

# sygonix®

## Operating instructions

### RS2W wireless outdoor switch

Item no. 1762779

#### Latest operating instructions

Download the latest operating instructions via the link [www.conrad.com/downloads](http://www.conrad.com/downloads) or scan the QR code shown. Follow the instructions on the website.



#### Explanation of symbols



The lightning symbol inside a triangle is used when there is a potential risk of personal injury, such as electric shock.



An exclamation mark in a triangle indicates important instructions in this operating manual that absolutely have to be observed.



The arrow symbol indicates specific tips and advice on operation.



Observe the operating instructions!

#### Delivery content

- RS2W wireless outdoor switch
- 4 x waterproof plug
- 4 x screw
- 4 x dowel
- Operating instructions

#### Intended use

The external wireless switch is intended for independent switching on and off up to two devices with a suitable wireless transmitter of the RS2W system.

The permitted connected loads for the devices and their operating voltages can be found in the chapter "Technical data".

For safety and approval purposes, you must not rebuild and/or modify this product. If you use the product for purposes other than those described above, the product may be damaged. In addition, improper use can cause hazards such as short circuiting, fire, electric shock etc. Read the instructions carefully and keep them. Make this product available to third parties only together with its operating instructions.

This product complies with the statutory national and European requirements. All company names and product names are trademarks of their respective owners. All rights reserved.

#### Safety instructions



**Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling in this manual, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.**



- The device is not a toy. Keep it out of the reach of children and pets.
- Do not leave packaging material lying around carelessly. This may become dangerous playing material for children.
- Protect the product from extreme temperatures, strong jolts, flammable gases, vapours and solvents.
- Do not place the product under any mechanical stress.

If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. Safe operation can no longer be guaranteed if the product:

- is visibly damaged,
- is no longer working properly,
- has been stored for extended periods in poor ambient conditions or
- has been subjected to any serious transport-related stresses.

Please handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.

Also observe the safety and operating instructions of any other devices which are connected to the product.

This device should be installed only by people with relevant electro-technical knowledge and experience! \*)

If it is not installed properly, you risk:

- your own life
- the life of the user of the electrical system.

If it is installed improperly, you risk severe damage to property, e.g., by fire. You face the risk of personal liability for personal injury and material damage.

Contact an electrician!

\*) Specialist knowledge required for the installation:

For the installation, in particular, the following specialist knowledge is required:

- the "5 safety rules" to be followed: Switch off power; secure against switching back on; determine voltage-free status; earthing and short-circuiting; cover or fence off nearby live parts

- Choose appropriate tools, meters and, if necessary, personal protective equipment

- Evaluation of the measurement results

- Selection of the electrical installation material to ensure the shut-down conditions

- IP protection types

- Installation of the electrical installation material

- Type of mains supply network (TN system, IT system, TT system) and the connection conditions that follow from them (classical earthing, protective earthing, required additional measures, etc.)

If you do not have the expertise required for the installation, do not connect and install it yourself, rather ask a qualified technician.

Do not use this product in hospitals or medical institutions. Although RS2W system transmitters only emit relatively weak radio signals, these may lead to the malfunctioning of life-support systems. The same may also apply to other areas.

In commercial institutions, the accident prevention regulations of the Employer's Liability Insurance Association for Electrical Systems and Operating Facilities are to be observed!

The product may be mounted in indoor and outdoor areas (housing with protection type IP66). However, it must not be installed in or under water. Water can seep into the product, which will destroy it. Furthermore, this could cause a lethal electric shock!

The product may only be assembled and operated in a stationary condition; the product is not suitable for installation and operation in vehicles.

Do not mount or use this product in rooms or under adverse environmental conditions where combustible gases, vapours or dust are present! There is a danger of explosion!

Keep the product away from strong magnetic fields generated by machines, electric motors or loudspeakers.

The product may only be operated on mains voltage (see sections "Installation and connection" and "Technical data"). Never try to operate the product at another voltage, as this will result in the destruction of the product.

Only carry out the installation and connection when all the mains cables to the inbuilt wireless switch are disconnected from the mains voltage. Otherwise, there is a risk of a life-threatening electric shock!

During installation, all poles must be disconnected from the mains voltage, e.g., via RCD. There must be an appropriately dimensioned fuse or circuit breaker between the RCD and the product.

Install the product only in an easy-to-reach position.

If it can be assumed that safe operation is no longer possible, the product must be turned off and precautions must be taken to ensure that it is not used unintentionally. Do not touch the inbuilt wireless switch or any device connected to it.

Disconnect the wireless inbuilt switch completely from the mains by switching off at the appropriate circuit breaker or by pulling out the fuse and switching of the corresponding earth leakage breaker. After this, arrange for an expert to check the product.

Never overload the product. Observe the maximum connected load specified in the chapter "Technical data".

If the product is operated while opened (for a functional check or programming), it must not get damp or wet. There is a risk of a life-threatening electric shock!

If any liquid has still managed to enter the device, immediately turn off the mains supply at all poles (turn off the automatic circuit breaker or remove the fuse, then switch off the residual current operated circuit breaker of the associated circuits). Contact a specialist. Do not use the product any longer.

Do not use the product if it is damaged. There is a risk of a life-threatening electric shock!

If it can be assumed that safe operation is no longer possible, the product must be turned off and precautions must be taken to ensure that it is not used unintentionally. Do not touch the product or any device connected to it.

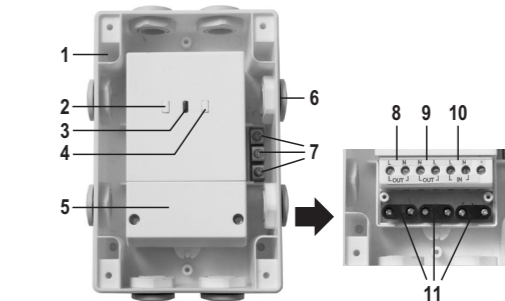
First switch off the mains voltage to all poles (switch off the connected circuit breaker or remove the fuse and then switch off the connected RCD).

Consult an expert when in doubt about operation, safety or connection of the device.

Maintenance, modifications and repairs are to be performed exclusively by an expert or at a qualified shop.

If you have questions which remain unanswered by these operating instructions, contact our technical support service or other technical personnel.

#### Operating elements



- 1 Opening for mounting the housing to a wall
- 2 Button for switching channel 1
- 3 LED
- 4 Button for switching channel 2
- 5 Cover for screw terminals/strain reliefs
- 6 Filler plug (x 8)
- 7 3x terminals for protective conductor
- 8 Output L/N for switching channel 1
- 9 Output L/N for switching channel 2
- 10 Input L/N and PE (earth symbol)
- 11 Strain reliefs

#### Installation and connection



Please observe the chapter "Safety instructions"!

The wireless inbuilt switch can be mounted in a suitable place. The housing of the wireless inbuilt switch is protected according to IP66. Thus, it may be installed in unprotected outdoor areas. Make sure that the housing is never in or under water.

The wireless inbuilt switch must be disconnected from the mains supply during installation. Turn off the mains supply, by switching off the appropriate circuit breaker or by pulling out the fuse. Secure it against unauthorised reconnection, e.g., with a danger sign.

Furthermore, turn off the earth leakage circuit breaker to disconnect all the poles from the mains voltage.

Check that the mains connection is current free with a suitable tester.

- Open the cover of the protective housing by removing the 4 screws on the top with a screwdriver. You can then remove the cover.
- The complete external wireless switch can be removed from the housing.
- Remove the two screws on the cover (5) and remove the cover. The screw terminals for the two outputs/switching channels (8 + 9), the input for power supply (10) and the strain relief (11) for the connection cables are situated under the cover.
- Depending on the installation location and the position of the connecting cables, up to 4 filler plugs (6) can be used instead of the 4 cable connections provided.



Makes sure that the rubber seals of the cable connections make good contact with the housing and are not kinked.

- Depending on the type of wall, suitable screws and wall plugs are required for mounting the housing to a wall.

→ Select an installation location that is not in direct vicinity to other transmitters. Maintain distance to metal parts as this can reduce the range considerably.

If you have to drill holes for wall plugs, mark the installation location on the wall through the four holes (1) at the housing corners. The distance between the holes for mounting is 100 x 80 mm.

Pay attention when drilling and tightening the screws that no cables or pipes are damaged.

- Push the power cable and the connection cables for the devices through the cable connections (admissible cable diameter 7 - 12 mm).

- Slacken the three strain reliefs.

- Connect the power cable to the input (10) of the external wireless switch (L = phase/brown cable, N = neutral wire/blue cable, PE = protective each conductor/yellow-green cable).

- Connect the screw terminals of the two switching channels with the devices, e.g., to two lights.



The total power for both switching channels (ohmic load) is 2000 W. For example, a device with 1500 W can be controlled on switching channel 1 and a device with 500 W on switching channel 2.

For inductive loads, the total power for both switching channels is 300 W (e.g., switching channel 1 = 200 W, switching channel 2 = 100 W).

- The three separate terminals (7) are provided to connect the protective earth conductor or you can use the common cable terminals, which can be housed in the housing of the wireless inbuilt switch. If more than one of the terminals (7) is used, the terminals must be connected to each other.

- Tighten the screw of the strain reliefs (11).

- Replace the cover (5) and tighten the screws.

- Screw the lock nuts of the cable connections so that the cables are securely fixed. Sealing according to IP66 is only guaranteed when this is done.

- Now, switch on the mains voltage.

→ Before placing the cover onto the housing of the wireless inbuilt switch and screwing it tight, the device must be programmed to the used wireless transmitter(s).

When this is done successfully, the housing must be closed and screwed tight. Subsequently, the device is fully operational.

### Function test: Switching the connected load on/off using the push button

Briefly press the button (2 or 4) on the external wireless switch to switch the connected device on or off.

### Programming the external wireless switch to a radio transmitter

→ The external wireless switch can be programmed to every radio transmitter of the RS2W radio system.

Before programming, observe the operating instructions of the radio transmitter you intend to use.

During programming, maintain a minimum distance of 20 - 30 cm between the external wireless switch and the transmitter. Failing to do this may result in a programming failure.

Each of the two switching channels of the wireless inbuilt switch can be programmed to 5 different wireless transmitters of the RS2W system. This way, the connected devices can be switched on or off e.g., from several locations.

Both switching channels are independent of each other. Thus, each switching channel must be programmed separately. With this method, it is possible for both switching channels to react to, for example, one transmitter channel or for each switching channel to react separately to e.g., transmitter channel 1 and/or 2, etc.

- When a device connected to the external wireless switch, switch off the corresponding device first at the external wireless switch with the corresponding button (2 or 4).

→ The switching channel intended for programming must be switched off; otherwise, programming cannot be done.

- Start with the programming process on the radio transmitter. Example: Both buttons "ON" and "OFF" of the desired switch channel at the 12-channel hand-held transmitter of the RS2W system must be pressed simultaneously until the red LED on the hand-held transmitter starts flashing. Release both buttons, the red LED continues to flash, the programming mode is activated.

- Keep the corresponding button for the switching channel you want to programme pressed until programming on the radio transmitter is complete.

Example: The LED at the 12-channel hand-held transmitter of the RS2W system, lights up blue and then goes dark. Release the button on the external wireless switch.

- The switching channel of the external wireless switch switches on to indicate the end of the programming process.

→ Up to 5 receivers can be programmed to one switch channel of a transmitter of the RS2W system. This means, for example, that you can switch up to 5 external wireless switches on or off simultaneously by pressing one button. It is also possible to programme the external wireless switch to multiple transmitters.

⚠ However, the dimmer available for the RS2W system must not be programmed together with an external wireless switch to a single switching channel! Always programme it to a separate channel of the radio transmitter.

### Deleting a programmed external wireless switch from a transmitter

The procedure is exactly the same as for programming the external wireless switch to the transmitter. You can find further information in the operating instructions of the used radio transmitter of the RS2W system.

### Switching the device on/off remotely

- Both switching channels of the external wireless switch and the connected devices can only be switched on or off remotely, if they were programmed to a transmitter of the RS2W radio system.

- Follow the description above and the operating instructions of the radio transmitter that will be used.

→ The LED on the external wireless switch lights up briefly when a radio signal was received.

### Range

- The range of the radio signals between a transmitter of the RS2W system and the external wireless switch is up to 150 m under optimum conditions.

→ This value, however, is the so-called "open space range" (the range when the transmitter and receiver are in line of sight, without any interference).

- In practice, however, there may be walls, room ceilings, etc. between the transmitter and the receiver, which will reduce the range accordingly.

- Due to the different influences on the wireless transmission, no specific range can be guaranteed. However, trouble-free operation is usually possible in a single family house.

Sometimes the range can be considerably reduced due to:

- Walls, reinforced concrete floors, drywall walls with metal frame construction
- Coated/metallised insulated glass
- Proximity to metallic & conductive objects (e.g., heating elements)
- Proximity to human bodies
- Other devices on the same frequency (e.g., wireless headphones, wireless loudspeakers)
- Proximity to electric motors/appliances, transformers, power supplies, computers

### Care and cleaning


- The product is maintenance-free. Any maintenance or repair work may be performed only by an expert.
- To clean the exterior of the wireless inbuilt switch, a dry, soft and clean cloth is sufficient.
- Do not use any aggressive cleaning agents, rubbing alcohol or other chemical solutions as they can cause damage to the housing and malfunctioning.
- Do not immerse the product in water.

### Declaration of Conformity (DOC)

Conrad Electronic SE, Klaus-Conrad-Straße 1, D-92240 Hirschau hereby declares that this product conforms to the 2014/53/EU directive.

→ Click on the following link to read the full text of the EU declaration of conformity: [www.conrad.com/downloads](http://www.conrad.com/downloads)  
Select a language by clicking on a flag symbol and enter the product order number in the search box. You can then download the EU declaration of conformity in PDF format.

### Disposal

 Electronic devices are recyclable waste and must not be disposed of in the household waste. At the end of its service life, dispose of the product according to the relevant statutory regulations.

You thus fulfil your statutory obligations and contribute to the protection of the environment.

### Technical data

Operating voltage ..... 230 V/AC, 50 Hz  
Power consumption ..... with both outputs switched off: 0.4 W  
with both outputs switched on: 1.3 W  
with one output switched on: 0.8 W

Switching outputs ..... 2  
Cable cross-sectional area for screw terminals ..... 0.75...2.5 mm<sup>2</sup>  
Total connection power (combined)..... resistive load: 2000 W (8.7 A)  
inductive load: 300 W (1.3 A)

→ Devices with mainly ohmic load are, e.g., light bulbs, heaters or similar.

Devices with inductive load are, e.g., engines, control gears, conventional transformers, energy saving bulbs, etc.

Transmission/receiving frequency ..... 868.000 - 868.600 MHz  
Transmission/receiving range ..... max. 150 m (in open area)  
Transmission power..... <14 dBm  
Protection class ..... IP66  
Operating temperature ..... -20 to +55 °C  
Dimensions (L x W x H) ..... 155 x 105 x 52 mm  
Weight ..... 369 g

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