

TS 022, TS 023 TX 022, TX 023

User instruction

2 channels electronic time switch weekly cycle

Major characteristics

- Product delivered with current time and date set.
- Automatic change of winter / summer time ☀/🌙.
- Programming key .
 - for permanent overrides,
 - for program copy or save.
- Programming for day or group of days.
- 56 program steps On, Off. or options (only for TX 022 and TX 023).
- Permanent overrides On or Off (☞ permanent light on).
- ON or OFF temporary priority settings, using configuration tools. (Only for TX 022 and TX 023).
- Temporary overrides On or Off (☞ flashing).
- Holiday mode : overrides On or Off between two dates.
- Simulation of presence .
- Display bar graph of daily profile for both channels.
- Keyboard locking possible .
- Programmable with power off.
- Back lit screen.
- DCF Synchronization (Only for TS 023 and TX 023).
- Possible transmission of date and time on the bus

Safety Recommendations:

- Installation should only be carried out by a suitably qualified electrician.
- Observe the installation regulations of the protection measures SELV.

Technical specifications

Electrical characteristics

- Supply voltage: bus EIB 29 V
- TS 022, TX 022 : Power consumption: max. 9,5 mA
- TS 023, TX 023 : Power consumption: max. 10 mA

Functional characteristics

- Programming capacity: 56 steps
- Minimum time between 2 steps: 1 minute
- Running accuracy: ± 1,5 sec / 24h
- Operating reserve: lithium battery provides 5 years of backup.
- The product is set into standby state (display switched-off) after 1 minute with power off. It switches back into **auto** mode as soon as power is back or when pressing any key.
- Protection degree: IP 20

Size: 2 modules

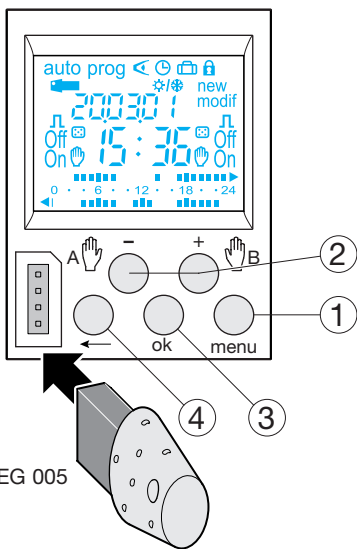
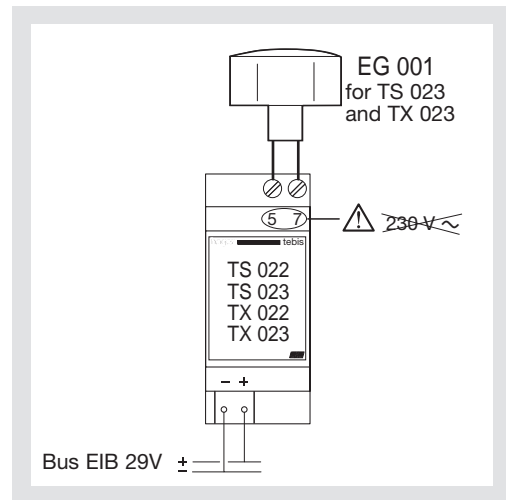
Environment

- Operating temperature: -5 °C to +45 °C
- Storage temperature: -20 °C to +70 °C

Connection

- Flexible capacity: 1 to 6 mm²
- Rigid capacity: 1,5 to 10 mm²
- Double insulation cable.

Connection diagram:



Keys:

- ① **menu** : selection of operating mode
- auto** : mode of running according to the program selected.
- prog** : **new** for programming mode.
- prog** : **modif** to modify or remove one step of existing program.
- ◀ : Program display.
- 🕒 : modification of time, date and selection of the winter / summer time change mode ☀/🌙.
- : Setting holidays.
- ② **+and-** : navigation or setting of values.
- A - : in **auto**, mode, selection of overrides,
- B : waivers or random operation.
- ③ **ok** : to validate the settings.
- ④ : to return to the previous step.

You may return into **auto** mode at any moment using **menu**.

If no action is taken for 1 min, the switch returns into **auto** mode.

Date and time transmission on the bus

If the **+** and **-** keys are pressed simultaneous, the product displays **SLAVE OFF** or **SLAVE ON**. In **SLAVE OFF** mode the bus transmits the time-switch's date and time. In **SLAVE ON** mode the time switch reads the time and date transmitted on the bus if necessary.

Notes :

1. Classification of the entries
Key **-** to number Channel A
Key **+** to number Channel B.
2. Physical addressing:
Simultaneously press **ok**, and **menu**, the screen displays **Addr**.

Reset:

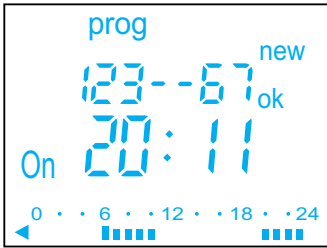
- **Program reset:**
the program may be completely cleared by simultaneously pressing the 3 following keys: **menu, ok, ←**. Time, date and parameters set using the configuration tool are maintained.
- **Total:**
pressing simultaneously the **-, +, ok, menu**. The program, time and date and the parameters set using the configuration tools are removed.

Installation recommendations

1. Install the module at the bottom of enclosure to prevent excessive operating temperature.
2. Connect module to bus EIB.
3. Follow the instructions of system requirements.

Programming: prog new

Programming may be done for each day or for a group of days. In this case instructions are common to several days.
Days: 1 = Monday, 2 = Tuesday, 3 = Wednesday... 7 = Sunday.



1. Select the **prog** mode using **menu**, then **ok**.
2. Select the channel (A or B) using **+** or **-**, then **ok**.
The number of remaining program steps appears for a short time.
3. Choose the day(s) using **+** or **-**. Validate with **ok**.
4. **ok** flashes. Use **ok** to validate the group of days.
- or **←** makes it possible to reset the group of days if necessary
5. Using **+** or **-**, select the state of the instruction: On, Off or **⏸**. Press **ok** to validate the state.
6. Enter the time of switch-on using **+** or **-**.
Validate with **ok**.
7. Enter minutes with **+** or **-**. Validate with **ok**.
8. For On **⏸**, set the duration (seconds, then minutes) in the same way as for the switch-on schedule.

Program the other instructions of the group of days by repeating operations 3 to 8.

The day or the group of days may be modified at the during step 3 by pressing the **+**, **-** or **←**.

At the end of programming return to **auto** mode using the **menu** button.

To set the program of the other channel, return to prog new mode and proceed according to steps 2 to 8. In this mode it is also possible to add an instruction to the program set up.

Proceed as described above.

Display

To check the daily profile set up without the risk of modification or deletion:

Select the mode **←** using **menu** and press **ok**.
Select the channel (A or B) using **+** or **-** and **ok**.
The first step of Monday is displayed as well as the daily profile.

Two options available for display :

1. Pressing repeatedly **+** or **-**: lets you shift days.
In this case only the first daily step is displayed as well as the daily profile.
2. Pressing **ok**: all steps of each day appear one after the other.

Modification or clearing of a program step : prog modif

Select the **prog** mode with **menu** and press **ok**.
Select the channel (A or B) using **+** or **-** and **ok**.
Select the **modif** mode with **+** or **-**.
Validate with **ok**.

The number of remaining program steps appears for a short time.

The first step of the first day or group of days appears.

Repeatedly pressing the **ok** key displays all programmed steps one at a time.

Any flashing field (state, hour, minutes) may be modified using **+** or **-**, then validated with **ok**.


When the cursor is positioned on **ok** located behind the group of days, you may display successively the days or the groups of days and switch directly to the one that has to be modified using **+** or **-**.

To remove a program step:

select the state of the channel (One, Off or **⏸**), press simultaneously **+** and **-**.

Clear appears on the screen. Validate with **ok** or **←** to cancel.

EG 005 Key

As soon as the key is inserted in the time switch, the symbol  appears on the screen.

Two types of operation:

A. Permanent override:

Insert the key into the switch.
After 10 seconds the program contained in the key will be executed without clearing the program contained in the time switch.
As soon as the key is removed the program of the time switch is again valid.

B. Copy (load) / Save (save):

The key makes it possible to save a program contained in the time switch.
It is also possible to copy the contents of the key into the clock.

1. Insert the key and wait for 2 sec.
2. Using menu select the mode:
save to save a program contained in the time switch,
load to load the program of the key into the time switch,
← to check the program contained in the key.
3. Validate the selection with **ok**.
4. For **save** and **load** reconfirm with **ok**.

The following error messages may appear on the screen:

- no prog**: the key is empty, it does not contain any program.
- Error**: the key is part of another time switch.

In these two cases:


- Only the save **save** is possible.
- The error message remains on display as long as the key is present, but in this case the program of the time switch is executed.

Setting time at the date

Winter / summer time change

Select the mode  with **menu** then **ok**.

Modify the day, month, year, the hour and the minutes using **+** or **-** and **ok**.

The time switch next suggests the winter / summer time changes .

Select the type of change desired using **+** or **-**.
Validate with **ok**.

The type of change depends on the geographical zone.

Types available:

Type	Start of time change Summer	Start of time change Winter	Zone of application
Euro *	Last Sunday of March	Last Sunday of October	European Union
USA	First Sunday of April	Last Sunday of October	North America
GB	Last Sunday of March	Fourth Sunday of October	Only for the United Kingdom
AUS	Last Sunday of October	Last Sunday of March	Australia.
USER	Date freely programmed	Date freely programmed	
No	No change	No change	

* type according defect

The change always takes place between 2:00 and 3:00 a.m.

When the USER type is selected:


1. Enter the day then the month of the date of change of the summer time (+ 1 hour) with **+** or **-** and **ok**.
2. Enter the day then the month of the date of change of the winter time (- 1 hour) with **+** or **-** and **ok**.

The time switch will check which days of which weeks correspond to these dates and will apply changes to the same periods for the following years independently of the date.

Holidays

Allows you to override the output, On or Off for a given period.


Once done, this override will be removed and will not be carried over to the following year.


Select the mode  using **menu** then **ok**.

With **+** or **-**, select the state of override: On or Off, **ok** to validate.

Enter the day then the month of the starting period (date 1) using **+** or **-** then **ok**.

Enter in the same way the day and the month of the ending period (date 2).

In auto mode,  flashes to indicate that a period of holidays was programmed.

 becomes permanent during the period.

The override will be effective at 0:00 of the 1st date until 23:59 from the 2nd date.

If date 1 is set before the day of programming, the period of holidays is valid for the following year.





To clear a period of holidays return to the mode, press simultaneously the **+** and **-** keys.

Clear appears. Confirm with **ok**.

Override - Random operation

Pressing repeatedly  **-**.

If the state of the output is **On**:

- 1st press: temporary waiver. **Off** and  flash. The next program step will let you return to the automatic mode.
- 2nd press: permanent override. **On** and  are permanent. This override must be cancelled manually.
- 3rd press: permanent override. **Off** and  are permanent. This override must be cancelled manually.
- 4th press: random operation. Simulation of presence,  as well as the state of the output are displayed. Must be cancelled manually. In this case the steps of the program are shifted randomly within a range of ± 59 min.
- 5th press: return to the automatic mode.

Locking

To prevent all undesirable actions, the keyboard of the time switch may be locked using a key EG 004.
Unlocking is done in the same way.

Waranty



A warranty period of 24 months is offered on hager products, from date of manufacture, relating to any material or manufacturing defect. If any product is found to be defective it must be returned via the installer and supplier (wholesaler).

The warranty is withdrawn if:
- after inspection by hager quality control dept the device is found to have been installed in a manner which is contrary to IEE wiring regulations and accepted practice within the industry at the time of installation.

- the procedure for the return of goods has not been followed.
Explanation of defect must be included when returning goods.