

PROGRAMMATORE MODULARE DIGITALE

Logik

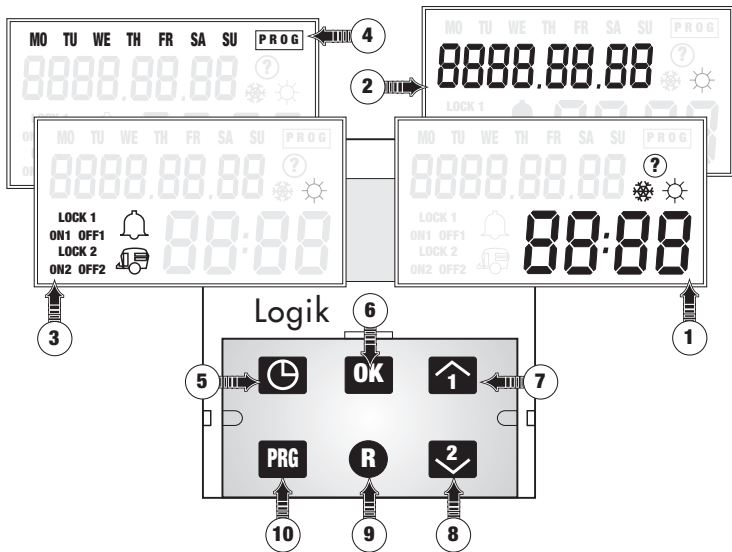
Digital Modular Programmer: User Manual

Manuale di Installazione ed Uso



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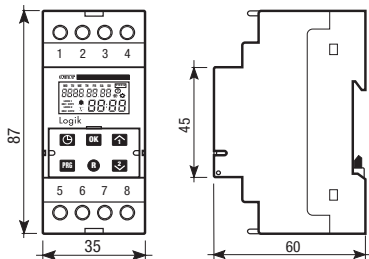


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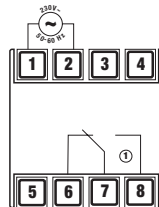
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DIMENSIONS

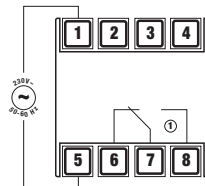


CONNECTION DIAGRAMS

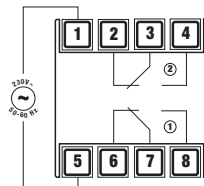
LOGIK Y/DW



LOGIK YB



LOGIK Y2/YB2/DW2



SAFETY WARNINGS

- 1) *This manual must be read carefully before installing the device*
- 2) *The device must only be installed by trained personnel*
- 3) *Before connecting the terminals, ensure the wires are not under tension*
- 4) *Check that the electric board in which the device is to be installed prevents the terminals from being reached after installation*
- 5) *Do not power up or connect the device if some part of it is damaged*

Modular digital programmers

Code	Model	Description
VP871800	LOGIK DW	Single monostable relay daily/weekly timer
VP874200	LOGIK DW2	Dual monostable relay daily/weekly timer
VP870000	LOGIK Y	Single monostable relay daily/weekly/monthly/yearly timer
VP873400	LOGIK Y2	Dual monostable relay daily/monthly/yearly timer
VP872600	LOGIK YB	Single bistable relay daily/weekly/monthly timer
VP875900	LOGIK YB2	Dual bistable relay daily/weekly/monthly/yearly timer

OPERATION NOTES

- The appliance is supplied switched off, to avoid unnecessary consumption of the battery. To switch it on, press **"R"** followed by **"PRG"**.
- In case of use of impulsive events only, it is necessary to add a program at the end of the others, to prevent an eventual anomaly (programmed on or off failure).
This program has to send a command OFF to the relay every day at a pre-set time (for example 00:00). This program don't make any activation of the connected load, because there isn't any switch on the output contacts. In the 2 and 4 channels type, it is not important to which channel is associated the program.

HARMONIZED REFERENCE STANDARDS

- Conformity with EC directives:
73/23/CEE and subsequent **93/68/CEE** (Low Tension)
89/336/CEE and subsequent **92/31/CEE** e **93/68/CEE** (EMC)
is declared for the following standards:
- Safety: **EN 60730-2-7**
- Electromagnetic compatibility: **EN 55014-1**, **EN 55014-2**

TECHNICAL CHARACTERISTICS

- Modular digital timed connector, 2 DIN modules of normalised dimensions
- Backlit liquid crystal display
- Programming
 - daily: every day at the same time
 - weekly: every week on the same day
 - monthly: every month on the same day
 - yearly: every year on the same month and day
 - on a fixed date during the year
- Automatic switch to summer/winter time (settable)
- IMPULSE program (from 1 to 59 seconds)
- HOLIDAY program
- RANDOM program
- Temporary and permanent forcing of the relays
- Hour counter for each channel (max 99999h ~11 years)
- Partial and total reset
- Fast exit from programming mode
- Power supply: **230 V AC** (-10% ÷ +15%)
- Frequency: 50/60 Hz
- Absorption:
 - 8 VA (2 W) for monostable relay models
 - 4 VA (1 W) for bistable relay models
- Output:
 - 1 or 2 relays 16(3) A 250 V AC for monostable models
 - 1 or 2 relays 5(1) A 250 V AC for bistable models

- Capacity for each channel:
 - Halogen and incandescent lamps
 - max 1500 W 240 V (monostable models)
 - max 500 W 240 V (bistable models)
 - Fluorescent lamps
 - max 600 W 240 V (monostable models)
 - max 150 W 240 V (bistable models)
- Timer precision: ± 1 s per day
- No. of programs:
 - max 25 for single monostable relay models
 - max 50 for dual monostable relay models
 - max 50 for single bistable relay models (1 or 2 channels)
- Programming resolution: 1 min
- Reserve charge:
 - max 5 years for monostable models (unrechargeable Lt battery)
 - >100h after 4h ignition for bistable models (rechargeable NiMH battery)
- Protection:
 - IP20 connection switches
 - IP41 front of instrument
- Container: 2 DIN modules
- Pollution: normal
- Storage temp.: $-10\text{ }^{\circ}\text{C} \div +70\text{ }^{\circ}\text{C}$
- Operating temp.: $0\text{ }^{\circ}\text{C} \div +50\text{ }^{\circ}\text{C}$

DESCRIPTION OF THE FRONT PANEL

■ DISPLAY

- 1) **"Hours/minutes" (HH:MM)**, summer time symbol "☀", winter time symbol "❄", **RANDOM** program symbol "❓"
- 2) **"Year/month/day" (AAAA.MM.GG)**
- 3) Relay status, **IMPULSE** program symbol "🔔", **HOLIDAY** program symbol "🏠"
- 4) **"Days of the week"** and programming status

■ KEYBOARD

- 5) Timer setting and fast exit from programming mode "⏸"
- 6) Data confirmation and programming advance **"OK"**
- 7) Increment/modify/select a value and relay manual command "①"
- 8) Decrement/modify/deselect a value and relay manual command "②"
- 9) Reset "@"
- 10) Programming **"PRG"**

FIRST PROGRAMMING

Before setting any values, perform a **"total reset"** of the instrument.

GENERAL PROGRAMMING NOTES

- To exit the programming mode at any time, press "⏸".
- If no key is pressed for 30 seconds, the device automatically returns to normal operating mode.
- **"Single channel"** (or **"single relay"**) means that the programmer has a single output and is therefore only able to control one group of charges.

RESET

■ PARTIAL RESET: this function

- resets the date to the default value 2000.01.01
- resets the time to the default value 00:00
- if active, the **RANDOM** program is set to **OFF**

To perform a partial reset of the device, press "@"; the display will flash **00:00** in the hour field (zone 1) and the timer can now be set.

■ TOTAL RESET: in addition to the operations performed by the partial reset function, a total reset will cause all programs to be erased and will reset the hour counter to zero.

To perform a total reset, press "@", and then, within 3 seconds, press **"PRG"**; the word **CLEAR** will appear in the centre of the display and then only the hour field (zone 1) will be visible (flashing).

Now it is possible to proceed with the "time/date" setting.

NORMAL OPERATIONS

During normal operation, the device executes the set programs and the display shows the following information:

- operational status of the relay(s) (zone 3)
- operation (if in use) of the **RADOM** program “?” (zone 1)
- the time and the symbol for either winter time “❄” or summer time “☀” (zone 1)
- day of the week (zone 4)
- complete date in format “year-month-day” (zone 2)



- * **Note:** when not receiving power, monostable models are **not** able to switch the relays although they keep the various programs stored; consequently, they are automatically set to **OFF**. Bistable models, on the other hand, are able to execute set programs even when they do not receive power.

TIME/DATE SETTING

The internal clock/timer must be set to the right time for the device to operate correctly:

- 1) Press “☉”: the display will show a screen similar to the picture beside, with the seconds flashing
- 2) Press “①” to set the second-counter to zero and increase the minute-counter by one (for synchronisation with the next minute); press “②” to set the second-counter to zero without incrementing the minute-counter by one (for synchronisation with the current minute)
- 3) Press “OK” to pass to the sequential setting of minute, hour, year, month and day:
 - the numbers in the field of the value being modified will flash on the display
 - press “①” or “②” to move to the desired value
 - press “OK” to confirm your choice and move to the next field (cyclical: ➔ **MINUTE** ➔ **HOURL** ➔ **YEAR** ➔ **MONTH** ➔ **DAY** ➔ **SECOND** ➔)



- * **Note:** indication of the day of the week (zone 4 on the display) is automatically updated.

- 4) Press “☉” to store the values and return to normal operation.

RELAYS FORCING

The status of the relays can be manually altered provided that the **HOLIDAY** program is not active.



- For devices with only 1 channel, press “①”
- For devices with 2 channels, press the key corresponding to the desired relay (“①” for relay 1, “②” for relay 2)

* **Note:** the relay can be taken through a cycle of states by pressing the manual command repeatedly.

The states are shown in zone 3 of the display

- **ON:** on until the next programmed intervention
- **ON LOCK:** on until the next manual intervention
- **OFF LOCK:** off until the next manual intervention
- **OFF:** off until the next programmed intervention


DEVICE PROGRAMMING

The device programming sets the times of events such as switching on (**ON**), switching off (**OFF**) and impulse operation (**ON** ). Various cycles can be set (sequences of **ON**, **OFF**, **ON** ).

The maximum number of events that can be programmed is 25 for monostable relays, and 50 for bistable relays (regardless of the number of channels) and for dual relay monostable devices.

1) Enter programming mode by pressing “**PRG**”.

* **Note:** if the device has 2 relays, a screen will be displayed showing the channel (**CH1** or **CH2**); select the relay by pressing “①” or “②” and confirming with “**OK**”.

When programmed for the first time, the display will show this screen with the symbols **ON**, **OFF**,  , flashing (the symbols in zone 4 are also shown for the models LOGIK DW and DW2).



After the first programming, the first program set is displayed; press “**OK**” repeatedly to show all the programs set and, if the maximum number of set programs has not been reached, the screen for a new program will be shown.

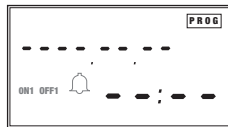
If the full number of set programs has been reached, the word “**FULL**” will be displayed.

2) Press “**OK**” again to exit the programming mode: the display will show the number of programs still available for that channel.

3) To select the type of event, use “①” and “②”.

The following will flash in zone 3:

- **ON1 (ON2)** for a switch on event on channel 1 (2)
- **OFF1 (OFF2)** for a switch off event on channel 1 (2)
- **ON1**  (**ON2** ) for an impulse event on channel 1 (2)



* **Note:** the programmed states run in a cycle in this order:

➔ **ON** ➔ **OFF** ➔ **ON** 🔔 ➔

- **SWITCH ON (SWITCH OFF):** it refers to the definition of the hour, minute, second and the parameters relating to the change to the state **ON (OFF)** of the chosen relay (in relation to the type of programming chosen: daily, weekly, monthly, yearly or on a fixed date).

DAILY/WEEKLY: the events are repeated on the selected days each week.

- a) Confirm the event selected by pressing "**OK**": two dashes (--) will flash in field 1.
- b) Press "**1**" to set the minutes and hour: 00:00 will be shown in field 1.
- c) Using the "**1**" and "**2**" keys, set the desired value and press "**OK**" to confirm the choice and pass to the next field.
- d) Once the timer is set, the device automatically passes to the choice of day(s) of the week: the symbol (**MO**) for Monday will flash in zone 4.

* **Note:** a slow flash indicates that the day has been selected while a fast flash indicates the day has been ignored.

- e) Press "**1**" to confirm the flashing day and pass to the next or press "**2**" to ignore the day and move to the next. The days of the week are considered cyclically and in sequence. The symbols of the days selected are displayed in zone 4.
Press "**OK**" to store the parameters.
- f) Press "**OK**" again to program another event; alternatively, press "⌚" to return to normal operation.

MONTHLY: it refers to a repetition of one or more events on a certain date of each month of each year.

- Follow the directions in steps **a)** to **d)** for "daily/weekly" programming.
- Press "**OK**" to skip the selection of the days of the week and to pass directly to the selection of the number of the day.
- The parameter being set is shown with flashing dashes in its respective field in zone 2. As there is no need to specify the year or the month, press "**OK**" twice to pass to the number of the day.
- To set the day, use the "**1**" and "**2**" keys; press "**OK**" to confirm your choice.
- Press "**OK**" again to program another event, alternatively, press "⌚" to return to normal operation.

YEARLY: it refers to a repetition of one or more events on a particular day of a particular month that occurs each year.

- Follow the directions in steps **a)** to **d)** for "daily/weekly" programming.
- Press "**OK**" to skip the selection of the days of the week and pass directly to the selection of the month and the number of the day.
- The parameter being set is indicated by flashing dashes in the respective field in zone 2; press "**OK**" to skip the selection of the year and pass directly to the selection of the month and day (keys "**1**" and "**2**" to select, "**OK**" to confirm and move to the next field).
- Press "**OK**" once more to program another event; alternatively, press "⌚" to return to normal operation.

A "FIXED DATE": it refers to one or more events that occur on a precise day (year, month, day).

- Simply follow the same procedure as for "yearly programming", also specifying the year.

■ **IMPULSE EVENT:** it consists of switching on the device for a time settable between 1 and 59 seconds.

- Confirm the event (ON 🕒) by pressing **"OK"**.
- The duration of the impulse in seconds is shown in zone 2 of the display and can be set using keys **"①"** and **"②"**.
The display will automatically show **00:00** in the hour field (zone 1).
- Press **"OK"** to confirm the value and move on to set the minutes, hour, day/s, month in the same manner as used to set the switch on/off times.
- Press **"OK"** again to program another event; alternatively, press **"⏮"** to return to normal operation.

* **Note:** impulse programming can be weekly, monthly or yearly but can not be set for a "fixed date".

DISPLAY AND MODIFICATION OF PROGRAMS

- Press the **"PRG"** key to enter **"Programming"** mode. If the device has only one relay, the screen for the first program set will be shown; on devices with 2 relays, it is first necessary to select the desired channel using the **"①"** and **"②"** keys.
- Press **"OK"** to display the various programs in sequence. When all the programs have been shown, the display will show the screen for a new program. If the maximum number of programs has been reached, the word **"FULL"** will be displayed.

- To modify the program displayed, press **"PRG"**. The methods to modify a program are analogous to the programming methods (in general, **"①"** and **"②"** to choose, **"OK"** to confirm). When all the program fields have been dealt with, press **"OK"** again to pass to the next program (if there is one) or to a new programming session.
- To return to normal operation, press **"⏮"**.
- * **Note:** it is not possible to alter the typology of an event, for example, to transform a "switching on" event into a "switching off" event.

ERASING OF A PROGRAM

- Press **"PRG"** to enter the **"programming"** mode.
- Press **"OK"** to move through the programs until you reach the one to be erased.
- To erase the displayed program, press **"PRG"** for about 5 seconds. Confirmation of its erasure will be given by the word **"CLEAR"** which will appear for an instant in zone 2 of the display. When the procedure has completed, the screen for the next program (if there is one) or a new programming session will be displayed.
- To return to normal operation, either press **"⏮"** or press **"OK"** (you will then see the number of programs that can still be set), then press **"OK"** once more.

ADVANCED PROGRAMMING

- The **"Advanced Programming"** mode gives access to the following functions:
- **SUMMER TIME "☀" / WINTER TIME "❄"**: This function allows you to set the dates for the automatic change-over from summer time to winter time and vice versa.
- Press **"PRG"** for about 5 seconds to activate the advanced programming mode. The display will show the word **"HOUR"** in zone 2 and the **"☀"** and **"❄"** symbols.
- The words **ON (OFF)** will flash in zone 1 to indicate if the automatic change-over from summer time to winter time and vice versa is enabled (inhibited). To change from one mode to the other, toggle the **"①"** and **"②"** keys (**ON/OFF**).
- * **Note:** the default dates for change-over are the last Sundays of March and October (see the picture beside).



- If the change-over is active, press **"OK"** to show the settings of summer time **"☀"** (change from winter time to summer time) and winter time **"❄"** (change from summer time to winter time).

The display will show:

LAST	If the change-over occurs on a particular day of the last week of a set month
1st	If the change-over occurs on particular day of the first week of a set month
2nd	If the change-over occurs on a particular day of the second week of a set month
3rd	If the change-over occurs on a particular day of the third week of a set month
4th	If the change-over occurs on a particular day of the fourth week of a set month
DATE	If the change-over occurs on a precise day (month, day)

- SUMMER/WINTER TIME CHANGE:** press **"PRG"** when the display shows one of the two screens relating to the change-over to enable modification of the values. Press **"①"** or **"②"** to select the change-over mode (**LAST, 1st, 2nd, 3rd, 4th, DATE**), then press **"OK"** to confirm your choice.
- For modes **LAST, 1st, 2nd, 3rd, 4th**, you have to set the month, day, hour and minutes (the parameter being altered will flash); press **"①"** and **"②"** to select, then **"OK"** to confirm.
 - For the **DATE** mode, you have to set the month, number of the day, hour and minutes (the parameter being altered will flash); press **"①"** and **"②"** to select, then **"OK"** to confirm.

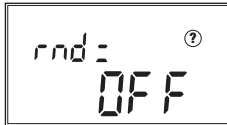
Press **"OK"** consecutively to pass to the setting of winter time, then to the setting of the "random program"; to return to normal operation, press "☺".

- If the change-over is not active, press **"OK"** to open the "random program" setting directly.

■ **RANDOM PROGRAM:** it allows the device to be activated using random **ON/OFF** times that range from 5 to 68 minutes. The program only effects channels that are not locked manually (**LOCK**) and that are in the **ON** state on the current date. When this program is active, the display shows the symbol "☺" in zone 1.

* **Note:** if a channel has been set manually to **ON** before activation of the program, the channel will return to the **OFF** status and remain there after a random time determined by the program.

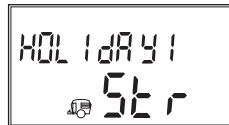
- Press **"PRG"** for about 5 seconds to activate the advanced programming mode: the display will now show the word **HOUR** in zone 2, the symbols "①" and "②" in zone 1, and the words **ON (OFF)** will flash.
- To enter the "random program" setting mode, press **"OK"** until the display shows a screen similar to that displayed beside.
- To activate (**ON**) or deactivate (**OFF**) the "random program", use the "①" and "②" keys, then press **"OK"** to confirm



- Press **"OK"** once more if you wish to enter the "holiday program".
- To return to normal operation, press "☺".

■ **HOLIDAY PROGRAM:** this function will suspend operation of the device for 2 periods during the year (**HOLIDAY1** and **2**). During these periods, the relays that are not in the **LOCK** state are turned to **OFF**. At the end of the periods, the relays return to their normal programming status.

- * **Note:** when the program is active, the display shows the "☺" symbol and the status of the relays cannot be altered manually.
- Press **"PRG"** for about 5 seconds to activate the advanced programming mode. The display will show the word **HOUR** in zone 2, the "☺" and "☺" symbols in zone 1, and the words **ON (OFF)** will flash.
- To enter the "holiday program" setting mode, press **"OK"** until the display shows a screen similar to that one beside; **"STR"** will appear in zone 1 which indicates that the next screen contains the parameters that relate to the beginning of the holiday period.



- Press **"OK"** to make the parameters appear (year, month, day, hour and minute). These will define the beginning of the first holiday period (a screen similar to this one).

To alter these settings, press **"PRG"**.

As usual, the value to be modified will flash (press **"1"** or **"2"** to select, **"OK"** to confirm).



- Press **"OK"** to continue: the display indicates that the next screen refers to the end of the first holiday period (the word **"END"** appears in zone 1).
- Press **"OK"** to display the parameters (year, month, day, hour and minute) that define the end of the first holiday period. To alter these settings, press **"PRG"**. As usual, the parameter being altered will flash (press **"1"** and **"2"** to select, **"OK"** to confirm).
- Press **"OK"** to pass to the setting of the beginning/ending parameters of the second holiday period (**HOLIDAY2**) and, at the end, to the "hour-counter function".
- To return to normal operation, press **"☺"**.

* **Note:** if the holiday program has never been used, dashes (--) will be displayed in the fields for the year, month and day (zone 2) and hour and minutes (zone 1).

■ **HOURL-COUNTER FUNCTION:** this function displays the number of hours (max. 99,999) that the relays have been **ON**.

* **Note:** to set the hour counter to zero, the device must undergo a **"total reset"**.

- Press **"PRG"** for about 5 seconds to activate the advanced programming mode. The word **HOUR** will be displayed in zone 2, the symbols "☼" and "☾" in zone 1, and **ON (OFF)** will flash.
- Press **"OK"** consecutively until a screen similar to that one in the picture appears; the total number of hours the relay (indicated in zone 1) has been **ON** will be displayed in zone 2.
- For 2 channel devices, press **"1"** or **"2"** to display the hours the first or second relay (**CH1** or **CH2**) has been in operation.
- To return to normal operation, press **"OK"** or **"☺"**.



This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on its right side, suggesting it's resting on a surface.



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