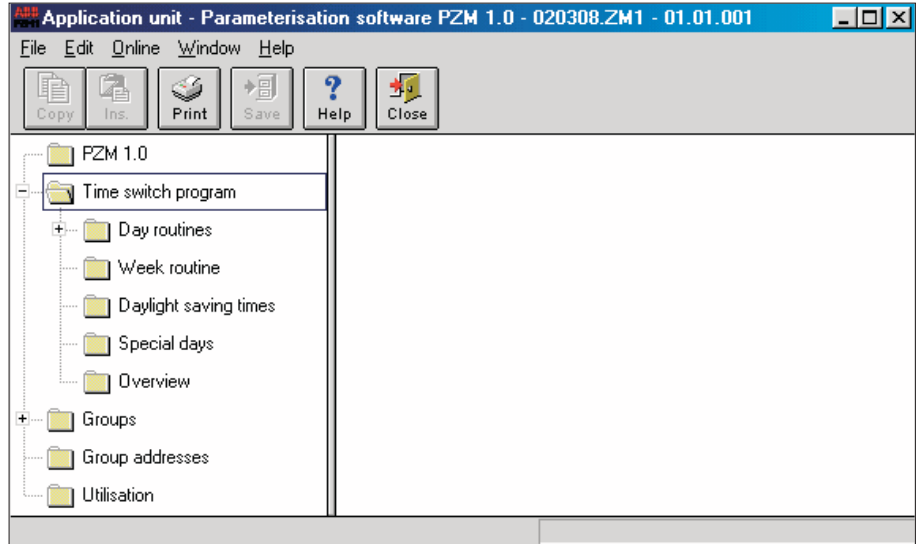
Print prints out the parameterisation data in table format.

Save stores the parameterisation data under the current filename with the file extension **.zm1**.

Help opens the Help function of the parameterisation software **PZM 1**.

Close exits the parameterisation software **PZM 1**. Asks if you wish to save the data.

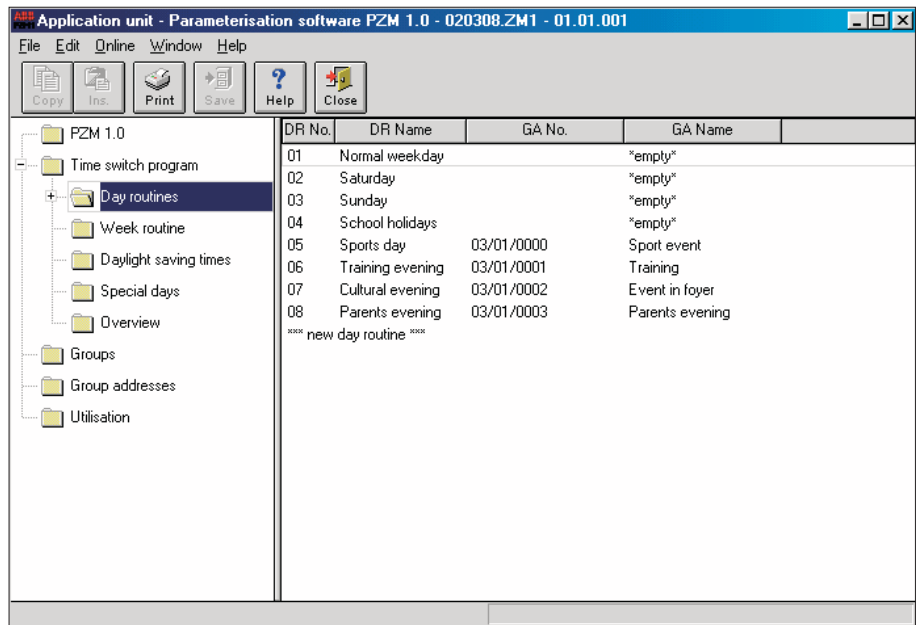
3.3.4 Selection area



The selection area on the left-hand side has a similar structure to the browser in Windows™ Explorer. From there, you can select the table that is to be displayed or edited.

The folders depicted are located in the selection area.

3.3.5 Table area



The table area on the right-hand side displays the table or view that has been marked in the selection area. Existing entries can be edited or deleted and new entries can be inserted.

3.3.6 Status bar



When it is activated, it always forms the lower border of a window. It indicates for the current selection in the **Table area**, the number of elements that are still available for further entries.

The status bar can be activated or deactivated in the **Window** menu under the item **Status Bar**.

4 Adapting the time switch program with the parameterisation software PZM 1

4.1 Procedure

The EIB installation has been planned and installed by the installer of the system. You have discussed with him the functions that the application unit **AB/S 1.1** should fulfil e. g. day routines, switching times etc.

He has then created the time switch program and downloaded it into the application unit **AB/S 1.1**.

When the system was handed over, you were given the time switch program by the installer as a .zm1 file. If several application units are used in the installation, there is a .zm1 file for each application unit.

You have further received an ABB product data CD-ROM with the parameterisation software **PZM 1**.

The installer of the system has defined the group addresses (functions) when assigning parameters to the EIB installation which you can access with the parameterisation software **PZM 1**. He has specified names for these group addresses and selected them so that they indicate their usage e. g. „Switch external lighting ON/OFF“.

You cannot modify these names with the parameterisation software **PZM 1**.

After starting the parameterisation software **PZM 1**, first open the .zm1 file of the application unit **AB/S 1.1** which you wish to edit.

Under the folder **PZM 1** in the table area, you can obtain information from the installer about the time switch program and its usage. Check in the field **Comment of the installer** that you have opened the correct file.

Before you carry out a change in the time switch program, you should generate a working copy of the file with the Save As option. Select a new name for this. If your changes are not successful, you can then revert back to the original file.

If your changes have been carried out, enter a comment in the field **Comment of the user** e. g. the change carried out and the name of the change ... and store the modified file.

Download the modified file into the application unit **AB/S 1.1**. Then set the internal clock and test the changes you have carried out.

If several application units are present in the installation, the unique address ensures that the time program is downloaded into the correct application unit.

If all the changes to the time switch program have been carried out and tested, save and archive the modified file.

If you wish to extend the EIB installation at a later date or if new functions are required which you cannot conduct yourself with the parameterisation software PZM 1, the installer needs the .zm1 file with the current time switch program.

If the file with the current time switch program is no longer available, the changes that you have made are lost when the installer edits the program.

4.1.1 Working in the table area

The selection area has a similar structure to the browser in Windows™ Explorer. By choosing the corresponding folder, you can select the table that is to be displayed or edited.

The table area displays the table or view that was marked in the selection area. Existing entries can be edited or deleted and new entries can be inserted.

Deleting an existing entry

Select one or more existing entries. Press the right mouse button and select **Delete** from the pop-up menu or select **Delete** from the **Edit** menu in the toolbar. You are then asked to confirm the deletion. Close this message field with **Yes** to delete the entry or **No** to cancel the deletion.

Editing an existing entry

Select one or more existing entries. Double click with the left mouse button or press the right mouse button followed by **Edit** in the pop-up menu to open the relevant dialog window for editing the entry.

The dialog windows for editing existing entries can be closed by pressing the **OK** and **Cancel** buttons.

Any changes that have been carried out are adopted by pressing the **OK** button, while pressing the **Cancel** button loses the changes.

Inserting a new entry

Select *****new entry*****. Double click with the left mouse button or press the right mouse button and select **Edit** from the pop-up menu. Alternatively, select the **Edit** menu followed by the menu item **New xxx** if available. This opens the dialog window for creating a new entry.

You can exit the dialog windows for inserting a new entry using the buttons **Insert** and **Close**.

After pressing the **Insert** button, the new entry is inserted in the table and a further entry can be edited in the dialog window.

You can exit the dialog window without inserting the new entry by pressing the **Close** button.

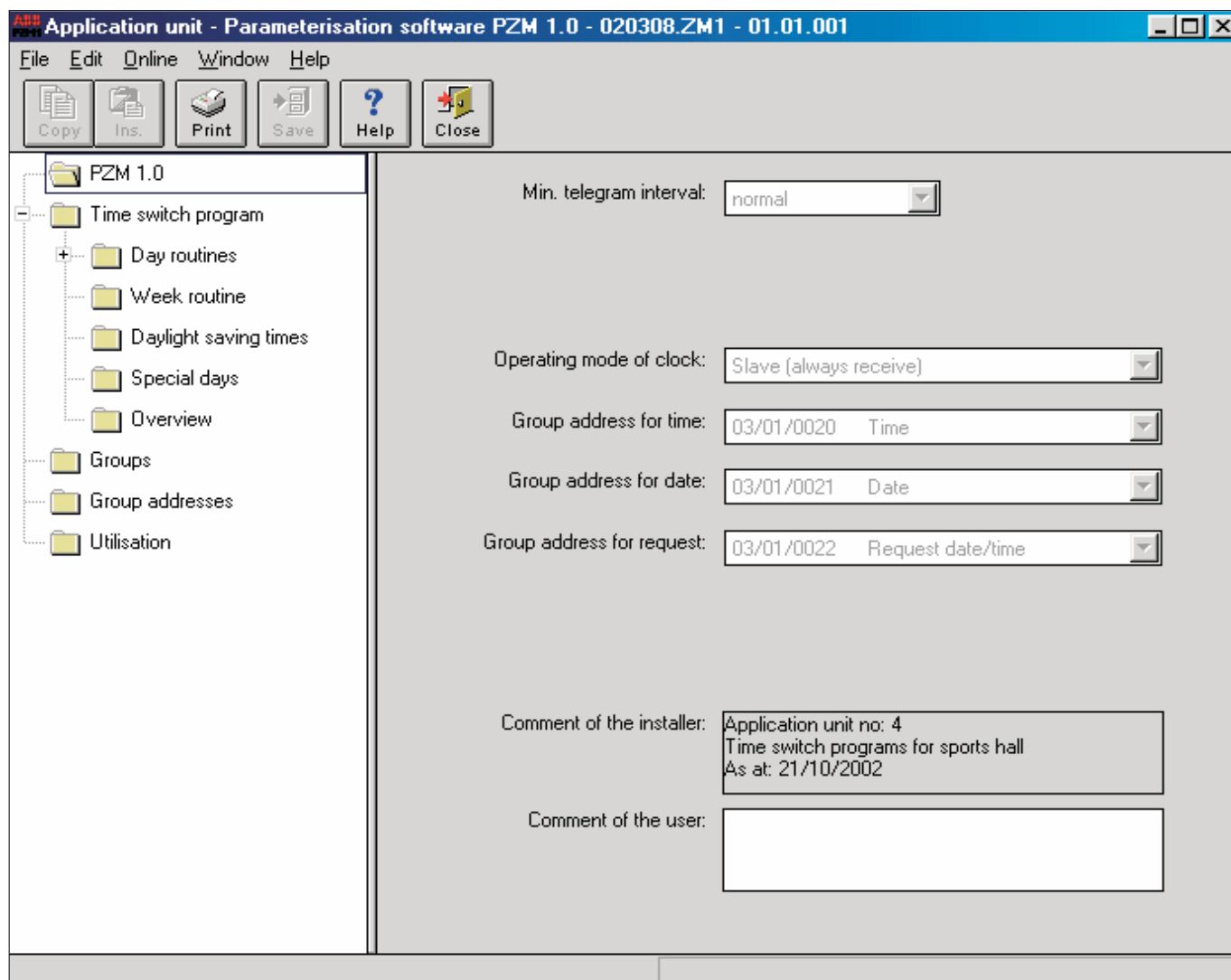
Sorting in list fields

When creating new entries, the possible entries are chosen from list fields with one or more columns. To ease the selection, the columns can be moved in the list field and sorted into ascending or descending order. To move the column, click on the column header with the left mouse button and shift it to the right or left while keeping the mouse button pressed down. To sort in ascending order the list field is opened and you click on the columns that you wish to sort with the left mouse button. To sort in descending order, the **Ctrl** key must be pressed and held down before using the left mouse button.

Note:

The **Utilisation** list field cannot be sorted.

4.2 PZM 1



The associated table area displays the general parameters of the parameterisation software **PZM 1** and two comment fields. This data cannot be modified by yourself, except for the field **Comment of the user**.

4.2.1 Min. telegram interval

The parameter **Min. telegram interval** indicates which minimum time interval is used by the application unit for sending the bus telegrams in succession. For example, if a minimum telegram interval of 0.5 s is selected and 5 telegrams need to be sent, the last telegram is sent 2.5 s after the first telegram. The option **normal** means that no additional delay has been inserted.

4.2.2 Operating mode of clock

A further field indicates whether the internal clock of the application unit has been set by the installer of the EIB system as a master clock or a slave clock. The group addresses that have been assigned for the date, time and request are also displayed.

Parameterisation software PZM 1 for application unit AB/S 1.1

Working mode of the internal clock

The time switch program is controlled by an internal clock in the application unit. The clock is supplied by the bus voltage. In the event of a bus voltage failure, the internal clock has a power reserve of at least 1 hour.

If bus voltage recovery occurs within this period, the time switch program restarts automatically.

Once the power reserve has elapsed, the current date and time are lost and the time switch program is halted until the date and time are reset.

The behaviour of the clock of the application unit **AB/S 1.1** on bus voltage recovery can be specified via the parameters.

The clock can be set automatically by a bus telegram from a master clock. Otherwise, the clock must be set via the application program **Times Groups/1** or the parameterisation software **PZM 1**.

Note:

The time switch program is updated when the clock is adjusted and switching operations can be triggered as a result.

Once the power reserve has elapsed, a cold start is carried out, whereby the assigned group address is sent and the current time is requested. The internal clock is then synchronised to the master clock. The time switch program is updated and restarts.

Switching operations can be triggered as a result.

General information about the slave and master operating modes

If slave or master has been selected as the operating mode, the group addresses for the time, the date and for requesting the time and date are displayed.

Operating mode of clock:	Slave (always receive)
Group address for time:	03/01/0020 Time
Group address for date:	03/01/0021 Date
Group address for request:	03/01/0022 Request date/time

Operating modes of the internal clock

With the parameter **Operating mode of clock**, you can see the operating mode of the internal clock which the installer of the EIB system has selected. The following modes are possible:

- **Internal** (default setting)
- **Slave (always receive)**
- **Slave, OFF period (00:05 ... 23:55 receive)**
- **Master (send every minute)**
- **Master (send every hour)**
- **Master (send daily)**

Internal (default setting)

The internal clock cannot send the date and time on the bus nor be set via telegrams on the bus.

Slave (always receive)

The internal clock can be set or synchronised via a bus telegram e.g. from a master clock.

Slave, OFF period (00:05 ... 23:55 receive)

The internal clock can be set between 00:05 and 23:55 and synchronised via a bus telegram e. g. from a master clock. Date and time telegrams are ignored during the period between 23:55 and 00:05. Synchronisation problems are thereby avoided when the day changes.

Master (send every minute)

The internal clock sends bus telegrams with the time and date once per minute e. g. to synchronise other EIB devices.

The date and time are also sent when the object **Group address for request** is activated or deactivated e. g. via a telegram from other bus devices.

Master (send hourly)

The internal clock sends bus telegrams with the time and date once every hour e. g. to synchronise other EIB devices.

The date and time are also sent when the object **Group address for request** is activated or deactivated e. g. via a telegram from other bus devices.

Master (send daily)

The internal clock sends bus telegrams with the time and date once every day e. g. to synchronise other EIB devices.

The date and time are also sent when the object **Group address for request** is activated or deactivated e. g. via a telegram from other bus devices.

4.3 Time switch program

The time switch program sends bus telegrams with specific group addresses and values at the set intervals, thereby triggering specific functions in the EIB installation such as switching the lighting on/off in room 13.

It is therefore possible to define the day routines i. e. switching programs for specific days and the week routine i.e. the assignment of day routines to the days of the week in the time switch program.

In the time switch program, you can

- define 15 day routines i. e. 15 different time switch programs for the period between 00:00 and 23:59,
- define the week routine i. e. assign a day routine to each day of the week,
- define the periods for the summertime conversion for 5 years in advance,
- assign other day routines to 100 individual periods – so-called special days – which deviate from the standard week routine,
- display an overview of the time switch program.

4.3.1 Day routine

A day routine contains the time switch program for a day between 00:00 and 23:59.

Within a day routine, the first telegram can be sent at 00:00 and the last telegram at 23:59.

Day routines can be activated and deactivated via the time switch program and/or a bus telegram (e. g. by pressing a bus push button).

If a new day routine is activated via a bus telegram, the current day routine ends i. e. the application unit sends a bus telegram containing the group address of the current day routine with the value 0 on the bus. A bus telegram containing the group addresses of the new day routine is then sent on the bus with the value 1. It is therefore possible to show e. g. on an LC display which day routine is currently active.

The application unit then sends bus telegrams if required and creates the exact state in the EIB installation that would have existed if the old day routine had run until midnight as normal and the new day routine had started at midnight and had then been carried out until the current time.

If a day routine has been activated and the clock is put forward, the exact state is then created in the EIB installation that would have existed if the day routine had run normally until the new time.

No bus telegrams are sent if the clock is put back.

If the time is adjusted so that a new day routine is activated, the sequence is carried out as described for a change in the day routine.

First select **Time switch program** in the selection area, followed by **Day routines**.

The screenshot shows the 'Application unit - Parameterisation software PZM 1.0 - 020308.ZM1 - 01.01.001' window. The left pane shows a tree structure with 'Day routines' selected under 'Time switch program'. The right pane displays a table of existing day routines.

DR No.	DR Name	GA No.	GA Name
01	Normal weekday		*empty*
02	Saturday		*empty*
03	Sunday		*empty*
04	School holidays		*empty*
05	Sports day	03/01/0000	Sport event
06	Training evening	03/01/0001	Training
07	Cultural evening	03/01/0002	Event in foyer
*** new day routine ***			

The list of day routines that have already been inserted is displayed in the associated table area.

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This table displays the consecutive number of the day routine (**DR No.**) and the name of the day routine (**DR Name**).

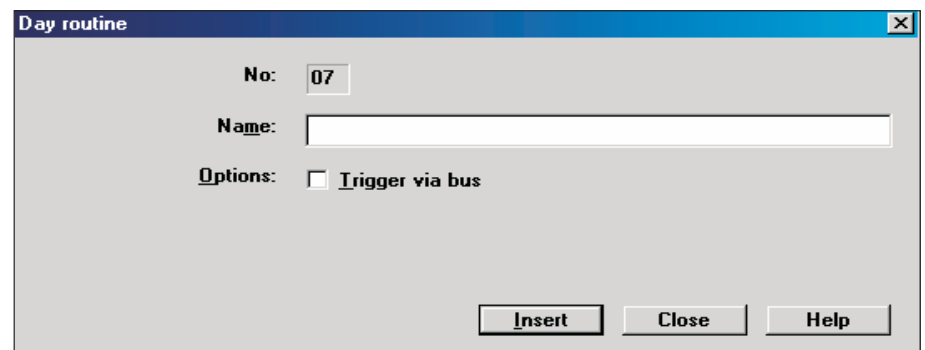
If a bus telegram can activate a day routine, the associated number (**GA No.**) and name (**GA Name**) of the group address is displayed which can activate or deactivate this day routine.

You can delete or edit existing day routines or insert new day routines.

Edit day routine

Select an existing day routine in this list or select *****new day routine***** or press the right mouse button and select **New day routine** from the pop-up menu.

The relevant dialog window opens after double clicking with the mouse.



The screenshot shows a dialog window titled "Day routine". It contains the following elements:

- No:** A text box containing the number "07".
- Name:** An empty text box for entering the routine name.
- Options:** A checkbox labeled "Trigger via bus" which is currently unchecked.
- Buttons:** Three buttons at the bottom right: "Insert", "Close", and "Help".

Enter a new name in the **Day routine** dialog window or modify an existing name.

Day routines can be activated or deactivated by the time switch program and/or a bus telegram (e. g. by pressing a bus push button).

If it should be possible to activate the day routine both via the time switch program and a bus telegram, then select the checkbox **Trigger via bus**.

In this case, a further list field is opened where it is possible to select and insert a group address that has previously been defined and adopted in ETS2.

Type	Name	No
1 bit	Parents evening	03/01/0003
1 bit	External lighting	00/00/0008
1 bit	Hallway FF	00/00/0004
1 bit	Hallway GF	00/00/0002
1 bit	Night lighting	00/00/0006
1 bit	Parents evening	03/01/0003

This list only contains the group addresses that are available for the current dialog.

The **Type** indicates which type of values can be sent by a bus telegram with this group address.

The **Name** of the group address has been defined by the installer when assigning parameters to the EIB installation and cannot be modified with the parameterisation software **PZM 1**.

The **Number** of the group address is the unique identifier of a group address.

This list can be rearranged and sorted as required.

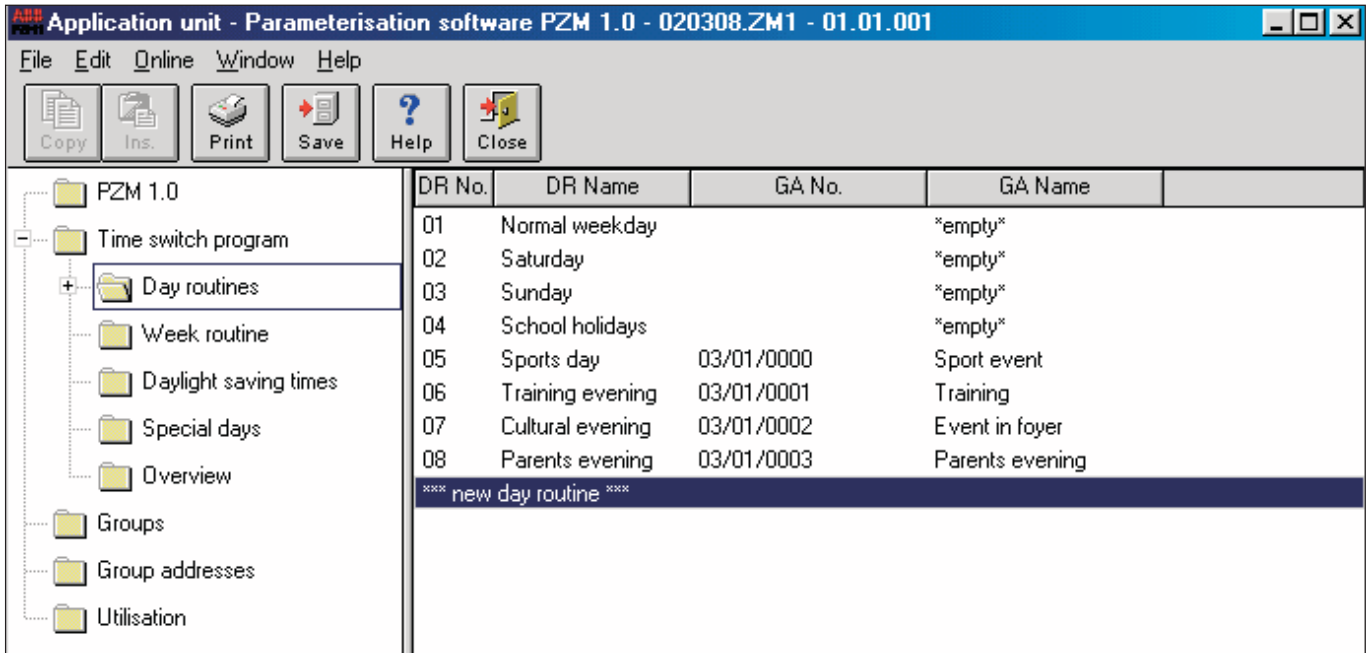
Close the **Day routine** dialog window using the **Insert/Close** buttons.

4.3.2 Switching times of the day routine

The point at which the time switch program of the application unit sends a bus telegram with a defined group address and value on the bus is designated as a switching time.

Edit switching time

In the selection area, click on **Time switch program**, **Day routines** and then select a day routine.



The list of inserted day routines appears in the associated table area.

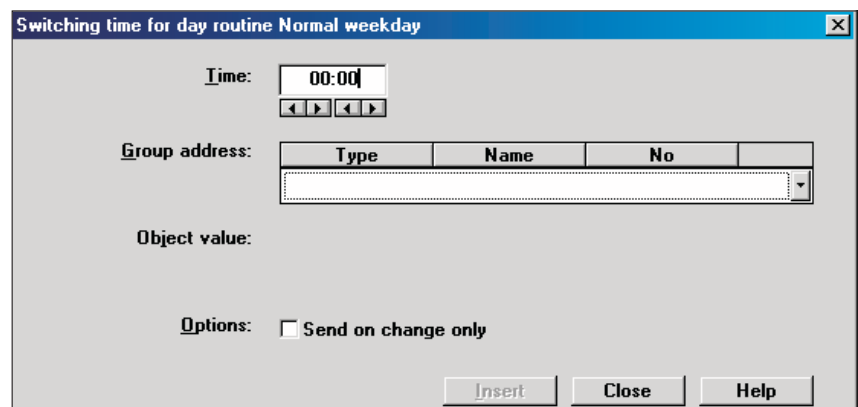
You can see at what time a bus telegram should be sent with a specific group address and a specific value.

A tick in the column **SoC (Send on change only)** indicates that a bus telegram is only sent if the value differs from the last transmitted value e. g. if the light should be switched on and is already switched on, this bus telegram is not sent.

You can delete or edit existing switching times or insert new switching times.

Select an existing switching time in this list or select *****new switching time***** or press the right mouse button and select **New switching time** from the pop-up menu.

The relevant dialog window opens after double clicking with the mouse.



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In this dialog field you define

- at what time a bus telegram is sent, thereby activating a function,
- which group address is sent with this bus telegram and which function is thereby activated,
- which object value is sent with this bus telegram, thereby e. g. switching the light ON or OFF.

Type	Name	No
1 bit	Class 203	00/00/0016
1 bit	Class 204	00/00/0017
1 bit	Classroom FF	00/00/0005
1 bit	Classroom GF	00/00/0003
1 bit	Cleaning lighting	00/00/0007
1 bit	Entrance hall	00/00/0001
1 bit	External lighting	00/00/0008
1 bit	Hallway FF	00/00/0004
1 bit	Hallway GF	00/00/0002

From the list of group addresses, select the group address which should be sent at the specified time.

With the option **Send on change only**, you define that a bus telegram is only sent if the value differs from the last value sent e. g. if the light should be switched on and is already on, this bus telegram is not sent.

Switching time for day routine Normal weekday

Time: 18:00

Group address:

Type	Name	No
1 bit	Cleaning lighting	00/00/0007

Object value: 1 (0 .. 1)

Options: Send on change only

Buttons: Insert, Close, Help

Close the dialog window **Switching time for day routine ...** via the **Insert/Close** buttons.

<ul style="list-style-type: none"> [-] PZM 1.0 <ul style="list-style-type: none"> [-] Time switch program <ul style="list-style-type: none"> [-] Day routines <ul style="list-style-type: none"> 01: Normal weekday 02: Saturday 03: Sunday 	Time	GA No.	GA Name	Value	Type	SoC
	07:00	00/00/0008	External lighting	0	1 bit	
	07:30	00/00/0001	Entrance hall	1	1 bit	
	07:45	00/00/0002	Hallway GF	1	1 bit	
	07:55	00/00/0003	Classroom GF	1	1 bit	
	18:00	00/00/0007	Cleaning lighting	1	1 bit	
	*** new switching time ***					

The list is displayed in the table area, extended by the newly inserted switching times.

4.4 Week routine

Select **Time switch program** in the selection area followed by **Week routine**.

<ul style="list-style-type: none"> [-] PZM 1.0 <ul style="list-style-type: none"> [-] Time switch program <ul style="list-style-type: none"> [+] Day routines <ul style="list-style-type: none"> Week routine Daylight saving times Special days Overview 	Weekday	DR No.	DR Name
	Monday	1	Normal weekday
	Tuesday	1	Normal weekday
	Wednesday	1	Normal weekday
	Thursday	1	Normal weekday
	Friday	1	Normal weekday
	Saturday	2	Saturday
	Sunday		"none"

This table displays the days of the week together with their associated day routines.

If a day routine has not yet been assigned to a weekday, there is no day routine number and **none** is entered as the name.

You can assign a day routine to the day of the week or delete an existing association.

Edit week routine

Select an existing day routine in this list or *****none*****.

The associated dialog window opens after double clicking with the mouse.

Standard day routine for Sunday		
Day routine:	Name	No
	Sunday	3
	Saturday	2
	School holidays	4
	Sports day	5
	Sunday	3
	Training evening	6

Select the day routine which you wish to assign to the weekday from the open list field.

Close the dialog window using the **OK** or **Cancel** buttons.

Weekday	DR No.	DR Name
Monday	1	Normal weekday
Tuesday	1	Normal weekday
Wednesday	1	Normal weekday
Thursday	1	Normal weekday
Friday	1	Normal weekday
Saturday	2	Saturday
Sunday	3	Sunday

The list is displayed in the table area, extended by the newly inserted day routines.

4.5 Daylight saving times

Select **Time switch program** in the selection area followed by **Daylight saving times**.

Year	Start	End	Offset
2002	from 31/03/02, 02:00	to 27/10/02, 03:00	+1 h
2003	from 30/03/03, 02:00	to 26/10/03, 03:00	+1 h
*** new daylight saving time ***			

This table displays the time periods for the summertime conversion which have already been defined.

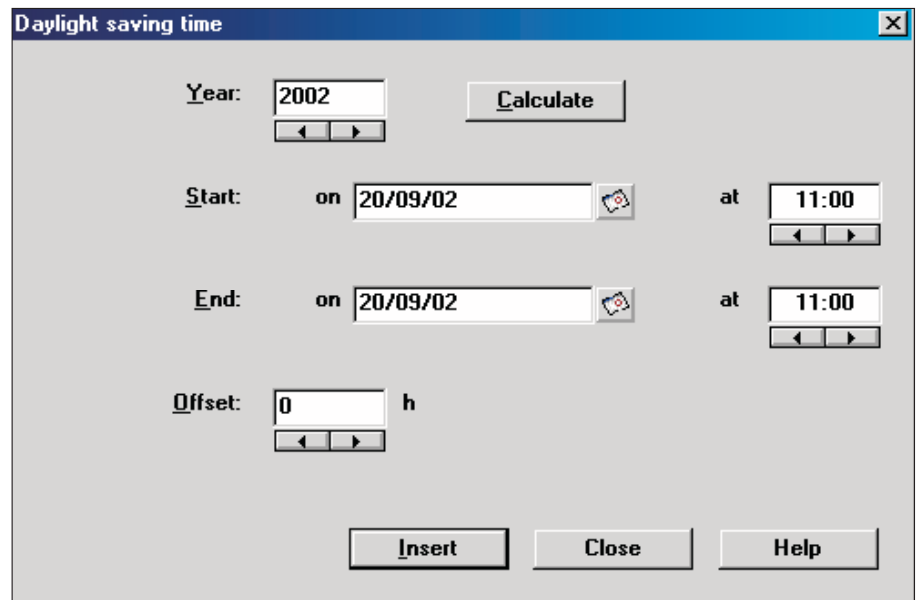
In this table, you can see the year of the summertime conversion, the start and end of the daylight saving time as well as the offset.

You can delete and edit existing entries or insert new periods.

Edit daylight saving time

Select an existing daylight saving time in this list or select *****new daylight saving time***** or press the right mouse button and select **New daylight saving time** from the pop-up menu.

The relevant dialog window opens after double clicking with the mouse.



In this dialog field, you can define and calculate new periods for the conversion from summertime or modify existing entries.

First select the year and press the **Calculate** button to determine the start and end of the daylight saving time.

These times are calculated according to the conversion rules that are stored in your version of Windows™ for changing from standard time to summertime.

You can also enter or modify the **Start** and **End** of the daylight saving time yourself as well as the **Offset** i. e. the time adjustment. At the start of the daylight saving time, the current time of the internal clock is adjusted by this value and reset at the end of this period.

March 2002						
Su	Mo	Tu	We	Th	Fr	Sa
24	25	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

The date for the start and end can be set in a range between 01/01/1970 and 31/12/2035. It is displayed as two-digit numbers which are separated in the format day/month/year. Entries for the year in the range between 36 and 69 are rejected.

There is a button to the right of the entry field for the date which enables the relevant page of the calendar to be displayed for the current date.

The date for the start and end of the daylight saving time can be entered either directly or by selecting a date in the calendar.

Close the dialog window via the **Insert/Close** buttons.

Year	Start	End	Offset
2002	from 31/03/02, 02:00	to 27/10/02, 03:00	+1 h
2003	from 30/03/03, 02:00	to 26/10/03, 03:00	+1 h
2004	from 28/03/04, 02:00	to 31/10/04, 03:00	+1 h
**** new daylight saving time ****			

The list is displayed in the table area, extended by the newly inserted daylight saving times.

4.6 Special days

Individual days or time periods which deviate from the normal week routine are called special days.

Select **Time switch program** in the selection area followed by **Special days**.

The associated table area displays the list of special days which have already been defined.

Start	End	Day routine
from Mo, 25/03/02, 00:00	to Fr, 05/04/02, 23:59	04: School holidays
**** new special day ****		

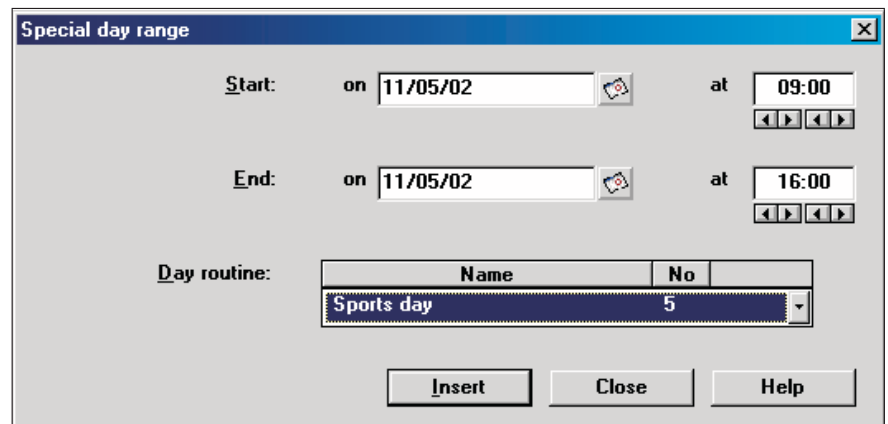
This table indicates the start and end of the time periods which have already been defined as special days as well as the day routine which have been assigned to them.

You can delete and edit existing special days or insert new special days.

Edit special days

Select an existing daylight saving time in this list or select *****new special day***** or press the right mouse button and select **New special day** from the pop-up menu.

The relevant dialog window opens after double clicking with the mouse.



By entering the date and time, you define the **Start** and **End** of the time period which deviates from the normal week routine.

March 2002						
Su	Mo	Tu	We	Th	Fr	Sa
24	25	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

The date for the start and end can be set in a range between 01/01/1970 and 31/12/2035. It is displayed as two-digit numbers which are separated in the format day/month/year. Entries for the year in the range between 36 and 69 are rejected.

There is a button to the right of the entry field for the date which enables the relevant page of the calendar to be displayed for the current date.

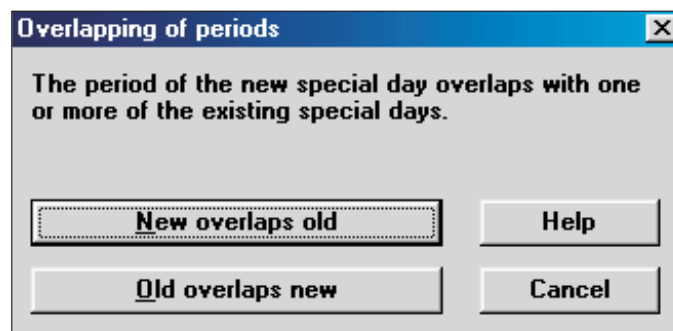
The date for the start and end can be entered either directly or by selecting a date in the calendar.

Select a day routine from the list of day routines and close the dialog window via the **Insert/Close** buttons.

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Overlapping of periods

If a new special day has been entered and the period of the new special day coincides with periods that have been already been defined for other special days, the following message appears.



With the selection **New overlaps old**, the new entry coincides with existing entries in the same time period (see examples).

With the selection **Old overlaps new**, the new entry does not coincide with existing entries in the same time period (see examples).

	Example 1	Example 2
Old entry	DR1	DR 1
New entry	DR2	DR 2
New overlaps old	DR1 DR2 DR1	DR2
Old overlaps new	DR1	DR2 DR1 DR2

Select the option required.

<ul style="list-style-type: none"> [-] PZM 1.0 <ul style="list-style-type: none"> [-] Time switch program <ul style="list-style-type: none"> + Day routines Week routine Daylight saving times Special days Overview 	Start	End	Day routine
	from Fr, 15/03/02, 08:00 C	to Fr, 15/03/02, 17:00	05: Sports day
	from Mo, 25/03/02, 00:00	to Fr, 05/04/02, 23:59	04: School holidays
	**** new special day ****		

The list is displayed in the table area, extended by the newly inserted special day.

If the periods overlap, you now see the list with the correction you have selected.

4.7 Overview

Select **Time switch program** in the selection area followed by **Overview**.

An overview of the use of a specific group address can be displayed in the associated table area.

<ul style="list-style-type: none"> [-] PZM 1.0 <ul style="list-style-type: none"> [-] Time switch program <ul style="list-style-type: none"> Day routines Week routine Daylight saving times Special days Overview 	Group address:			
	Type	Name	No	
	1 bit	External lighting	00/00/0008	
	Time frame: from 11/03/02		to 11/03/02	Show
Date	Time	Value	SoC	by day routine

Show overview

So that all the elements of the table area are visible, it is advisable to maximise the window until the horizontal scrollbar disappears.

Select a group address (function) from the list field **Group address** and a time period and then press the **Show** button. You can display in a table the time intervals at which bus telegrams are sent with this group address and the values which are sent with these bus telegrams.

◀ March 2002 ▶						
Su	Mo	Tu	We	Th	Fr	Sa
24	25	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

The date for the **Time frame from ... to** can be set in a range between 01/01/1970 and 31/12/2035. It is displayed as two-digit numbers which are separated in the format day/month/year. Entries for the year in the range between 36 and 69 are rejected.

There is a button to the right of the entry field for the date which enables the relevant page of the calendar to be displayed for the current date.

The date for the start and end can be entered either directly or by selecting a date in the calendar.

If the entry **SoC (Send on change only)** is marked with a tick, a bus telegram is only sent if the value has changed i.e. if the light has already been switched on and should remain switched on, this bus telegram is not sent.

The screenshot shows the PZM 1.0 software interface. On the left is a tree view with folders: PZM 1.0, Time switch program, Day routines, Week routine, Daylight saving times, Special days, Overview, Groups, Group addresses, and Utilisation. The 'Overview' folder is selected. On the right, the 'Group address' section shows a table with columns: Type, Name, No. The selected entry is '1 bit', 'Entrance hall', '00/00/0001'. Below this, the 'Time frame' is set from '11/03/02' to '14/03/02'. A 'Show' button is visible. Below the time frame is a table with columns: Date, Time, Value, SoC, by day routine.

Date	Time	Value	SoC	by day routine
11/03/02	07:30	1		01: Normal weekday
12/03/02	07:30	1		01: Normal weekday
13/03/02	07:30	1		01: Normal weekday
14/03/02	07:30	1		01: Normal weekday

The following information is indicated in the table for the selected group address:

- the date and time when a telegram is sent,
- the value which is sent with this telegram e.g. switch light ON or OFF,
- whether this bus telegram is only sent if the value differs from the last value sent (SoC) and
- which switching time is assigned to this day routine.

Note:

The number of entries in the **Overview** table is limited to 800.

4.8 Groups

4.8.1 General information about groups

It is defined in the time switch program when bus telegrams are sent with specific group addresses and specific values on the bus.

If several bus telegrams with specific group addresses and values should be sent repeatedly at certain times, they can be combined into a **Group**

e. g. at 15:00, 16:00, 17:00 and 18:30, the lighting in Room 1, Room 2 and Room 3 should be switched on and the blinds in Room 1, Room 2 and Room 3 should be lowered.

The group addresses and values that are assigned to these functions can now be combined into a group e.g. „Room 1, 2, 3“. This group can therefore also be designated as a functional group and the combined group addresses are called **Group members**.

In the time switch program, it is therefore only necessary to enter the group address of a trigger for this group e. g. with the name „Room 1, 2, 3“ in order to send bus telegrams on the bus that contain the group addresses (group members) and values that have been combined.

The group address that triggers a group is called a **Group trigger**.

You therefore save time for the parameterisation and the time switch program becomes clearer.

4.8.2 Properties of groups

Group number

The group number (**GR No.**) is automatically assigned by the application program **Times Groups/1** and is a consecutive number which acts as a unique identifier for the group.

Group name

The group name (**GR Name**) can be freely selected and can for example describe which functions are activated by this functional group or which parts of the building are influenced by triggering the group.

Type

A group can be activated by a bus telegram with the group address of a trigger for this group. Various types of values can be sent with this bus telegram, e. g. 1 bit values i.e. binary values such as 0 and 1 or e.g. 8 bit values such as 0, 128 or 255 which can then be interpreted as 0 %, 50 % and 100 %.

The **Type** identifies which type of value is assigned to the trigger of a functional group i. e. whether the group is triggered by a telegram with the binary value 1 or by a telegram with the 8 bit value 128.

Trigger

If a group is triggered by a Group trigger, specific functions are activated e.g. switching the light ON or OFF. It is therefore possible for example when triggering a group to switch the light off in specific rooms with the value 0 and to switch the light on in these rooms with the value 1. A group can therefore behave differently when triggered by the value 0 rather than by the value 1.

You could therefore designate the triggering of a group by the value 1 as an activation of the (functional) group and the triggering of the group by the value 0 as a deactivation of the (functional) group.

Binary values which trigger a (functional) group can only accept the values 0 and 1. If the group is triggered e.g. by an 8 bit value, the trigger values can lie in a range between 0 and 255 or between 0% and 100%.

Value ranges can therefore be entered for both the activation and deactivation of a group.

Those values which activate a group or in other words trigger within range A are entered under **Range A** while **Range B** contains those values which deactivate a group or trigger within range B.

If a group is triggered e. g. by a 2 byte value with which the room temperature of a room is transmitted, the blinds can for example be opened at a temperature value below 22 ° C and both the air conditioning and lighting can be switched off. At a temperature above 24 ° C, the blinds can be closed and the lighting and air conditioning switched on.

It is possible to define further criteria for the group trigger to prevent this group e.g. from being triggered and thereby activating specific functions each time that identical values are sent repeatedly.

Condition

The entry **A, B (always)** means that the group will always be triggered if the trigger value lies within range A or B. If a bus telegram is received several times with the same value or with values in the same range, the group would be triggered after each transmission.

Using the above example, if the temperature value 21 ° C is sent several times in succession, the group is activated each time and bus telegrams are therefore sent each time to open the blinds and to switch off the air conditioning and lighting.

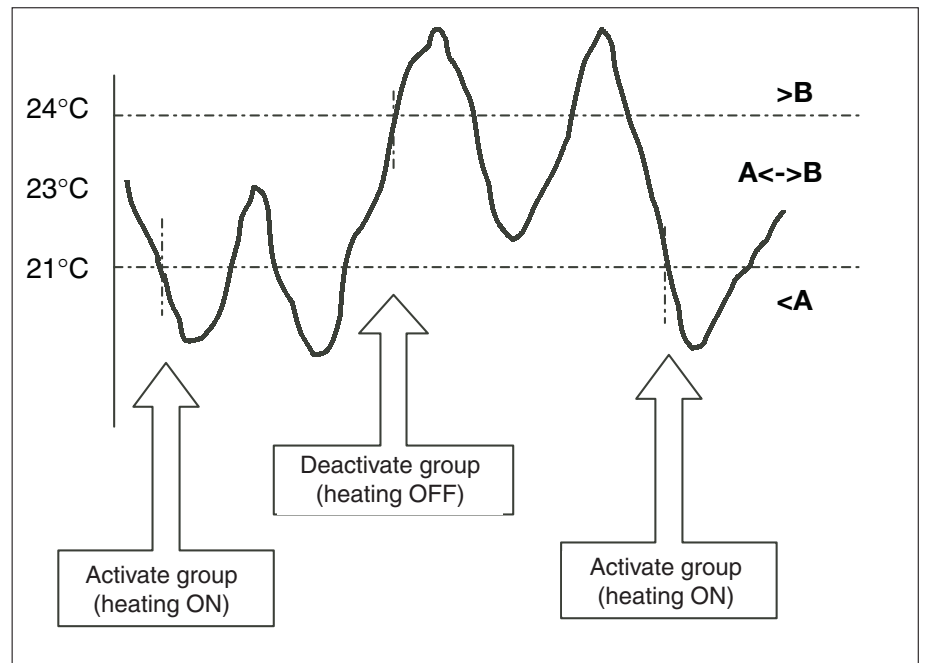
The entry **> A, > B (new entry)** means that the group is only triggered the first time that the trigger value is in range A or B. If the same value is sent several times to the application unit **AB/S 1.1**, the group is only triggered after the first transmission.

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If the group was triggered last time by the transmission of a value in range A e.g. 21 ° C and values were then sent outside of range A e.g. 23 ° C followed by a value in range A again e.g. 21 ° C, the group is reactivated by the first transmission of the value 21 ° C. Bus telegrams are sent to open the blinds and to switch off the air conditioning and lighting.

The entry **A<->B (hysteresis)** means that the group is only triggered if the trigger value is first in range A and the last triggering was carried out by a value in range B or if the trigger value is first in range B and the last triggering was carried out by a value in range A.

If the group was last triggered by a value in range A e.g. 21 ° C (the group is activated e.g. in order to switch on the heating) and values outside of range A were then sent e.g. 23 ° C followed by a value in range A e.g. 21 ° C, the group is no longer activated by this value. A new activation only takes place if a value is transmitted that lies in range B i.e. above 24 ° C (the group is deactivated e.g. in order to switch off the heating).



Warm start and Cold start

Current information that is saved in the application unit, e.g. Group 1 is triggered, is stored for at least 1 hour after a bus voltage failure. If the bus voltage failure lasts longer than 1 hour, the application unit automatically detects whether the information is still saved or whether a data loss has occurred. The application program and the parameters are permanently stored in the application unit.

In the event of a data loss, the application unit carries out a so-called **Cold start** on bus voltage recovery i. e. it can no longer access stored data and must either work with predefined data or read out the relevant data from other bus devices.

It should further be noted that the time switch program does not start up automatically after a cold start as the current time or the date are no longer available. See also internal clock.

If the stored data is still available, the application unit carries out a **Warm start** on bus voltage recovery i. e. it can work with the stored data but can also use predefined data or read out the relevant data from the other bus devices.

The reaction of the application unit to both a cold and warm start can be defined.

Bus (read value)

The application unit reads out the relevant data from other bus devices after bus voltage recovery. Depending on the received value and the criteria for triggering the group, it either triggers or does not trigger the group in range A or B.

After a warm start, the group is no longer triggered for example if the group was already activated in range A and continues to be active in range A after reading out data from the other bus devices. Another condition is that the trigger parameter should not be set to **always**.

Init (use init value)

The application unit uses fixed values after a bus voltage recovery. Depending on the predefined values and the criteria for triggering the group, it either triggers or does not trigger the group in range A or B.

This setting can only be selected for a cold start.

RAM (old value)

The application unit uses the values still stored after bus voltage recovery. Depending on the stored values i.e. the state prior to bus voltage failure and the criteria for triggering the group, it either triggers or does not trigger the group in range A or B. This setting is only possible for a warm start as the values are no longer available after a cold start.

None (no reaction)

The application unit only triggers a group again if a bus telegram has been received with a value in range A or B.

In principle, the group is always triggered after a cold start on receipt of the first value that lies in range A or B. After a warm start, the group is only triggered if all other criteria have been met e.g. the final value received before the bus failure was in range B and the first value received after bus voltage recovery is in range A.

Initial value

If the application unit should use a fixed value after bus voltage recovery with data loss i.e. after a cold start, this value should be listed under Init.

This setting is only significant for a cold start.

4.8.3 Group table

Select **Groups** in the selection area.

The associated table area displays the list of groups that have already been inserted.

GR No.	GR Name	Type	Range A	Range B	Trigger	Warm start	Cold start	Init value
01:	Start of lessons	1 bit	to 0	from 1	A, B	RAM	Init	1
02:	End of lessons	1 bit	to 0	from 1	A, B	RAM	Init	0
03:	Breaktime	1 bit	to 0	from 1	A, B	RAM	Init	0
new group								

This table lists the consecutive group number (**GR No.**), the group name (**GR Name**), the type of group trigger (**Type**), the trigger conditions in **Range A** and **Range B**, the behaviour in the event of a **Warm start** and a **Cold start** as well as the associated **Initial value**.

You can delete or edit existing groups or insert new groups.

Edit group

Select an existing group from this list or select *****new group***** or press the right mouse button and select **New group** from the pop-up menu.

The relevant dialog window opens after double clicking with the mouse.

The group number (No.) is automatically assigned by the application program Times Groups/1 and is a consecutive number which acts as a unique identifier for the group.

Under **Name**, you should enter text which best describes how the group should react after triggering e.g. switch the lighting on or off in all the rooms.

Define under **Type** which type of values this group can trigger. The types shown can be selected from the list field.

Under **Trigger**, you can define the limits for **Range A** and **Range B** within which the values must lie in order to trigger the group. Only states 0 and 1 are available for 1 bit types. These values cannot be edited.

Specify under **Condition** under which circumstances the group should be triggered.

- 1 bit
- 1 bit
- 1 byte unsigned
- 1 byte signed
- 2 byte unsigned
- 2 byte signed
- 2 byte floating point

- A, B (always)
- A, B (always)
- >A, >B (new entry)

Bus (read value) ▾
 Bus (read value)
 Init (use init value)
 none (no reaction)

You can define under **Cold start**, how the application unit should behave on bus voltage recovery.

Bus (read value) ▾
 Bus (read value)
 Init (use init value)
 none (no reaction)

You can define under **Warm start**, how the application unit should behave on bus voltage recovery.

The value which the application unit should use as a fixed value after a cold start can be defined under **Initial value**. The field is dependent on the set type. If e. g. a 1 bit type has been selected, only the values 0 and 1 can be set.

Close the dialog window via the **Insert/Close** buttons.

GR No.	GR Name	Type	Range A	Range B	Trigger	Warm start	Cold start	Init value
01:	Start of lessons	1 bit	to 0	from 1	A, B	RAM	Init	1
02:	End of lessons	1 bit	to 0	from 1	A, B	RAM	Init	0
03:	Breaktime	1 bit	to 0	from 1	A, B	RAM	Init	0
04:	Shutters for south f:	1 byte unsigned	to 12.55 %	from 25.10 %	A < > B	Bus	Bus	0.00 %
new group								

The list of groups is now displayed in the table area, edited and extended by the newly inserted group.

4.8.4 Group trigger

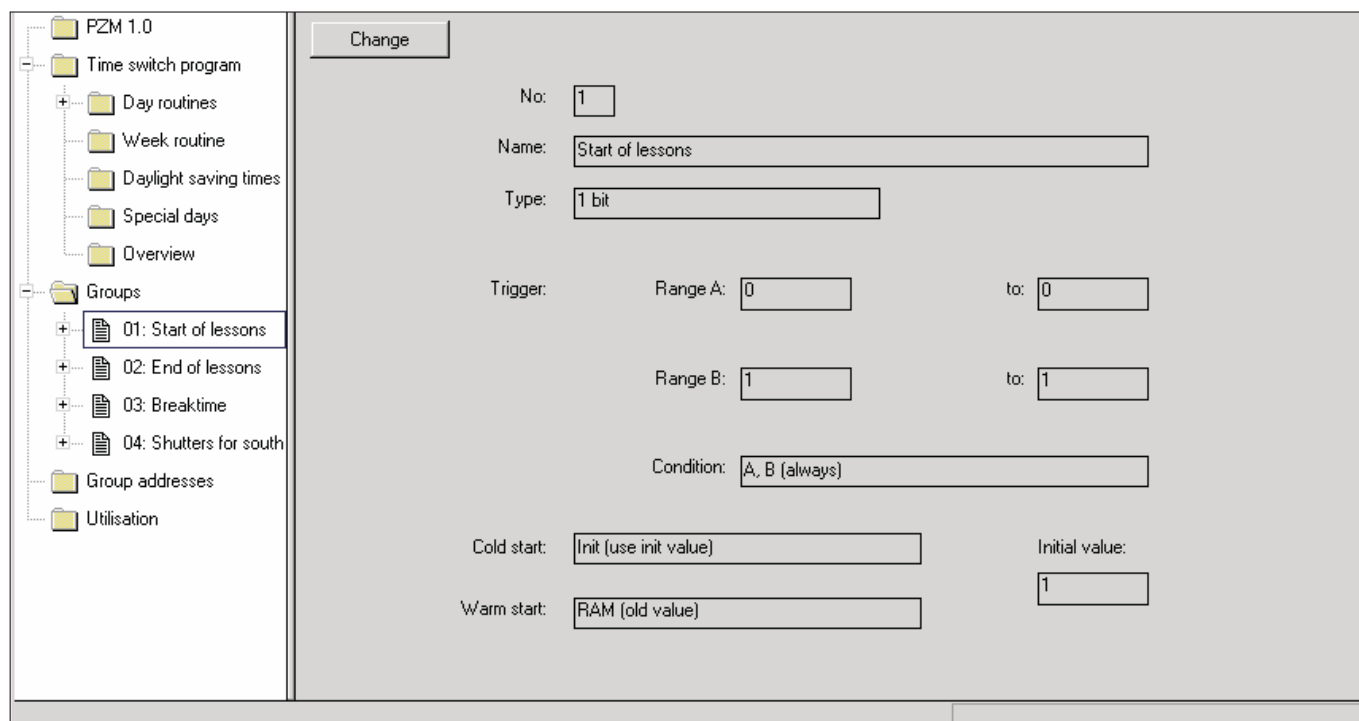
Using a group trigger, a group can be initialised internally via the time switch program of the application unit or externally by a bus telegram.

Group triggers initialise a functional group if

- the application unit receives a bus telegram whose group address has been entered in the list of group triggers and
- whose value lies in the ranges which have been defined for triggering and
- whose value meets the trigger conditions.

When a group is triggered by a time switch program of the application unit, the program sends a bus telegram with a group address which is then received simultaneously by the application unit and the group is thereby triggered.

Select **Groups** in the selection area and then select the required group.



The settings that have been defined for the group are shown in the open dialog window. By pressing **Change**, you switch to the Group dialog where you edit the group and carry out modifications.

Click in the browser + to display the group triggers and group members of the group. Select **Trigger**.

GA No.	GA Name	Type	sending
00/00/0003	Classroom GF	1 bit	✓
*** new group trigger ***			

This table lists all the group addresses which can trigger this group.

Group addresses which act as triggers can only be of the type that has been entered in the **Group** dialog field.

If a group has been triggered, a bus telegram is sent by the application unit which contains a group address that has been set to **sending**. It is therefore possible to implement a status signal for example.

You can delete or edit existing group triggers or insert new triggers.

Edit group trigger

Select an existing group trigger from this list or select *****new group trigger***** or press the right mouse button and select **New group trigger** from the pop-up menu.

Type	Name	No
1 bit	Classroom FF	00/00/0005
1 bit	Classroom FF	00/00/0005
1 bit	Cleaning lightin	00/00/0007
1 bit	Entrance hall	00/00/0001
1 bit	External lighting	00/00/0008
1 bit	Hallway FF	00/00/0004

In this dialog field, you define which group address is used to trigger the group.

To do so, select one of the available group addresses from the open list field.

Parameterisation software PZM 1 for application unit AB/S 1.1

Via the option **Set for sending**, it is defined that a bus telegram with this group address is sent when a group is triggered by the time switch program of the application unit. It is therefore possible to display e. g. on a visualisation terminal that this group has been triggered. Only one group address per group can be set for sending.

Close the dialog window via the buttons **Insert/Close**.

GA No.	GA Name	Type	sending
00/00/0003	Classroom GF	1 bit	✓
00/00/0005	Classroom FF	1 bit	
*** new group trigger ***			

The list of group triggers is now displayed in the table area, extended by the newly inserted entries.

4.8.5 Group Member

If a group is activated, it sends bus telegrams which contain the group addresses that are included in the list of group members and the values that are assigned to these group addresses.

Several group addresses with various types can be combined into a group.

Select **Groups** in the selection area and then select the required group.

The settings that have been defined for the group are shown in the open dialog window. By pressing **Change**, you switch to the **Group** dialog where you edit the group and carry out modifications.

Click in the browser + to display the group triggers and group members of the group. Select **Members**.

GA No.	GA Name	Type	Value	Range	SoC
00/00/0009	Class 201	1 bit	1	A	
00/00/0010	Class 101	1 bit	1	A	
00/00/0011	Class 102	1 bit	1	A	
00/00/0012	Class 103	1 bit	1	A	
00/00/0013	Class 104	1 bit	1	A	
00/00/0014	Class 105	1 bit	1	A	
00/00/0015	Class 202	1 bit	1	A	
00/00/0016	Class 203	1 bit	1	A	
**** new group member ****					

This table lists all the group addresses that are members of this group.

The value that is transferred when the group is triggered with this group address is displayed under **Value**.

The entry under **Range** defines whether this value is transferred when the group is triggered in range A or B.

If the entry **SoC (Send on change only)** is marked with a tick, a bus telegram is only sent if the value has changed e.g. if the light is already switched on and should remain switched on, this bus telegram is not sent.

You can delete or edit existing group members or insert new members.

Edit group member

Select an existing group member from this list or select *****new group member***** or press the right mouse button and select **New group member** from the pop-up menu.

Type	Name	No
1 bit	Class 204	00/00/0017

Object value:
(0 .. 1)

Send value: on trigger in range A
 on trigger in range B
 on change only

Insert Close Help

In this dialog field, you can assign a new member to the group or edit an existing one.

To do so, select one of the available group addresses from the open list field.

Via the option **Send value: on trigger in range A** or **Send value: on trigger in range B**, it is possible to define the value that should be sent for each range.

A tick in the entry **on change only means** that a bus telegram will only be sent if the value has changed e.g. if the light has already been switched on and should remain switched on, this bus telegram is not sent.

Close the dialog window via the **Insert/Close** buttons.

Parameterisation software PZM 1 for application unit AB/S 1.1

ABB i-bus® EIB

	GA No.	GA Name	Type	Value	Range	SoC		
<ul style="list-style-type: none"> [-] PZM 1.0 <ul style="list-style-type: none"> [-] Time switch program <ul style="list-style-type: none"> [+] Day routines <ul style="list-style-type: none"> [-] Week routine [-] Daylight saving times [-] Special days [-] Overview [-] Groups <ul style="list-style-type: none"> [-] 01: Start of lessons <ul style="list-style-type: none"> [-] Trigger <li style="border: 1px solid black;">[-] Members 	00/00/0009	Class 201	1 bit	1	A			
	00/00/0010	Class 101	1 bit	1	A			
	00/00/0011	Class 102	1 bit	1	A			
	00/00/0012	Class 103	1 bit	1	A			
	00/00/0013	Class 104	1 bit	1	A			
	00/00/0014	Class 105	1 bit	1	A			
	00/00/0015	Class 202	1 bit	1	A			
	00/00/0016	Class 203	1 bit	1	A			
	00/00/0017	Class 204	1 bit	1	A			
	**** new group member ****							

The list of group members is now displayed in the table area, extended by the newly inserted group member.

4.9 Group addresses

Select **Group addresses** in the selection area.

	GA No.	GA Name	Type	DR	ST	GT	GM
<ul style="list-style-type: none"> [-] PZM 1.0 <ul style="list-style-type: none"> [-] Time switch program <ul style="list-style-type: none"> [+] Day routines <ul style="list-style-type: none"> [-] Week routine [-] Daylight saving times [-] Special days [-] Overview [-] Groups <ul style="list-style-type: none"> [-] 01: Start of lessons <ul style="list-style-type: none"> [-] Trigger [-] Members [+] 02: End of lessons [+] 03: Breaktime [+] 04: Shutters for south <li style="border: 1px solid black;">[-] Group addresses [-] Utilisation 	00/00/0001	Entrance hall	1 bit		✓		
	00/00/0002	Hallway GF	1 bit		✓		
	00/00/0003	Classroom GF	1 bit		✓	✓	
	00/00/0004	Hallway FF	1 bit				
	00/00/0005	Classroom FF	1 bit				
	00/00/0006	Night lighting	1 bit				
	00/00/0007	Cleaning lighting	1 bit		✓		
	00/00/0008	External lighting	1 bit		✓		
	00/00/0009	Class 201	1 bit				✓
	00/00/0010	Class 101	1 bit				✓
	00/00/0011	Class 102	1 bit				✓
	00/00/0012	Class 103	1 bit				✓
	00/00/0013	Class 104	1 bit				✓
	00/00/0014	Class 105	1 bit				✓
	00/00/0015	Class 202	1 bit				✓
	00/00/0016	Class 203	1 bit				✓
	00/00/0017	Class 204	1 bit				✓
	03/01/0000	Event in foyer	1 bit		✓		
	03/01/0001	Training evening	1 bit		✓		
	03/01/0003	Sports day	1 bit		✓		
03/01/0004	Parents evening	1 bit		✓			

Parameterisation software PZM 1 for application unit AB/S 1.1

The table displays the group addresses that are available for the parameterisation and their current usage in the application unit.

A tick in the day routine column (**DR**) indicates whether a bus telegram with this group address can activate or deactivate a day routine.

A tick in the column switching time (**ST**) indicates whether a bus telegram with this group address is assigned to a day routine and thus is sent at a specific interval on the bus.

A tick in the group trigger column (**GT**) indicates whether this group address is associated with a group.

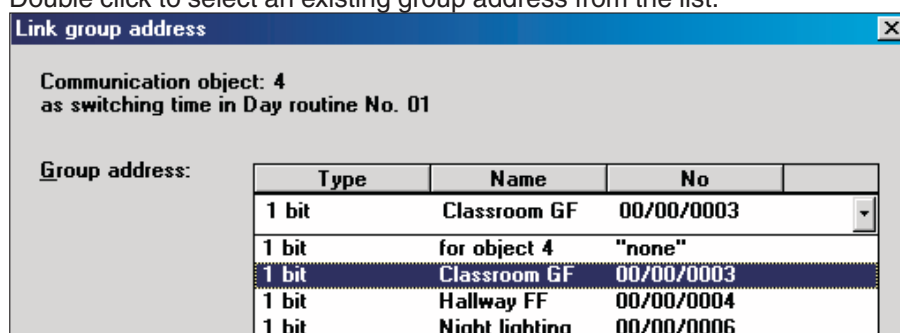
A tick in the group member (**GM**) column indicates whether this group address is associated with a group.

You can delete or reassign existing group addresses. You can also insert a new group address.

The group address can only be edited if the group address is intended for a specific usage as indicated with a tick.

Link group address

Double click to select an existing group address from the list.



This dialog field can only be opened if a specific usage e.g. activation of a day routine has already been assigned to the group address. The group address is thus positively assigned to a communication object.

The **communication object** number is automatically assigned as a consecutive number by the parameterisation software **PZM 1**.

In this dialog field, you can link another group address to the displayed **communication object** number i.e. the day routine would then be activated by another group address.

To do so, select a **Group address** from the list of available group addresses in the open list field.

Close the dialog window via the **OK/Cancel** buttons.

4.10 Utilisation

Select **Utilisation** in the selection area.

	Field name	Size	used	(%)	free
Addresses and objects					
PZM 1.0	Group addresses	250	21	(8%)	229
Time switch program	Objects	250	18	(7%)	232
Day routines	Associations	250	18	(7%)	232
Week routine	Time switch program				
Daylight saving times	Day routines	15	8	(53%)	7
Special days	Switching times	800	5	(0%)	795
Overview	Special days	100	2	(2%)	98
Groups	Daylight saving times	5	3	(60%)	2
01: Start of lessons	Groups				
Trigger	Groups	20	4	(20%)	16
Members	Group members	300	8	(2%)	292
02: End of lessons					
03: Breaktime					
04: Shutters for south					
Group addresses					
Utilisation					

The table provides an overview of the utilisation of the application unit AB/S 1.1.

The following are displayed:

- **Size** Number of possible assignments
- **Used** Assignments used
- **(%)** Percentage of assignments used
- **Free** Assignments still available

Addresses and objects

The application unit can send and receive bus telegrams.

If telegrams are received, it is defined with the group address which function has been addressed in the application unit e.g. a group is triggered.

If bus telegrams are sent, it is defined with the group address which functions are addressed in other EIB devices e.g. switch the light in Room 13 on or off.

A total of **250 group addresses** can be assigned to the application unit.

Object (communication object)

The transfer points between the EIB and the application unit are designated as **Objects** (communication objects). This type of object is directly linked with a function in the application unit e.g. activating a day routine or sending a telegram on the bus. The connection of the object to the EIB takes place via the assigned group address i. e. if a day routine should be activated for example, the trigger group address is assigned to the object that is linked to the function „Activate day routine“.

The management of the objects and assignment of the group addresses is automatically carried out in the background by the parameterisation software **PZM/1** and is not visible to the user. If a new day routine has been defined for example and this day routine can be activated via a bus telegram, the parameterisation software **PZM/1** automatically creates an object for it in the background.

The number of possible objects is **250**.

The parameterisation software **PZM/1** can assign to an object several group addresses, i.e. a group can for example be triggered by bus telegrams from various operator terminals and with various group addresses.

The number of possible associations of group addresses to objects is likewise **250**.

Time switch program

15 day routines i. e. switching sequences for specific days can be defined in the time switch program.

A total of **800 switching times** can be assigned to these day routines.

Individual days or periods which deviate from the standard week routine are defined as special days. A total of **100 special days** can be specified.

The periods for summertime conversion can be defined for up to **5 years** in advance.

Groups

If bus telegrams with specific group addresses should be sent repeatedly at a fixed switching time, these group addresses can be combined into a group as members. A total of **20 groups** can be defined.

These groups can contain a total of **300 group members**.

The group address that triggers a group is called a **group trigger**. The trigger of a group occupies an object. If several group triggers are assigned, each group trigger only occupies one association.

5 Rectifying problems

5.1 Using the context-sensitive Help function to rectify problems

The context-sensitive Help function provides the necessary information for each step required for the parameterisation software **PZM 1**.

The Help function is retrieved as follows:

- Select the **Help** menu from the menu bar or
- Press the right mouse button in the table area and select **Help about** or
- Press **F1** on the keyboard or
- Press the **Help** button on the toolbar.

The following procedure is the best way of using the parameterisation software **PZM 1** and the Help function:

After starting the parameterisation software **PZM 1**, minimise the window and move it to the right-hand corner of the screen so that about a third of the screen width remains empty. Now retrieve the option **Help for Software** and position the open window in the empty area on the left-hand side of the screen.

When you call up the Help function for information, you can now see the relevant Help page on the left-hand side for each editing step. By clicking on the underlined items marked in green, you can receive further explanations for these terms. You can return to the previous Help page using the **Back** button.

5.2 Behaviour on bus voltage failure

In the event of a bus voltage failure, the application unit stores the object values of the inputs and outputs for at least 1 hour. If the bus voltage failure lasts for a considerable longer period, the stored object values are lost.

Secure states can be achieved after a bus voltage failure by selecting the parameter setting **Behaviour after bus voltage recovery**.

5.3 Behaviour after bus voltage recovery

To prevent an unwanted operational performance after a bus voltage failure, particularly in large installations, the insertion of an uninterruptible power supply should be provided for the bus voltage and for the scanning voltage of the contacts.

5.4 Technical hotline

Our ABB i-bus® EIB hotline is available to answer any technical queries about the application unit and its application programs. You can reach the ABB i-bus® EIB hotline at the following times:

Weekdays from 09:00 to 12:00 and from 13:00 to 16:00.

Outside these times, at weekends and on Bank Holidays, you can leave a message on the answering machine.

Telephone number of the hotline: +49 6221 701434

You can also send your queries to the following email address:

EIB.Hotline@de.abb.com

Error	Cause / remedy
Time switch program does not start after a bus voltage failure	
Time is not correct	
Internal clock is incorrect	
No communication with the bus	

6 Glossary

Time switch program	The time switch program sends bus telegrams with specific group addresses and specific values at set time. Specific functions such as switching the lighting in room 13 on or off are triggered in the EIB installation.
Day routines	A day routine contains the switching operations of a specific day that must be carried out. A day routine can also be activated by a group address via the bus. 15 different day routines can be defined.
Week routine	The week routine is compiled from the day routines. A day routine can be assigned to each weekday (Monday to Friday).
Special days	Special days are days on which the standard week routine and associated day routine should not be carried out. It is possible to define either one day (e. g. Bank Holiday) or several days (e. g. holidays) as special days. A specific day routine is carried out on these days. 100 special days can be defined.
Daylight saving times	The conversion days, conversion times and offset for the daylight saving time can be calculated or defined with this function.
Group	Combination of group addresses whose associated objects should be influenced in the same way when an event occurs. 20 groups can be defined.
Group trigger	One or several group addresses that active a group
Group member	One or several group addresses that belong to a group. A total of 300 group members can be assigned.
Communication object (object)	Object in a bus device. The value of the object can be modified by the device itself. It can also be changed by another communication object e. g. in another bus device by the sending of a telegram. Up to 250 objects can be used.
Type	Various types of values can be sent with a bus telegram e. g. 1 bit values i. e. binary values such as 0 and 1 or e. g. 8 bit values such as 0, 128 or 255 which can then be interpreted as 0 %, 50 % and 100 %.
1 bit value	Binary values with the values 0 and 1 can be sent or received with the bus telegram. 1 bit values are used for example to switch loads ON or OFF.

2 bit priority	<p>4 different values can be transmitted with the bus telegram. So-called priority objects in the EIB devices can thus be addressed. If a channel in an EIB switch should for example be switched ON or OFF, the value 1 or 0 is sent to the assigned switch object. If a priority object is also assigned to this channel, the value that is sent to the priority object determines the behaviour of the channel.</p> <p>The 2 bit values have the following meaning:</p>		
	Value	Meaning	Function
	00/01	FREE	The priority object has enabled the switch actuator. The output is switched dependent on the value of the switch object.
	10	Forced OFF	The priority object has switched the switch actuator OFF with positive drive. The switch object has no function.
11	Forced ON	The priority object has switched the switch actuator ON with positive drive. The switch object has no function.	
1 byte unsigned	256 different values can be sent or received with the bus telegram. These 8 bit values can be displayed as decimal numbers in a range of 0 to 255 or as percentage values in a range of 0 to 100 %. 8 bit values are used for example to dim luminaires to a specific brightness value.		
1 byte signed	256 different values can be sent or received with the bus telegram. These 8 bit values are displayed as numbers in a range between –128 and +127.		
2 byte unsigned	65536 different values can be sent or received with the bus telegram. These 16 bit values are displayed as numbers in a range of 0 to 65535.		
2 byte signed	65536 different values can be sent or received with the bus telegram. These 16 bit values are displayed as numbers in a range between –32768 and 32767.		
2 byte floating point	65536 different values can be sent or received with the bus telegram. These 16 bit values are displayed as floating point values with two decimal places. Only floating point values with the exponent 3 have currently any practical significance. They are used for the transfer of temperature values between –163 and +163°C.		
3 byte time	3 byte object or group address which is used to send the time.		
3 byte date	3 byte object or group address which is used to send the date.		
1 bit request object	1 bit object which is used to request the date and time from a master clock.		

Group address	The group address is a function-related address which enables several recipients to be addressed via a telegram.
Associations	The same group address can be assigned to several objects in a device. The maximum number of associations permitted is 250.
Physical address	Unique identifier of a bus device in an EIB installation.

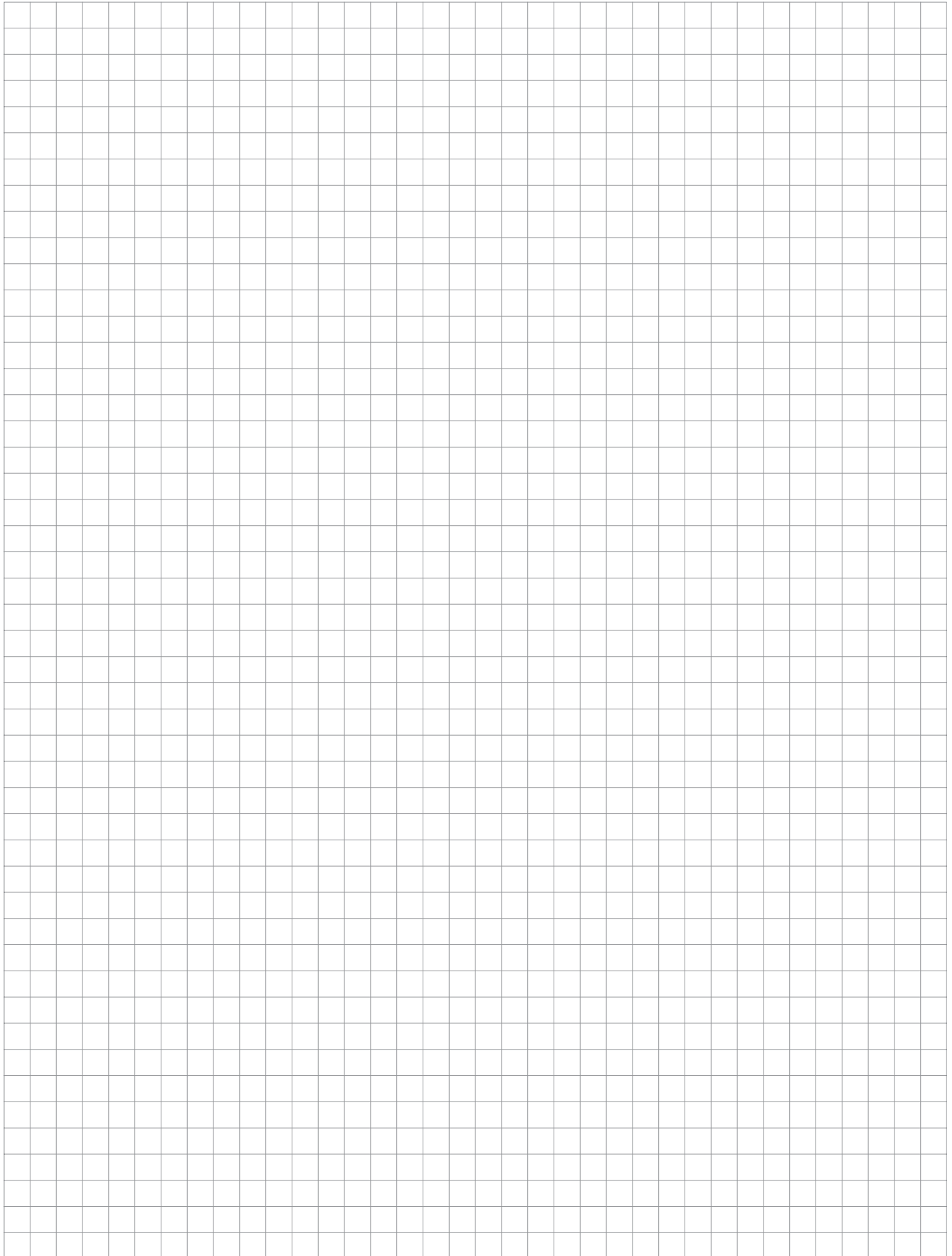
Further terms and definitions can be taken from the „Building system technology handbook, basic principles“ from the ZVEH.

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┌ **Your EIB-Partner** ┐

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