

ZCM-42 TIME PROGRAMMER

Wi-Fi-CONFIGURABLE

USER'S MANUAL

ZAMEL Sp. z o.o.

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DESCRIPTION

The ZCM-42 time programmer is used to perform time functions in automation and control systems. It can control loads connected to outputs depending on the hour and day of the week as well as sunrise and sunset times (including information on geographical coordinates of the place of time programmer installation, current date, and time shift set). The programmer also offers the possibility of setting one-time events – executed on a given day of the year – and makes it possible to define exceptions (time periods during which control is executed differently than set in weekly and astro schedules). The programmer allows you to program 80 events for all types (weekly, astro, and one-time events as well as exceptions), but the main advantage of this programmer is that they are not simply ON/OFF pairs but independent events, which allows for very flexible control of the connected devices – for example, you can turn on a device using the astro function and turn it off using the weekly function. Parameters are set via a website thanks to the Wi-Fi module included with the device. In addition, the programmer keeps device settings without requiring a battery when there is a power failure and offers the possibility of importing/exporting saved schedules.

FEATURES

- control based on sunrise and sunset times,
- option to change calculated sunrise and sunset times manually,
- control based on hour and day of the week,
- option to program one-time events and exceptions,
- setting parameters via a website thanks to the Wi-Fi module,
- no need to install any applications,
- settings are kept without requiring a battery.

Hereby, ZAMEL Sp. z o. o. declares that the radio equipment type ZCM-42 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.zamel.com



The device should be connected to a one-phase network in accordance with legally binding standards. The connection method is described in this manual. Any activities related to installation, connection, and adjustment should be performed by qualified electricians who have read this user's manual and familiarised themselves with device functions. Removing the enclosure voids the warranty and poses a risk of electric shock. Before installation, make sure that there is no voltage on connection cables. To install the device, use a cross-head screwdriver with a diameter of 3.5 mm. The proper operation of the device is affected by how the device is transported, stored, and used. It is not advisable to install the device in the following cases: lack of any components, damage to or deformation of the device. If the device operates improperly, please contact the manufacturer.



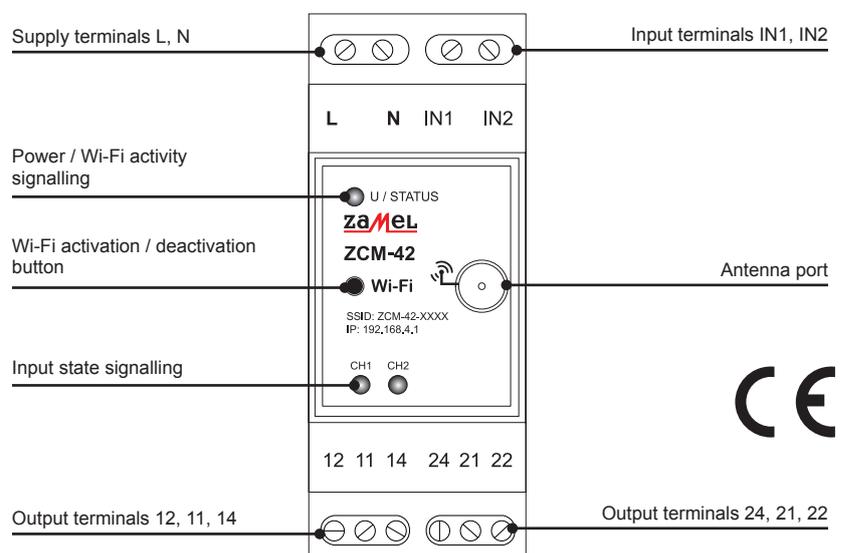
Do not dispose of this device together with other waste! To avoid harmful effects on the environment and human health, the worn-out device should be stored in designated areas. Electrical waste from households may be handed over to the waste collector established for this purpose free of charge and in any amount, as well as to the store when purchasing new equipment.

TECHNICAL DATA

| | |
|---|--|
| Nominal supply voltage: | 230 V AC 50 / 60 Hz |
| Supply voltage tolerance: | -15 ÷ +10 % |
| Nominal power consumption: | 0.75 W - Wi-Fi disabled 0.85 W - Wi-Fi enabled 1.4 W - with one relay turned on 2 W - with two relays turned on |
| Transmission: | Wi-Fi 2.4 GHz b/g/n |
| Operating range: | 100 m in the open area* |
| Transmitting power: | ERP < 20 mW |
| Supply voltage / Wi-Fi status signalling: | LED (green) |
| Number of outputs: | 2 |
| Input state signalling: | 2 LEDs (red) |
| Parameters of relay contacts: | 2 x NO/NC 16 A / 250 V AC (inrush: 111 A / 20 ms) |
| Number of inputs: | 2 |
| Can be used with: | monostable (returnable), bistable switches |
| Schedules: | astro, weekly, yearly, exceptions |
| Number of events: | 80 for all schedule types |
| Settings are kept by: | supercapacitor - settings are kept for 24 hours |
| Operating temperature: | -10 ÷ +55 °C |
| Operation position: | any |
| Enclosure mounting: | DIN-Rail |
| Enclosure IP rating: | IP20 |
| Number of connection terminals: | 10 |
| Cross-section of connection cables | 0.2 ÷ 2.5 mm ² |
| Overvoltage category: | II |
| Contamination degree: | 2 |
| Dimensions: | two-module enclosure 90x35x66 mm |
| Weight: | 163 g |

* The operating range given refers to an open area, i.e. ideal conditions, without obstacles. If there are obstacles between the transmitter and the receiver, the operating range should be expected to be reduced by: 10-40% for bricks, 5-20% for wood and plaster, 40-80% for reinforced concrete, 90-100% for metal, and 10-20% for glass. In addition, overhead and underground high-voltage power lines as well as cell towers located near devices have a negative impact on the operating range.

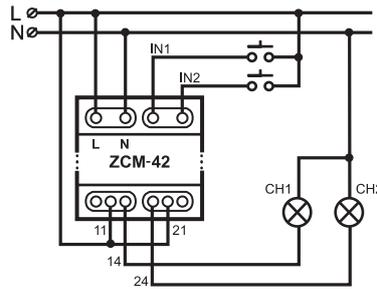
APPEARANCE



WIRING DIAGRAM

NOTE! The ZCM-42 controller should be connected to a one-phase network in accordance with legally binding standards. Any activities related to installation, connection, and adjustment should be performed by qualified electricians who have read this user's manual and familiarised themselves with device functions.

1. Disconnect the power supply circuit with a fuse, circuit breaker, or a switch disconnecter connected to the appropriate circuit.
2. Check voltage-free condition on power cables using a proper measuring instrument.
3. Connect the ZCM-42 device according to the wiring diagram.
4. Feed supply voltage.
5. Configure the device (see CONFIGURING THE DEVICE).
6. Check if the device operates properly.



CAPACITY

- 1250 W AC5b
- 300 W AC5a
- LED** 100 W
- 600 W AC5a
- 450 W AC5a

CONFIGURING THE DEVICE

If the U/STATUS LED is turned off after connecting the device to the power supply, press and hold the Wi-Fi button for 3 seconds, which will activate the Wi-Fi module in the programmer. Then on a mobile device search for a Wi-Fi network with the name that starts with ZCM-42-XXXX and connect to it by entering the proper password (default password: zamel123). Then enter 192.168.4.1 in an Internet browser. The „Home Page“ of the ZCM-42 programmer (Fig. 1) will be displayed, containing information on the current firmware version, date, time, sunrise and sunset times, and geographical coordinates. Below you can find buttons used to turn on/off relays. The bar at the bottom allows you to switch between individual tabs.

The second tab is used to control schedules (Fig. 2). At the top of the tab you can choose schedule type. Below you can find a list of saved schedules of a given type as well as information on when a given schedule will be executed and what action it will trigger. The user can turn on/off every schedule and delete it. Go to the schedule adding screen by pressing the „+“ button in the bottom right corner. There is a field for selecting schedule type at the top (you can choose between one-time, weekly, astro, and exception type). The next fields to be displayed depend on the type of schedule selected. For one-time schedules, you can configure date and time; for weekly schedules, you can configure the hour and day of the week; for astro schedules, you can configure the day of the week, event (sunrise or sunset), and time shift (in the range of -120 to +120 minutes). For exceptions, you can define the date and the range of hours for which the exception is to apply. The last element to be defined before saving a schedule/an exception is the action to be triggered – you can choose between turning on/off a single relay or both relays, turn on a relay for a defined time, and for exceptions – operation according to one-time schedules. After all settings are made, press the „Add schedule“ / „Add exception“ button.

The third tab is used to export / import schedules (Fig. 3). Press the „Export“ button to save all schedules on the memory of the device from which the configuration is made. The „export.zcnf“ file is saved in the default folder for files downloaded in the browser. To import schedules that have already been exported, first choose the file in which they are stored and then press the „Import“ button.

The fourth tab (Fig. 4) allows you to configure time settings (date, hour), settings for geographical coordinates (required to calculate sunrise and sunset times), Wi-Fi settings, input settings, and language settings. In the Wi-Fi settings, you can change the password for the programmer Wi-Fi network, enter the SSID and password for the router, and update the firmware. In the input settings, you can configure the „Switch time“ parameter for each input, which defines the time (in minutes) for which the relay corresponding to a given input will be turned on (time „0“ means that the relay will not be turned off automatically), while the „Time-based mode“ parameter (in seconds) allows you to define the time for which schedules operating in time-based mode will turn on relays. You can also select the users language in the fourth tab.

To restore the clock to the factory settings, press and hold the PROG button for 10 seconds. (NOTE: All saved schedules will also be deleted).



Fig. 1



Fig. 2



Fig. 3



Fig. 4

UPDATING THE FIRMWARE

The firmware of the ZCM-42 programmer can be updated remotely. This operation requires a router connected to the Internet. In the programmer settings, enter the SSID name and the password for the route and then save the programmer firmware settings. Then press the „Update firmware“ button. The ZCM-42 programmer will try to connect to the router Wi-Fi network and will check if there if a firmware update is available. If it is, it will download and update the firmware. Once the firmware update process is completed, the programmer will restart automatically and return to normal operation.

WARRANTY CARD

Manufacturer provides a 24-month warranty

1. ZAMEL Sp. z o.o. shall offer a 24-month warranty on the products sold.
2. The warranty provided by ZAMEL Sp. z o.o. shall not cover:
 - a) mechanical damage caused during transport, loading/unloading or in other circumstances,
 - b) damage caused by incorrect installation or operation of products manufactured by ZAMEL Sp. z o.o.,
 - c) damage resulting from any changes made by the BUYER or third parties in the products sold or equipment necessary for the proper operation of the products sold,
 - d) damage resulting from force majeure or other fortuitous events for which ZAMEL Sp. z o.o. is not liable.
3. Any warranty claims shall be made by the BUYER at the point of sale or to ZAMEL z o.o. in writing after defects have been identified.
4. ZAMEL Sp. z o.o. undertakes to handle complaints in accordance with the applicable provisions of Polish law.
5. The choice of the form of complain resolution, e.g. replacement of a product with a product free from defects, repair, or reimbursement of money, shall lie with ZAMEL Sp. z o.o.
6. The warranty does not exclude, limit, or suspend BUYER's rights under the statutory warranty for defects in the item sold.

Seller's stamp and signature, date of sale