DIGITAL TIME/ASTRONOMICAL SWITCH

User Manual

DWA

ABB

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English

USER MANUAL

English

The digital time switches of DWA series are electronic devices for the management of the electrical utilities over time. They allow the time programming (periodicity: daily or weekly) or astronomical.
DWA1 is equipped with a relay (channel 1) while DWA2 is equipped with two relays (2 independent channels). Each channel can be associated with a different programming (time or astronomical).
DWA time switches have a Bluetooth interface that allows it to be coupled with mobile devices (smartphone or tablet). Thanks to the free app that can be downloaded from the AppStore and Google Play stores, it is possible to program and make settings directly on your smartphone, and then transfer all the data to the time switch. The reverse procedure is also possible, i.e. to copy the programming of a time switch on your mobile device.
The backup battery allows you to keep the settings even in case of black-out and can be replaced through the cover on the back of the time switch.
DWA time switches are devices of electronic type that perform actions of 1B type , intended to operate in environments with III overvoltage category and pollution degree 2 in accordance with EN 60730-1 standard.

Code	Model	Description
2CSM222511R1000	DWA1	Weekly astronomical/time switch 1 channel with Bluetooth
2CSM222501R1000	DWA2	Weekly astronomical/time switch 2 channels with Bluetooth

TECHNICAL FEATURES

- Power supply: 230 Vac (-15% ÷ +10%) 50/60 Hz
- Power consumption:
  - DWA1: 2W (6 VA)
  - DWA2: 2W (6 VA)
- Lithium backup battery: 3V, CR2032 type (replaceable)
- Output:
  - DWA1: 1 monostable change-over relay with maximum switchable load of 16A / 250V
  - DWA2: 2 monostable change-over relays with maximum switchable load of 16A / 250V
- Terminal block for cables with maximum cables section of 2.5 mm^2
- Display LCD with backlighting (active with AC power supply)
- Bluetooth BLE 4.2 communication interface (active with mains power supply)
- Storable programs:
  - DWA1: 120 events
  - DWA2: 120 events (divisible on 2 channels)
- Actions type: 1B
- Operating temperature: -20 ÷ +50 °C
- Operating humidity: 20 ÷ 90% non condensing
- Storage temperature: -25 ÷ +70 °C
- Operating frequency band: 2400-2483.5 MHz
- Maximum transmitted radiofrequency power: 4 dBm
- Container: 2 DIN modules
- Protection degree: IP20
- Insulation: reinforced between accessible parts (front) and all the other terminals

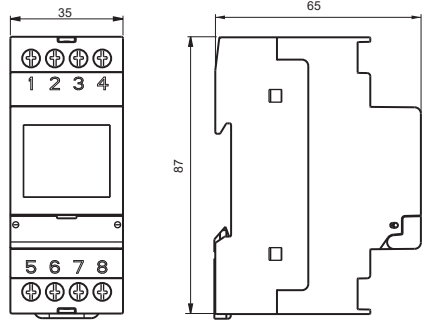
English

SAFETY WARNINGS

■ ***During product installation and operation it is necessary to observe the following instructions:***

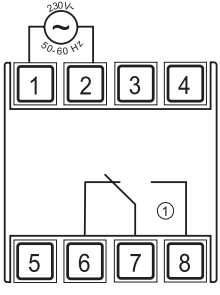
1) The instrument must be installed by a qualified person, strictly in observance of the connection diagrams shown in this manual.
2) After installation inaccessibility to the terminals without using dedicated tools must be guaranteed.
3) Before accessing the connection terminals, make sure that the leads are not live.
4) Do not connect or feed the instrument if any part of it is damaged.
5) The product must be installed and activated in compliance with current electric systems standards.
6) Do not use the instrument for anything other than the indicated purpose.
7) In the electrical system upstream of the device must be installed a protection device against the overcurrents
8) The product can be used in environments with overvoltage Category III and Pollution degree 2, according to the Standard EN 60730-1
9) The access to the device must be limited and the default device PIN and Bluetooth password must be changed in order to avoid tempering of programs of relays.

DIMENSIONS (mm)

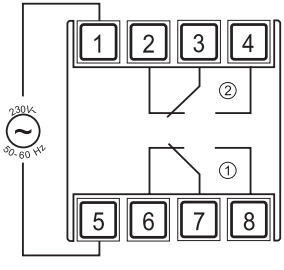


WIRING DIAGRAMS

DWA1

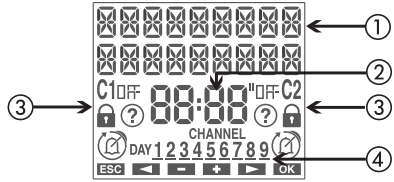


DWA2

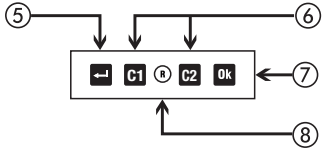


English

DISPLAY AND KEYBOARD DESCRIPTION



① General indications
② Time indication
③ Channel 1/channel 2 status indication
On / OFF
: active manual program
+ : blocked switchings
+ : active random switchings
+ On / OFF (flashing) : active cycle switchings
: active holiday program
: active pulse program
④ Day of the week (DAY) indication



⑤ Turn on the display
Access the menu
ESC (one level back)
⑥ **"C1"**: decrease datum/previous menu/ switching channel 1/ lock channel 1
"C2": increase datum/next menu/ switching channel 2/ lock channel 2
⑦ Confirm selection
⑧ Hardware reset

"Ok" + **"C1"** (3 sec): active random switching on channel 1
"Ok" + **"C2"** (3 sec): active random switching on channel 2

"↵" + **"C1"** (3 sec): active cycle switching on channel 1
"↵" + **"C2"** (3 sec): active cycle switching on channel 2

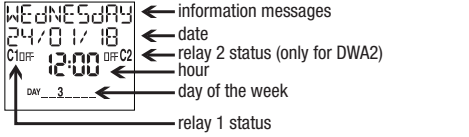
FIRST START-UP

- Once out of the package, DWA is off: press the key ↵ and wait a moment before activating the display
- The set language is English. To change it, press the key ↵ for at least 3 seconds. Choose among: German, English, Spanish, French, Italian, Russian and confirm with Ok.
- Make connections following the diagrams on page 5 of this manual
- Power DWA: the backlighting turns on permanently.
- The presence of the backup battery allows the DWA to have updated date and time.
  To make the other settings follow the following steps:

Date	- format: DD/MM/YY - 1st day of the week: Monday
Astronomical coordinates	- country: Italy - city: Agrigento - latitude: North (37° 19' 12") - longitude: East (13° 34' 12")
Daylight Saving time (DST) change: active	- start of daylight saving time (DST): last Sunday of March at 02:00 o'clock - end of daylight saving time (DST): last Sunday of October at 03:00 o'clock
Time correction:	- sunrise: +0:00 - sunset: +0:00
Time zone:	+1:00 UTC
Random switchings:	- minimum: 1 minute - maximum: 5 minutes
Cycle switchings:	- ON duration: 1 minute - OFF duration: 1 minute
PIN protection:	disabled (---)
Bluetooth:	disabled (Password: 123456)

English

START PAGE (or main)



Information messages
- day of the week
- product identification code and serial number
- battery status (only if discharged)
- NO RELAY*

* Only if DWA is not powered by mains.
In this condition the backlighting is not active and the relay is in off status.

NOTE: Bluetooth interface is active only when DWA displays the start page (main) and only if it's mains power supplied. Therefore, to transfer programs from and to the times witch it is necessary to respect these conditions.

- Press the key:

↵ to access the menu of DWA

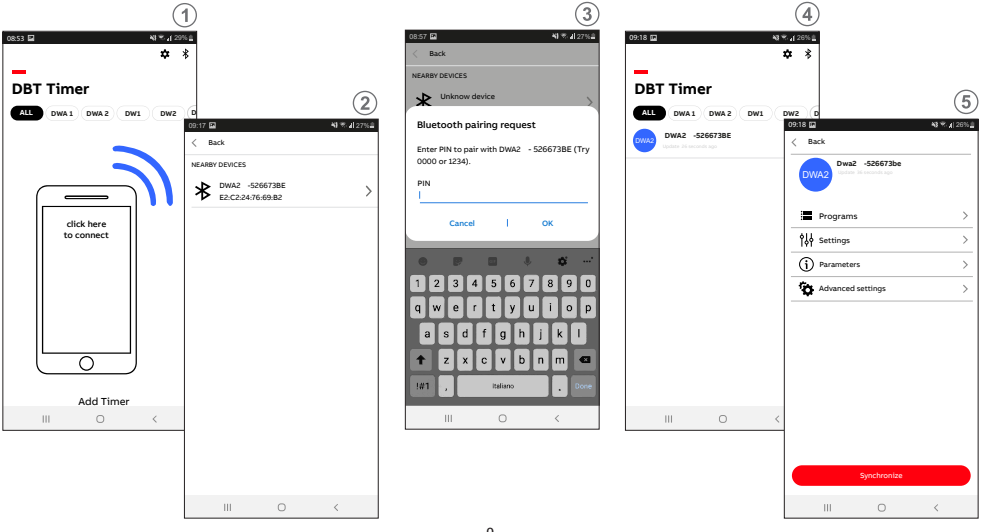
C1 and C2 to change channel 1 and channel 2 status (only for DWA2)

OK to display the Bluetooth signal level or the calculated sunrise and sunset times**

** The displayed times take into account possible entered values of correction (see page 18) if the display shows _ _ _ _ means that the calculated sunrise time is after the sunset time if the display show _ _ _ _ means that the calculated sunrise time is before 00:00 or that the calculated sunset is at 23:59

NOTE: The device is supplied with deactivated Bluetooth interface. To activate it, access Bluetooth menu (see page 48).

Access the store of your device, install and start the free app DBT TIMER



English

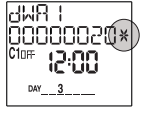
① Activate Bluetooth on DWA devices (see page 48).

② At the start the app displays the list of the associated DWA devices.
To associate a new device, press the symbol "+" in the upper right corner.

③ All the Bluetooth devices detected nearby are displayed: select the device to be associated from the list.
Note: each device is identified by the product code (for example DWA) and by the serial number (for example 00000020).
These informations can be viewed from the main page of the DWA.
Warning: make sure that the DWA is mains powered, Bluetooth interface is activated and that the display shows the main page (initial).
Otherwise the Bluetooth interface is not active and the device is not visible.

④ Enter the password to associate the DWA with your device.

⑤ After successfully completing the procedure, the DWA is added in the list of the associated devices.
Select the DWA on which you want to act from the list of the associated devices.
Note: communication between the app and the DWA is point-to-point. This means that,
even in the presence of multiple DWA, the app can communicate with one only at a time.
The DWA currently connected to the app displays the symbol * immediately after the serial number.



⑥ The app displays the initial page of the selected DWA. From this page you can:
a. Create new programs that will then be copied to the DWA.
b. Change the settings of the DWA
c. View the parameters and associate an alias to the DWA.
d. Manually control the relay output/s and activate the random switching function or cycle function.

MANUAL SWITCHING

To manually take action on the channels of DWA time astronomical switches (activated with the combination described on page 6), carry out the operations described below:

① SWITCHING CHANNEL: press the key C1 for channel 1 or C2 for channel 2. If on becomes off and vice versa.
temporary **on** : the selected channel is set **on** until the next programmed **off** event
temporary **off** : the selected channel is set **off** until the next programmed **on** event

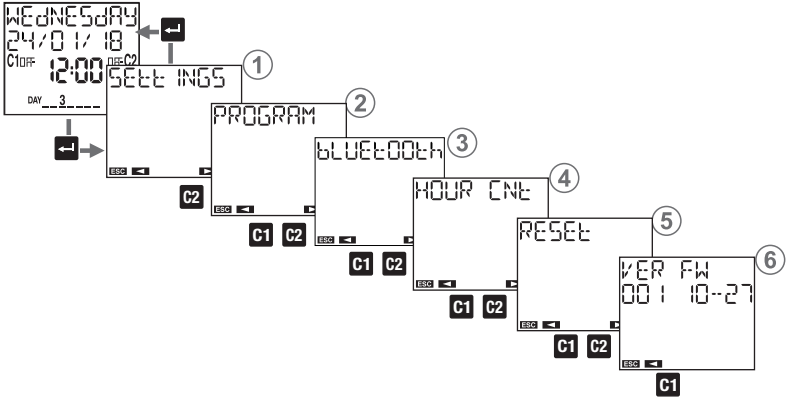
② LOCK CHANNEL: press for a long time (for 3 seconds at least) the key C1 for channel 1 or C2 for channel 2. The current state is locked until the unlocking (press again for a long time the key C1 or C2).
permanent **on** the selected channel is locked in **on** position until the manual unlocking
permanent **off** the selected channel is locked in **off** position until the manual unlocking

③ RANDOM SWITCHING: press contemporary and for a long time (for 3 seconds at least) the key Ok and C1 for channel 1 or C2 for channel 2.
Press again simultaneously and for a long time the keys Ok and C1 or C2 to disable the function.
random ? : the selected channel is set on and then will take place switching on/off at random intervals (the minimum and maximum interval can be set from "Settings random" menu)

④ CYCLE SWITCHING: press contemporary and for a long time (for 3 seconds at least) the keys ↵ and C1 for channel 1 or C2 for channel 2
Press again simultaneously and for a long time the key ↵ and C1 or C2 to disable the function.
cycle (flashing) : the selected channel is set **on** and then will take place switching **on/off** (the on and off duration can be set from "Settings cycle" menu).

English

MENU DESCRIPTION



① **“Settings”** menu allows you to change: language, date, time, daylight saving time (DST), astronomical coordinates, minimum and maximum duration of the interval between two switchings with random program, ON and OFF duration of cycle switchings, PIN for keyboard lock.

②**“Programming”** menu allows you to set a new program or to check, to copy, to modify or to delete a set program.

③ **“Bluetooth”** menu allows you to configure the Bluetooth communication interface.

④ **“Hour counter”** menu allows you to check the operation hours (relay on) of the loads connected to the relays.

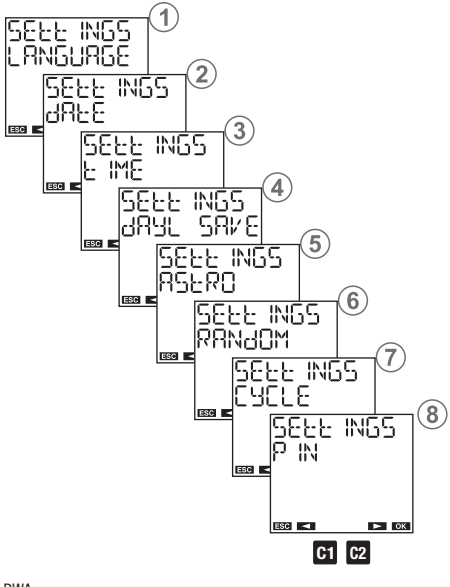
⑤ **“Reset”** menu allows you to reset settings, programmed settings, operating hour counter.

⑥ **“Ver FW”** menu allows you to check the firmware version installed on the device.

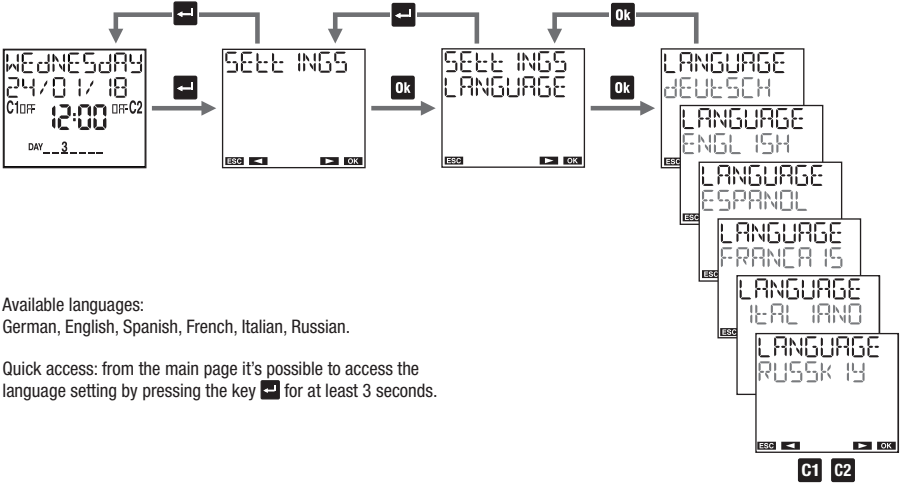
SETTINGS MENU

"Settings" menu allows you to view and eventually to modify the the general operation settings of DWA, such as:

① language
② date
③ time
④ automatic daylight saving time (DST) change
⑤ position (astronomical coordinates)
⑥ interval duration between two random switchings
⑦ ON and OFF time duration for cycle switchings
⑧ keys protection by PIN



Language setting menu

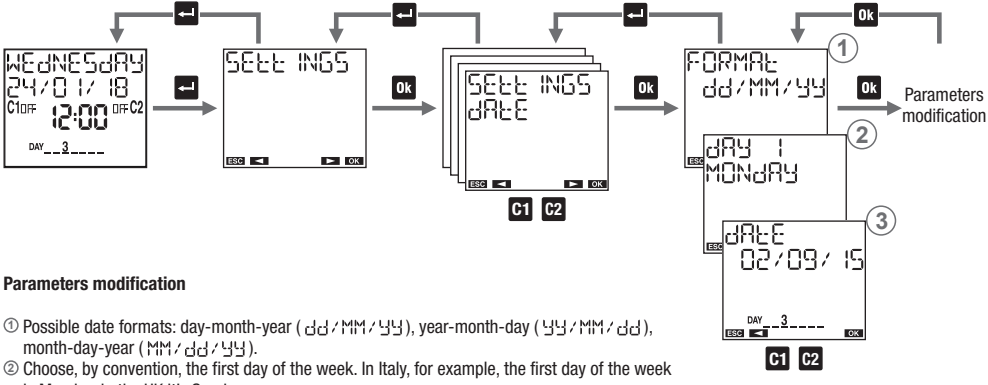


Available languages:
German, English, Spanish, French, Italian, Russian.

Quick access: from the main page it's possible to access the language setting by pressing the key ↵ for at least 3 seconds.

English

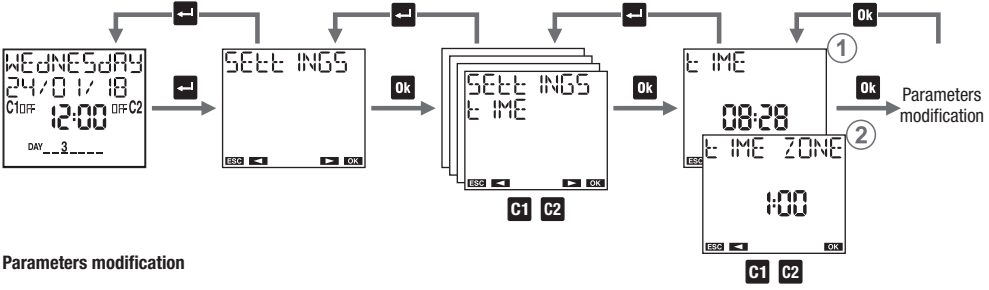
Date setting menu



Parameters modification

① Possible date formats: day-month-year (dd/MM/YY), year-month-day (YY/MM/dd), month-day-year (MM/dd/YY).
② Choose, by convention, the first day of the week. In Italy, for example, the first day of the week is Monday, in the UK it's Sunday.
③ Enter the date: day, month, year.

Time setting menu



Parameters modification

① Set the time: hours, minutes.
② Set the time zone. Range: -14:00 ÷ +14:00 at 15 minutes steps.
For Italy set +1:00.

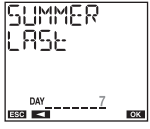
English

Daylight saving time (DST)/winter time (CET) change setting menu

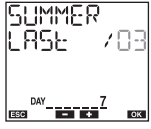
Daylight saving time (DST)/winter time(CET) change and vice versa can occur in an automatic way. In this case, DWA:
- increases by an hour in the passage from winter time (CET) to daylight saving time (DST)
- decreases by an hour in the passage from daylight saving time (DST) to winter time (CET)

For every change it's necessary to specify:

the week of the month during which the time change occurs (first, second, third, fourth, last)



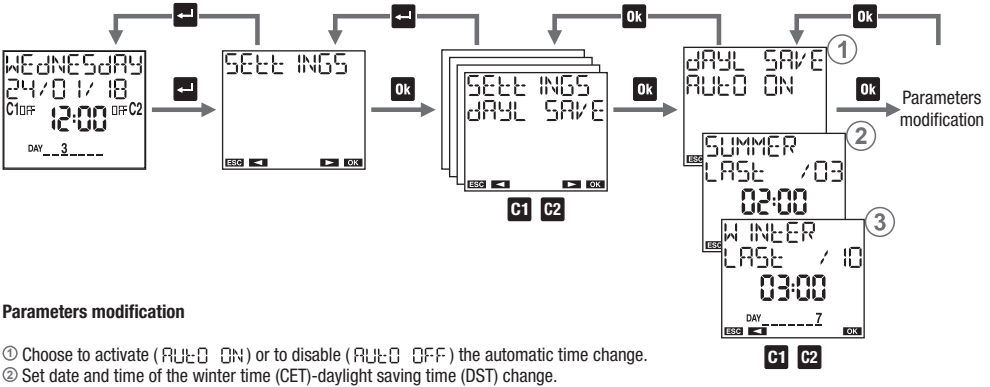
the day of the week (Monday: 1, Tuesday: 2, ...)



the month

the hour and the minutes

In Italy,for example, daylight saving time (DST) begins occurs the last (LAST) Sunday (**7**) of March (03) at 02:00 o'clock, and ends the last (LAST) Sunday (**7**) of October (10) at 03:00 o'clock.



Parameters modification

① Choose to activate (AUtO ON) or to disable (AUtO OFF) the automatic time change.
② Set date and time of the winter time (CET)-daylight saving time (DST) change.
③ Set date and time of the daylight saving time (DST)-winter time (CET) change.

Astronomical coordinates setting menu

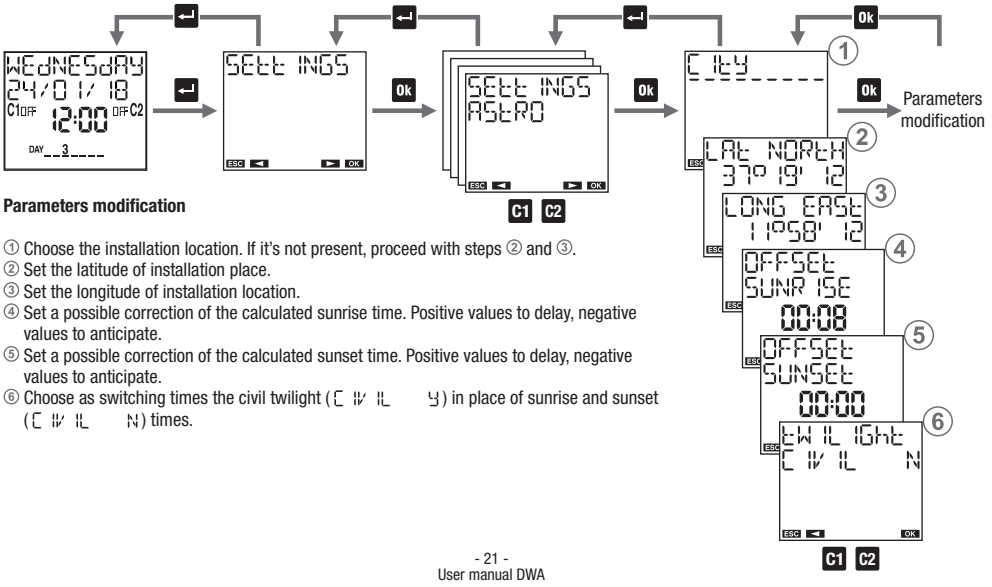
The setting of the geographical coordinates of the installation place allows DWA to calculate, for each day of the year, sunrise and sunset times. To simplify the procedure, in the DWA are stored the coordinates of the locations listed below; if your location is among them you can select it from the menu ①, otherwise it's necessary to enter the coordinates of latitude and longitude (menu ② ③).

Note: the display on point ① shows "---------" if the coordinates have been entered.

Location stored in DWA:
Italy: all provinces
United Kingdom: Cardiff, Belfast, Edumburgh, London
Spain Barcelona. Madrid, Seville, Valencia
France: Lion, Marseile, Paris, Tolose
Germany: Berlin, Hamburg, Cologne, Munich

The correction of sunrise and sunset times is useful for applications that require the turning on of lights in particular localities. It's possible, in fact, that the presence of disturbing elements, such as the mountains, can influence actual times of sunrise and sunset, making it necessary to advance or delay of a few minutes the calculated times.

The twilight is the time interval before sunrise, or after sunset, characterized by the permanence of the light due to the spread by the atmosphere of the Sun light. During these time intervals it's possible to distinguish clearly objects and conduct outdoor activities without using additional lighting. Therefore, in some applications it is more interesting to take as times of switching on and off the twilight (civil) in place of sunrise and sunset. With DWA it's possible to choose to turn on/off the loads depending on the times of sunrise and sunset or the civil twilight. The calculated time correction also applies to the times of twilight. To view the calculated switching on time (sunset) and switching off time (sunrise), from the main page press the key Ok (see page 8).

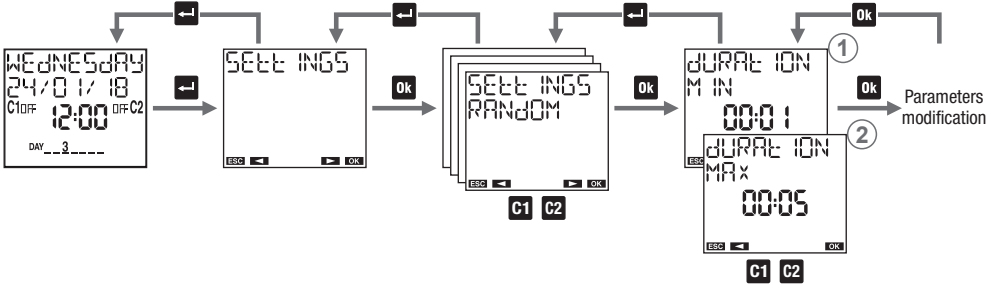


Parameters modification

① Choose the installation location. If it's not present, proceed with steps ② and ③.
② Set the latitude of installation place.
③ Set the longitude of installation location.
④ Set a possible correction of the calculated sunrise time. Positive values to delay, negative values to anticipate.
⑤ Set a possible correction of the calculated sunset time. Positive values to delay, negative values to anticipate.
⑥ Choose as switching times the civil twilight (C IV IL Y) in place of sunrise and sunset (C IV IL N) times.

English

Random switchings setting menu

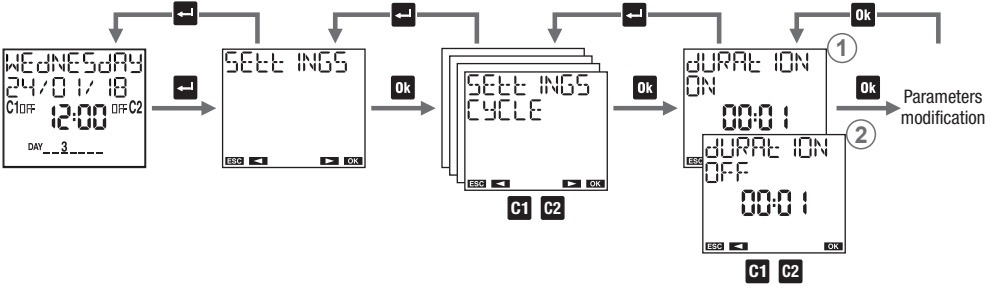


The "random switching ⑦" function (activated with the combination described on page 6) allows the channel on which it's active to automatically switch and at random time intervals.
In this menu it's possible to define the minimum and maximum duration of the time interval between two random switchings. Default minimum duration is 1 minute, maximum duration is 5 minutes.

Parameters modification

① Set the minimum duration. It's possible to set values between 1 minute and the *maximum duration.*
② Set the maximum duration. It's possible to set values between the *minimum duration* and 23:59 hours.
Note: setting the minimum duration equal to the maximum, the switchings will occur at fixed time intervals.

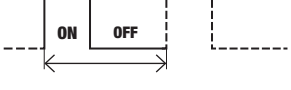
Cycle switchings setting menu



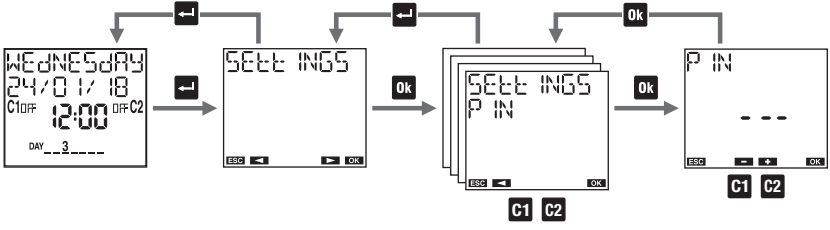
The “cycle switching” function (activated with the combination described on page 6) is a succession of on and off switching.
The cycle programme always starts from the on status. In this menu it’s possible to define the duration of on and off.
The duration of the on and off duration cannot be less than one minute.
Default on duration: 1minute, OFF duration: 1 minute

Parameters modification

① Set the ON duration. It’s possible to set values between 1 minute and 99:59 hours.
② Set the OFF duration. It’s possible to set values between 1 minute and 99:59 hours.



Protection PIN setting menu



The protection code (PIN) is used to lock the keyboard and prevent changes by unauthorized persons. With active PIN protection, pressing any key, it's necessary to enter the PIN: if PIN is correct the keyboard unlocks; after 3 minutes without pressing a key, the keyboard will lock automatically.

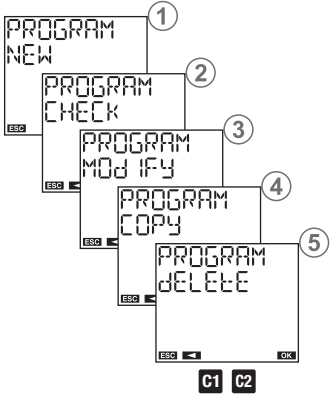
To activate PIN protection:
- set a value between 000 and 999

To disable PIN protection:
- set "**---**" (located before 000 or after 999)

Note: If you have forgotten your PIN code to unlock DWA it's necessary to carry out a hardware reset (see page 50).

PROGRAM MENU

The menu “program” allows you to:
① create a new program
② check created programs
③ change or delete a created program
④ copy all created programs of channel 1 on the channel 2 and vice versa (only for DWA2)
⑤ delete all programs of a channel



Programs types

- Program ON/OFF: is composed of a switching of the ON relay and of a subsequent switching of the OFF relay. It can have a daily period (everyday with the same modes), weekly (every week with the same modes).
- PULSE ON Program: is an ON relay switching for a maximum duration of 59 seconds. It can have a daily period (everyday with the same modes), weekly (every week with the same modes).
- PULSE OFF program: is a relay switching OFF for a maximum duration of 59 seconds. It can have daily period (everyday with the same modes), weekly (every week with the same modes)*.
- HOLIDAY program: is a period of time defined by a start time and an end time within which all programmed switchings (of that channel) are disabled. The relay is in OFF position (OFF holiday) or in ON position (ON holiday).

Channel types

- TIME channel: carries out programs of time type: ON / OFF, ON pulse, OFF pulse, holiday
- ASTRO channel: carries out programs of astronomical type, i.e. in the interval delimited by sunrise and sunset*: ON/OFF, ON pulse, OFF pulse, holiday, night programs (see pages 34-35). ON switchings set before sunset are carried out at sunset, OFF switchings set after sunrise are carried out at sunrise (except for some night programs that can have switching on or switching off during the day. See on page 34).

* times of sunrise and sunset are automatically calculated by DWA according to geographic coordinates set during installation. In place of sunrise and sunset times it's possible to use the times of civil twilight (see page 18).

⚠ **Important:** on the same channel can't coexist ON pulses and OFF pulses (if an ON pulse is already present, it's not possible to save a holiday OFF program and vice versa).

⚠ **Important:** on the same channel can't coexist holiday ON programs and holiday OFF programs (if a holiday ON program is already present, it's not possible to save a holiday OFF program and vice versa).

⚠ **Important:** a channel may be either of clockwise or of astronomical type, but it can't be of both types simultaneously. It's not possible to save programs of astronomical type on a channel where are stored programs of time type (and vice versa). Messages of ERROR 011 (astro program on channel astro) and ERROR 012 (time program on astro channel).
In this case to proceed it's necessary to delete the saved programs on that channel (see page 45).

Programs priority

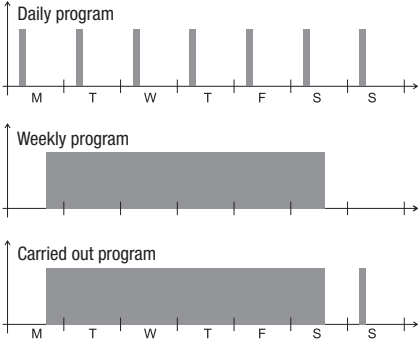
The priority programs defines how DWA manages the case in which programs with different period are running at the same time (1 indicates higher priority).

Program	Date*	Weekly	Daily
Holiday	1		
Pulse		2	
On/Off		3	4

* Date: select day, month, year (program carried "only once in the life of the product"). If the month is not specified, the program is carried out all days *xx* of all months of the specified year.

Program priority on/off

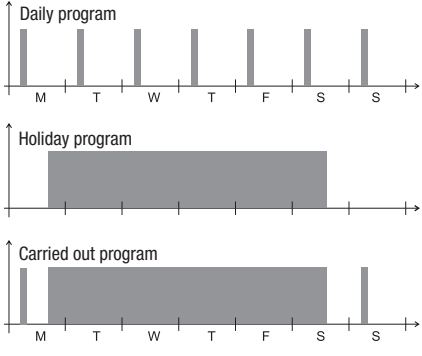
In case in which, on the same channel, on/off programs are provided with different period (daily or weekly) to carry out in the same day, only the program with the highest priority is executed.



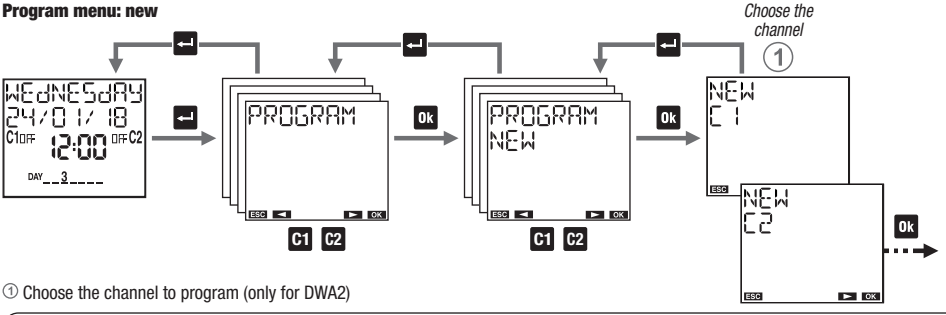
From this example it's possible to see that the daily event on Monday is not carried out because in the same day it is provided the beginning of the week program (even if the daily program of Monday begins and ends before the beginning of the weekly program). Instead, the daily program of Sunday is carried out because it's the only one running for that day.

Holiday program

The holiday program just begins and ends exactly at the specified times.



Program menu: new



① Choose the channel to program (only for DWA2)

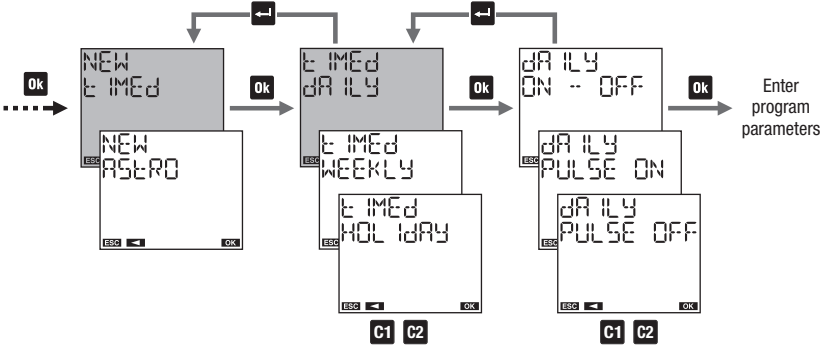
Select days

scroll through the days of the week from 1 to 7:

- by pressing the key **C2** to move to the next day without selecting the current day
- by pressing the key **Ok** to select/deselect the current day and move to the next

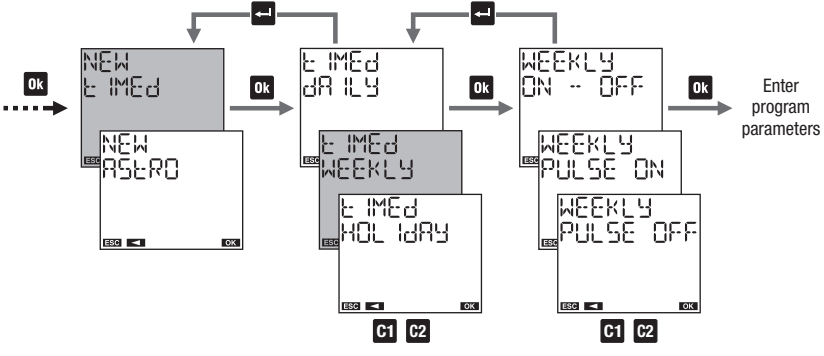
English

Program menu: new daily time



Program parameters
- on/off: on time and off time
- on pulse: time and pulse duration (max 59 seconds)
- off pulse: time and pulse duration (max 59 seconds)

Program menu: new weekly time

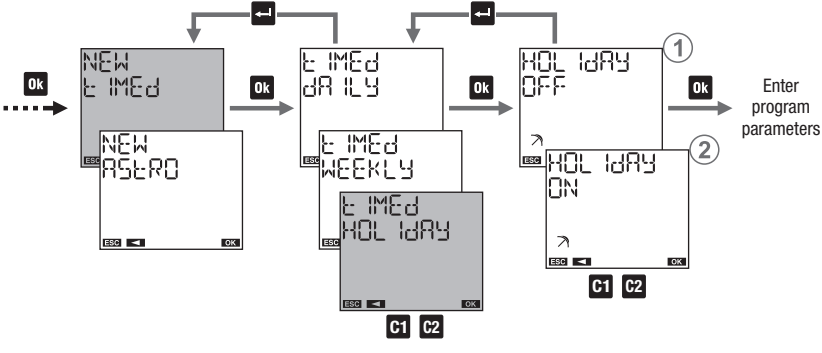


Program parameters

- on/off: day (or days)* and on time, day (or days) and off time
- on pulse: day (or days)* and pulse time, pulse duration (max 59 seconds)
- off pulse: day (or days)* and pulse time, pulse duration (max 59 seconds)

* *See "Select days" on page 28*

Program menu: new holiday time



① HOLIDAY OFF: the relay is OFF from the beginning to the end of Holiday program
② HOLIDAY ON: the relay is ON from the beginning to the end of Holiday program

Program parameters

- beginning of the program
- end of the program

How to choose the day (or days) in a holiday program

(1) to set the program:

in the first, second, third, fourth or last week of the month
in / the day/s (Monday, ...) of the week just specified
the specified month (MM for all months)
the given year (YY for all years)

Note: in this case, the holiday program must begin and end in the same day. Otherwise ERROR 010 is signaled.

(2) to set the program on the last day:

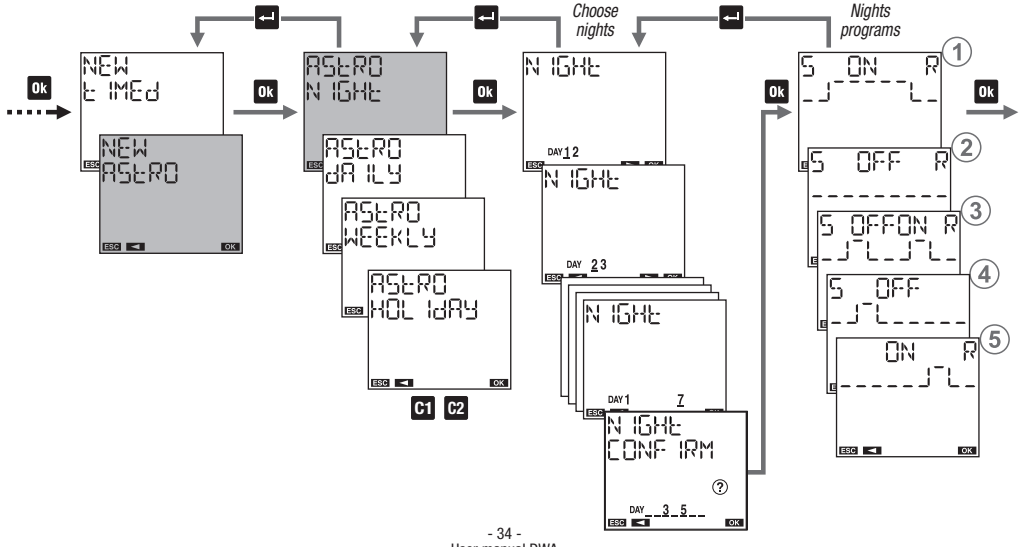
---/MM/YY of all months of all years
---/VV/YY of the specified VV month of all years
---/MM/ZZ of all months of the specified ZZ year
---/VV/ZZ of the specified VV month of the specified ZZ year

(3) to set the program on the day XX (1,2,3...):

XX/MM/YY of all months of all years
XX/VV/YY of the specified VV month of all years
XX/MM/ZZ of all months of the specified ZZ year
XX/VV/ZZ of the specified VV month of the specified ZZ year

English

Program menu: new astro night



How to select nights

scroll through the nights of the week from the first (1-2) to the last (7-1):

- by pressing the key C2 key to move to the next night without selecting the current night
- by pressing the key OK to select/deselect the current night and move to the next

How to interpret the selection

If the night between the days of A and B is selected, the day A is on and underlined while B is on (not underlined).
Examples of selection:

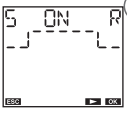
DAY 1 2 3 4 5 Selected nights: between day 1 and 2, between day 2 and 3, between day 3 and 4, between day 4 and 5

DAY 1 2 3 4 5 Selected nights: between day 1 and 2, between day 2 and 3, between day 4 and 5

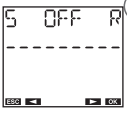
DAY 1 2 3 4 7 Selected nights: between day 1 and 2, between day 3 and 4, between day 7 and 1

English

Night programs



1 Turning on at sunset, turning off at sunrise.
No parameter required.



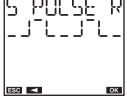
2 Off from sunset to sunrise.
No parameter required.

3 Turning on at sunset, turning off during the night. Turning on during the night, turning off at sunrise.
Choose one of the three following cases:

Ok

Turning on at sunset, turning off at a settable time.
Turning on at a settable time, turning off at sunrise. (*)

Turning on at sunset, turning off after a settable time interval.
Turning on before sunrise of a settable time interval, turning off at sunrise.

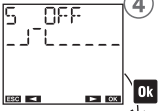


Turning on at sunset for a settable short duration (pulse, max 59 seconds).
Turning on at sunrise for a short settable duration (pulse, max 59 seconds).

* If off time is before sunset, switching is not carried out. If on time is after sunrise, switching is not carried out.

** Switching on continues for the entire set time interval (also if off time is after sunrise).

*** Switching on occurs before sunrise of the entire set time interval (also if on time is before sunset).



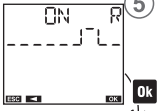
4 Turning on at sunset, turning off during the night.
Choose one of the 3 following cases:

Ok

Turning on at sunset, turning off at a settable time. (*)(**)

Turning on at sunset, turning off after a settable time interval. (**)

Turning on at sunset for a settable short duration (pulse, max 59 seconds).

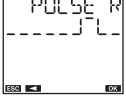


5 Turning on during the night, turning off at sunrise.
Choose one of the three following cases:

Ok

Turning on at a settable time, turning off at sunrise. (*)(***)

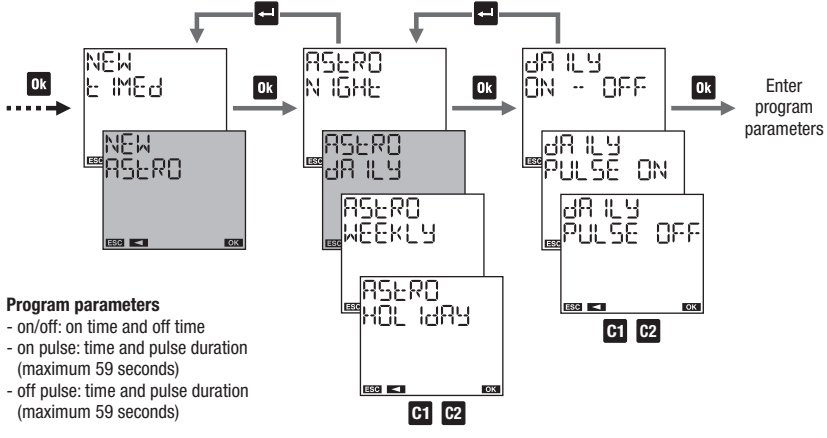
Turning on before sunrise of a settable time interval, turning off at sunrise. (***)



Turning on at sunrise for a settable short duration (pulse, max 59 seconds).

English

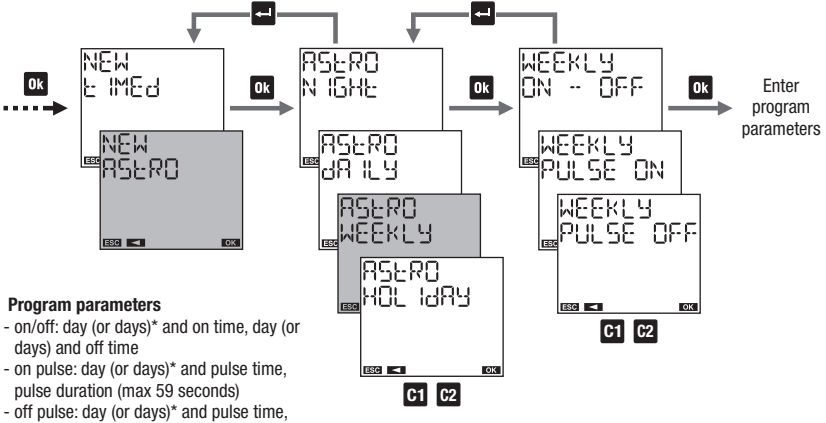
Program menu: new daily astro



Program parameters

- on/off: on time and off time
- on pulse: time and pulse duration (maximum 59 seconds)
- off pulse: time and pulse duration (maximum 59 seconds)

Program menu: new weekly astro

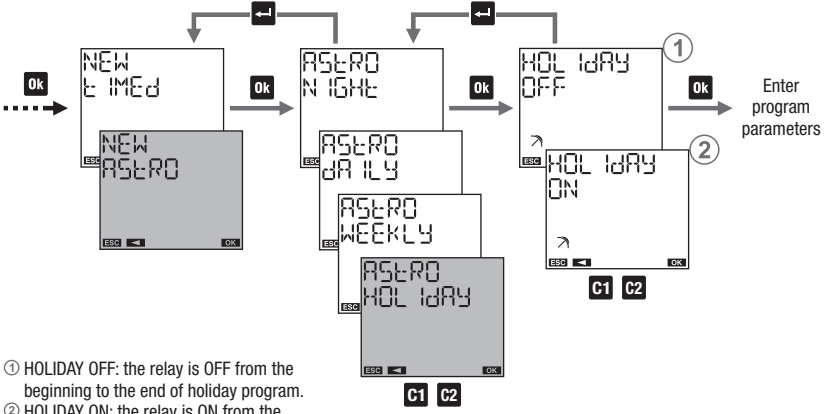


Program parameters

- on/off: day (or days)* and on time, day (or days) and off time
- on pulse: day (or days)* and pulse time, pulse duration (max 59 seconds)
- off pulse: day (or days)* and pulse time, pulse duration (max 59 seconds)

* *See "Select days" on page 28*

Program menu: new holiday astro

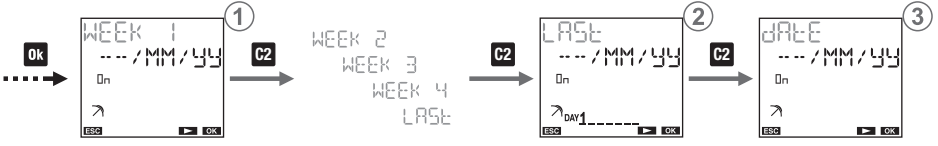


① HOLIDAY OFF: the relay is OFF from the beginning to the end of holiday program.
② HOLIDAY ON: the relay is ON from the beginning to the end of holiday program.

Program parameters

- beginning of the program
- end of the program

How to choose the day (or days) in a holiday astro program



(1) to set the program:

in the first, second, third, fourth or last week of the month
in / the day/s (Monday, ...) of the week just specified
the specified month (MM for all months)
the given year (YY for all years)

Note: in this case, the holiday program must begin and end in the same day. Otherwise ERROR 0 10 is signaled.

(2) to set the program on the last day:

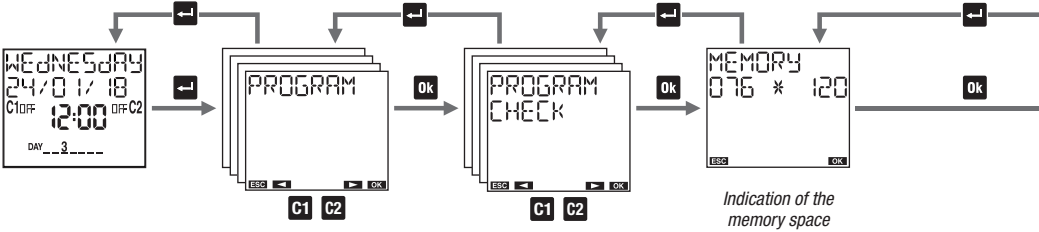
---/MM/YY of all months of all years
---/WW/YY of the specified WW month of all years
---/MM/ZZ of all months of the specified ZZ year
---/WW/ZZ of the specified WW month of the specified ZZ year

(3) to set the program on the day XX (1,2,3...):

xx/MM/YY of all months of all years
xx/WW/YY of the specified WW month of all years
xx/MM/ZZ of all months of the specified ZZ year
xx/WW/ZZ of the specified WW month of the specified ZZ year

English

Program menu: check

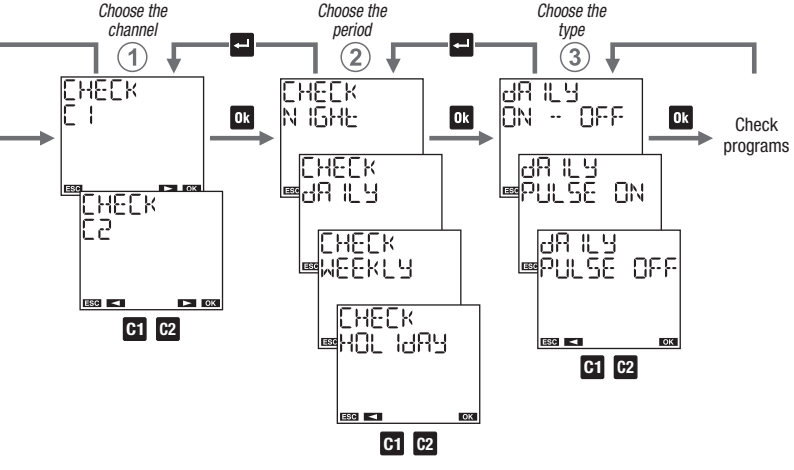


Indication of the memory space (76 of 120)

How to check a program

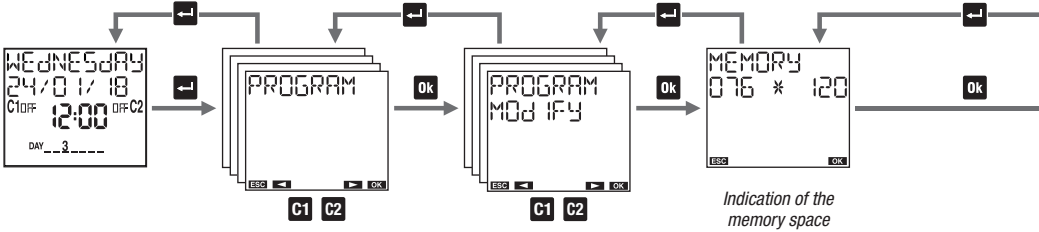
① choose the channel (only for DWA2)
② choose the period: daily, weekly, holiday or night (when it is a channel of astronomical type)
③ choose the type: on/off, on pulse, off pulse or a night program (only if it is a channel of astronomical type)

Note: a program requires more screens to be displayed:
- press the key **Ok** to move from the first to the second part of the same program
- press the keys **C1** and **C2** to switch from one program to another


Choose the channel
Choose the period
Choose the type
1
2
3
CHECK C1
CHECK C2
Ok
CHECK NIGHt
CHECK DAILY
CHECK WEEKLY
CHECK HOLIdAY
DAILY ON - OFF
DAILY PULSE ON
DAILY PULSE OFF
ESC
OK
C1 C2
Check programs

English

Program menu: modify



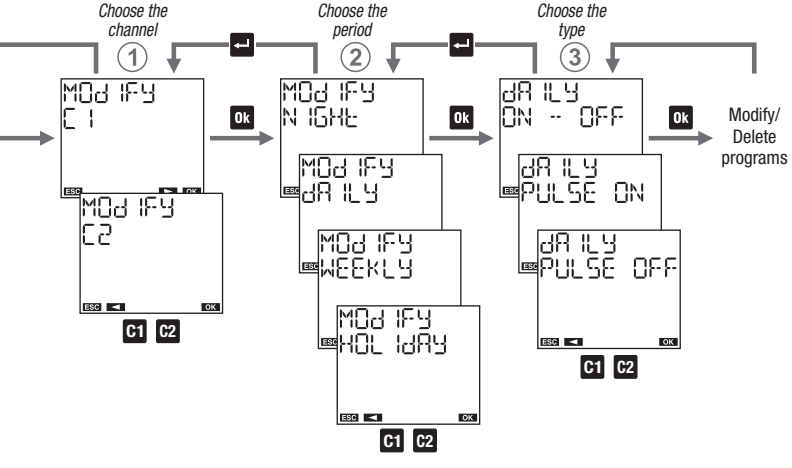
Indication of the memory space (76 of 120)

How to modify or to delete a program

① choose the channel (only for DWA2).
② choose the period: daily, weekly, holiday or night (only if it's an astronomical channel)
③ choose the type: on/off, on pulse, off pulse or a night program (only if it's an astronomical channel)

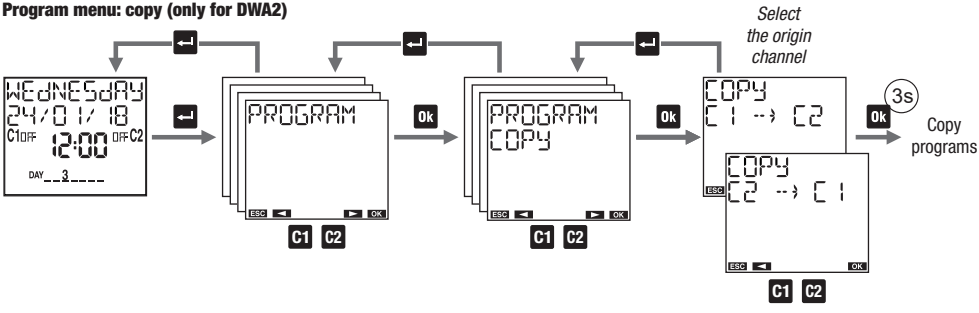
Note: a program requires more screens to be displayed:
- press the key **Ok** to move from the first to the second part of the same program
- press the keys **C1** and **C2** key to switch from one program to another

To modify: press for a long time (at least 3 seconds) the key **Ok**
To delete: press for a long time and simultaneously the keys **Ok** and ↵


Choose the channel
1
Choose the period
2
Choose the type
3
MOdIFY
C1
MOdIFY
C2
Ok
MOdIFY
NIGHt
MOdIFY
dAILY
MOdIFY
WEEKLY
MOdIFY
HOLIdAY
dAILY
ON - OFF
dAILY
PULSE ON
dAILY
PULSE OFF
Modify/ Delete programs
ESC
OK
C1 C2

English

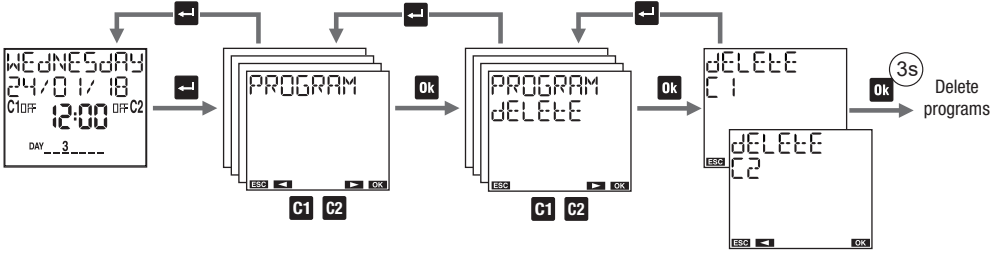
Program menu: copy (only for DWA2)



"Copy" menu allows copying the programs of a channel (origin channel) on the other channel (channels destination).
Note: the programs previously stored on the channel destination will be deleted.

English

Program menu: delete



"Delete" menu is used to delete all stored programs on the specified channel.
Note: to delete one single program to see "modify" mode (see page 42).

BLUETOOTH MENU

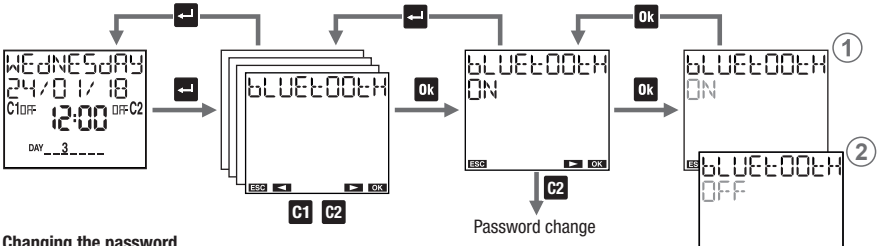
The Bluetooth menu allows you to enable or disable the Bluetooth interface and change the password used to associate your device (smartphone or tablet) to DWA.

To enable the Bluetooth interface:
① set Bluetooth ON

Warning: to make the Bluetooth interface active, the DWA must be mains powered and connected to the main page (see page 8). The Bluetooth interface is therefore not active when browsing through the DWA menus.

To disable the Bluetooth interface:
② set Bluetooth OFF

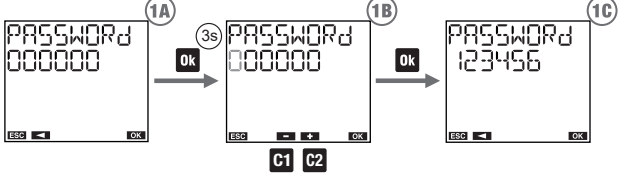
In this way no communication can take place between your device and DWA. DWA works with the settings and programs already set; any changes or creation of new programs must be made by acting directly on the keyboard of DWA.



Changing the password

The password is the 6-digit code required by the app for the first association between DWA and smartphone

1A Press the key **Ok** for at least 3 seconds until the first digit of the password starts to flash.
1B Set the first digit with the keys **C1** and **C2** keys and press the key **Ok** to confirm and move to the next digit.
1C Repeat step 1B to set all 6 digits.
After confirming the last digit, the display shows the new password.
Press the key ↵ to exit the menu.



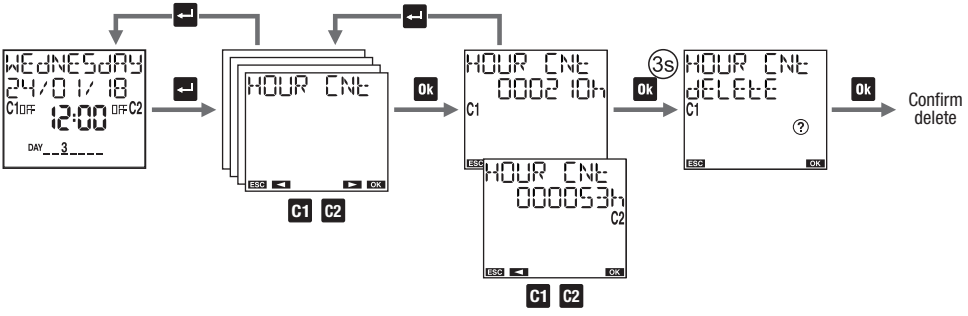
English

HOUR COUNTER MENU

"Hour counter" menu allows you to display the hours of use (relay on) of connected loads.
The maximum value of the counter is 99999 hours (about 11 years); reached the maximum limit, the counter resets automatically.

To reset a counter:
1. select the desired channel (only for DWA2)
2. press the key Ok for 3 seconds until the display shows "HOUR CNT dELEtE ⑦"
3. confirm by pressing Ok (press ↵ to exit without zeroing)

Note: it's possible to reset all counters contemporary from the "Reset" menu (see page 50).


WEdNESdAY
24/01/18
C1 OFF 12:00 OFF C2
DAY 3
HOUR CNt
ESC
OK
C1 C2
Ok
HOUR CNt
0002 10h
C1
HOUR CNt
000053h
C2
ESC
OK
C1 C2
Ok
3s
HOUR CNt
dELEtE
C1
?
ESC
OK
Ok
Confirm
delete

English

RESET MENU

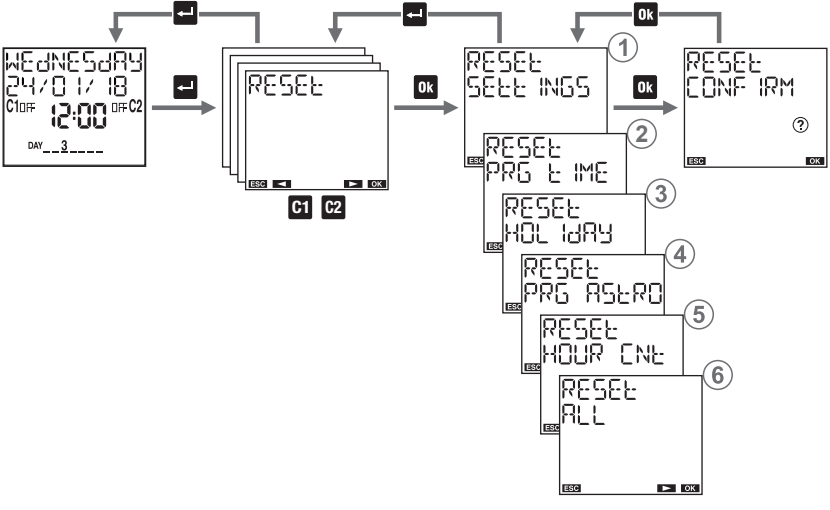
"Reset" menu allows you to restore the initial state of the device.

Available resets:
① Settings reset: deletes all the carried out settings (except the language and the PIN)
② Time programs reset: deletes all saved time programs
③ Holiday programs reset: deletes all saved holiday programs
④ Astro programs reset: deletes all saved astronomical programs
⑤ Counter reset: resets the counters of all channels
⑥ Reset all: carries out all the above described resets and deletes the language and PIN protection

There is also another reset, of hardware type, which allows you to reset the device in case it responds to the pressing of the keys so unexpectedly, without losing the carried out settings/programs (only the date and the time are lost).

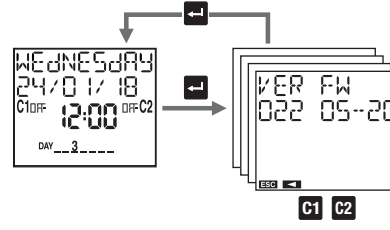
To carry out a hardware reset:
1. press the key "R" with a sharp object

The hardware reset is also useful when you forget PIN protection. Reset, in fact, unlocks the keyboard for 3 minutes, the necessary time to access the appropriate menu and check/disable PIN.


WEdNESdAY
24/01/18
C1OFF 12:00 OFFC2
DAY__3____
RESEt
ESC
OK
C1
C2
RESEt
SEtt INGS
RESEt
CONF IRM
RESEt
PRG t IME
RESEt
HOL IdAY
RESEt
PRG ASt RO
RESEt
HOUR CNt
RESEt
ALL

FIRMWARE MENU

This menu shows the firmware installed in the device, where:
022 is the revision index
05 is the month
20 is the day



English

ERROR SIGNALS

When setting up programs, in case of a discrepancy, the following error messages can occur:

- ERROR 001 on and off events with different frequency (each on event must have an off event)
- ERROR 002 on and off concomitant events of the same program
- ERROR 003 Two or more consecutive on events of the same program / Two or more consecutive off events of the same program
- ERROR 004 Invalid date
- ERROR 005 Insufficient memory
- ERROR 006 Attempt to set an on pulse on a channel where is already stored an off pulse (see page 25)
- ERROR 007 Attempt to set an off pulse on a channel where is already stored an on impulse (see page 25)
- ERROR 008 Attempt to set an on holiday program on a channel where is already stored an off holiday program (see page 25)
- ERROR 009 Attempt to set a holiday off program on a channel where a holiday on program is already stored (see page 25)
- ERROR 010 Attempt to set a holiday program of on and off events on different days of the week (see page 31)
- ERROR 011 Attempt to set an astro program on a channel of time (see page 25)
- ERROR 012 Attempt to set a time program on a channel of time type (see page 25)
- ERROR 030 Error accessing memory *

* In this case, carry out a hardware reset (see page 50).
If the error persists, contact ABB technical support mobile

BATTERY MANAGEMENT

When the battery is close to empty, on the first line of the display appears bAtt-ERY. In this case, the battery must be replaced as soon as possible. **Use only batteries of CR2032.**

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 becuase 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 (in absence of power by means).

Dispose of the used batteries observing the laws in force in relation to the disposal of hazardous waste.

REFERENCE STANDARDS

EU CONFORMITY DECLARATION

ABB declares that the device complies with the EU directive 2014/53/EU (RED) with reference to the following standards:

- EN 60730-2-7
- ETSI EN 301 489-1
- ETSI EN 301 489-17
- ETSI EN 300 328

The complete text of EU conformity declaration is available at the Internet address ABB - www.abb.com

2CSM441044D0201

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