



## External module user manual MOBILUS C-SW2

[www.mobilus.pl](http://www.mobilus.pl)

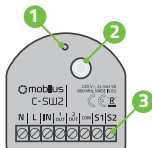
## 1. GENERAL INFORMATION

The MOBILUS C-SW2 relay switch is a remotely controlled MOBILUS module operating in the COSMO / COSMO | 2WAY intended for installation in a wall switch box or in any place where there is a need to control any two receivers with a power not exceeding 1 kVA each. It can be used to turn on and off devices connected to its output remotely via radio using COSMO / COSMO | series controllers. 2WAY, using the COSMO | GTW smart home control unit or directly from the connector connected to the module.

## 2. IMPORTANT INFORMATION

- Please read the instructions carefully before use.
- After unpacking the device, check whether it has not been damaged during transport. If so, please inform your supplier immediately.
- Please read the user manual carefully before use.
- The MOBILUS C-SW2 module should be powered by 230 V~, 50 Hz. Its installation should only be carried out by persons with electrical qualifications according to the attached electrical diagram in accordance with all applicable regulations.
- The device should be installed so that children cannot access it.
- The MOBILUS C-SW2 module is designed to work with all COSMO / COSMO | series remote controls. 2WAY.
- The range of radio control is limited by regulations regarding the maximum power of remote controls and the conditions of installation of devices. When designing the arrangement of remote controls, you should take into account the limitation of the range to approximately 20 m through 2 walls.
- Declaration of Conformity:
  - We declare with full responsibility that the MOBILUS C-SW2 module meets the following European Directives:
    1. 2014/53/EU Radio RED Directive;
    2. 2014/30/EU Electromagnetic Compatibility Directive.
    3. 2014/35/EU Low Voltage Directive

### 3. PRODUCT DESCRIPTION



1. Antenna.
2. Illuminated PROGRAMMING BUTTON P.
3. Connection terminals:
  - N - neutral wire;
  - L - phase wire;
  - IN - power input to the relay;
  - S1 - button no. 1;
  - S2 - button no. 2;
  - COM - control input for S1 and S2;
  - OUT 1 - control output 1;
  - OUT 2 - control output 2.

#### 4. TECHNICAL DATA

Supply voltage: 230 V~; 50 Hz.

Permissible power of each receiver: max. 1 kVA.

Radio protocol: COSMO | 2WAY, COSMO.

Radio frequency: 868MHz.

Radio signal power: up to 1 mW.

Operating range: up to 40 m in an open area, up to 20 m in a building (depending on the type of construction, materials used and arrangement of units).

Installation location – box  $\geq 50$  mm.

Operating temperature: 0 °C – 40 °C.

Dimensions – 44 x 46 x 19 mm.

## 5. INSTALLATION OF THE DEVICE

1. Make sure the mains voltage is disconnected.
2. Connect the MOBILUS C-SW2 module according to the diagram:
  - connection diagram to the 230 V~ network with an ordinary (bistable) single lighting switch - Fig. 5a;
  - Set the appropriate operating mode for a given section of the module;
  - connection diagram to the 230 V~ network with a single bell (monostable) switch - Fig. 5b;
  - Set the appropriate operating mode for a given section of the module;
  - various connectors can be used (e.g. monostable for the first section, bistable for the second).
  - Set the appropriate operating mode for each section.
3. Place the MOBILUS C-SW2 module in the electrical box.
4. Place the antenna appropriately (as far as possible from metal elements).
5. Turn on the mains voltage.

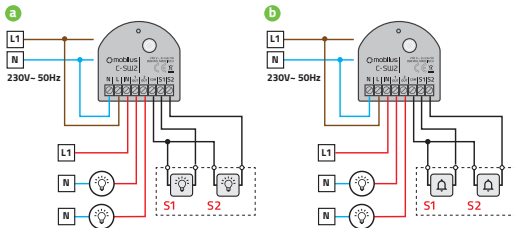


Fig. 5

## 6. ENTERING THE MODULE PROGRAMMING MODE

The MOBILUS C-SW2 module allows you to control two devices. Therefore, you should run the appropriate PROGRAMMING MODE for a specific output OUT1, OUT2.

To do this, press and hold for more than 5 seconds. programming button on the MOBILUS C-SW2 module. Three short sound signals confirm that the module has entered the PROGRAMMING MODE - Fig. 6a. If every 1 sec. the diode flashes and a single sound signal is heard - this means PROGRAMMING MODE for the device connected to the OUT1 output - Fig. 6b.

To switch PROGRAMMING MODE for the device connected to the OUT2 output, briefly press the programming button - Fig. 6c. Flashes twice and beeps twice, repeated every 1 second. mean correct switching of the PROGRAMMING MODE for the OUT2 output - Fig. 6d.

**ATTENTION!** If within 20 sec. no programming of the radio module will be performed, the MOBILUS C-SW2 radio automatically exits the PROGRAMMING MODE. The sound signals and LED flashing stop.

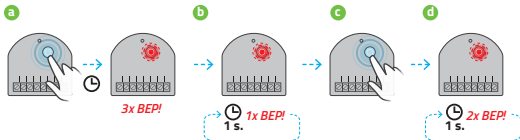


Fig.6

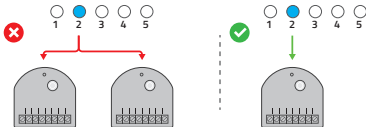
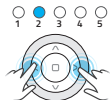
## 7. LOADING THE MASTER-A\* CODE INTO THE MODULE MEMORY

1. Enter the PROGRAMMING MODE of the MOBILUS C-SW2 module and set its mode for a given output OUT1, OUT2.
2. On the remote control, press and hold the STOP and UP buttons simultaneously.
3. Loading the MASTER remote control is confirmed by a long sound signal from the module. The MASTER code has been loaded into memory and the module goes into OPERATING MODE. Now, using the MASTER remote control, you can operate devices or enter the PROGRAMMING MODE corresponding to a given output in order to load additional remote controls.



**ATTENTION!** In the case of a multi-channel remote control, select only one channel to be MASTER.

**TIP** For programming convenience, it is recommended that each MOBILUS C-SW2 had its own separate MASTER remote control (separate channel in the case of multi-channel remote controls). Avoid situations where several MOBILUS C-SW 2 will have a common remote control (common channel) MASTER.



**\*MASTER** - remote control or channel (in the case of a multi-channel remote control) loaded first into the MOBILUS C-SW2 module memory. Enables programming of additional remote controls.

## 8. PROGRAMMING THE SECOND AND EACH SUBSEQUENT REMOTE

1. On the MASTER remote control for a given device, press and hold the STOP and UP buttons simultaneously until the module emits three short beeps, confirming entry into the PROGRAMMING MODE - Fig. 8a. Additionally, in this mode, every 1 sec. LED flashes.
2. On the second remote control (in the case of a multi-channel remote control, select the channel you want to program), press and hold the STOP and UP buttons simultaneously until the module emits two short beeps.

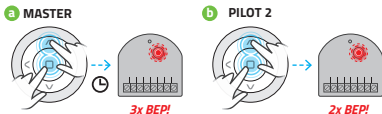


Fig. 8

By repeating step 2, you can start loading the next remote control. However, if within 20 sec. no programming activity is started, the module returns automatically to the operating mode - the module will emit one long sound signal. Returning to working mode can also be done manually using MASTER. In such a situation, press and hold simultaneously for more than 5 seconds. MASTER STOP and UP buttons. In both cases, the return to working mode will be confirmed by one long beep.

## 9. RESETING THE C-SW MODULE - FACTORY SETTINGS

**ATTENTION!!!** RESTORING FACTORY SETTINGS deletes all programmed remote controls from the MOBILUS C-SW2 module memory.

1. Enter the PROGRAMMING MODE of the MOBILUS C-SW2 module - Fig. 9a.
2. IN PROGRAMMING MODE, press and hold the above button for 5 seconds. programming button - Fig. 9b. All remote controls previously loaded into the module have been deleted from its memory, which is confirmed by three long sound signals.

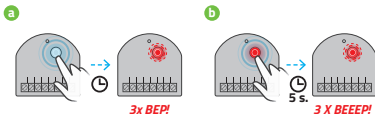


Fig. 9



## 10. DELETING INDIVIDUAL REMOTES (CHANNEL)

It is possible to delete only one of the programmed remote controls (does not apply to the MASTER remote control). For this purpose:

1. On the MASTER remote control for a given device, press and hold the STOP and UP buttons simultaneously until the connected module emits two short beeps, confirming entry into the PROGRAMMING MODE, - Fig. 10a. Additionally, in this mode, every 1 sec. LED flashes.
2. On the remote control (channel) you want to delete, press and hold the STOP and UP buttons simultaneously until the MOBILUS C-SW2 module emits two long beeps, confirming that the remote control code has been deleted from the memory - Fig. 10b.

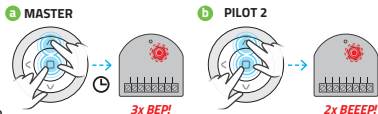


Fig. 10

**ATTENTION!** By repeating step 2 you can proceed to remove the next remote control. However, if within 20 sec. no programming activity is started, the module automatically returns to the operating mode. Returning to the operating mode can also be done manually using the MASTER remote control. In such a situation, press and hold the STOP and UP MASTER buttons simultaneously. In both cases, the return to working mode will be confirmed by two sound signals from the MOBILUS C-SW2 module.

## 11. TURNING THE RECEIVER ON/OFF

The device connected to the MOBILUS C-SW2 module can be controlled as follows:

### **I. Controlling the COSMO / COSMO | 2WAY REMOTE CONTROL.**

Press the UP button on the remote control - the device will be turned on.

Pressing the DOWN key will turn off the device.

### **II. Controlled by a SINGLE-KEY BISTABLE SWITCH**

Connector connected to connector S1 or connector S2 - Fig. 5a. Switching the key in the bistable switch: ON - the device will be turned on. OFF - the device will be turned off.

### **III. Controlled by a ONE-KEY MONOSTABLE SWITCH**

Connector connected to the S1 connector or S2 connector - Fig. 5b. Pressing the key in the monostable switch will switch the receiver status. If the receiver was turned on, it will be turned off and vice versa.

## 12. SELECTING THE WORK TYPE FOR A GIVEN SWITCH.

The MOBILUS C-SW2 module allows you to control both monostable and bistable switches. To do this, set the appropriate operating mode for a given device:

1. Use the MASTER remote control assigned to a given device to enter the MOBILUS C-SW2 module into PROGRAMMING MODE - Fig. 12a.
2. Hold the DOWN button on the remote control - fig. 12b. This will generate a sequence of sound signals in the module and the current control mode will change:  
MODE I - 2 short, 1 long - SINGLE-KEY MONOSTABLE SWITCH  
MODE II - 2 short, 2 short, 1 long. SINGLE-KEY BISTABLE SWITCH.  
MODE III - 2 short, 2 short, 2 short, 1 long. SINGLE-KEY BISTABLE STAIR SWITCH.
3. The module will exit PROGRAMMING MODE.

## CONTINUED 12. SELECTING THE WORK TYPE FOR A GIVEN SWITCH.

Mode switching works in the carousel, so I -> II -> III -> I -> II -> III...

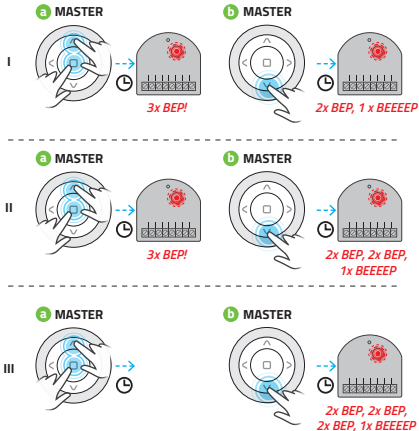


Fig. 12

### 13. RECEIVER OPERATING TIME.

**Setting the operating time of the device.** The MOBILUS C-SW2 module allows you to set the operating time of the connected device. For this purpose:

1. On the MASTER remote control for a given device, press the STOP and UP buttons simultaneously until the MOBILUS C-SW2 module emits three short beeps confirming entry into the PROGRAMMING MODE. Additionally, in every 1 sec. mode the diode is flashing - Fig. 13a.
2. Press the UP button on the remote control. The connected receiver turns on. From this moment, the MOBILUS C-SW2 module starts measuring the time for which the connected device will operate.
3. Pressing the STOP button will turn off the connected receiver and save the measured operating time in the memory of the MOBILUS C-SW2 module - Fig. 13b. The module will exit PROGRAMMING MODE.

**Principle of operation.** Pressing the UP key on the remote control will turn on the connected device. The device will turn off after the time programmed by the user has passed.



Fig. 13

**Deleting the operating time of the device.** For this purpose:

1. On the MASTER remote control for a given device, press the STOP and UP buttons simultaneously until the MOBILUS C-SW2 module emits three short beeps confirming entry into the PROGRAMMING MODE. Additionally, in every 1 sec. mode the diode is flashing - Fig. 13a.
2. Press and hold the STOP button until the MOBILUS C-SW2 module exits PROGRAMMING MODE and emits one long beep. The time has been deleted - Fig. 13c.

## 14. REPEATER FUNCTION

**SIGNAL REPEATER** - this function allows you to extend the range of radio control. The MOBILUS C-SW2 module with the repeater function enabled receives signals from the controller or actuators and passes them on. Thanks to this, the most distant receivers, which are not within the range of the controller, can receive and transmit information through modules located indirectly.

Enabling the repeater function:

1. On the MASTER remote control, press the STOP and UP buttons simultaneously until the MOBILUS C-SW2 module emits three short beeps confirming entry into the PROGRAMMING MODE. Additionally, in every 1 sec. mode the diode is flashing - Fig. 14a.
2. On the remote control, press the button sequence: UP, STOP, DOWN, UP, STOP, DOWN. - Fig. 14b. Activating the repeater function will cause a sequence of sound signals from the module: 3 short, 3 short, 1 long - Fig. 14c.
3. To deactivate the repeater function, repeat point 1. Then press the sequence of buttons on the remote control: UP, STOP, DOWN, UP, STOP, DOWN - deactivation is confirmed by issuing a sequence of sound signals from the module: 3 short, 1 long - Fig. 14d.

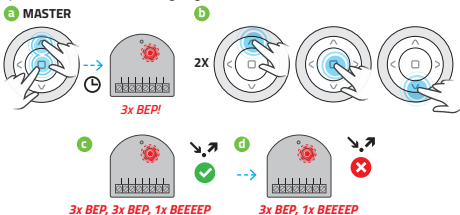


Fig. 14

## CONTINUED 14. REPEATER FUNCTION

**ATTENTION!** The signal repeater function should only be enabled on devices that are at the edge of the signal range. Unjustified activation of the signal repeater function in many devices may cause disruptions in the operation of all radio devices.

For effective operation, we recommend enabling the signal repeater function in a maximum of three devices in the facility.

## 15. OPERATING STATE OF THE RECEIVER AFTER A VOLTAGE OUTAGE

The MOBILUS C-SW2 module does not remember its state after a power failure and remains turned off for each connected device.

## 16. BI-DIRECTIONALITY

The MOBILUS C-SW2 module, thanks to two-way communication with the remote control, allows you to control the status of the controlled device (on, off). Correct operation of two-way communication requires the use of remote controls with COSMO | 2WAY communication.

The COSMO C-SW module transmits information to remote controls about the receiver's operating status: turned on, turned off. The mode is activated automatically - it cannot be deactivated.

## 17. ENVIRONMENTAL PROTECTION



This device is marked in accordance with the WEEE Directive (2002/96/EC), regarding waste electrical and electronic equipment. By ensuring correct disposal, you contribute to reducing the risk of the product having a negative impact on the environment and human health, which could occur if the device was disposed of incorrectly. The symbol on the product or the documents attached to it means that this product is not classified as household waste. The device must be taken to an appropriate waste collection point for recycling. For further information about recycling this product, please contact your local authority, waste disposal service provider or the store where you purchased the product.



**MOBILUS MOTOR Spółka z o.o.**

ul. Miętowa 37, 61-680 Poznań, PL

tel. +48 61 825 81 11, fax +48 61 825 80 52

VAT NO. PL9721078008

Wersja 1.0ENG, 220513

**[www.mobilus.pl](http://www.mobilus.pl)**