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# ABB

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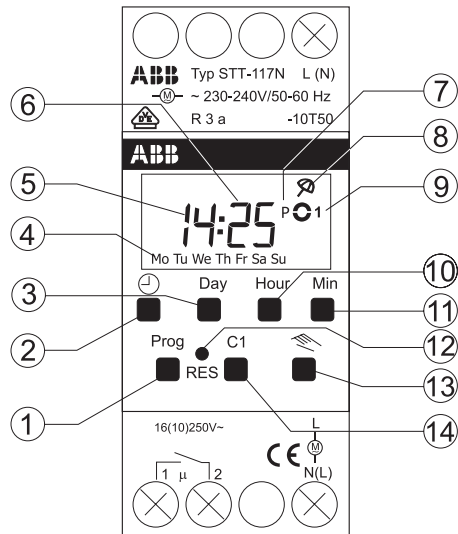


## STT-117 N

CE

STT-117 N

GB



- 1 Programming / checking mode
- 2 Button for setting current time
- 3 Button for setting day of the week
- 4 Days display (Mo, Tu, We ... Su)
- 5 Hour display
- 6 Minute display
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## 1.0 DESCRIPTION

### 1.1 Use

Time switches are used to switch connected electrical consumers on, off and over at certain times in a daily or weekly cycle.

The time switch **STT-117 N** is suitable for mounting in dry spaces and on a 35 mm rail (EN 50022). They can also be fitted to a wall using the terminal cover PCD2N.

#### **Note:**

**Single-channel** time switch **STT-117 N** with optional day or week program

#### **Dayprogram:**

Any programmable switching times will be executed at the same time every day.

#### **Weekprogram:**

Switching times can be individually set for every weekday.

### 1.2 Features

**The time switch is already preprogrammed with the date, automatic summer/winter time adjustment, as time switch with weekprogramm and the current time.**

- Automatic program review
- 99 day holiday program, programmable, 99 days in advance
- Switching preselection
- Continuous ON/OFF switching
- Lithium cell power reserve

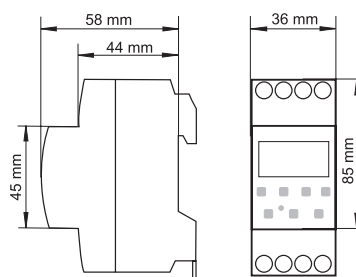
### 1.3 Technical data:

<b>Designation:</b>	<b>STT-117 N</b>
Type of program:	Day or week
Operating voltage:	230 V $\pm$ 10% 240 V + 6 % / - 14 %
Nominal frequency:	50-60 Hz
Internal consumption:	Max. 8 VA
Switching capacity:	16 (10) A, 250 V ~
Contact material:	AgSnO <sub>2</sub>
Time base:	Quartz
Memory locations:	14
Min. switching interval:	1 minute
Switching accuracy:	To the second
Operating accuracy:	$\pm$ 1 sec./day at 20° C deg. C
Power reserve:	Lithium, max. 3 years at 20° C deg. C
Perm. ambient temp.:	- 10° C ... + 50° C (- 10T50)
Class of protection:	II acc. to EN 60335 when mounted
System of protection:	IP 20 acc. to EN 60529

Technical data on device nameplate may vary - please check!  
Subject to technical alterations.

The time switches are in accordance with the European directives 73/23/EEC (Low-Voltage Directive) and 89 / 336 / EEC (EMC-Directive). If the time switches are used together with other devices in an installation, take care that the complete installation does not cause a radio interference.

### 1.4 Dimensioned drawing:



## 2.0 MOUNTING INSTRUCTIONS

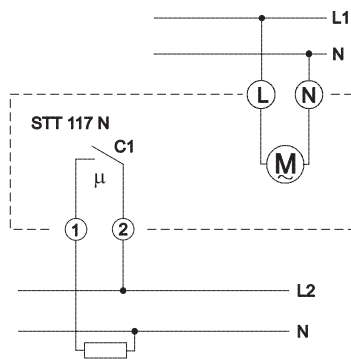
### 2.1 Safety information:

**Electrical devices should only be connected and mounted by an electrical specialist. Manipulations and modifications on the switch will result in loss of warranty. The national specifications and applicable safety regulations must be observed.**

Despite elaborate safety precautions, exceptionally strong electrical fields may cause interference with the microprocessor-controlled time switch. We therefore recommend that you observe the following points before installation:

- ⇒ Suppress interference of inductive loads by means of an RC filter
- ⇒ Use a separate line for the mains voltage supply
- ⇒ Do not install device in close proximity to sources of interference, e.g. transformers, contactors, PCs and TV sets.
- ⇒ If interference occurs, we recommend that you carry out a RESET (chapter 4.7) before putting the device back into operation

### 2.2 Electrical connection:



### 3.0 START-UP

The device STT-117 N comes ready programmed with the current time and with the relevant Greenwich mean time rule for automatic summer/ winter time adjustment.

Should you require a different time adjustment rule, or none at all, the new rule can be selected from the table (chapter 6.1) and re-programmed as described in chapter 6.2 to 6.3.

### 3.1 Automatic reset

If no buttons are pressed for a certain length of time in the checking or programming mode, the display is automatically reset to automatic mode after approx. 40 sec. The device then assumes the switching status dictated by the program.


### 3.2 Fast forward:

When setting the time or programming, the fast forward function is obtained by holding down button **Hour** or **Min** for more than 4 sec.

### 3.3 Setting/changing the current time

Should the time already set in the factory vary slightly, it can be corrected as follows:

**The button  must be kept pressed while setting!**

Later on release .

**Attention:** The colon between hours and minutes has to flash, if not, please do „Reset“; (see chapter 6.3).



<b>3.4 Priorities</b>
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<b>A</b>	A permanent switch setting takes priority over all other programs
<b>B</b>	A holiday program takes priority over a switching preselection or the automatic program
<b>C</b>	Manual switching changes the switching status until the next contrary switching command
<b>D</b>	If the switch-on and switch-off time are identical, the switch-off time always takes priority

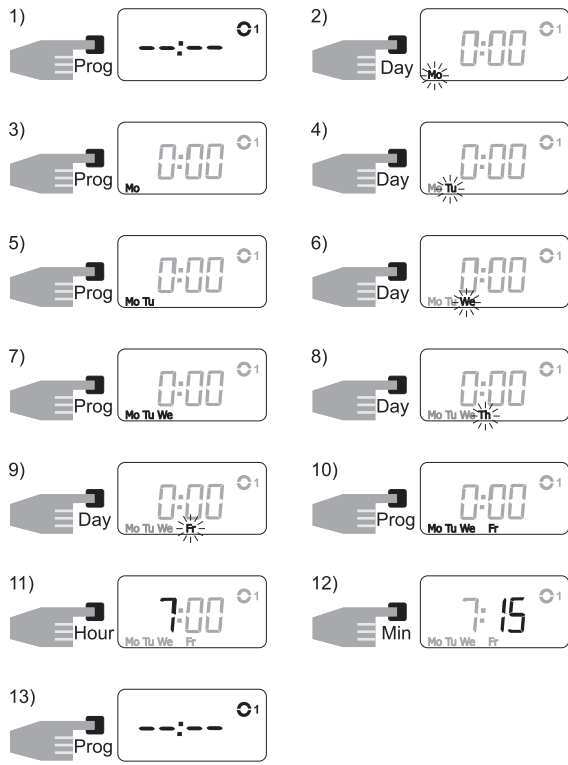
## 4.0 PROGRAMMING

### 4.1 Programming in the week program

The device type **STT-117 N** has a week program with free block formation for the days of the week. This means that identical switching times valid for several days of the week only occupy one memory location.

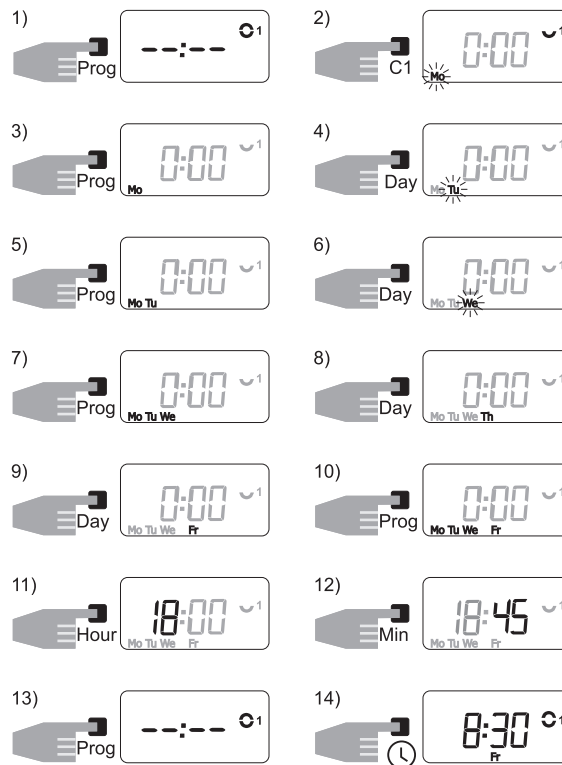
#### Example of a switch- on time:

The connected consumer is to switch on (☉) at 7:15 on Monday (**Mo**), Tuesday (**Tu**), Wednesday (**We**) and Friday (**Fr**).



**Example of a switch- off time:**

The connected consumer is to switch off (☺) at 18:45 on Monday (Mo), Tuesday (Tu), Wednesday (We) and Friday (Fr).



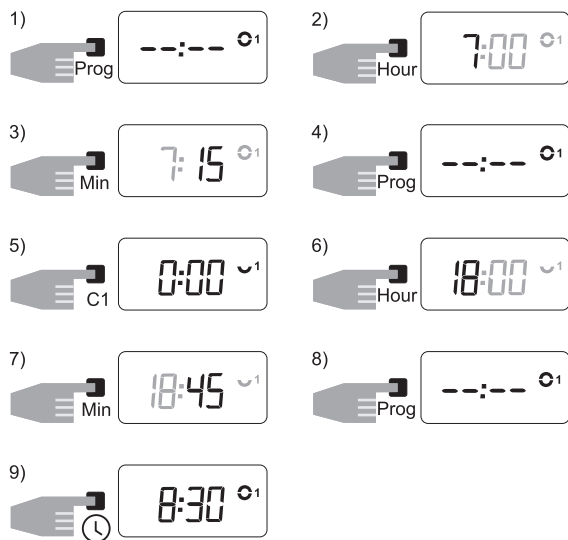
**Note:**

- When all memory locations are full, the word **End** appears in the LCD display.
- If a switch-on and switch-off time are programmed simultaneously, the switch off time will always take priority.

#### 4.2 Programming STT-117 N in the day program

If you only wish to operate the time switch **STT-117 N** in the day program, the device has to be started up again first (see chapter 6.2/6.3). Programming can then be performed as described in chapter 4.2.

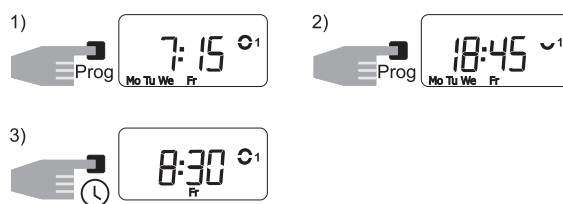
**Example:** Channel C1 is to be switched on at 7:15 (☉) and off again at 18:45 (☽) daily.



The button **C1** can be used during programming to select either the switch-on option (symbol ☉) or the switch-off option (symbol ☽).

### 4.3 Checking the program

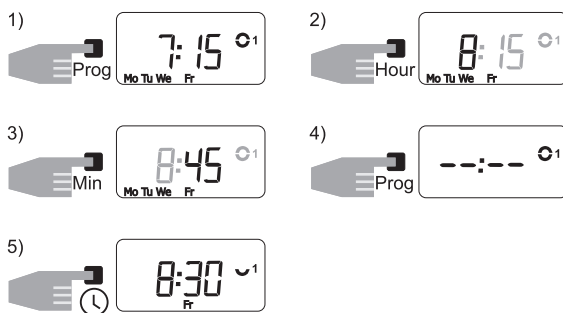
The stored switching time can be checked in automatic mode by pressing the **PROG** button.



**Fig. 1:** switch-on ( ☉ ) occurs mo, th, we, fr at 7:15

**Fig. 2:** switch-off ( ☑ ) occurs mo, th, we, fr at 18:45

### 4.4 Changing the program



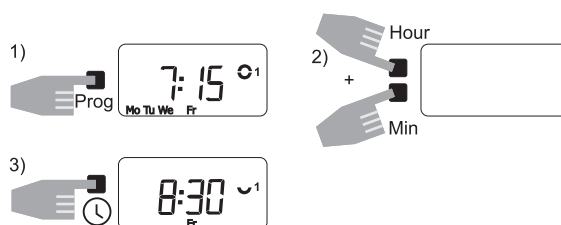
**Fig. 1:** Stored switching times in weekly program: switch-on mo, th, we, fr at 7:15

**Fig. 2+3:** Changing of switching times with buttons **Hour** and **Min** mo, th, we, fr at 8:45

If necessary, button **Day** can be used to redefine the days for which the switching time is valid. Store this setting via the **PROG** button.

#### 4.5 Individual deletions

In automatic mode, the stored switching times can be checked via the **PROG** button and individually deleted by pressing the **Hour** and **Min** buttons simultaneously. Only the switching time currently on display will be deleted.



#### 4.6 General deletion of all switching times

**Attention! This action deletes all stored switching times.**  
(The current time and the selected time adjustment rule remain).

If the buttons **Day + Hour + Min** are pressed simultaneously in the programming or checking mode, all switching times will be deleted at once.


#### 4.7 GENERAL DELETION (RESET)

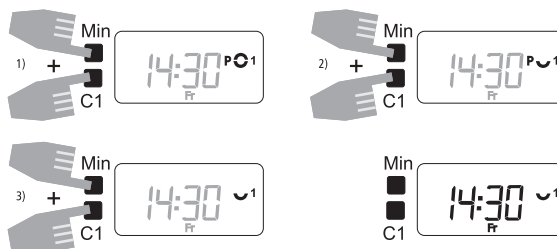
**Attention: all stored data are deleted with this button!**


Press **RES** button (Fig. 1/12) with a sharp object for approx. 1 sec.

## 5.0 SWITCHING FUNCTIONS



### 5.1 Switching preselection ON/OFF

During automatic mode, the connected consumer can be switched on (☉) or off (☾) via the button .



When the button  is pressed, the time switch assumes the required status. A switching preselection will be corrected by the next contrary switching command.

### 5.2 Permanent on/off switching

In automatic mode, the buttons **Min** and  can be used to switch the connected consumers on (Fig. 1 / P ☉) or off (Fig. 2 / P ☾) on a permanent basis. For this purpose, **hold down the Min button first** and then select the switching status with the button .

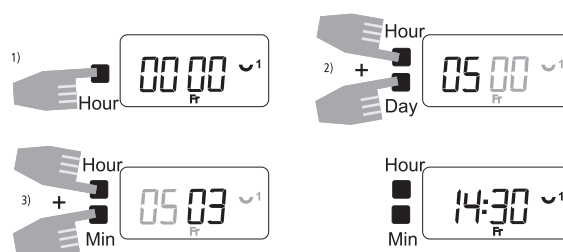


**When a permanent switching setting is cancelled, the dot next to the switching status display disappears** (see Fig. 3). Once the setting has been cancelled, the time switch performs a program review, which involves checking the stored program and then setting the correct switching status.

### 5.3 Holiday program

The selectable holiday program allows the stored program to be interrupted for a maximum of 99 days (switching status off = ☺). The holiday program can be programmed up to a maximum of 99 days in advance. The holiday program always begins and ends at midnight. The current day is not counted.

**Example:** On **Monday**, a holiday program is activated which is to apply for a period of 2 days as from **Friday**. The **Hour** button must be held down throughout the setting operation!



Whenever a holiday program is active, the symbol ☺ appears in the display.



### 5.4 Interrupting a holiday program

If you wish to cancel a holiday program, the holiday program display must be reset to 00:00 as described above using the buttons **Day**, **Hour** and **Min**. The symbol ☺ disappears. Programmed switching times determine the switching program.

## 6.0 SUMMER-/WINTERTIME ADJUSTMENT

### Important note:

If you wish to change the automatic time adjustment rule preprogrammed in the factory, you can select a new adjustment rule from table 6.1, and program this as described in chapter 6.2 to 6.3.

### 6.1 Selection table for automatic summer/winter time adjustment

Set- ting area	Beginning of summer time	Beginning of winter time	Appl. bereich
<b>dat up to 12/95</b>	Last Sun. in March	Last Sun. in Sept.	EU
<b>dat 1 from 1/96</b>	Last Sun. in March	Last Sun. in Oct.	EU
<b>dat 2</b>	Last Sun. in March	Last Sun. in Oct.	GB
<b>dat 3</b>	1st. Sun. in April	Last Sun. in Oct.	North America
<b>no</b>	No adjustment	No adjustment	

**6.2 Initial start-up w i t h o u t automatic summer / winter time adjustment**

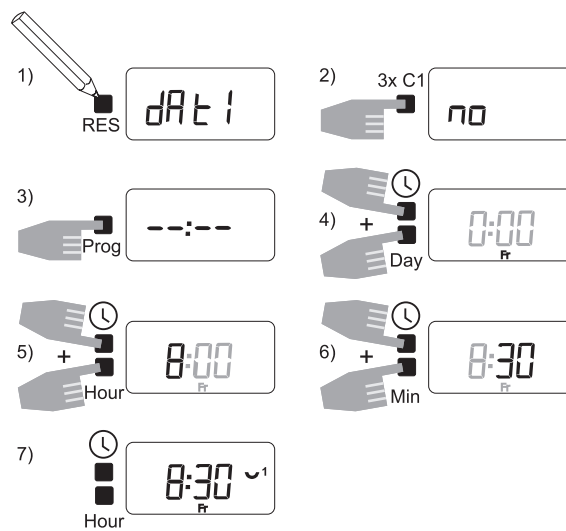
**Weekprogram:**

**see 2):** The button **C1** can be used to set the required time adjustment rule from the table in Chapter 6.1.

**see 4):** Button **Day** can be used to set the current day of the week (1 = Monday, 2 = Tuesday,..7 = Sunday).

**Dayprogram:**

**see 4):** Don't use button **Day**.



When the button is released after entering the time, both dots between the hour and minute display should flash. If not, repeat the setting.

**6.3 Initial start-up w i t h automatic summer/winter time adjustment**

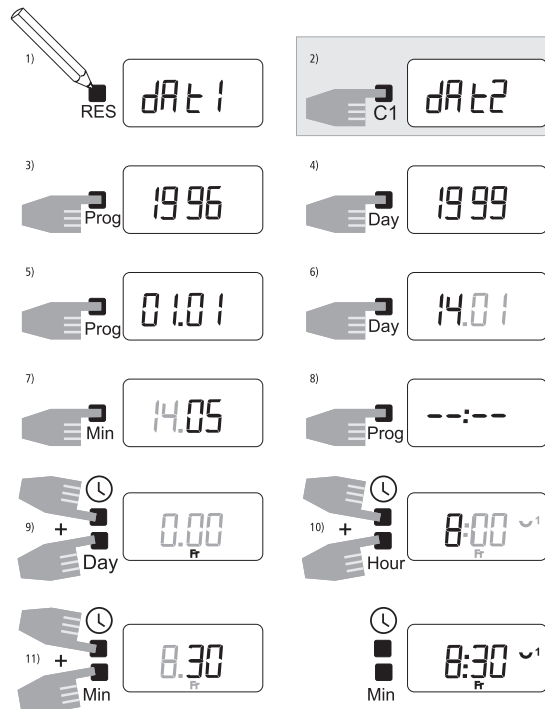
**Weekprogram:**

**see 2):** The button **C1** can be used to set the required time adjustment rule from the table in chapter 6.1.

**see 9):** Button **Day** can be used to set the current day of the week (Mo = Monday, Tu = Tuesday, ... Su = Sunday)

**Dayprogram:**

**see 9):** Don't use button **Day**.



When the button is released after entering the time, both dots between the hour and minute display should flash. If not, repeat the setting.

#### 6.4 Checking the date

First press the button  $\odot$  and then button **Day**. Hold down both buttons for approx. 2 sec. The set summer/winter time adjustment rule (e.g **dat1**) will then appear in the LCD display. If you now press the **Prog** button, the year will appear, followed by the date if pressed again. Press the **Prog** button to return to the automatic program.

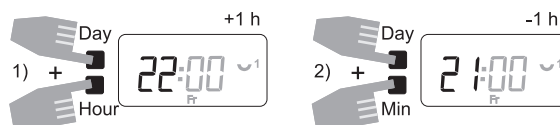
#### 6.5 Changing the automatic summer / winter time adjustment

Select the required automatic adjustment from the selection table in chapter 6.1. First press the button  $\odot$  and then button **Day**. Hold down both buttons for approx. 2 sec. The set summer/winter time adjustment rule will then appear in the LCD display (e.g. **dat**). To change the automatic S/W adjustment, press the button **C1**, and then store the setting via the **Prog** button.

You can then change the year using button **Day**, and store it by pressing the **Prog** button. The current day can then be changed with button **Day** and the month with button **Min**. Again, store by pressing the **Prog** button.

#### 6.6 Manual summer/winter time adjustment

If **no** automatic summer/winter time adjustment has been selected (**no**), the time can be corrected manually by +/- hour. First press the button **Day** and then button **Hour** or **Min**.



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