01 07 Event module 800A01

Use of the application program

Product family: Controller
Product type: Controller
Manufacturer: Siemens

Name: Event module N 341
Order no.: 5WG1 341-1AB01

Contents

01 07 Event module 800A01

Before you start

Basic knowledge

Familiarity with a PC as well as practical knowledge of Windows applications are prerequisites for being able to work efficiently with the software in order to parameterise the **N 341**.

You require knowledge of the following:

- use of EIB products
- working with product databases
- handling of ETS2
- familiarity with Windows
  - single mouse click
  - double mouse click
  - working with context menus (right mouse button)
  - drag & drop

Important notes

The **N 341** is a product for the EIB system and was developed in accordance with the guidelines defined in the developer's handbook.
The device and software description can only be comprehended in connection with this system. Detailed knowledge gained through EIB system training is required to understand this description.
The assignment of the physical address of the control module as well as the programming of the project-specific data is carried out with the ETS program.
An external time generator which sends the time and date every minute is required to operate the **N 341**.

Note

Process for archiving or copying all N 341 project design data

To make it easier to work with the event module N 341, you can assign your own names or short descriptions for each task and program during the parameterisation. These descriptions are only used for documentation purposes and for understanding the function of the respective parameters and are therefore not transferred to the N 341.

For this reason, a further file is required for saving these descriptions in addition to the ETS database which only contains the information that is necessary to program all the devices. However, when exporting a project from the ETS2 database, this supplementary file is not taken into account.

This means that all the descriptions of the programs and tasks are lost when exporting a project with the aid of ETS2.

The standard export function is of course suitable for transferring a project onto a commissioning PC, as the export file contains all the necessary information for programming the devices.

You should however select another method for permanent archiving or for transferring the project onto another PC for further editing:

1. Save each project in which you are using the event module N 341 in its own ETS2 database. (One database per project can significantly increase the speed of ETS2). To create a new project with an empty ETS2 database and an empty supplementary database, the following steps are necessary:
   a) Delete the current file with the name eib.db, which you can find in your ETS2 directory or save it under another name or a different path. Your Windows manual contains information about how to delete or move a file. (As this file is write-protected, you are asked to confirm the deletion to which you should answer 'yes'.)
   b) Delete the file with the name 001_pt01.zsd which you find in the subdirectory \1\library of your ETS2 directory or save it under another name or a different path.
   c) Create a copy of the file eib_strt.db and rename it as eib.db. Your Windows manual contains information about how to copy a file.

01 07 Event module 800A01

d) If you do not wish to reimport all the required files from the product database for each project, save a copy of the eib.db after the device import, which only knows the basic device data, under a different name and use this file later instead of the eib_strt.db to create a new ETS2 database.

2. To archive or transport the data of a project, copy the file eib.db as well as the file 001_pt01.zsd, which you find in the subdirectory \1\library of your ETS2 directory, onto a data carrier. Due to the size of the ETS2 database, it is advisable to archive both files with a data compression program. Suitable programs (e.g. WinZip) are available as shareware on the Internet or from all PC dealers.

3. To transfer an archived project onto a PC, back up or delete the existing files eib.db and \1\library\001_pt01.zsd in the ETS2 directory as described under 1. and copy or extract the saved files to the respective directory. All the information about this project is therefore at your disposal again.

Introduction

N 341
The **N 341** is a universal, freely programmable controller module for time- and event-dependent applications in the residential and commercial sector. It is latched onto a DIN rail and is immediately connected to the EIB via the data rail.

No additional software is required for programming or parameterisation. The necessary software is a component of the product database and is installed automatically in **ETS 2 version 1.1** when importing the product. The user-friendly interface and the operation are already known from the ETS program. The specified programs and time profiles can be clearly represented in graphical overviews.

When creating the programs and assigning the parameters, you can be supported by an Assistant which guides you through the operation step by step.

Performance characteristics
- Specification of max. 400 time tasks in up to 125 daily programs
- The daily programs can be assigned max. 150 calendar entries (date or date range)
- Three different periods can be specified for periodic sequences
  (Period duration 2 ... 40 days)
- Specification of max. 200 event tasks in up to 200 event programs
- Max. 60 text elements with 14 characters each can be triggered by daily or event programs and sent on the bus
- 60 EIB objects (properties)

Application examples
- Lighting tasks inside and outside the home
- Control of roller shutters, blinds and awning
- Control of greenhouse and winter garden (temperature, humidity, time, irrigation)
- Individual process control for automated comfort (heating, lighting, blinds...)
- Lifestyle programming for different user profiles (scene control)
- Security control / presence simulation (“occupied house”)
- Watering the garden / control of wells
- Access control / gate control

01 07 Event module 800A01

Programming

The programming is essentially carried out by editing the **Time** and **Event** parameters.

Time tasks are compiled into daily programs in the **Time** parameter. The daily programs are assigned to periodic sequences or a specific date or date range.

Event tasks are compiled into event programs in the **Event** parameter. The event programs are linked with the group addresses of suitable EIB devices (e.g. movement detectors, twilight switches, temperature sensors, window contacts etc.) by trigger conditions.

Examples of time programs

- Between 7th January and 25th April, the lighting in an underground car park is switched on at 6:00 and switched off at 22:00.
- From Monday to Friday, the lighting in the porch is switched on at 18:30 and switched off at 6:00.
- From 1st March until 31st October, the blind in a bedroom is opened at 6:00 and closed at 21:30 from Monday to Friday. On Saturday and Sunday, it is opened at 8:30 and closed at 22:00.

Examples of event programs

- Lighting in an underground car park is switched ON and the gate is moved UP – only after authorised access
  Lighting in an underground car park is switched OFF and the gate is moved DOWN – only after a specific delay and monitoring by a movement detector
- Lighting in the porch is switched ON – only when the lighting falls below a preset brightness value
  Lighting in the porch is switched OFF – only when the lighting exceeds a preset brightness value

Communication objects
The controller module can manage up to 255 communication objects.
Objects 0 and 1 are permanently assigned for date and time. They are 3 byte objects which are linked to an appropriate group address during the project design. Objects 2 to 254 are displayed as 1 bit objects after inserting the module in the project (Figure 1-1).

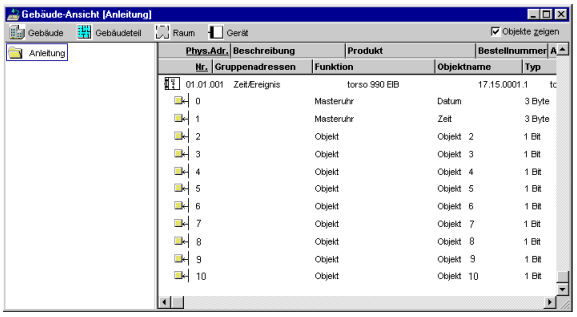


Figure 1-1

A manual connection with group addresses is not necessary. The associations are carried out with the parameterisation software. The type of the object is adapted during this assignment.

Communication objects 2-11 are 14 byte types and all further objects can adopt all the values available in the EIB (1 bit, 2 bit, 4 bit, 1 byte ... 14 byte). Unused objects are no longer displayed once the parameterisation is concluded (Figure 1-2).

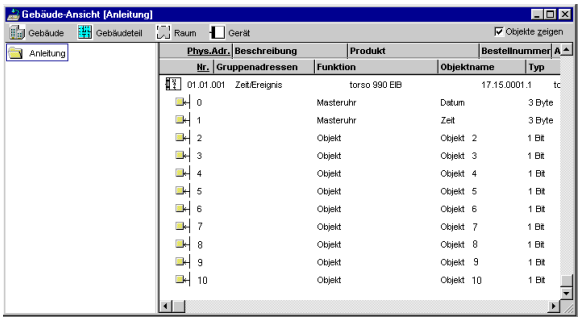


Figure 1-2

Note:

Assignments of the group addresses to communication objects of the N 341 may not be modified outside the parameterisation software.

Note about using the manual
To aid orientation, the instructions are numbered in the text and the relevant diagrams.

Example:

2. Click on PARAMETER...

01 07 Event module 800A01

Parameterisation

Introduction

To configure the controller module

1. Select the bus device **N 341** in the device list of your project and
2. Click on the PARAMETER... button in the **Edit device** window.

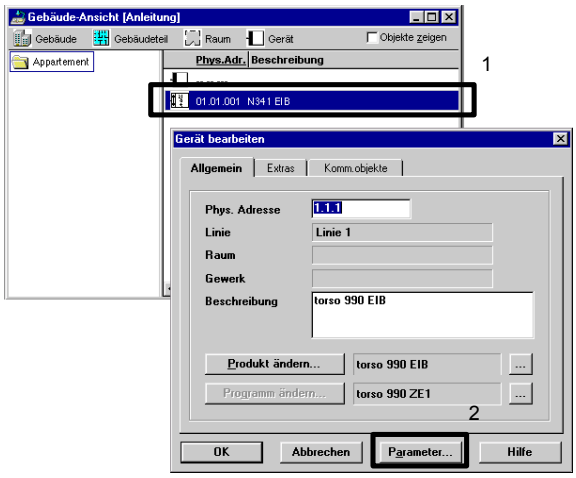


Figure 2-1: Selection of the N 341

The parameterisation software starts by reading in the parameters and communication objects. This process can take several minutes, depending on the scope of the parameters that are read in. A status bar indicates the download progress.

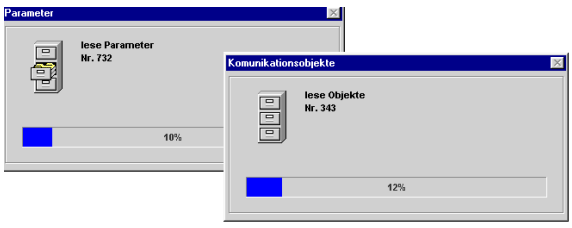


Figure 2-2: Reading in the parameters and objects

The main window is opened once the parameters have been read in. The parameterisation is carried out in four sections:

- General parameters
- Time
- Event
- Texts

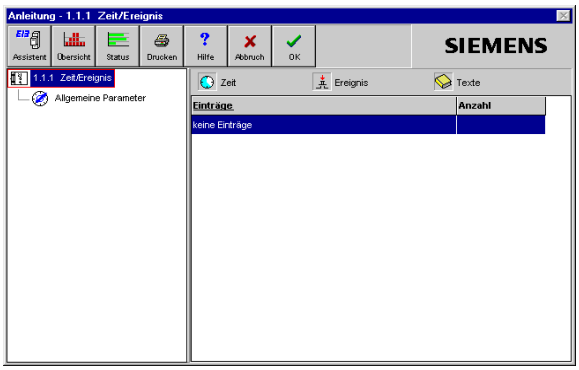


Figure 2-3: The main menu of N 341

Under **General parameters**, specific values are defined regarding the behaviour of the module (e.g. delays on restart for time and event). Default values are preset at the factory.

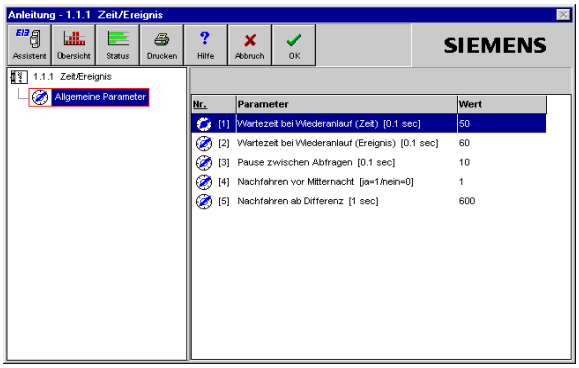


Figure 2-4: General parameters

01 07 Event module 800A01

The specification of daily programs as well as their connection by calendar entries and periods is carried out in the **Time** parameter.

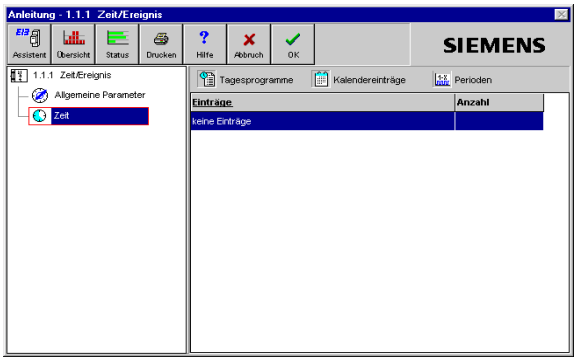


Figure 2-5: Time

Event programs and event triggers are specified in the **Event** parameter.

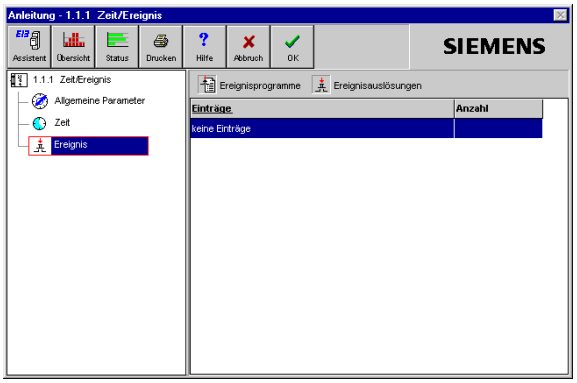


Figure 2-6: Event

A max. of 60 text elements each with 14 characters can be specified under **Texts**. This text can be used in time and event programs if an appropriate group address is available for assignment in the project.

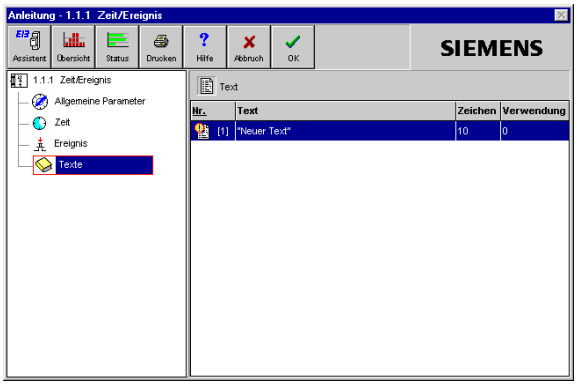


Figure 2-7: Texts

01 07 Event module 800A01

Parameter specifications

Time
The following are edited in the **Time** parameter:
- Daily programs
- Calendar entries
- Periods

Time tasks are specified in a daily program and existing group addresses are assigned to a communication object of the **N 341**.
In order for a daily program to be executed, it must be assigned to a calendar entry and/or a period.
A calendar entry defines a data or a date range (e.g.: 01.10.98 or 01.02. – 28.02.).
A period is defined as regards the period duration (2 to 40 days) and the start date. A daily program is assigned to each day of the period.

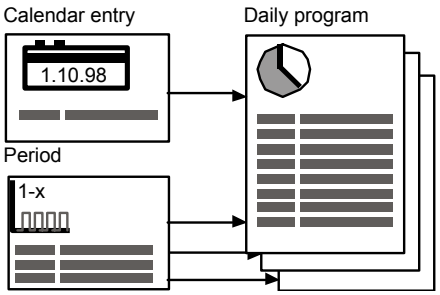


Figure 2-8: 'Time' parameter

Event
The following are edited in the **Event** parameter:
- Event programs
- Event triggers

Event tasks are specified in an event program and existing group addresses are assigned to communication objects of the **N 341**. In order for an event program to be executed, it must be assigned to an event trigger.
The trigger condition for a communication object is defined in an event trigger. If this condition is met, the assigned event program is triggered.

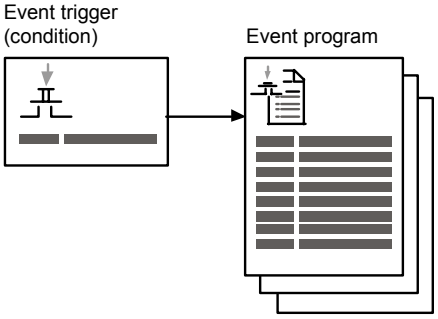


Figure 2-9: 'Event' parameter

01 07 Event module 800A01

Working with the Assistant

The **Assistant** supports you in the creation of programs and assignment of parameters. It guides you step by step through the parameterisation of **Time** and **Event**.

1. Click on ASSISTANT in the main window.
   The **Assistant - Selection** window is opened.

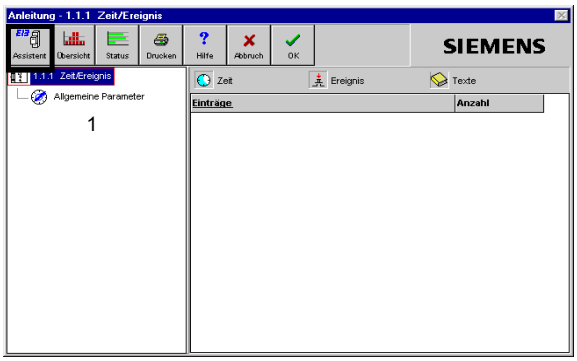


Figure 3-1: Retrieving the Assistant

2. Select the required parameters and confirm with NEXT. You are taken to the respective window:

   Assistant - Time
   Assistant - Event

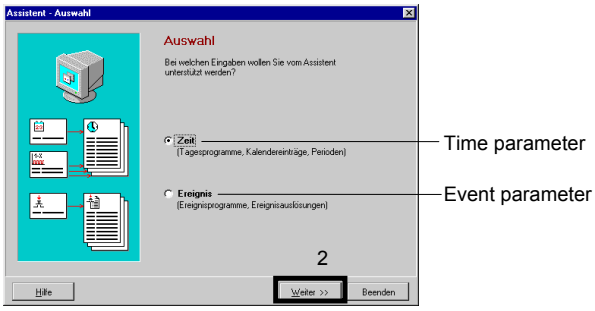


Figure 3-2: Parameter selection in the Assistant

Assistant – Time

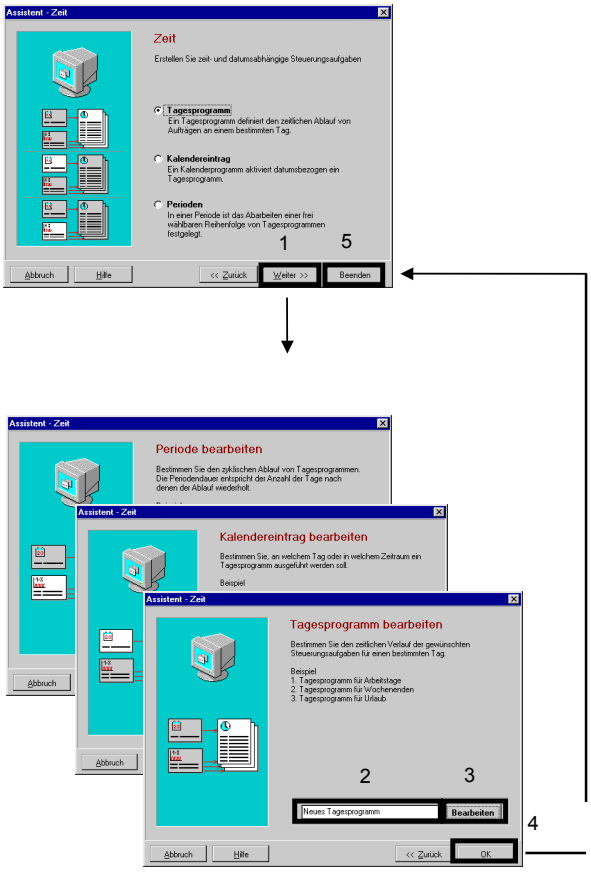
1. After your selection, click on NEXT.
   You are guided to the respective editing window.

2. Enter a name for the daily program, the calendar entry or the period by marking the text field.

3. Click on EDIT.
   The associated parameterisation is described in the following chapters
   - Inserting a time task (page 11)
   - Editing a calendar entry (page 16)
   - Editing a period (page 20)

4. Click on OK if you have finished editing. You are returned to the selection window **Assistant - Time**.

5. Exit the Assistant or make a new selection.



01 07 Event module 800A01

Assistant – Event

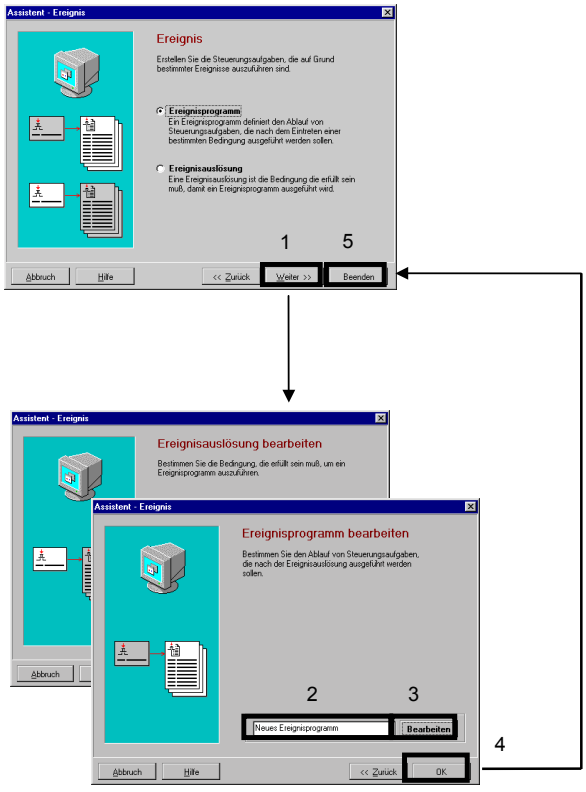
1. After your selection, click on NEXT.
   You are guided to the respective editing window.

2. Enter a name for the event program or the event trigger by marking the text field.

3. Click on EDIT.
   The associated parameterisation is described in the following chapters
   - Inserting an event task (page 24)
   - Editing an event trigger (page 29)

4. Click on OK if you have finished editing. You are returned to the selection window **Assistant - Event**.

5. Exit the Assistant or make a new selection.



01 07 Event module 800A01

Time

To edit the **Time** parameter, it must be inserted in the parameter directory.

1. Select the controller module in the parameter directory.

2. Drag the **Time** symbol in the selection bar to the work area underneath using drag & drop.
   The **Time** parameter is added to the parameter directory.

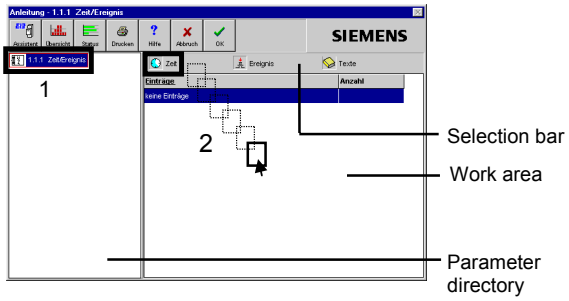


Figure 4-1: Inserting the Time parameter

3. Select the **Time** parameter directory.
   The selection bar now displays the symbols:
   - Daily programs
   - Calendar entries
   - Periods

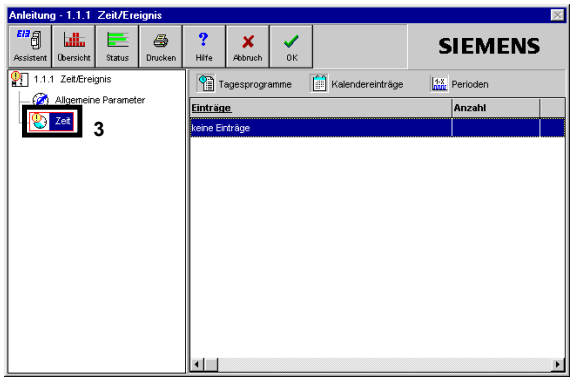


Figure 4-2: Time parameter

Daily programs

Time tasks are specified in a daily program.

Creating a daily program

1. Drag the **Daily programs** symbol in the selection bar to the work area underneath using drag & drop.
   The **Edit daily program** window is opened. The **Daily programs** parameter is added to the parameter directory.

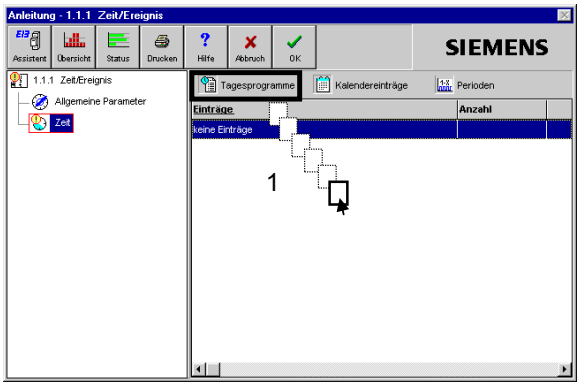


Figure 4-3: Inserting a daily program

2. Assign a name to the daily program (e.g. “Workdays”). The numbering is carried out automatically.

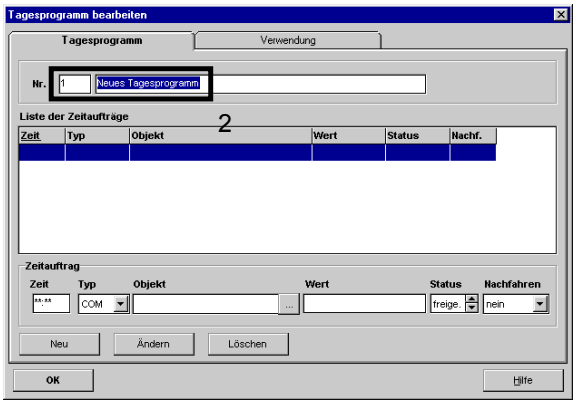


Figure 4-4: Assigning a name

01 07 Event module 800A01

Inserting a time task

1. Enter a **Time** (hh:mm) for the time task in the editing field. You can also use ** as placeholders.

   Examples:

****:****	every minute
****:30**	00:30, 01:30, 02:30, ...
05:**	every minute from 05:00 to 05:59
10:30	at 10:30

2. Under **Type**, select:
   - COM for a group address (assignment to COM object)
   - INTERNAL for an internal task (see 'Internal tasks', page 33)
   - TEXT if you wish to send text (see 'Text', page 35)

3. Click on the selection field [...] and select from the list according to the type:
   - COM: the required group address
   - INTERNAL: an internal task
   - TEXT: a group address with 6, 10 or 14 bytes

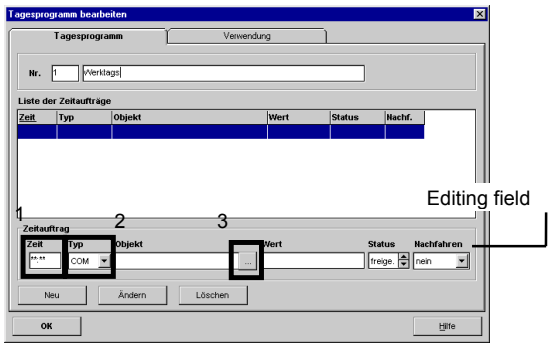


Figure 4-5: Inserting a time task

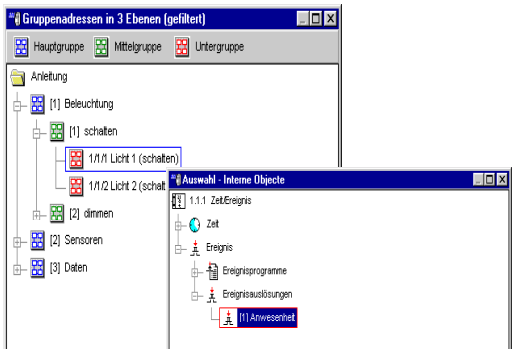


Figure 4-6: Object list / group addresses

4. Enter a value according to the type.

   In most cases, the program detects the data type itself and only permits values which are assigned to the group address.

   COM:

   Object type = 1 bit
   Value 0 switches an object OFF
   Value 1 switches an object ON

   Object type > 1 bit
   The value which the object should adopt is entered directly here (e.g. 0 - 100%, 22 °C, 4.5 V etc.)

   If the data type cannot be identified by the program an information window is displayed. The necessary data type is selected and confirmed with OK.

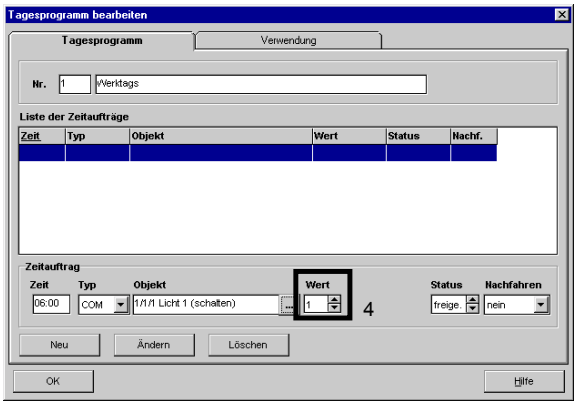


Diagram 4-7: Setting a value

01 07 Event module 800A01

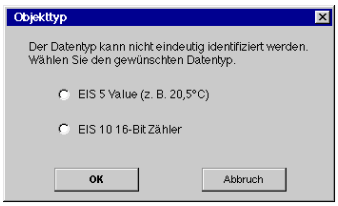


Figure 4-8: Example of a manual selection

After this selection, it may be necessary to define the unit of measurement. In this case, a further window is displayed in which the required unit of measurement can be selected.

After confirming the selection with OK, the unit of measurement is entered in the editing field together with a numerical value.

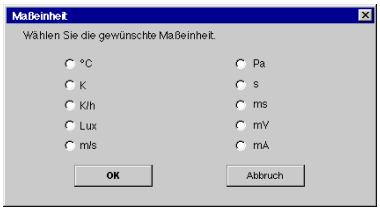
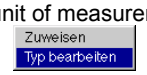


Figure 4-9: Selecting a unit of measurement

Note:
If an incorrect selection should be made for the unit of measurement, you can select the relevant group address again by clicking on the selection field. Select the context menu with the right mouse button and change the unit of measurement.



INTERNAL:
(see ‘Internal tasks’, page 33)

TEXT:
Select the required text for the value.
(page 35)

Note regarding the ‘Text’ type:
The selection for the value is only available if text has already been created under the ‘Text’ parameter.

5. Define the **Status** of the time task:
   - ENABLED = executed
   - DISABLED = not executed

6. In the selection **Update**, the editing of the time task is defined after a disruption on the bus. It can be necessary e.g. after a voltage failure to update a time program. All the missed tasks are carried out in order to ensure a defined state for further processing of the time program:

Selection	**Meaning**
NO	does not update the task
YES	the task is always updated
LAST	only the last task which refers to the same COM object is updated

7. Finish the input in the **Time task** editing field by pressing NEW. The new time task is then transferred to the **List of time tasks**. To create further time tasks for this daily program, repeat steps 1 to 7.

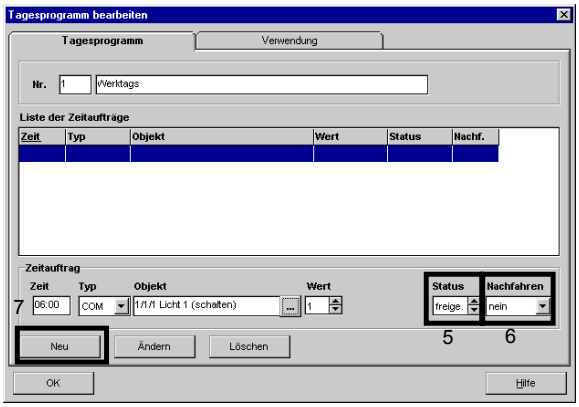


Figure 4-10: Update

Note:
The behaviour of the time tasks is also dependent on the settings in the **General parameters** (see page 36).

01 07 Event module 800A01

Modifying a time task

1. Select the entry to be modified from the **List of time tasks**. It is adopted in the **Time task** editing field.

2. Change the entry as required for:
   - Time
   - Type
   - Object
   - Value
   - Status
   - Update

3. Click on MODIFY once you have successfully made your changes. The task is adopted with the modified values.

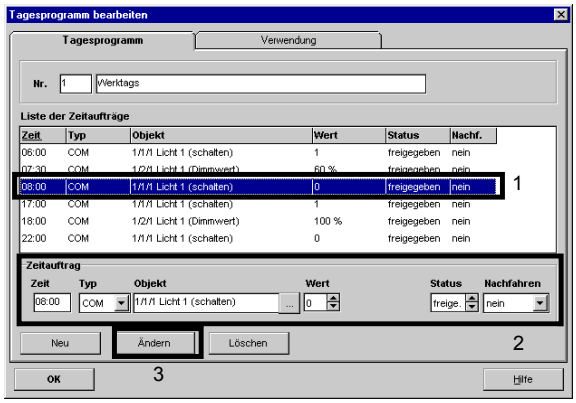


Figure 4-11: Modifying a time task

Deleting a time task

1. Select the entry to be deleted from the list of time tasks.

2. Click on DELETE. The time task is removed from the list.

Note:
You are not asked to confirm the deletion. The task is immediately removed from the list after clicking on DELETE.

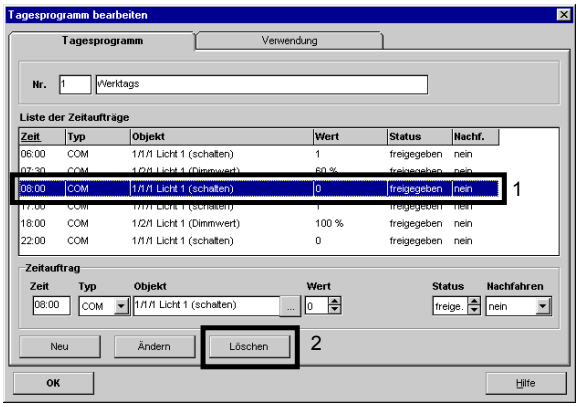


Figure 4-12: Deleting a time task

01 07 Event module 800A01

Extending a daily program
To extend a daily program, you can select a suitable entry from the **List of time tasks**, modify it in the **Time task** editing field and then add it to the list with NEW.

Example:
Figure 4-13 shows a daily program for controlling the lighting in a room.

Time	Task
06:00	Lighting is switched on
07:30	Lighting is dimmed to 60%
08:00	Lighting is switched off
17:00	Lighting is switched on, the final dimming value of 60% still applies
18:00	Dimming value of the lighting is increased to 100%
22:00	Lighting is switched off

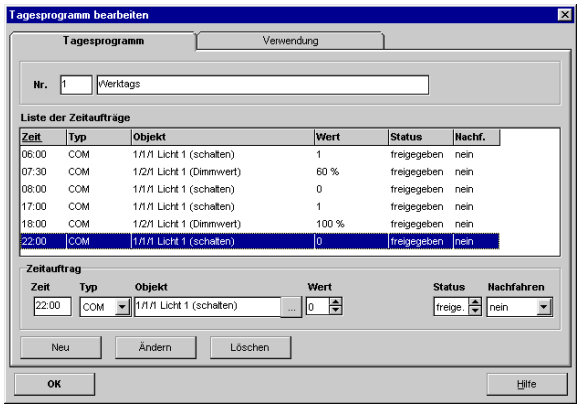


Figure 4-13: Example of a daily program

Usage
A daily program can be assigned to several calendar entries and/or periods. Under **Usage**, you obtain an overview of all the calendar entries and periods which are assigned to this daily program.

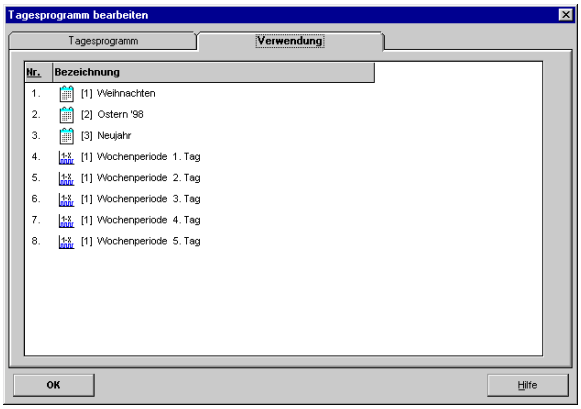


Figure 4-14: Example for using a daily program

Finishing the input
Click on the OK button if you are finished with the daily program. The window **Edit daily program** is closed. If the editing has been started from the Assistant, you return to the Assistant after pressing the OK button.

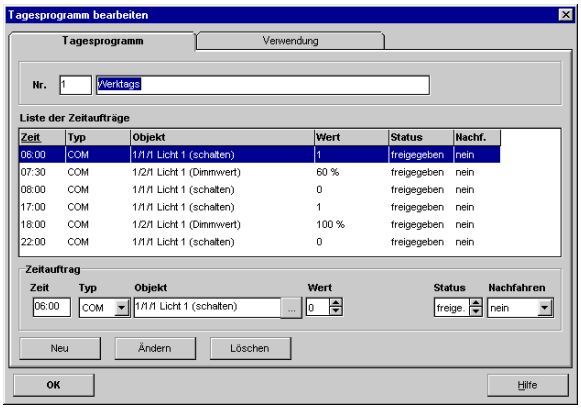


Figure 4-15: Finishing the input

01 07 Event module 800A01

List of daily programs

The daily programs are represented as tables in the work area. The following are assigned to the columns of this table:

1. Number of the daily program
2. Name of the daily program
3. Number of time tasks in the daily program
4. Frequency that the daily program is used by calendar entries and/or periods

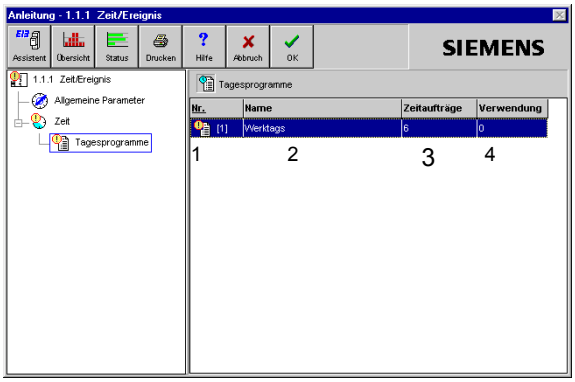


Figure 4-16: List of daily programs

If the daily program is marked with a ⓘ symbol in the **No.** column, it has not yet been assigned to a calendar entry of period. The entry “0” appears in the **Usage** column. This mark is also set in the parameter directory in front of the **Daily programs** parameter.

Figure 4-17: Marking a daily program

Calendar entries

If a daily program should be implemented on a specific date or within a specific date range, it must be assigned to this date in the calendar.

Inserting a calendar entry

1. Click on **Time** in the parameter directory.
2. Drag the symbol **Calendar entries** in the selection bar to the work area underneath using drag & drop. The window **Edit calendar entry** is opened. The parameter **Calendar entries** is added to the parameter directory.

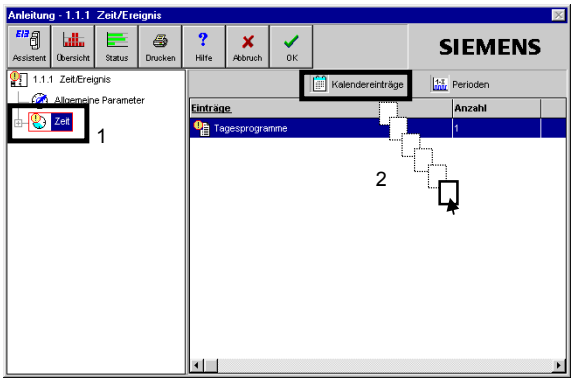


Figure 4-18: Inserting a calendar entry

3. Assign a name to the calendar entry (e.g. “Christmas”).
   The numbering is carried out automatically.

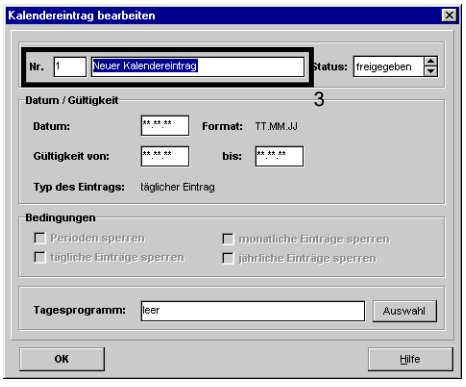


Figure 4-19: Assigning a name

01 07 Event module 800A01

Editing a calendar entry

1. Define the **Status** of the calendar entry.
   - ENABLED = executed
   - DISABLED = not executed

2. Enter under **Date/Validity** when the daily program should be executed (DD.MM.YY). You can also use ** as a placeholder.

Examples:

Date	From	To	Type	Description
..**	**.**.**	**.**.**	daily	no restriction
..**	01.05.98	**.**.**	daily	daily from 1st May 1998 onwards
..**	**.**.**	01.05.05	daily	daily until 1st May 2005
..**	05.**.**	10.**.**	monthly	every month from 5th to 10th
..**	01.05.**	15.05.**	annually	every year from 1st to 15th May
..**	01.05.98	15.05.98	once	from 1st to 15th May 1998
01.**.**	**.**.**	**.**.**	monthly	every 1st of the month
01.**.**	01.05.98	**.**.**	monthly	every 1st of the month from 1st May 1998
01.**.**	**.**.**	01.05.05	monthly	every 1st of the month until 1st May 2005 incl.
01.**.**	01.05.**	01.10.**	annually	every 1st of the month from May to October
01.**.**	01.05.98	01.10.98	once	every 1st May until October 1998
01.01.**	**.**.**	**.**.**	annually	every 1st January
01.01.**	01.01.98	**.**.**	annually	every 1st January from 1998 onwards
01.01.**	**.**.**	01.01.05	annually	every 1st January until 2005 inclusive
01.01.**	01.01.98	01.01.05	once	every 1st January from 1998 to 2005 inclusive
01.01.98	**.**.**	**.**.**	once	on 1st January 1998

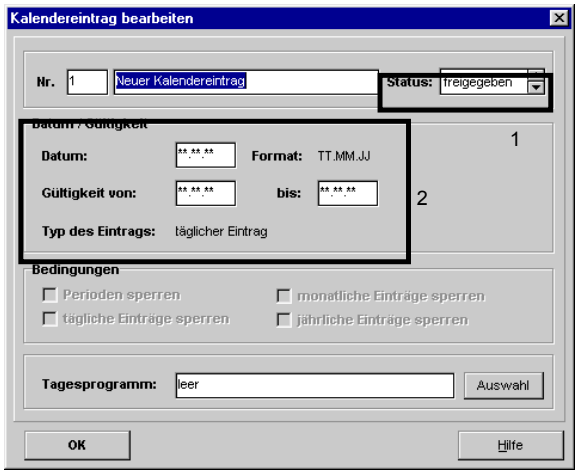


Figure 4-20: Editing calendar entries

3. After defining the date and validity, select the required daily program in the window **Selection of daily program** to assign it to this calendar entry. Confirm the selection with OK.

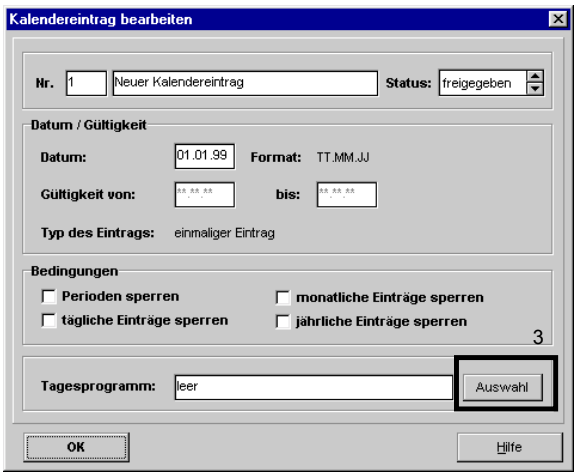


Figure 4-21: Selecting a daily program

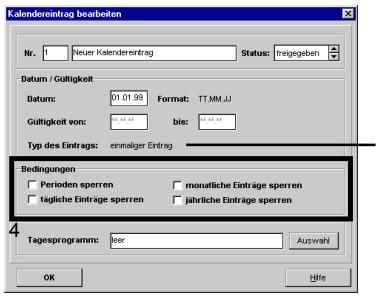
Figure 4-22: Selecting a daily program

It is possible that the assignment of dates and daily programs can lead to overlapping. In this case, **Conditions** must be agreed which define a unique sequence for the daily programs.

01 07 Event module 800A01

Under the fields for data entry, the **Entry type** is defined automatically by the program, depending on the data that was previously entered:

- once
- daily
- monthly
- annually
- periodically



Entry type is defined automatically

Figure 4-23: Defining conditions

4. Various conditions are made available for selection depending on the type of entry in order to block other types.

Type	Can block
once	annually, monthly, periodically, daily
annually	monthly, periodically, daily
monthly	periodically, daily
periodically	daily
daily	-

Example for defining the conditions:

Two different daily programs are assigned to a weekly period.

Mon. to Fri. Daily program “Workday”
Sat. and Sun. Daily program “Weekend/public holidays”

Only the daily program “Weekend/public holidays” should be executed on specific public holidays (e.g. Christmas, New Year), regardless of the day of the week.
A calendar entry with the corresponding date or date range is defined for each of these public holidays.

Each calendar entry now receives the condition **Block periods**, in order to disable the program for the respective date. In this way, the “Weekend/public holidays” program is triggered and not a “Workday” program.

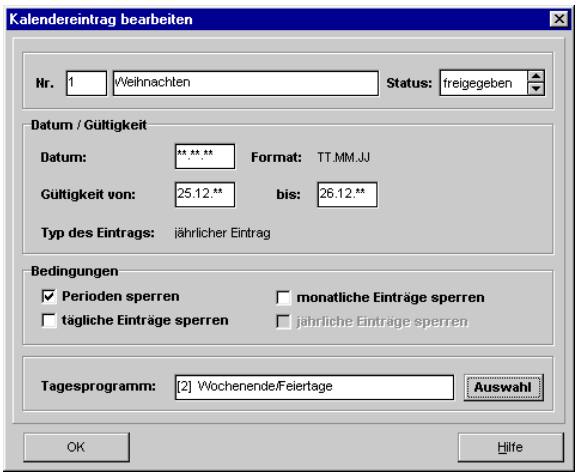


Figure 4-24: Example - Christmas

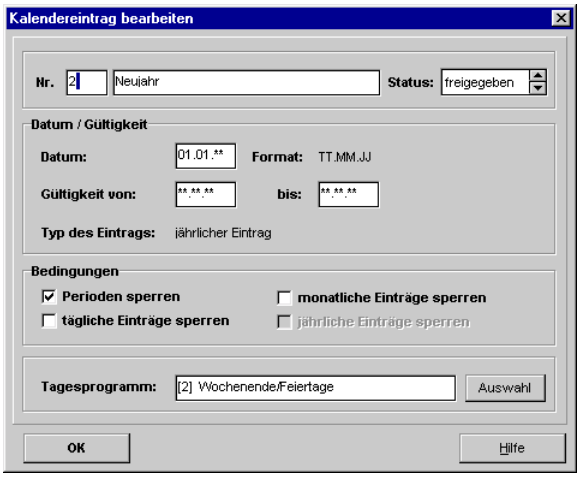


Figure 4-25: Example – New Year

5. Exit the calendar entry with OK.
   If the editing was started from the Assistant, you are returned to the Assistant after pressing OK.

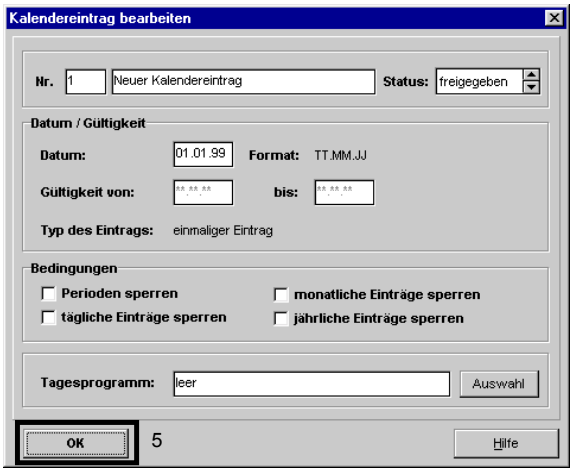


Figure 4-26: Exiting the calendar entry

List of calendar entries
Calendar entries are represented as tables in the work area. The following are assigned to the columns of this table:

1. Number of the calendar entry
2. Name of the calendar entry
3. Date
4. Validity (from/to)
5. Daily program which is assigned to this calendar entry
6. Status of the calendar entry

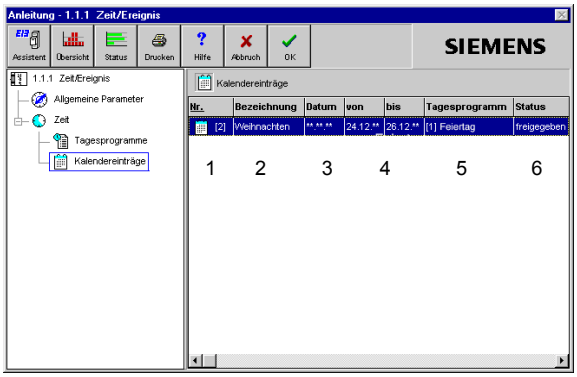


Figure 4-27: List of calendar entries

If the calendar entry has been marked with a ⓘ symbol in the **No.** column, it has not yet been assigned a daily program. The note “empty” appears in the column **Daily program**. This mark is also set in front of the **Calendar entry** parameter in the parameter directory.

Figure 4-28: Marking a calendar entry

Siemens AG
Automation and Drives Group
Electrical Installation Technology
P.O. Box 10 09 53, D-93009 Regensburg

01 07 Event module 800A01

Periods

The cyclical processing of a freely selectable sequence of daily programs is defined in a period:

Example:

Period duration	Daily programs
2 days	1.Periode: 1 2 — 2.Periode: 3 4 ▶
6 days	1.Periode: 1 3 4 6 2 5 — 2.Periode: 1 3 4 6 ▶
7 days	1.Periode: Mo Di Mi Do Fr Sa So — 2.Periode: Mo Di ▶

Specifying a period

1. Select **Time** in the parameter directory.
2. Drag the **Periods** symbol in the selection bar onto the work area underneath using drag & drop. The window **Edit period** is opened. The **Periods** parameter is added to the parameter directory.

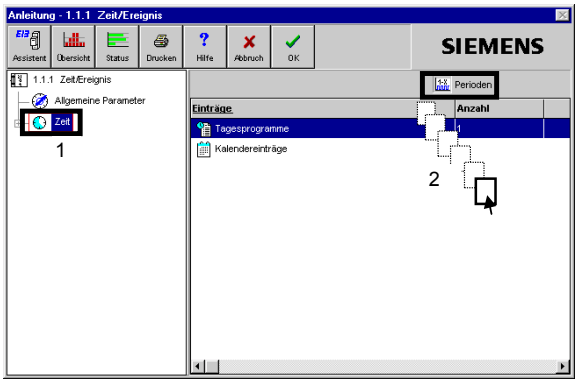


Figure 4-29: Inserting periods

3. Assign a name to the period (e.g. weekly period). The numbering is carried out automatically.

The weekly period (number of days = 7) is available by default when the window is opened and the date for the Monday of the current week is shown (start of period).

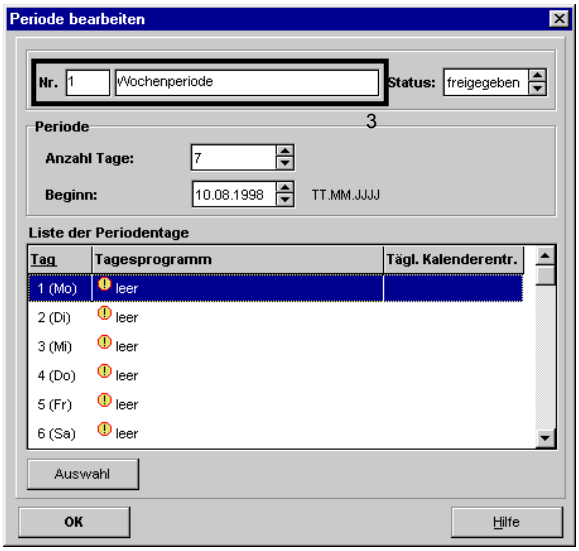


Figure 4-30: Assigning a name

01 07 Event module 800A01

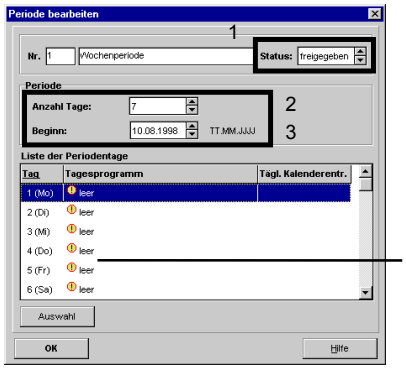
Editing a period

1. Define the **Status** of the period.
   - ENABLED = executed
   - DISABLED = not executed

2. Specify the duration of the period:
   - 2 days = shortest period
   - 40 days = longest period
   - 7 days = weekly period

   The weekday names are shown in a weekly period – also for a period duration of 14, 21, 28 and 35 days.

3. Under **Begin**, enter the date on which the period should be started.



Period with 7 days – the weekday names Mon. to Sun. are displayed

Figure 4-31: Editing a period

Note:
If a weekly period should be defined beyond the current date, it is advisable to specify that the period starts on a Monday.

4. Select a day from the **List of days in the period**. You open the window **Daily program selection** by pressing the SELECT button or by double clicking. Once the selection is made, the required daily program is transferred to the **List of days in the period** by selecting OK.

Example for a period duration of 7 days:

(Mon) Daily program “Workday”
(Tue) Daily program “Workday”
(Wed) Daily program “Workday”
(Thu) Daily program “Workday”
(Fri) Daily program “Workday”
(Sat) Daily program “Weekend/public holidays”
(Sun) Daily program “Weekend/public holidays”

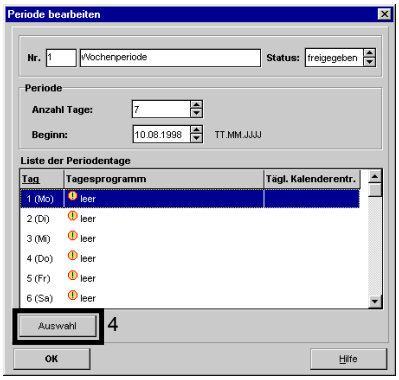


Figure 4-32: Editing a period

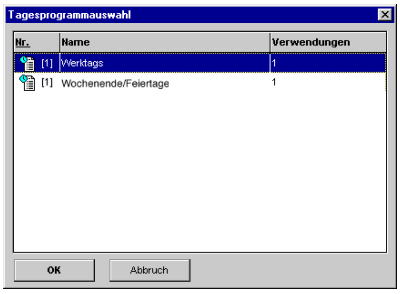


Figure 4-33: Daily program selection

Note:
A daily program does not need to be assigned to each day of the period. There must however be at least one entry in the **List of days in the period**.

01 07 Event module 800A01

5. You also have the option of assigning a higher priority to the execution of a daily program on a day that falls within this period. In this case, you must assign the entry DISABLE to a specified **Daily calendar entry**, which coincides with this day.

6. Finish the input with OK.
   If the editing has been started from the Assistant, you are returned to the Assistant after pressing OK.

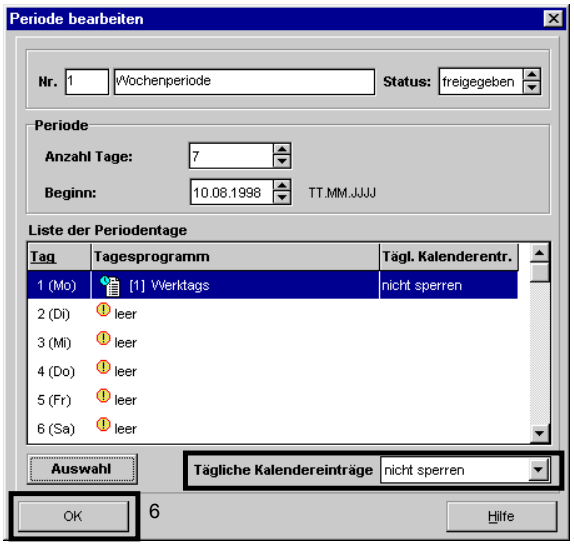


Figure 4-34: List of days in the period

List of periods
Periods are represented as tables in the work area. The following are assigned to the columns of this table:

1. Number of the period
2. Name of the period
3. Duration of the period in days
4. Start of the period
5. Status of the period

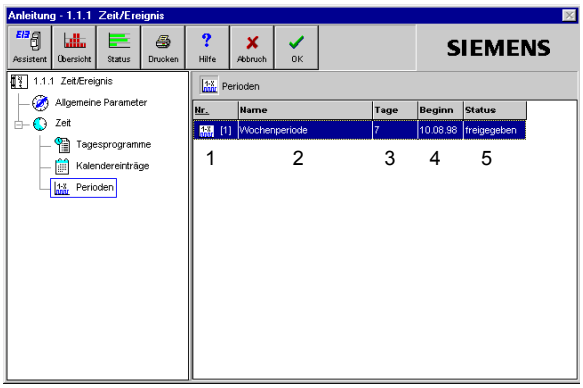


Figure 4-35: List of periods

If the period is marked with a ⓘ symbol in the **No.** column, no daily program has been assigned to it yet. This marking is also set in front of the **Periods** parameter in the parameter directory.

Figure 4-36: Marking a period

01 07 Event module 800A01

Overview (display of the daily programs)

You obtain an overview of the individual daily programs and their assignment to the calendar entries by selecting the menu item **Overview**. The overview can be represented separately according to calendar entries or periods. A complete overview is also possible according to calendar and period.

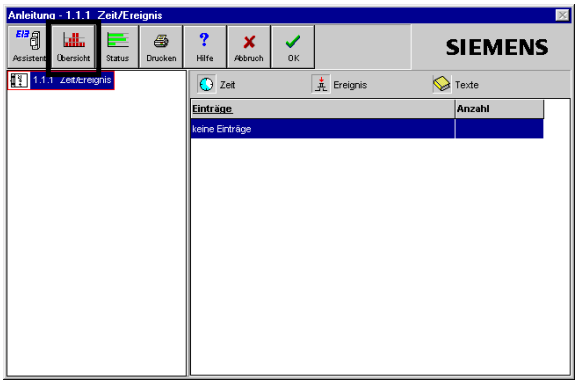


Figure 4-37: Selecting the overview

Year view
The following parameters can be selected for the display:

1. Year number
2. –Calendar and periods
   –Calendar
   –Periods
3. –All daily programs
   –Specific daily program from the list

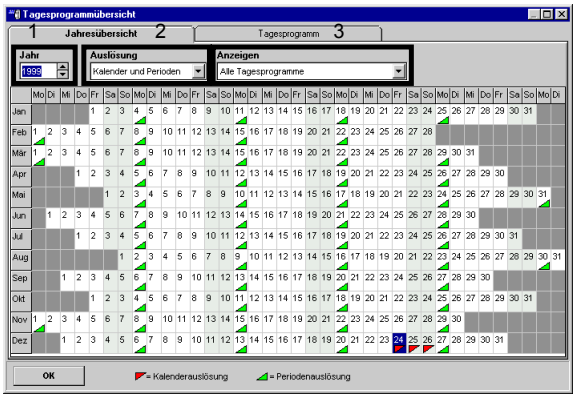


Figure 4-38: Year view

Note:
Double click on a day in the calendar, then the daily program overview is opened with the selected date and the time profile of all active daily programs of the respective group addresses is represented. The selected day is stored in colour in the year view.

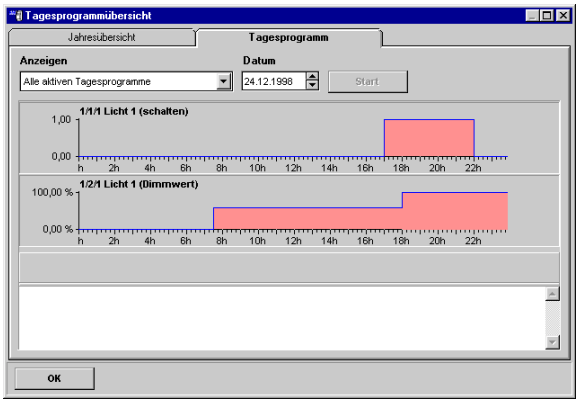


Figure 4-39: Overview of daily programs

Daily program
The overview is used to represent the time sequences (time profiles) of the group addresses.

1. Selection of a specific daily program or all active daily programs
2. Input of the required date (only when selecting all daily programs)
4. Click on START. The time profiles of the group addresses are displayed.

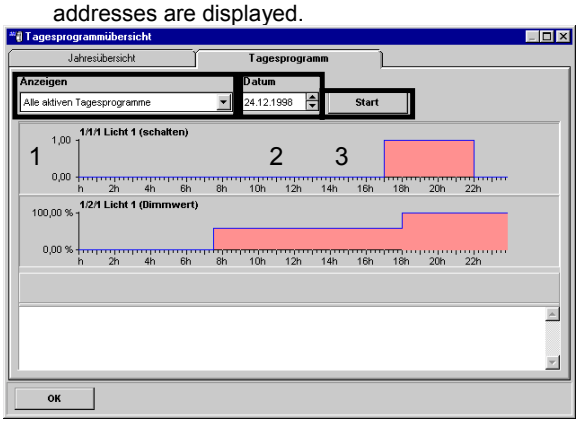


Figure 4-40: Overview of daily programs

01 07 Event module 800A01

Event

To edit the **Event** parameter, it must be inserted in the parameter directory.

1. Select the controller module in the parameter directory.

2. Drag the **Event** symbol in the selection bar into the work area underneath using drag & drop. The **Event** parameter is added to the parameter directory.

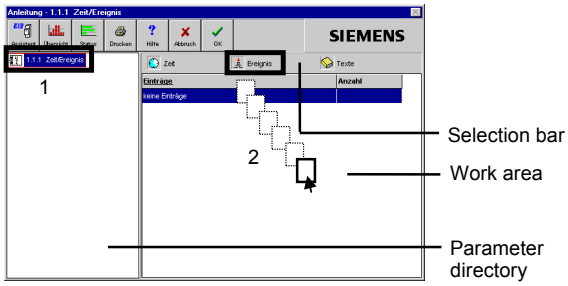


Figure 5-1: Inserting the **Event** parameter

3. Click on **Event** in the parameter directory.
   The selection bar now displays the symbols:
   Event programs
   Event triggers

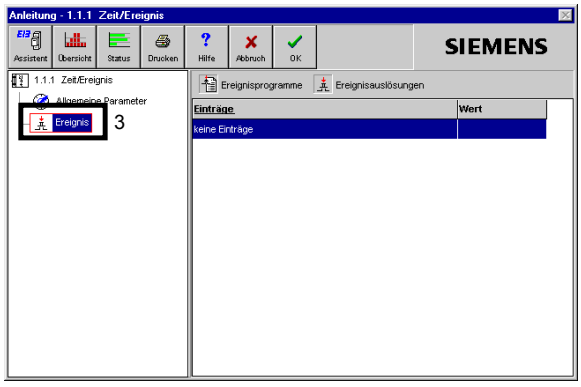


Figure 5-2: **Event** parameter

Event programs

Event tasks are specified in an event program.

Creating an event program

1. Drag the **Event programs** symbol in the selection bar into the work area underneath using drag & drop. The **Edit event program** window is opened. The parameter **Event programs** is added to the parameter directory.

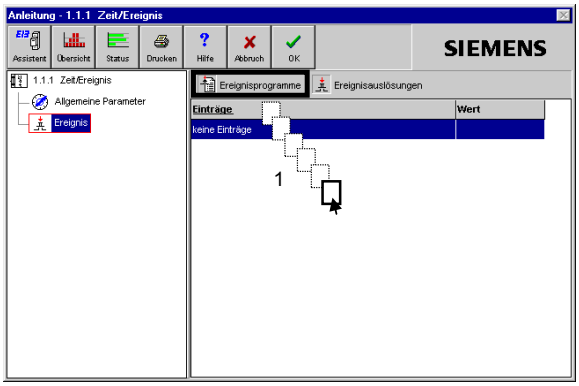


Figure 5-3: Inserting an event program

2. Assign a name to the event program (e.g. “Staircase lighting”).
   The numbering is carried out automatically.

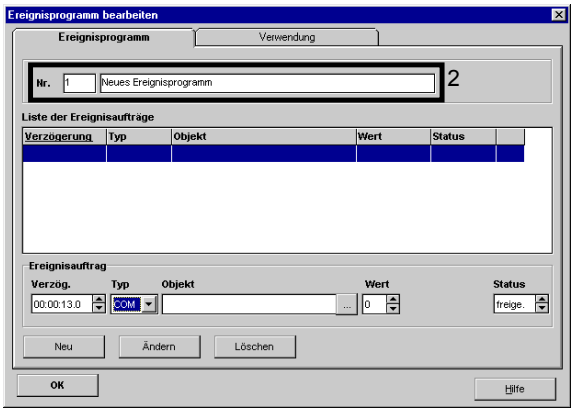


Figure 5-4: Assigning a name

01 07 Event module 800A01

Inserting an event task

1. Enter a **Delay period** for the event task in the editing field (hh:mm:ss.hs).
   - hh = Hours (0-1)
   - mm = Minutes (0-59)
   - ss = Seconds (0-59)
   - hs = Hundredth of a second (0-9)

   The maximum delay is 60 min.

   Example:
   - 00.00.00.0 The task is triggered immediately
   - 00:01:30.0 The task is triggered with a delay of 1 min 30 sec

2. Under **Type**, select
   - COM for a group address (assignment to COM object)
   - INTERNAL for an internal task (see 'Internal tasks', page 33)
   - TEXT if you wish to send text (see 'Text', page 35)

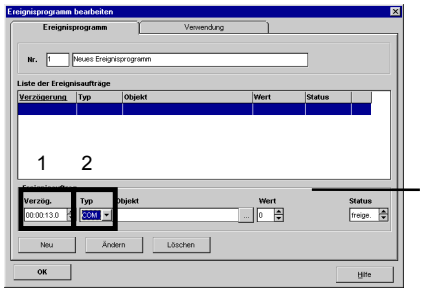


Figure 5-5: Select delay and type

Note:
Identical delay periods should not be used in an event program. They should at least differ in the hs range.

3. Click on the **Selection field** [...] and select from the list according to the type:
   - COM the required group address
   - INTERNAL an internal task
   - TEXT a group address with 6, 10 or 14 bytes

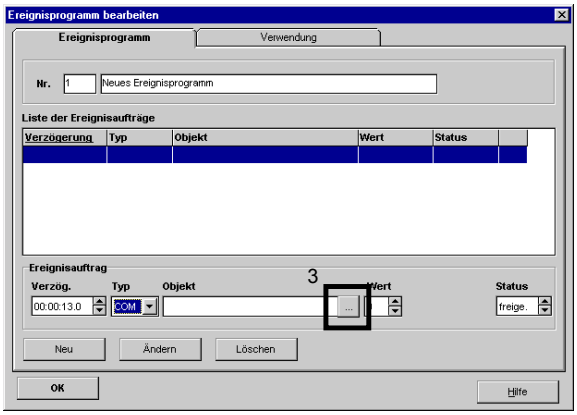


Figure 5-6: Selecting a communication object

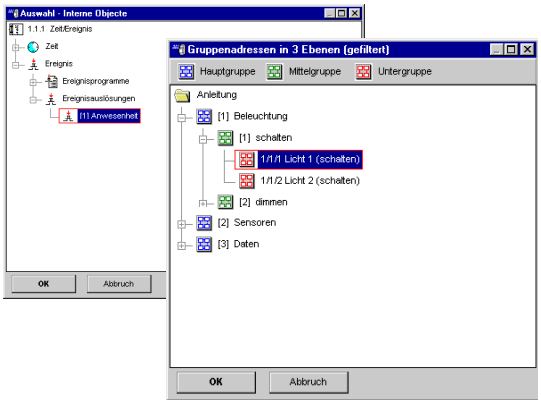


Figure 5-7: Object list / group addresses

01 07 Event module 800A01

4. Enter a **Value** according to the **Type**.

   In most cases, the program detects the data type itself and only permits values which are assigned to the group address.

   Also observe the notes in the chapter ‘Inserting a time task’ (page 11).

   COM:
   Object type = 1 bit
   Value 0 switches an object OFF
   Value 1 switches an object ON

   Objects with type > 1 bit
   The value which the object should adopt (e.g. 0 - 100%, 22 °C, 4.5 V etc.) is entered here directly.

   INTERNAL:
   (see ‘Internal tasks’, page 33)

   TEXT:
   Select the required text for the value.

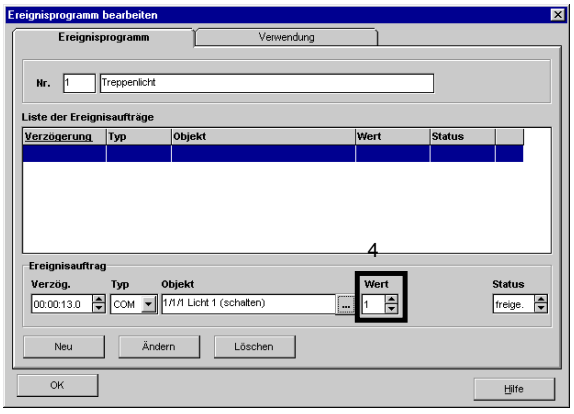


Figure 5-8: Setting a switching state

Note regarding the ‘Text’ type:
The selection for the value is only available if text has already been created under the ‘Text’ parameter.

5. Define the **Status** of the event task:
   - ENABLED = executed
   - DISABLED = not executed

6. Finish the input in the **Event task** editing field with NEW. The new event task is thus transferred to the **List of event tasks**.
   To create further event tasks for this event program, repeat steps 1 to 6.

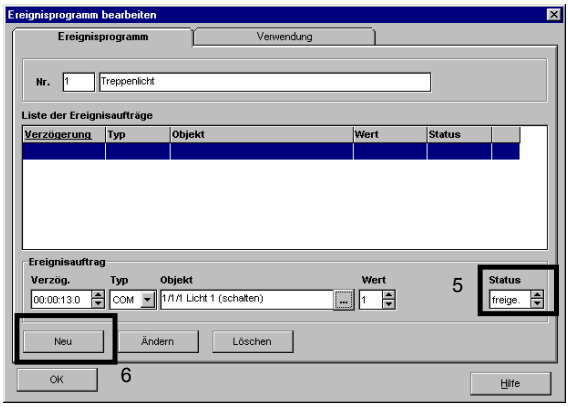


Figure 5-9: Setting a status

01 07 Event module 800A01

Modifying an event task

1. Select the entry to be modified from the **List of event tasks**. It is transferred to the **Event task** editing field.

2. Modify the input as required for:
   - Delay period
   - Type
   - Object
   - Value
   - Status

3. After successfully making the changes, click on MODIFY. The task is transferred with the modified values.

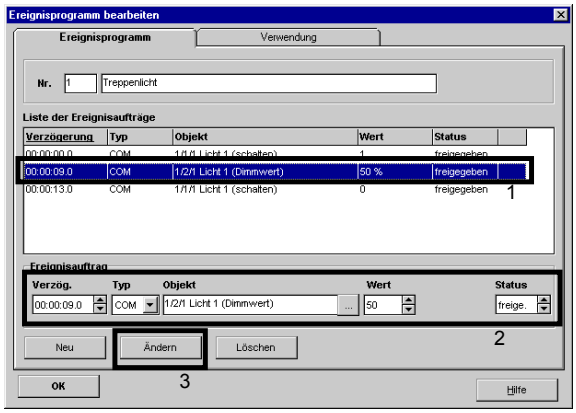


Figure 5-10: Modifying an event task

Deleting an event task

1. Select the entry to be deleted from the **List of event tasks**.

2. Click on DELETE. The event task is removed from the list.

Note:
You are not asked to confirm the deletion. The task is immediately removed from the list after clicking on DELETE.

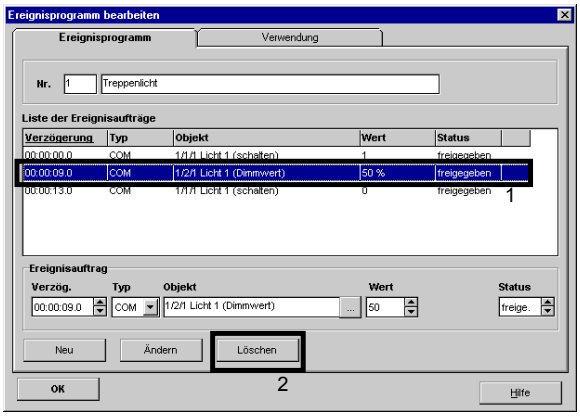


Figure 5-11: Deleting an event task

01 07 Event module 800A01

Extending an event program

To extend an event program, you can also select an appropriate entry from the **List of event tasks**, modify it in the **Event task** editing field and then add it to the list with NEW.

Example:
Figure 5-12 shows a sequence for the control of a staircase lighting function.

- 00:00:00.0 The lighting is switched on immediately.
- 00:01:30.0 After 1 minute and 30 seconds, the lighting is dimmed to 50%.
- 00:02:00.0 After 2 minutes, the lighting is switched off.

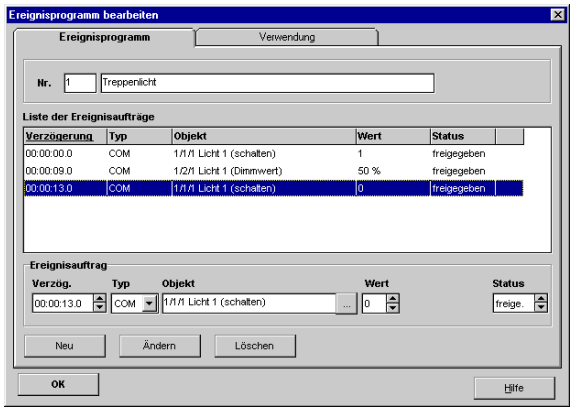


Figure 5-12: Extending an event program

Usage

An event program can be assigned to several event triggers. Under **Usage**, you obtain an overview of all the event triggers which are assigned to the event program.

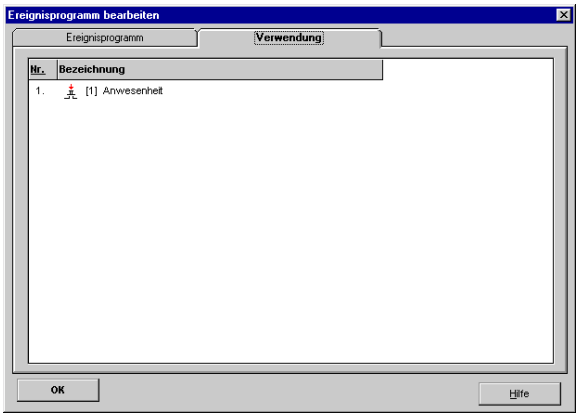


Figure 5-13: Example for using the event program

Finishing the input

Click on the OK button if you have finished with the event program. The **Edit event program** window is closed.

If the editing was started from the Assistant, you are returned to the Assistant after pressing OK.

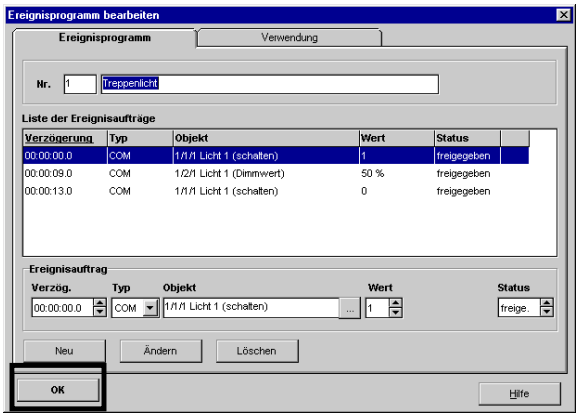


Figure 5-14: Finishing the input

01 07 Event module 800A01

List of event programs
Event programs are represented as tables in the work area. The following are assigned to the columns of this table:

1. Number of the event program
2. Name of the event program
3. Number of event tasks in the event program
4. Frequency of usage of the event program by event triggers

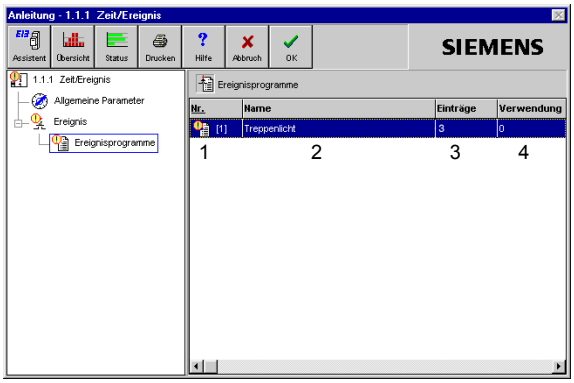


Figure 5-15: List of event programs

If the event program has been marked with a ⓘ symbol in the **No.** column, it has not yet been assigned an event trigger. The entry “0” appears in the **Usage** column. This mark is also set in front of the parameter **Event programs** in the parameter directory.

Figure 5-16: Marking an event program

Event triggers

An event trigger describes the condition for a communication object of the **N 341**, which triggers a selected event program when it occurs.

Inserting an event trigger

1. Click on **Event** in the parameter directory.

2. Drag the symbol **Event triggers** in the selection bar into the work area underneath using drag & drop. The **Edit event trigger** window is opened. The parameter **Event triggers** appears in the parameter directory.

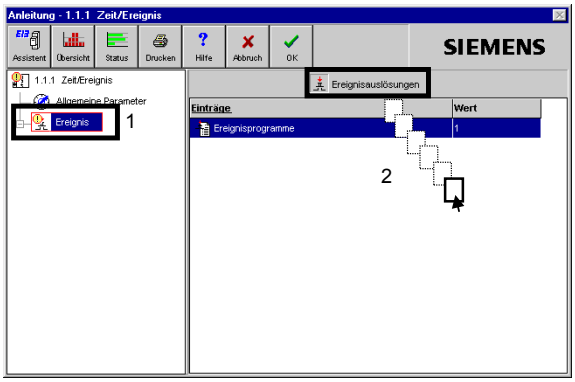


Figure 5-17: Inserting an event trigger

3. Assign a name to the event trigger (e.g. “Staircase lighting ON”). The numbering is carried out automatically.

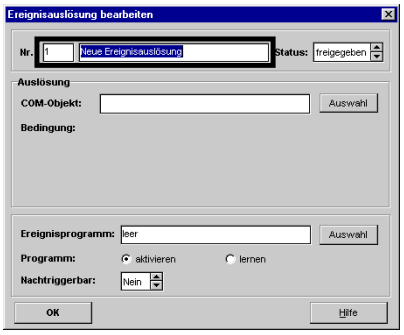


Figure 5-18: Assigning a name

01 07 Event module 800A01

Editing an event trigger

1. Define the **Status** of the event trigger.
   - ENABLED = executed
   - DISABLED = not executed

2. Click on SELECTION and select the required group address from the list.

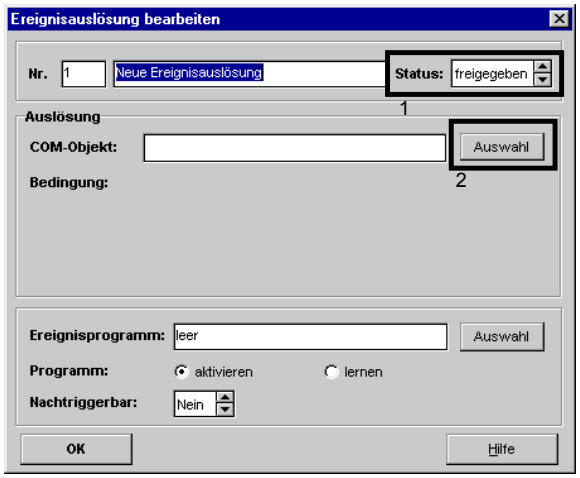


Figure 5-19: Editing an event trigger

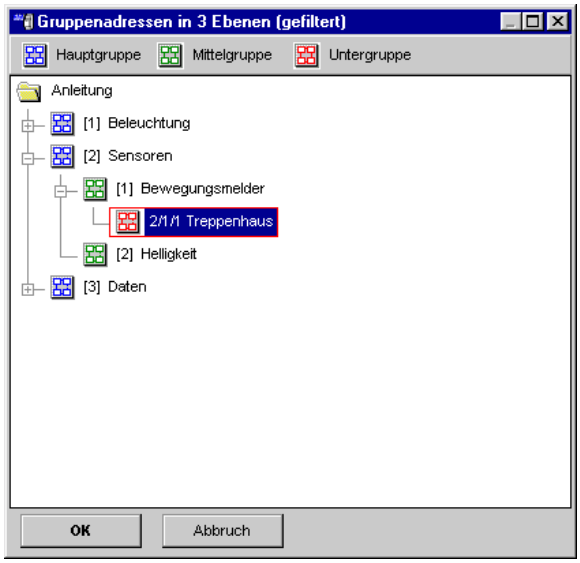


Figure 5-20: List of group addresses

A list with various conditions is available depending on the selected group address.

3. Enter the condition for the communication object which should start the selected event program.

   Example: Object type = 1 bit:
   if value received
   if value = 1
   if value = 0
   if value from 0 to 1
   if value from 1 to 0

   Example: Object type > 1 bit:
   if value received
   if value > limit value
   if value < limit value
   if value exceeds limit value
   if value falls below limit value
   if value = limit value

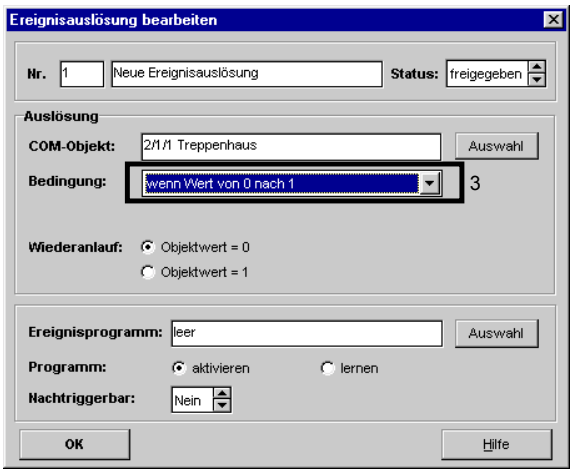
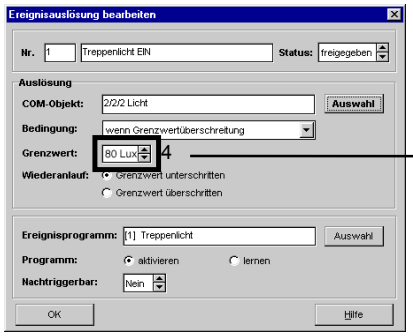


Figure 5-21: Object type = 1 bit

01 07 Event module 800A01

4. If object type > 1 bit, an additional input field is displayed, in which the **Limit value** must be entered for the condition.



Input of limit values for the evaluation

Figure 5-22: Object type > 1 bit

5. A selection is offered for the restart depending on the object type and the selected condition:

   Object type = 1 bit:
   - Object value = 0
   - Object value = 1

   Object type > 1 Bit:
   - Value falls below limit value
   - Value exceeds limit value

   These options are only shown if one of the following conditions has been selected:
   - if value from 0 to 1
   - if value from 1 to 0
   - limit value underflow
   - limit value overrange

Limit value underflow or overrange refers to the value which has been entered in the **Limit value** field. The definitions made for the restart are used as comparison values after e.g. a bus voltage failure. The object sent by the COM object after a restart is compared with this value and thus determines the trigger in accordance with the specified condition.

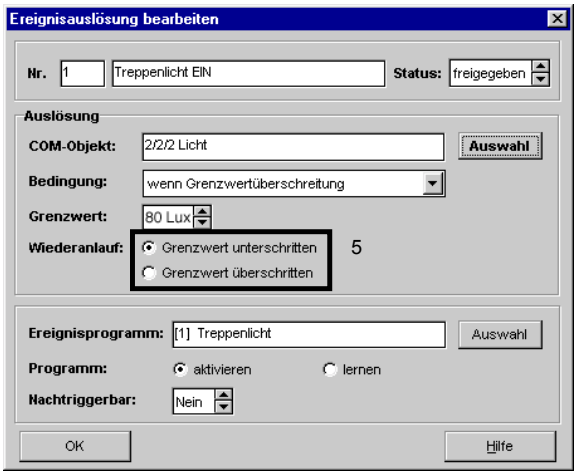


Figure 5-23: Restart

6. Click on SELECTION and select the required event program from the **Event program selection** list.

01 07 Event module 800A01

7. Under **Program**, select the option:
   ACTIVATE triggers an event program (default setting)
   LEARN (see 'Learning an event program', page 31)

8. Select for **Retriggerable**:
   YES the event program is interrupted by a new signal from the triggering COM object and restarted
   NO the event program is first executed before a restart can take place

9. Click on OK.
   The program returns to the main window.

If the editing has been started from the Assistant, you are returned to the Assistant after pressing OK.

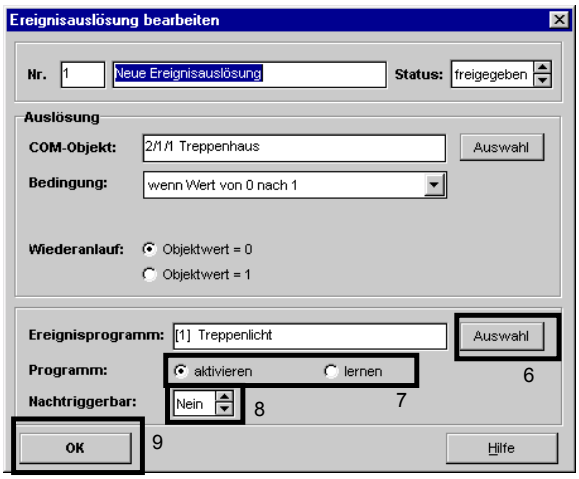


Figure 5-24: Selecting an event program and options

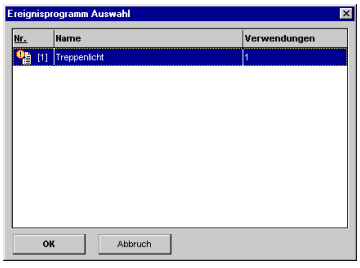


Figure 5-25: Event program selection

Learning an event program

This option enables the module to learn values that have been manually set by the user (e.g. dimming value of a specific lighting system for a specific switch sensor).

- The COM objects of an event program are queried
- The state that has been read is automatically entered under **Value** for the respective event entry

Example:
Create two event triggers:

- COM object for activating
- COM object for learning

One COM object (assigned to a specific switch sensor no. 1) activates the event program while the other COM object (assigned to a specific switch sensor no. 2) supplies the values set by the user which the controller module has learnt.

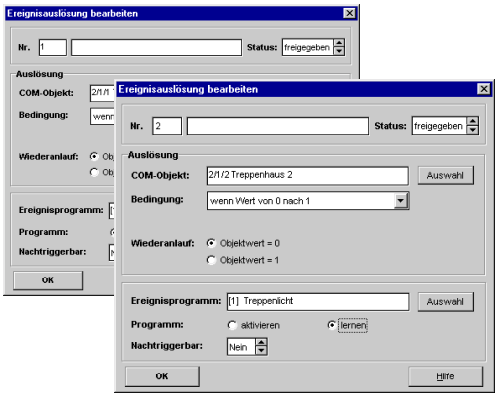


Figure 5-26: Learning an event program

Note:
The taught-in values are only entered directly in the controller module. If the event program has been loaded onto the controller module from the database, the taught-in values are overwritten again with the original values.

01 07 Event module 800A01

List of event triggers
Event triggers are represented as tables in the work area. The table provides information about the definitions that have been made.

The following are assigned to the columns of this table:
1. Number of the event trigger
2. Name of the event trigger
3. The COM object which triggers the event program
4. Event program to which the event trigger refers
2. Status of the event trigger

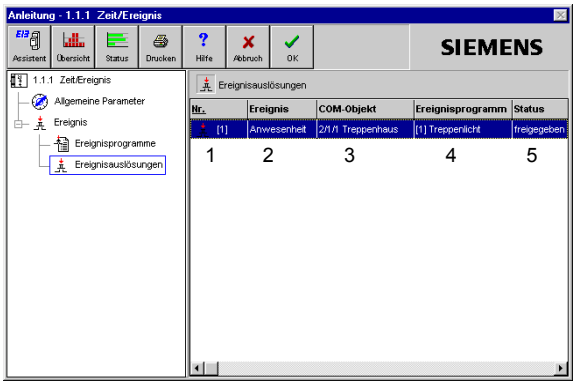


Figure 5-27: List of event triggers

If the event trigger is marked with the ⓘ symbol in the **No.** column, it has not yet been assigned a COM object and/or an event program. The note “empty” appears in the columns **COM object** and/or **Event program**. This mark is also set In front of the parameter **Event triggers** In the parameter directory.

Figure 5-28: Marking an event trigger

01 07 Event module 800A01

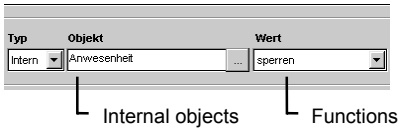
Internal tasks

With internal tasks, the parameters **Time** and **Event** are linked together logically. An internal task can be given both by a time task and by an event task. It can modify the status of all time and event parameters.

Examples:
- A daily program can be started by an event program.
- An event program can be disabled by a daily program.

For internal tasks, no bus activity takes place as the processing is carried out inside the controller module.

Internal objects



An internal task is specified if INTERNAL has been selected in the daily or event program under **Type**.

All the internal objects can be selected under **Object** by clicking on the selection field [...]:
- Daily programs
- Time tasks
- Calendar entries
- Periods
- Event programs
- Event triggers

Depending on the selection, the possible functions of the object are available under **Value**.

Functions

- Daily program
  - disable — a daily program can no longer be executed
  - enable — a daily program can be executed
  - start — a daily program is started
  - end — a running daily program is interrupted
- Time task
  - disable — an individual time task can no longer be executed
  - enable — an individual time task can be executed
- Calendar entry
  - disable — a calendar entry remains inactive
  - enable — a calendar entry is active
- Periods
  - disable — a period remains inactive
  - enable — a period is active
- Event program
  - disable — an event program can no longer be executed
  - enable — an event program can be executed
  - activate — an event program is started
  - deactivate — a running event program is interrupted
  - learn — an event program is learnt
    With this function, it is possible to learn several event programs at the same time.
- Event task
  - disable — an individual event task can no longer be executed
  - enable — an individual event task can be executed
- Event trigger
  - disable — an event trigger remains inactive
  - enable — an event trigger is active

01 07 Event module 800A01

Example:

Deactivate a switch within a defined time period.

The **Staircase lighting** event program is switched by a movement detector into the **Presence** event trigger. You can now disable this event trigger for a specified time period.

It should not be possible for the staircase lighting to be switched on by the movement detector daily between 8:00 and 17:00.

1. Create a daily program and rename it (e.g.: **daily**).
2. Specify 08:00 for the first time task. Select INTERNAL for the **Type**. Select an object with the required function from the object list (e.g. event trigger “Presence”).
3. Select DISABLED for the **Value**.
4. Create a second time task at 17:00 with the same event trigger and select ENABLED for the **Value**.

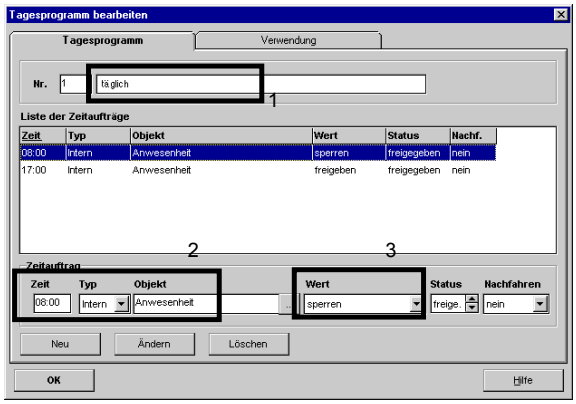


Figure 6-1: Daily program with internal task

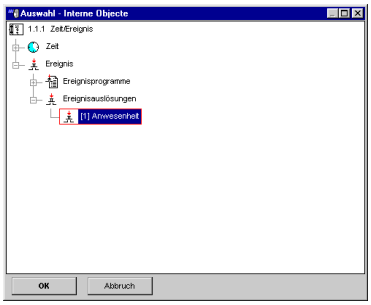


Figure 6-2: Object list

5. A daily program must be assigned to a calendar entry or a period. Specify a calendar entry and rename it
(e.g.: “Inactive movement detector”).
6. Set a daily entry for **Date/Validity**.
Date: **.**.**
Validity from: **.**.** to **.**.**
7. Assign the daily program to the calendar entry with the **Internal task** (e.g.: **daily**).
The movement detector is now inactive during the period between 08:00 and 17:00.

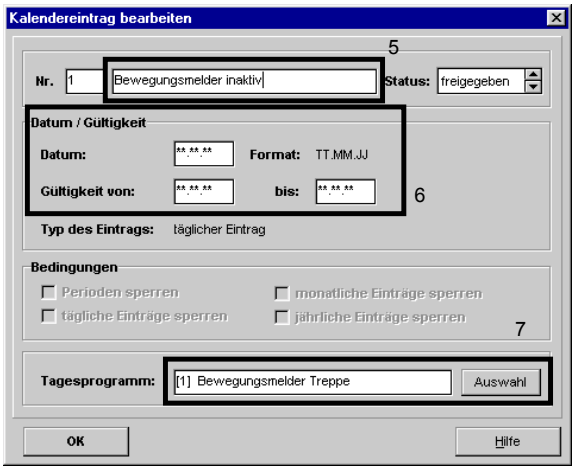


Figure 6-3: Calendar entry for daily program

01 07 Event module 800A01

Text

With the **Texts** parameter, you can create any text (max. 60 each with 14 characters) and send them to COM objects in daily or event programs. This text is then further processed by the receiver (e.g.: indication on a display, saved in a log file etc.).

Creation of text

1. Select the group address of the controller module which you wish to edit.

2. Drag the **Text** symbol in the selection bar into the work area underneath using drag & drop. The input window for text is opened.

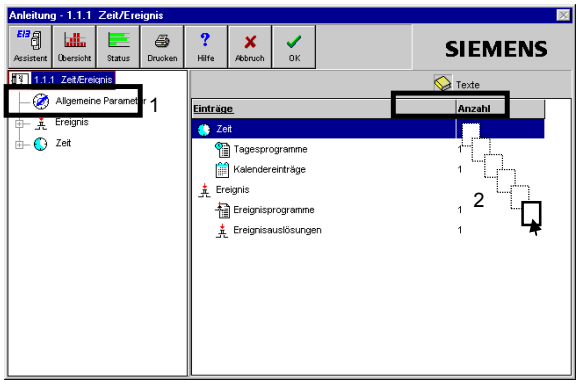


Figure 7-1: Inserting the **Texts** parameter

3. Enter the required text (max. 14 characters). Click on OK to confirm your input.

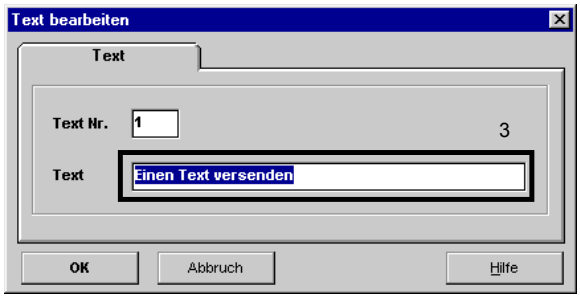


Figure 7-2: Recording text

4. If you wish to add further text, click on the **Texts** parameter. The **Text** symbol is displayed in the selection bar. Insert further text using drag & drop.

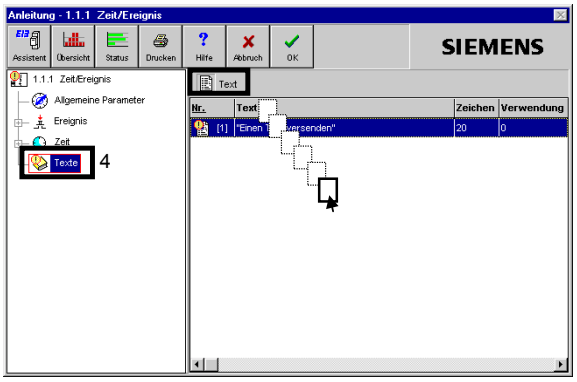


Figure 7-3: Adding further text

Using text in daily programs and event programs

1. Create or modify a daily program or event program. Select TEXT as the **Type**.

2. Select a suitable group address from the group address list (6, 10, 14 byte).

3. Under **Value**, select the text which you wish to send.

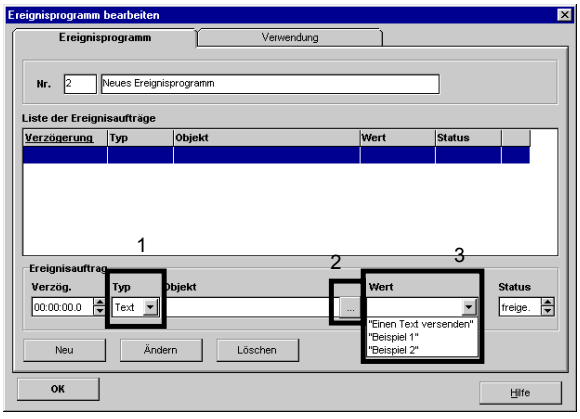


Figure 7-4: Selecting text

01 07 Event module 800A01

General parameters

The **General parameters** regulate the behaviour of the **N 341** on recovery of the bus voltage, after a bus fault.

1. Select **General parameters** in the parameter directory.

2. Select a parameter in the list by double clicking. The window for editing the parameter is opened.

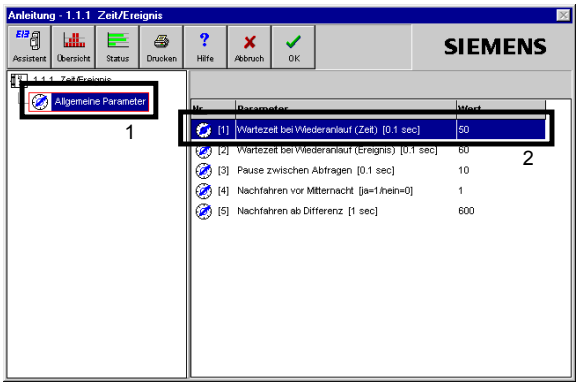


Figure 8-1: General parameters

3. Set the parameter as required and click on OK.

The method of operation of the individual parameters is described in the following section.

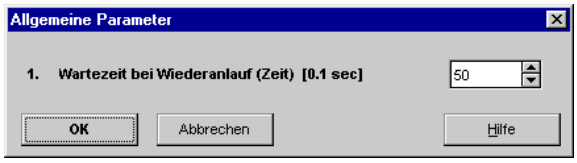


Figure 8-2: Set general parameters

Delay on restart (time)
- The bus voltage was interrupted.
- The parameter indicates how long it takes after bus voltage recovery until the controller carries out the time programs again.
- Unit of measurement for the parameter: 0.1 sec.
- Recommended setting: Value 50 = 5 sec.

Delay on restart (time)
- The bus voltage was interrupted.
- The parameter indicates how long it takes after bus voltage recovery until the controller carries out the event programs again.
- Unit of measurement for the parameter: 0.1 sec.
- Recommended setting: Value 60 = 6 sec.

Pause between scans
- The bus voltage was interrupted.
- After bus voltage recovery, the controller must identify the status of the COM objects used so that it can process event triggers correctly. To do so, it scans all the known COM objects on the bus. This scanning process is an additional load on the bus.
- The parameter indicates the pause between the individual scans.
- Unit of measurement for the parameter: 0.1 sec.
- Recommended setting: Value 10 = 1 sec.

Update before midnight
- The bus voltage was interrupted.
- Time tasks which were **not executed** due to a fault are processed after bus voltage recovery (updated).
- The parameter influences parameters in which the value YES or LAST has been entered under **Update**.
- The parameter indicates whether all the time tasks – also those before midnight – should be executed or only those of the current day.
- Value 1: also those before midnight
  Value 0: only those of the current day
- Recommended setting: Value 0

Update from differential
- The bus voltage was interrupted.
- The parameter indicates the duration of the bus voltage failure until an update is carried out. In the event of temporary faults, the daily programs are processed as normal.
- Unit of measurement for the parameter: 0.1 sec.
- Recommended setting: Value 600 = 10 min.

01 07 Event module 800A01

Saving / discarding parameters

1. Click on OK of you wish to save your parameterisation. The new parameters are written to the database. This process can take several minutes.

2. Click on CANCEL if you wish to discard the changes you have carried out.

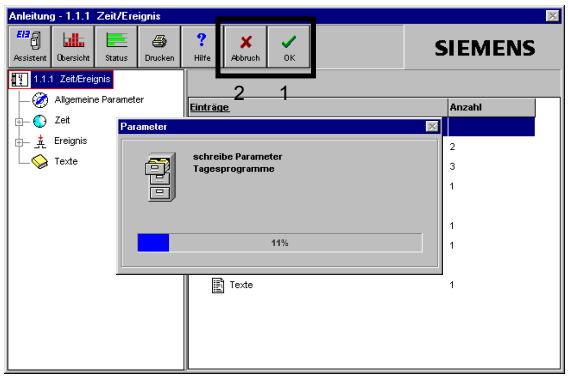


Figure 9-1: Saving the parameters

Deleting parameters

1. You can delete individual entries or complete parameters with the help of the context menu. Click on the parameter or entry to be deleted with the right mouse button. A context menu is opened. Select **Delete**.

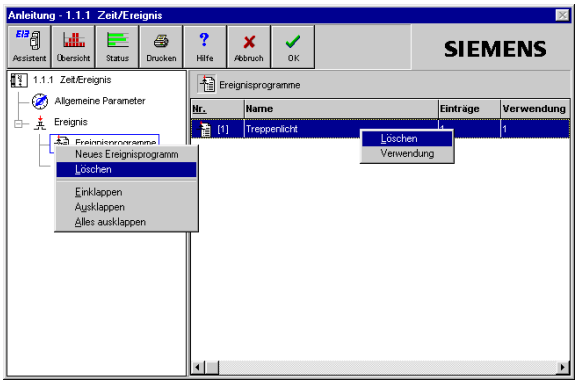


Figure 10-1: Deleting parameters

2. The program asks for confirmation if you wish to delete several entries at once.

Figure 10-2: Confirm deletion

01 07 Event module 800A01

Printing parameters

1. Click on **Print**.
2. Select the print options.
3. Click on OK to start printing.
4. Click on CANCEL to interrupt the process.
5. Click on SETTINGS to select another printer or other print options.

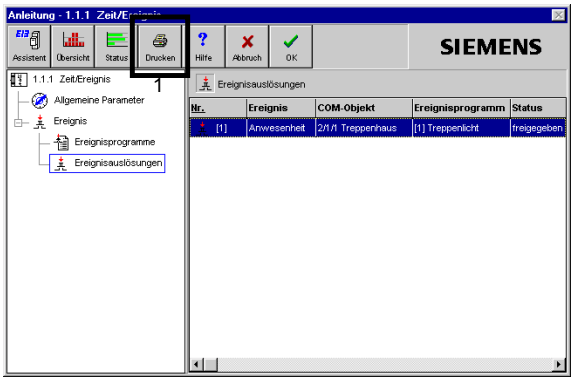


Figure 11-1: Printing parameters

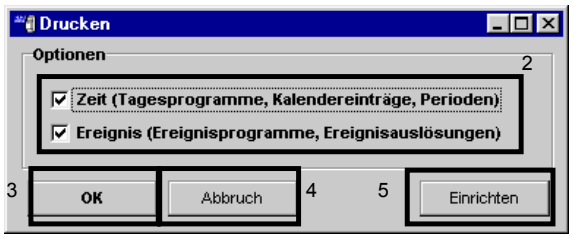


Figure 11-2: **Print** parameter window

Status display of the parameters

The number of programmable parameters is limited.

- Daily programs max. 125
- Time tasks max. 400
- Calendar entries max. 150
- Periods max. 3
- Event programs max. 200
- Event tasks max. 200
- Event triggers max. 100
- Text max. 60

The status display provides information about the capacity utilisation of the respective parameters as a percentage.

Click on **Status** in the main window. The status display is opened.

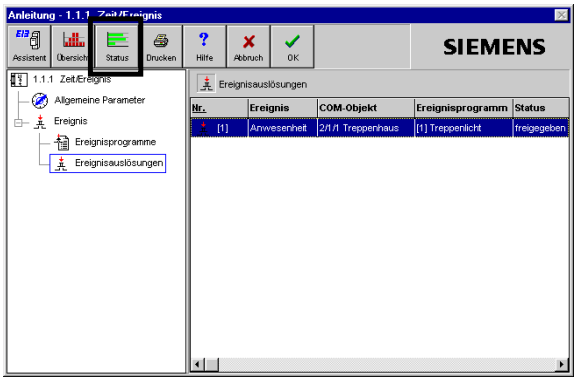


Figure 12-1: Retrieving the status display

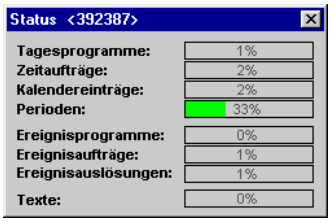


Figure 12-2: Status display of the parameters

01 07 Event module 800A01

Index

01 07 Event module 800A01