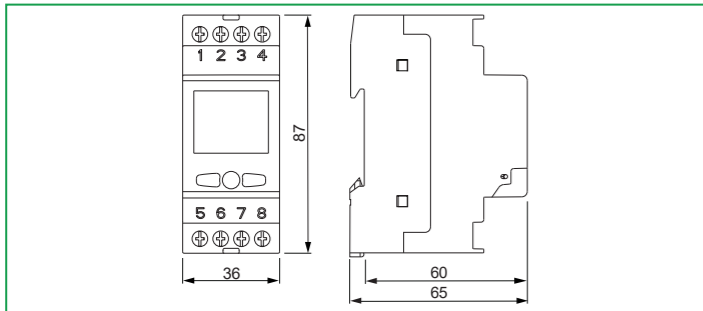
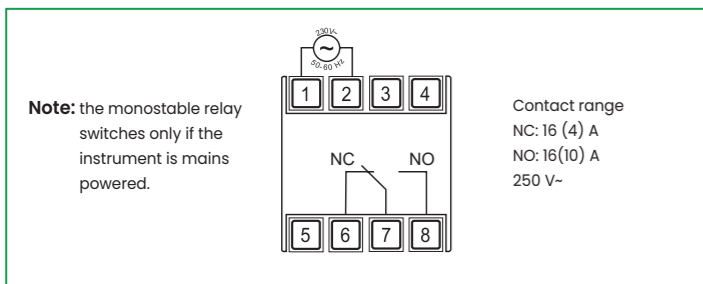




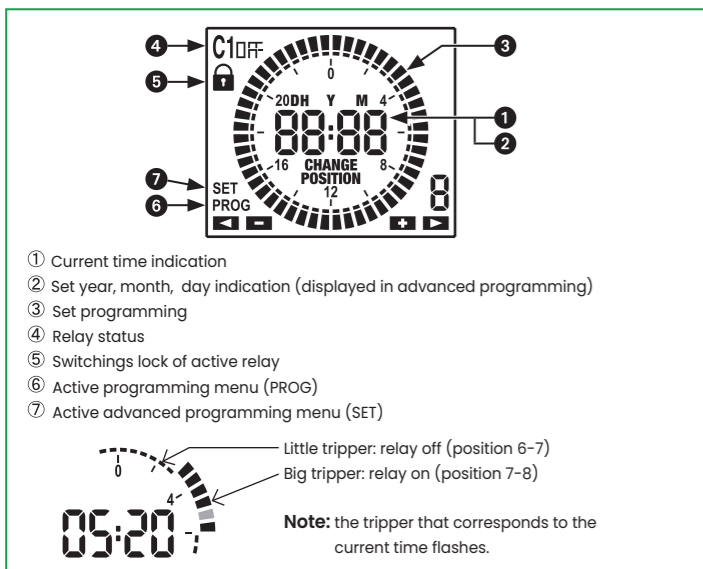
Dimensions



Connection diagram



Descrizione display



Installation

The instrument is provided with the inserted battery and the set date. Make the electrical connections according to the connection diagram. With the instrument powered by the mains, the backlighting is always on. For operating, the installation location must be set:

- press any key; the instrument requires you to set the location (for Italy only the telephone area code, for the other states the geographic coordinates are required)
- when the installation position is set, the instrument is able to calculate automatically the sunrise and sunset time for each day during the year. The instrument will turn on the load at the sunset and turn off it at the sunrise.

Note: if any position isn't set, all the internal trippers will flashing and the relay will remain off.

IMPORTANTE: typically the device is designed for independent-mounted control for fixed installation at reference ambient temperature of 25 °C, for which normal PVC conductors are used. When the device is used with higher ambient temperature, special conductors with a T marking 110°C are necessary.

User Manual

Read all instructions carefully

ASTRONOMICAL TWILIGHT SWITCHES WITH TRIPPERS

TA 10 is an astronomical twilight switch used to manage electric utilities between sunset and sunrise which are automatically calculated by the instrument based on the geographical coordinates inserted (for Italy only the telephone area code). The trippers permit you to set one or more intervals in which the load turn off. The cover on the back of the instrument allows battery replacement once depleted. TA 10 is an electronic device that performs IBTU type actions designed for use in place with over-voltage category III and pollution degree 2, as per standards EN 60730-1.

Code	Model	Description
4G001800	TA 10	Astronomical twilight switches with trippers

SAFETY WARNINGS

- During product installation and operation it is necessary to observe the following instructions:
- 1) The instrument must be installed by a qualified person, in strict compliance with the connection diagrams.
 - 2) Do not power the product if any part of it is damaged.
 - 3) The instrument must be installed and activated in compliance with current electric system standards.
 - 4) The electrical system in the building in which the instrument is to be installed should have an over-current switch and a protection device.
 - 5) Before accessing the connection terminals, verify that the leads are not live.
 - 6) After installation, inaccessibility to the connection terminals without appropriate tools must be guaranteed.
 - 7) In case of malfunction do not perform repairs and contact immediately the technical support.

TECHNICAL CHARACTERISTICS

- Power supply: 230 Vac (-15% ÷ +10%) 50/60 Hz
- Absorption: 6 VA (1 W)
- Output: relay with change-over monostable contact
- Minimum interval for turning-off in the night: 30 minutes
- Summer/winter time automatic update (removable) depending on the geographical zone of installation
- Active backlight display with mains power
- Replaceable CR2032 type backup battery (duration: 5 years about)
- Operating temperature: -20 ÷ 50 °C
- Storage temperature: -25 ÷ 70 °C
- Operating humidity: 20÷90% non condensing
- Container: 2 DIN modules
- Degree of protection: IP20
- Actions type: IBTU
- Insulation: reinforced among accessible parts (frontal) and all other terminals
- Rated impulse withstand voltage: 4 kV

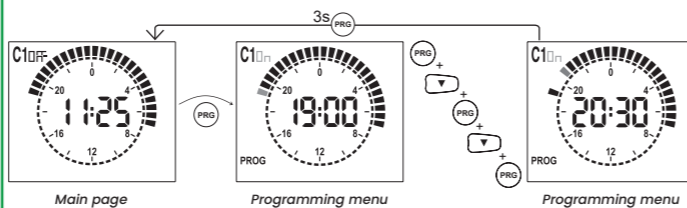
Programming

Simply AST programming consists of a single program to be repeated every day, according to which the output is in the ON position between the time of sunset and the time of sunrise and in the OFF position between sunrise and sunset.



Between sunset and sunrise it is possible to set one or more intervals with minimum duration of 30 minutes in which the output relay will be off:

1. from the main page press **PROG** key.
2. the programming starts from the first tripper into the interval between sunset and sunrise
3. press the key **▲** or **▼** to set the tripper (**▲** = relay on, **▼** = relay off) and press **PROG** to confirm and step up of 30 minutes (the next tripper)
4. once the desired programming is got, press **PROG** key for at least 3 seconds to exit and return to the main page.



Note: from dawn to dusk no switching is performed and the relay is forced to remain in the off status.

Advanced programming

From the main screen by pressing for a long time (> 3 seconds) **PROG** key, it's possible to access to the advanced programming, to set:

- location where instrument is installed (geographical coordinates or, for Italy only, the telephone area code)
- sunrise and sunset time correction (maximum correction ±120 minutes)
- date and time
- summertime automatic update
- geographical zone of installation (needed to determine when the summer/winter time changes).

Italy location setting:

- 02 = Milano
- 06 = Roma
- 010 = Genova
- 0985 = Scalea

Latitude setting: 00 = Every other state

Longitude setting: East longitude, West longitude

Time zone setting: Positive time zone, Negative time zone

Correction settings: Sunrise time correction ± 200h, Sunset time correction ± 200h. Use negative values to advance the event, positive values to delay the event.

Year, Month, Day, Time setting: Year setting (2013), Month setting (06), Day setting (07), Time setting (09:07)

Minute setting, Summer/winter time change*, Geographical zone setting**

(*) summer/winter time change
If the automatic update of summer time is active (on), the change occurs according to the set geographical zone:

Zone	Start DST (+1h)	End DST (-1h)
01 Europe	Last Sunday, March	Last Sunday, October
02 North America	Second Sunday, March	First Sunday, November
03 Australia	First Sunday, October	First Sunday, April
04 Chile	Second Sunday, October	Second Sunday, March
05 New Zealand	Last Sunday, September	First Sunday, April

Note: time change is fixed for all zones at 2:00 o'clock for the start of DST and at 3:00 o'clock for the end of DST.

() If the instrument is installed in Italy, geographical zone setting are not required.**

Relay manual switching

To change manually the status of relay output (from ON to OFF or vice versa) press the **▼** key.

Attention: the status is maintained until new press of the **▼** key or until the next program switching.

To lock the current status of the relay and prevent its switchings, press for a long time (> 3 seconds) the key **▼**. In this condition the symbol **🔒** is lit. Unlocking is done by pressing for a long time the **▼** key.

Battery management

When the battery is close to empty, the instrument displays the word **batt** alternating with the main page. In this case, replace the battery as soon as possible. **Use only CR2032 type batteries. Battery replacement must be performed by qualified person.**

- To replace the battery:
- disconnect the mains
 - remove the battery slot cover, turning it anti-clockwise
 - replace the battery and remount the cover, turning it clockwise
 - connect the power supply

Warning: do not use metal objects (such as screwdrivers) to remove the battery because this may cause the power reserve to be canceled, resulting in a loss of date and time.

Warning: in order not to lose the programming steps and carried out settings, it is necessary to ensure that the time for the battery replacement doesn't exceed 60 seconds.

- It is necessary to remove the batteries before the instrument is scrapped.
- In case of replacement, dispose of the batteries in the appropriate places separate waste collection containers.

Default parameters

The default of the parameters shows the instrument factory conditions, that is to say:

- position: none
- geographical zone: 1 (Europe)
- winter time automatic change: active
- programming: ON at sunset, OFF at sunrise
- sunrise and sunset time adjust: 0

To perform the default, from the main screen press simultaneously for at least 3 seconds the keys **▲**, **PROG** and **▼** and, during **dEF** flashing, confirm by pressing **PROG** key.

Attention: if during **dEF** flashing you don't press any key within 5 seconds, the instrument returns to the main screen without perform the reset.

Note: after default, all the internal trippers will flash. Press any key to set the location (see box Installation).

Reference Standards

- Compliance with Community directives: 2014/35/UE (LVD), 2014/30/UE (E.M.C.D.) is declared in reference to the following harmonised standards:
 - EN 60730-2-7

Information to users pursuant to art. 14 of the directive 2012/19 / EU of the european parliament and of the council of 4 July 2012 on waste electrical and electronic equipment (WEEE)

If the crossed-out bin symbol appears on the equipment or packaging, this means the product must not be included with other general waste at the end of its working life.

The user must take the worn product to a sorted waste center, or return it to the retailer when purchasing a new one.

Products for disposal can be consigned free of charge (without any new purchase obligation) to retailers with a sales area of at least 400 m², if they measure less than 25 cm.

An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.