



Wireless Wire® Radio ventilation/exhaust-fan set

ZAS F consisting of:
FV2 SM Radio transmitter with magnet contact
FV2 E Radio receiver with relay output

Radio ventilation/exhaust-fan set for controlling exhaust air systems in conjunction with room air-dependent fireplaces
According to Ordinance on Firing Installations (German "FeuVO")

Special features

- ▶ Battery-operated transmitter and magnet easy to install (with double adhesive strip)
- ▶ Magnetic contact status of the transmitter can be sent wirelessly to one or more receivers
- ▶ Receiver with potential-free relay contact
- ▶ Several radio connections can be installed next to each other (devices addressable)
- ▶ Free field range > 30 m (no external antenna)
- ▶ Receiver fits in flush-mounted switch box



General information

The battery-operated FV2 SM transmitter can detect mechanical position states (windows, doors, etc.) via a magnet and transmit them as a radio signal to the associated FV2 E receiver. Any change to the transmitter's magnetic contact is immediately transmitted to the relay contact of one or more receivers. The devices can be addressed so that several radio connections of this type can also be operated next to each other. Radio protocols are only sent in the event of changes and for safety reasons in defined time intervals. By default, the transmitter and receiver are already assigned to each other. Addressing only needs to be changed if several transmitters are in the range of coverage.

Applications

Window monitoring in connection with fume hoods (§4 Firing Ordinance (Germany)), monitoring of doors, windows, gates, flaps, etc. (theft protection, alarm and status messages)

Operation

The FV2 SM transmitter with associated magnet is attached most simply with the double adhesive strips already attached. For problematic surfaces, fastening can also be done with screws.

The receiver FV2 E can, for example, be installed in a flush-mounted switch box. The switching logic is freely selectable due to its potential-free change-over contact. In addition, the switching logic can be inverted at input B1 (B1 to L), as the relay naturally drops out in the event of a power failure. The relay also de-energizes (break contact closes) if no radio signal is received for at least 270s.

Addressing is done by putting the receiver into learning mode and generating a new address at the transmitter, which is then sent to the receiver. Several receivers can also be assigned to a transmitter (point-to-multipoint connection).

Initial operation:

We recommend not to install the FV2 SM transmitter for range tests for the time being. The FV2 E receiver must be powered (at least L and N already connected).

Open the transmitter housing (slightly lever back one of the two hooks with a slotted screwdriver) and insert the battery with the correct polarity (+ pole up).

By default, the transmitter and receiver are already assigned to each other. Addressing only needs to be changed if several transmitters are in the range of coverage.

In the transmitter, the button next to the battery holder is used together with an LED to generate a new address and to transmit this address to a receiver.

When addressing, a distinction must be made between assigning only one receiver to a sender or several receivers. The learning mode is switched on or off at the receiver with the "Prog." button (can be activated through a small opening in the housing). The LED to the left of the programming button lights red when learning mode is activated. This LED also indicates whether radio reception is OK. If a valid radio signal is received, it flashes green. When the taught-in radio signal is received, it flashes red.

Addressing:

Assign the first receiver (with creation of a new sender address):

- Press the programming button on the receiver briefly = turn receiver into learning mode → LED lights up
- Briefly press the "Prog." button on the transmitter = turn transmitter into learning mode → LED lights up
- press the "Prog." button on the transmitter for 5 to 10s (LED goes out after 1s and begins to flicker after 5s) = create a new sender address and send it to the receiver → LED on receiver goes out

Assigning additional receivers:

(Sender address may no longer be changed)

- Briefly press the "Prog." button on the receiver = turn receiver into learning mode → LED lights up
- Briefly press the "Prog." button on the transmitter = turn

transmitter into learning mode → LED lights up
- press the "Prog." button on the transmitter until the LED goes out (1 to 2s) = transmit existing sender address to receiver → LED on receiver goes out

Reset to factory settings (FV2 SM):

Press the "Prog." button for more than 10s.

Reset to factory settings (FV2 E):

Press the "Prog." button for 10s until the red LED flashes 5 times.

The receiver then reacts to transmitters in the factory setting.

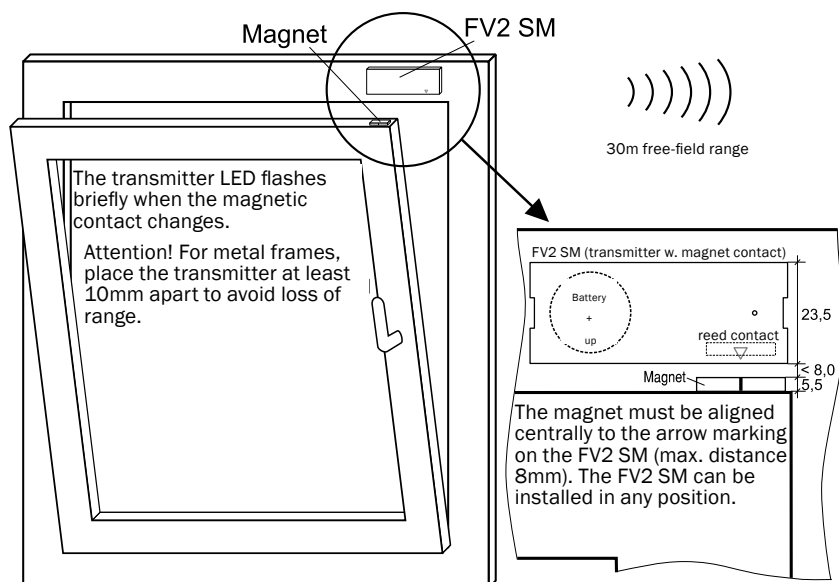
Range notes:

The range of the radio signal in free field is at least 30 m. However, the signal is sometimes strongly dampened by obstacles (walls, concrete ceilings, metal surfaces, damp bushes, etc.). It is therefore advisable to test the range before mechanically fixing the devices. The alignment of the devices to each other also has a significant effect on the range, since the antenna is integrated in the device in each case and is thus also aligned. An installation close to ground is also unfavourable (we recommend at least 1 m above ground). Sometimes interference from electrical devices can reduce the range (switching power supplies, DC motors). Further information can be found on our data sheet "Practical tips for the radio control system".

Installation

Mounting the FV2 SM transmitter:

Mounting directly on metal window frames is unfavourable, because of loss of range!



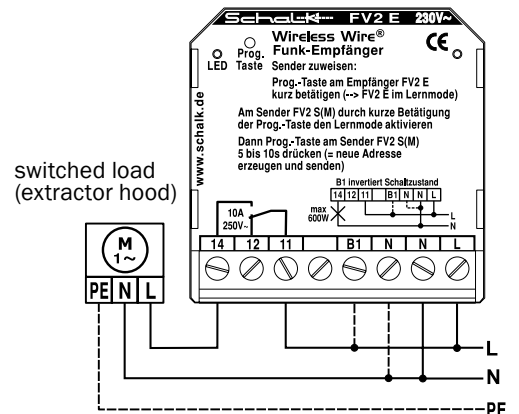
Caution

When used as supply air monitoring it must be ensured that sufficient fresh air can always flow in through the opened window! If the monitored window has a roller shutter, it must be ensured that even if the shutter is closed, fresh air can still flow in! For electrically operated systems, e.g. the limit switch can be adjusted accordingly. For manually actuated roller shutters, a mechanical limit stop must be installed.

Connecting the FV2 E receiver:

Mounting inside closed metal housings usually leads to a total loss of function due to loss of range!

The receiver LED flashes green shortly after receiving a radio signal (but lights red in learning mode, the learning mode is switched on and off using the programming button).

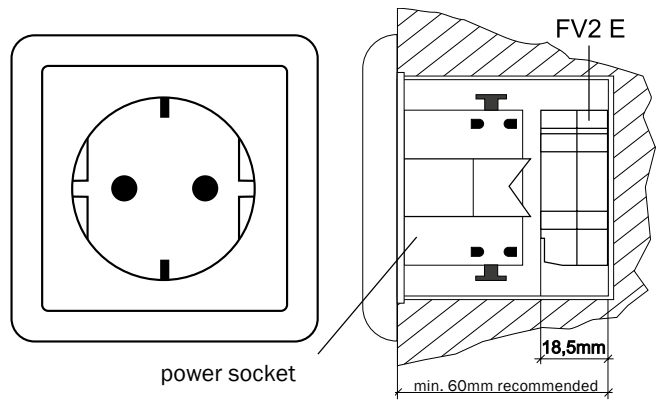


Radio connection system

Example of use: switched socket for extractor fan

The FV2 E can be installed behind a socket to be switched.

Avoid shielding by metallic surfaces!



Technical data

Radio frequency	433.92 MHz
Modulation	OOK PWM
Range	> 30 m in free field
Ambient temp.	-10°C to +45°C
Mounting orientation	If necessary, align the receiver with the transmitter (for better range)

Transmitter FV2 SM:

Battery type	Lithium CR2032
Battery life	typically 2 to 3 years (depending on switching frequency)
External dimensions	59,5 x 23,3 x 15,3 mm ³
Weight	15 g
External dimensions (magnet)	22,2 x 11,2 x 5,5 mm ³
Weight (magnet)	3 g
RAL colour	white / green 6029

Receiver FV2 E:

Operating voltage:	230 V AC 50/60 Hz
Power consumption:	0.6 W
Relay contact	1 change-over contact 10 A / 250 V AC potential-free (8 mm KLS)
Switch rating	see "Relay contacts" data sheet
Connection terminals	Socket terminals with captive screws M3
Clamping range	0.5 mm ² - 2.5 mm ²
Strip length	6.5 mm - 7.0 mm
Screwing torque	0.50 Nm
External dimensions	43 x 43 x 18,5 mm ³
Weight	33 g
RAL colour	grey 7035 / green 6029

Order data

Item no.	EAN	Type	Designation
FV2SMB	4 046929 101172	FV2 SM	FV2 SM Transmitter with magnetic contact
MIG100	4 046929 901109	MIG 1	Replacement magnet in housing, self-adhesive for MKW 1/FV2 SM
FV2E09	4 046929 101189	FV2 E	FV2 receiver 230 V AC, 1 relay
ZASF09	4 046929 101196	ZAS F	Radio ventilation/exhaust-fan set (consisting of FV2 SM and FV2 E)

Accessories

Item no.	EAN	Type	Designation
HC3500	4 046929 901048	HC 35	DIN rail clip for flush-mounted housings