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Wireless forcing switch - Spirit



E Installation Instructions

ART.NR.:
113243

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1 Function

Pack consists of a wireless transmitter, WT1, and a wireless receiver, WRR1. The ventilation unit can be wirelessly remotely controlled by using the units.



WT1 is a single channel transmitter which can be linked to receives for wireless control of ON/OFF.

- The learning method means simple programming/ deprogramming and eliminates interference which can arise from traditional mechanical programming.
- A red LED in the centre of the rocker switch indicates signal transmission.
- Optional wall mounting using screws or double-sided tape. The transmitter can also be hand-held or placed on a table.



WRR1 is a receiver for wireless control (ON/OFF) of connected current indoors.

- The learning method means simple programming/ deprogramming and eliminates interference which can arise from traditional mechanical programming.
- Radio frequency 868MHz gives 30m range in line of sight, reduces the risk of interference, and ensures stable transmission.
- The red LED indicates signal receipt and status when programming and deprogramming by flashing at different frequencies.
- Timer function.

2 Installation

All electrical connections must be carried out by qualified electricians.

2.1 Selecting installation site

The transmitter (WT1) can be located anywhere. The receiver (WRR1) must be connected to the ventilation unit. Observe the following to ensure optimum signal transmission:

- The ground absorbs radio waves. Install WT1 at least 1 metre above the floor. The higher the location the better the signal.
- Ensure WT1 is located within range of the linked receiver(s).
- WT1 should be installed at least 1 metre from conductive materials such as reinforced walls, aluminium windows/doors or cables, to avoid the range being shortened.
- Do not install WT1 on a thick wall to avoid the range being shortened.
- Locate WT1 and other units using the same frequency at least 2 metres from each other to minimise the risk of interference.
- Do not connect live cables to the antenna. This will cause interference (see Fig. 2). Do not strip the antenna sheath (see Fig. 1).
- Transmission between transmitter and receiver can be affected by humidity, installation site, building construction, the environment etc. Use the table below as a guide to the negative effect of various materials.

Material	Suppression
Line of sight	0
Glass/paper/wood/plaster	5 - 20%
Fibre panels/brick/concrete	10 - 40%
Reinforced concrete	50 - 90%
Rain/snow	60 - 100%
Metal	90 - 100%

Fig. 1

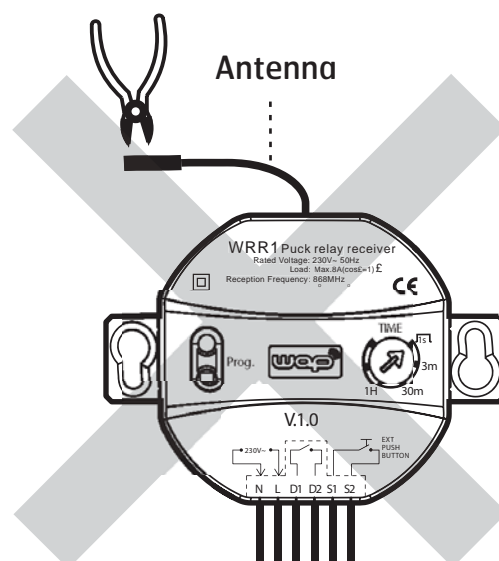
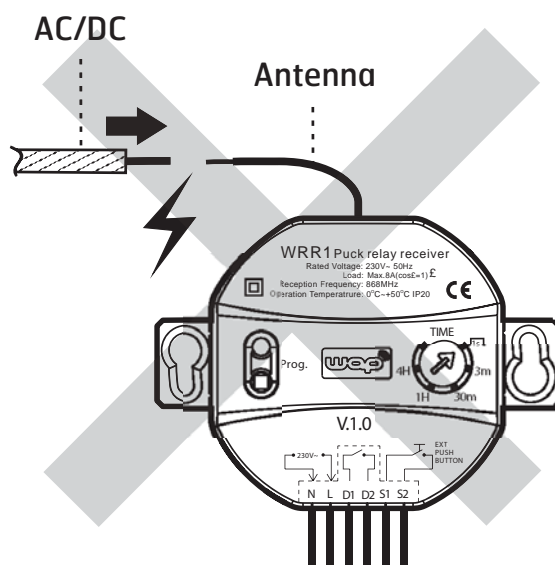



Fig. 2



2.2 Installation WT1

-  WT1 is supplied with a CR2032 3V battery by the factory.
- The plastic insulation must be removed before use.
- Ensure that "Top/on" is always at the top.

2.2.1 Removing the plastic insulation

Lever off the rocker switch. Slacken the screws on the plate. Separate plates, design frame and back plate (see Fig.3). Pull out the plastic insulation (see Fig.4).

2.2.2 Installation set WT1

- WT1 can be mounted in different ways.
- on a wall using screws (see Fig.5 and item 2.2.3)
 - on a wall using double-sided tape (see Fig. 6)
 - on a junction box (see Fig. 7 and item 2.2.4)
 - hand-held (see Fig. 8).
 - placed on a table (see Fig. 9)

Fig. 3

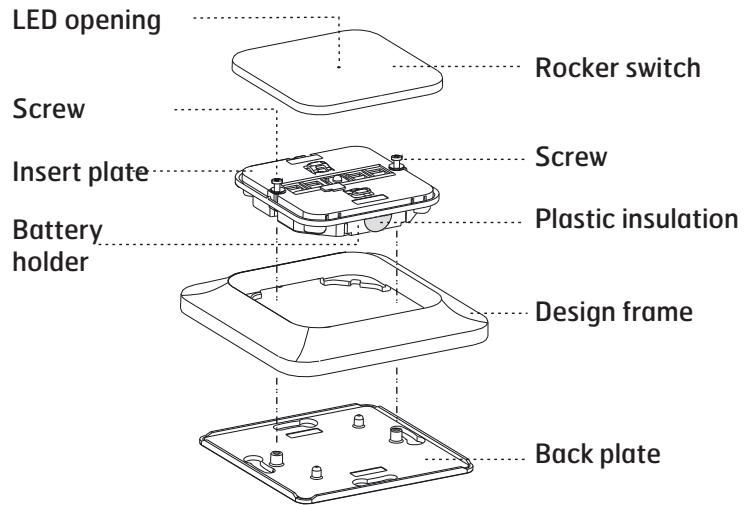


Fig. 4

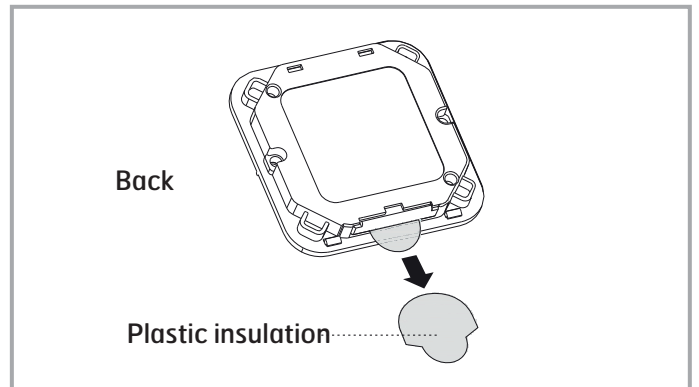


Fig. 5

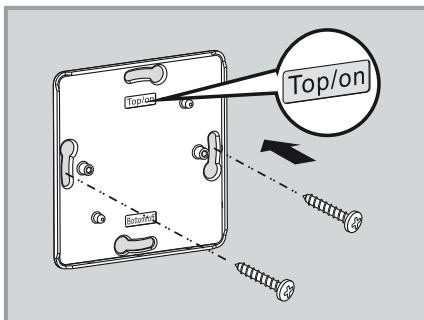


Fig. 6

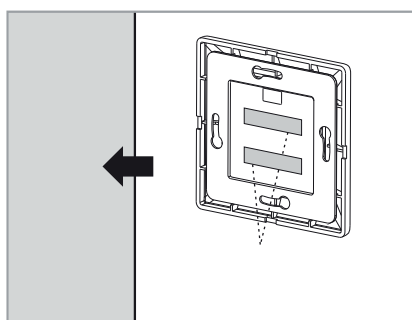


Fig. 7

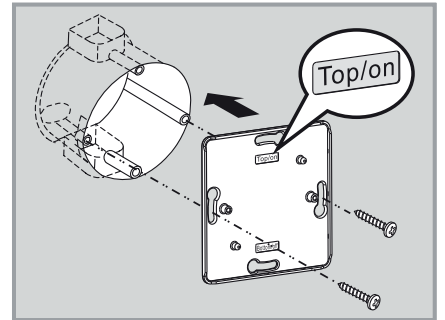


Fig. 8

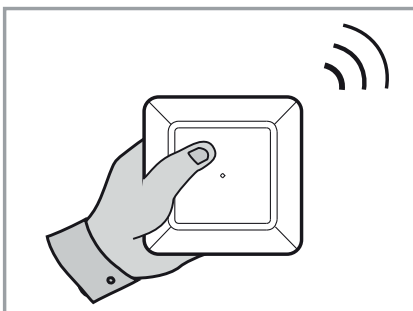


Fig. 9



2.2.3 Installation on wall using screws

- Mount the back plate on a wall using screws (see Fig. 10).
- Place the insert plate in the design frame. Screw the insert plate onto the back plate (see Fig.12).
- Press rocker switch onto the insert plate (see Fig.13).

2.2.4 Installation on junction box

- Mount the back plate on the box using screws (see Fig. 11).
- Place the insert plate in the design frame. Screw the insert plate onto the back plate (see Fig.12).
- Press rocker switch onto the insert plate (see Fig.13).

Fig. 10

Installation on wall

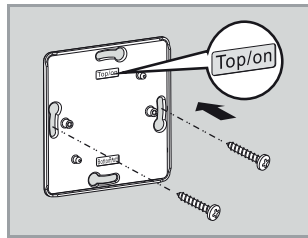


Fig. 11

Installation on junction box

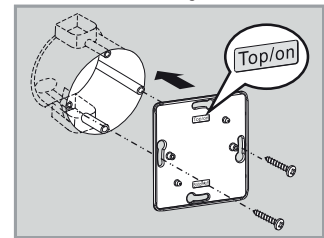


Fig. 12

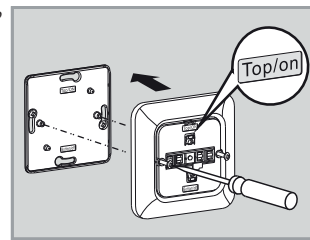
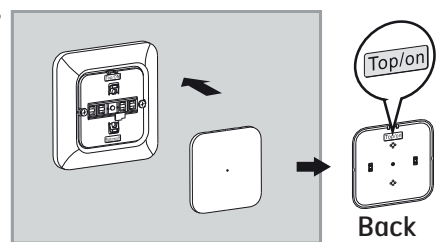


Fig. 13



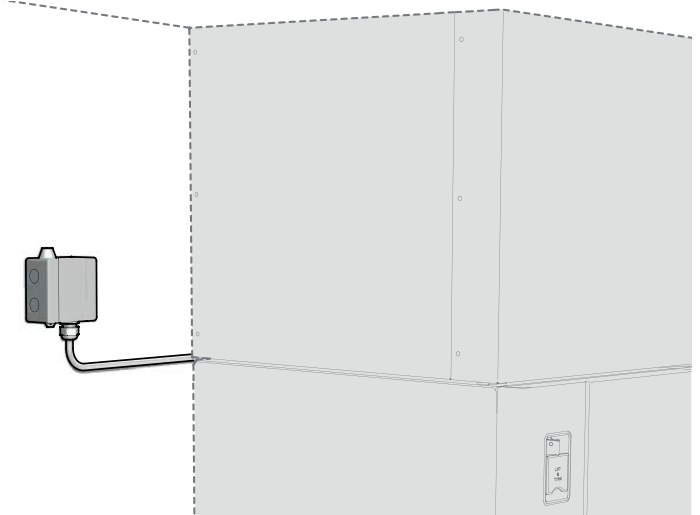
2.3 Installation WRR1

The receiver found inside the coupling box close to the ventilation unit (within approx. 0.5m), as the cable to connect between the units is 1m long. Ensure that the box is placed on the outside of ducting to the ventilation unit, as these can suppress reception (see Fig. 14).

The four wires on the receiver are numbered, and should be connected to the central unit according to the table below.

The forcing switch can be given two functions, depending on how the receiver is connected to the ventilation unit.

Fig. 14



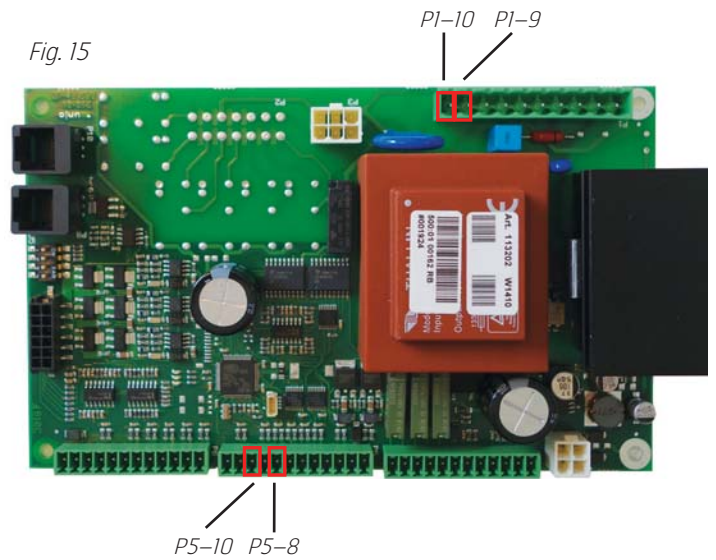
2.3.1 Enhanced ventilation (Forcing)

Used when enhanced ventilation is needed, e.g. if a shower is in operation. Capacity is increased on both supply and exhaust sides.

See the table below and figure 15 for connection.

Cable	Circuit board	Receiver	Description
	P1-10	N	N - 230V
	P1-9	L	L - 230V
Brown	P5-8	D2	Speed 3
White	P5-10	D1	G0

Fig. 15



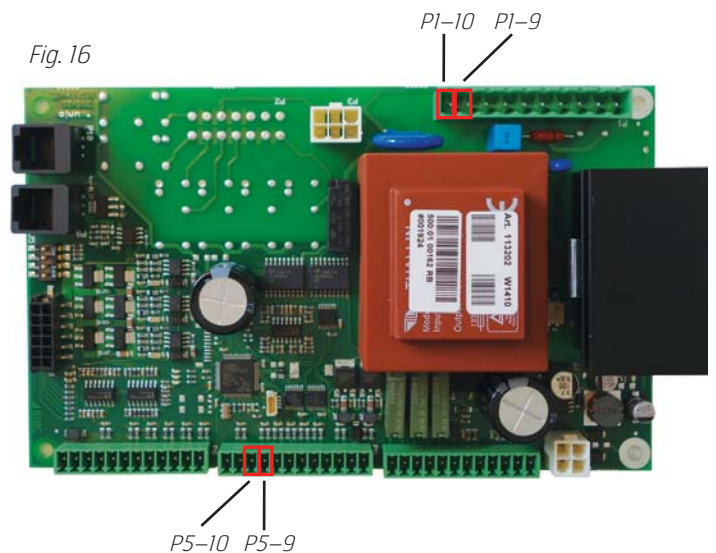
2.3.2 Enhanced supply flow

Used when enhanced supply flow is needed, e.g. when lighting a stove. Capacity is increased on the supply side and reduced on the exhaust side to compensate for the increased air requirement a stove causes when in use.

See the table below and figure 16 for connection.

Cable	Circuit board	Receiver	Description
	P1-10	N	N - 230V
	P1-9	L	L - 230V
Green	P5-9	D2	Speed 4
White	P5-10	D1	G0

Fig. 16



2.4 Programming

The receiver must go through a learning procedure to identify the transmitter's ID number, and thus establish a link. Each transmitter has been allocated an individual ID number by the factory. The receiver must learn the number to be able to execute the command sent by the transmitter.

Transmitter WT1 is used as an example (see Fig. 17).

- Check that cables are connected correctly.
- Place receiver and transmitter within 0.5 - 5m of each other to ensure effective programming.
- **Max. 20 ID numbers can be stored on WRR1.** If WRR1 reaches 20 stored ID numbers and a programming takes place, the first program learned and saved will be replaced.
- The learning procedure takes about 1 minute. Alternatively, it can be disrupted by a short (< 1 sec.) press on the learning button.

2.4.1 Learning procedure

Learning procedure step:

- Press the learning button for approx. 2 secs. Slow-flashing LED indicates learning setting (see Fig. 18).
- Press relevant button (upper or lower part) until the LED is permanently lit.
- When the LED lights continuously, the learning procedure is complete (see Fig. 19).

See 2.4.3 to disrupt the learning procedure.

⚠ If learning programming has to be repeated, existing links must be deleted. One or all links can be deleted.

Deleting a link

- Press the learning button for approx. 2 secs. to go to the learning setting.
- The LED will flash slowly to indicate learning setting (see Fig. 20)
- Press relevant button (upper or lower part) until the LED flashes quickly.
- LED will flash quickly to indicate deletion is complete (see Fig. 21).

2.4.2 Deleting all links

- Hold the learning button down for more than 5 secs.
- LED will flash slowly for about 3 secs
- The LED will then flash quickly, which indicates that all links are deleted (see Fig. 22).

See 2.4.3 to disrupt the learning procedure.

Fig. 17

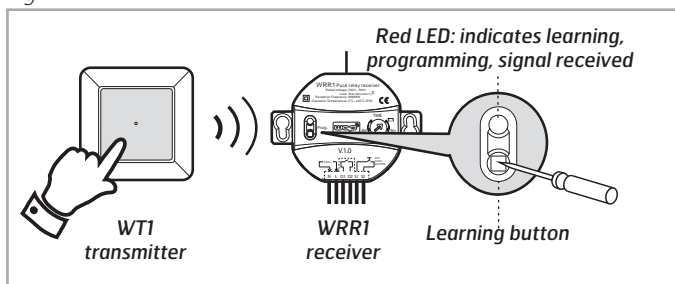


Fig. 18

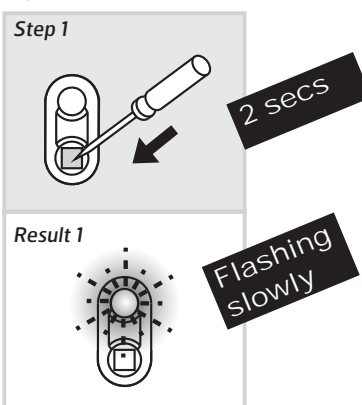


Fig. 19

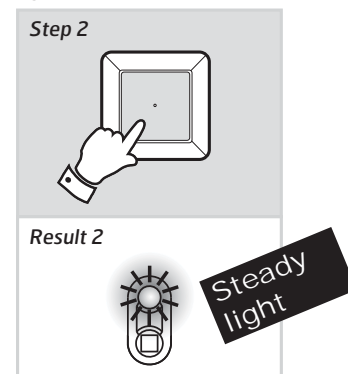


Fig. 20

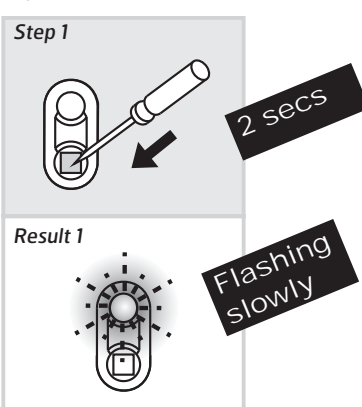


Fig. 21

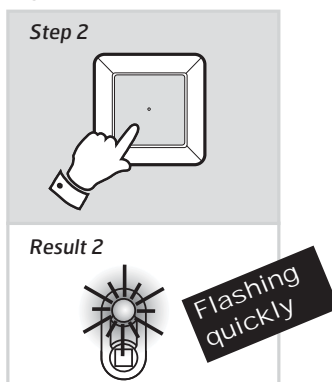
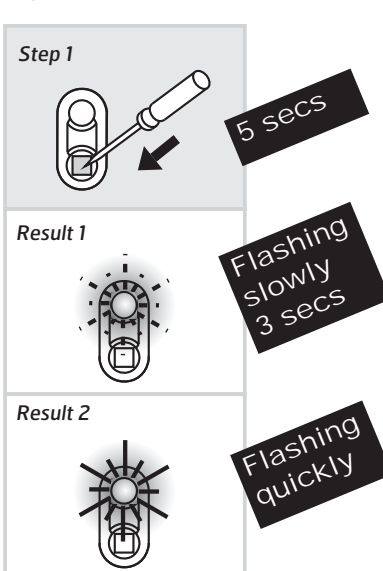


Fig. 22



(Programming cont'd.)

2.4.3 Disrupt learning setting

Automatic:

The learning setting will be disrupted automatically after

1 min. regardless of whether any programming has been done. LED goes out (see Fig. 23).

Manual:

The learning setting can be disrupted by a short press on the learning button (<1 sec.). LED goes out (see Fig. 24).

Fig. 23

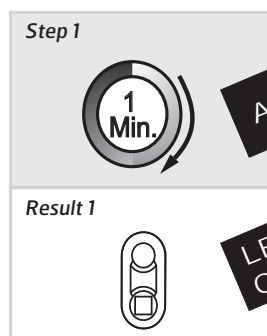
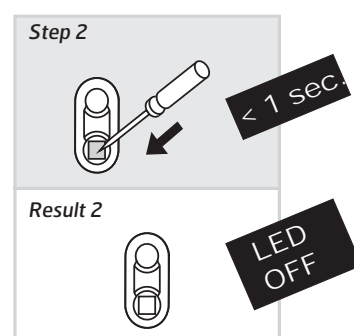


Fig. 24



3 Use

Follow item “3.4. PROGRAMMING” before use.


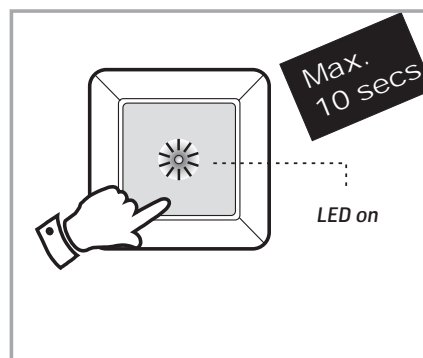
 Red LED in centre of rocker switch is on when WT1 transmits. If pressed for an extended period, the LED will light for max. 10 secs. (see Fig. 25).

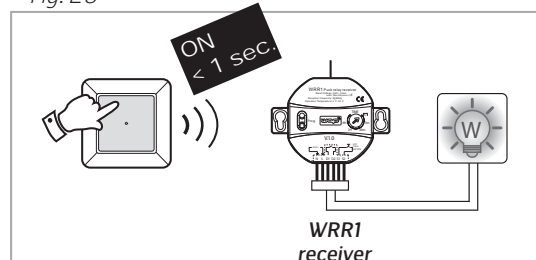
Fig. 25



ON function

Press the upper part of the rocker switch briefly (1 sec.) to activate the function selected on the ventilation unit (see Fig. 26).

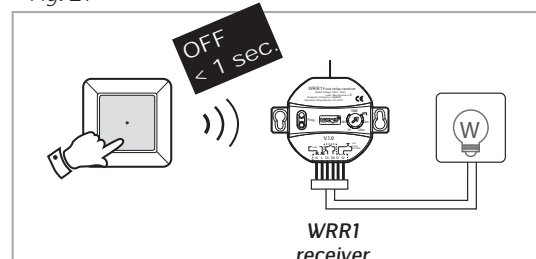
Fig. 26



OFF function

Press the lower part of the rocker switch briefly (1 sec.) to deactivate the function selected on the ventilation unit (see Fig. 27).

Fig. 27



4 Timer function

⚠ Current can be connected (TO) for the set time by pressing the upper part of the rocker switch. Pressing the lower part will switch OFF the current.

⚠ The TIME dial must always point to a discrete setting according to the marking. Do not set the timer between marked values.

WRR1 has 6 timer settings: 1S. / 3m / 30m / 1H / 4H / (see Fig. 28 and 29).

TIME is set to 1H by the factory.

The timer function is triggered by WRR1 receiving a TO signal from a linked transmitter.

TIME 3m

Current is connected for approx. 3 mins. when the receiver receives the ON signal from a linked transmitter. The current is then switched off.

TIME 30m

TIME Current is connected for approx. 30 mins. when the receiver receives the ON signal from a linked transmitter. The current is then switched off.

TIME 1H

TIME Current is connected for approx. 1 h. when the receiver receives the ON signal from a linked transmitter. The current is then switched off.

TIME 4H

TIME Current is connected for approx. 4 h. when the receiver receives the ON signal from a linked transmitter. The current is then switched off.

TIME (INFINITE)

TIME The current is connected when the receiver receives the ON signal from a linked transmitter, and is switched off again when it receives the OFF signal.

The current can be switched off manually using the rocker switch. timer time has expired.

Fig. 28

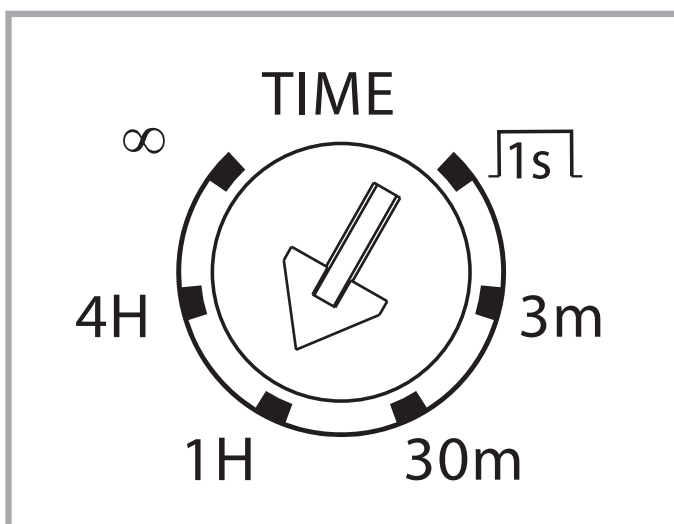
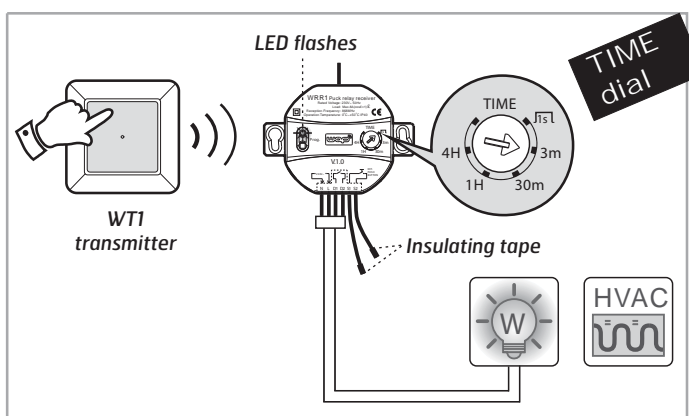



Fig. 29



5 Changing battery

 WT1 uses a 3V (CR2032) battery.

Power consumption will depend on the number of activations and ambient temperature. Fewer activations and lower temperature = lower consumption. Remove battery when charge is insufficient or WT1 is not to be used for an extended period.

- Lever the cover off the backing plate.
- Pull out the battery holder using a screwdriver (see Fig. 29).
- Replace battery (model CR2032, 3V). Check polarity is correct (see Fig. 30).
- Press battery holder back into place.

Fig. 29

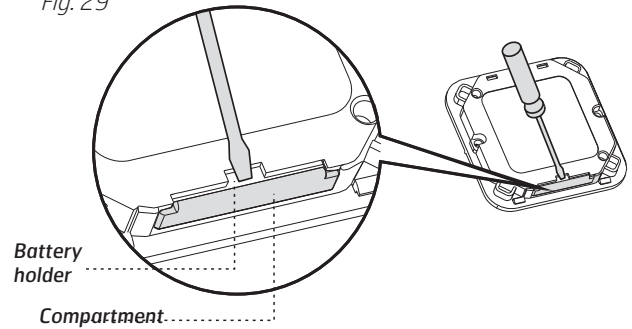
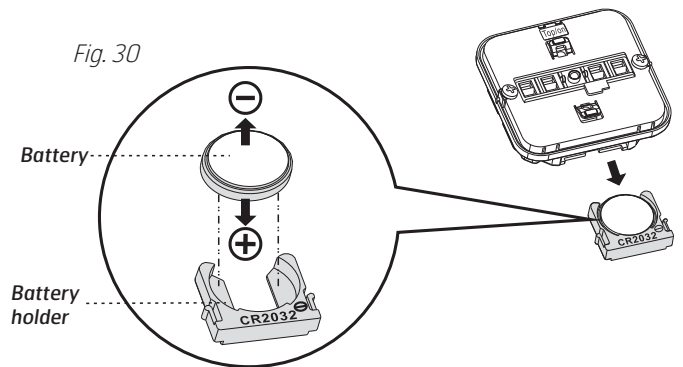


Fig. 30



6 Dimensions

6.1 WRR1

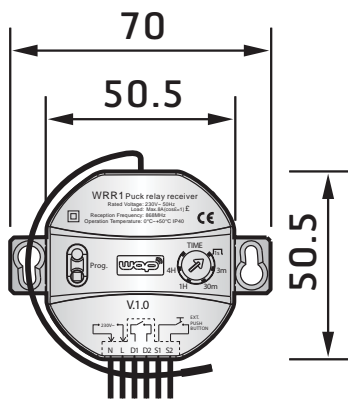


Fig. 31

6.2 WT1

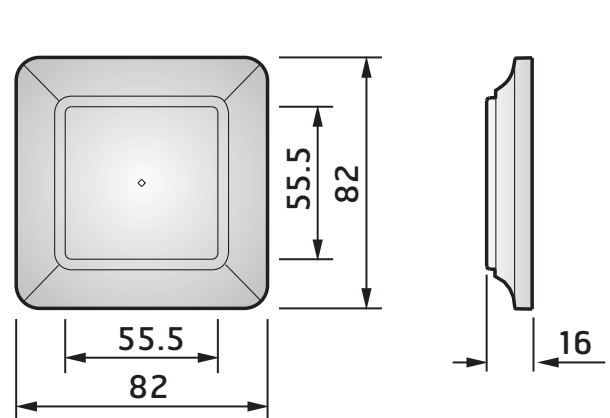


Fig. 32

7 Technical data

7.1 Transmitter

Rated voltage	DC 3V(CR 2032) Battery
Range	Approx. 30m (line of sight)
Radio frequency	868MHz
Programming	Learning procedure
Channels	1 channel
Compatible receivers	WRR1 (Relay puck) WDR1 (Dimmer puck)
Temperature range	0 C to +45 C
Encapsulation class	IP20
Indication	Red LED

7.2 Receiver

Rated voltage	230V AC, 50Hz
Current	Max. 8A(cos=1) For lighting type: Incandescent: max. 1500W 230V Halogen: max. 700W Low voltage halogen: max. 400VA Neon tubes (uncompensated): max. 400VA Compact tubes PL: max. 300VA HVAC: max. 250V AC or 30V DC Motor: max. 75W
Timer	1 sec./3 mins./30 mins./1h/4h/ INFINITE
Range	Approx. 30m (line of sight)
Radio frequency	868MHz
Storing programs	Max. 20.
Temperature range	0 C to +50 C
Encapsulation class	IP 40

8 Troubleshooting

Problem	Possible cause	Solution
Ventilation unit not activating	1230 V cable not connected or incorrectly connected. 2. Connection of live cable is incorrect or current is defective.	1. Check that receiver is connected to power supply and that the cables are correctly connected. 2. Check that live cables are correctly connected and there is current.
WRR1 does not react to linked transmitter	1. Press rocker switch on on linked transmitter briefly. 2. Range exceeded. 3. Learning process failed. 4. Learning has been deleted or replaced. 5. Major obstacle between transmitter and receiver. 6. Interference. 7. Transmitter battery flat.	1. Press rocker switch for 1- 2 secs. 2. Adjust distance between WRR1 and linked transmitter. 3. Repeat learning procedure. 4. Clear all programs learned and repeat learning procedure. 5. Remove obstacle or find a new location. 6.a. Remove object causing interference. b. Find another location. 7. Replace battery.
Short range.	1. Transmitter battery flat. 2. Major obstacle between transmitter and receiver. 3. Interference.	1. Replace battery. 2. Remove obstacle or find a new location. 3.a. Remove object causing interference. b. Find another location.
Timer function activates after unprogrammed time.	TIME dial between two values.	Adjust dial.



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