# Radio-controlled switch FE3 SE

1 relay, low height
Simple radio receiver with one relay. Push-button or switch mode and group control possible.
Connection option for wired local push-button.

Special features

‣ Operating modes: Switching or push-button mode
‣ Individual and group control possible
   (Toggle, On, Off functions can be taught-in)
‣ Free field range 50 m
‣ Antenna integrated in the housing
‣ Repeater available to increase range
‣ small housing for flush-mounted switch box (H = 18.5 mm)
‣ potential-free change-over contact 10 A 250 V AC
‣ Input for wired push-button
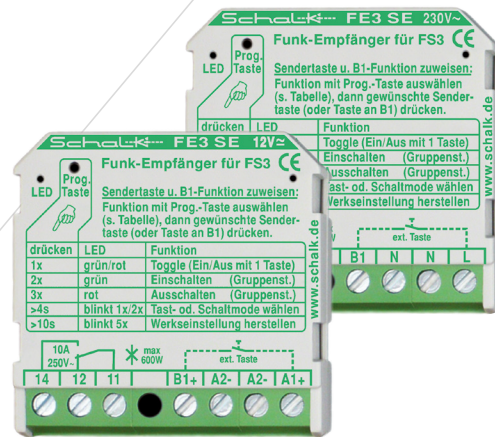
General information

The FE3 SE radio receiver switch has a potential-free change-over contact which can be switched wirelessly via the Schalk handheld transmitters or flush-mounted transmitters of the FS3 series. The 3 functions (toggle, on, off) can be assigned to any transmitter button. The "Toggle" function (alternately on-off) is used for individual control. The "On" and "Off" functions can also be used to switch several receivers together. The function for input B1 is also freely selectable. The relay can also be operated in switching or push-button mode. In push-button mode, door openers or push-button dimmers can then also be controlled, for example.

Applications

Wireless switch: Lamps, fans, horns, push-button dimmers, door openers, etc.

Operation

Assign transmitter buttons:
Select one of the functions toggle, on or off by briefly pressing the "Prog." button.
The selected function is indicated by the LED:
Toggle   = LED lights alternately green-red
Ein (On) = LED lights up green
Aus (Off) = LED lights red
Then press the desired button on the transmitter. When the LED goes out, the transmitter button has been accepted for this function.

Assign function for B1 input:
Select one of the functions toggle, on or off by briefly pressing the "Prog." button. Then press the button connected to B1.

Select the operating mode "push-button" or "switching":
Press the "Prog." button for more than 5s. The LED then flashes once (= push-button mode) or twice (= switching mode).

Restore factory settings:
Press the "Prog." button for more than 10s. The LED then flashes red five times. Now the FE3 SE can be switched via button 1 of the transmitter if all address switches are set to "-". The B1 input is set to toggle.

To additionally **delete all taught-in radio transmitters and functions** (including the standard addresses and B1 functionality), hold the programming button pressed for 20s until the LED flashes red 10 times. As a result, the receiver no longer reacts to radio transmitter/wired push-button as long as they are not explicitly taught-in again.

LED status (red or green)
Indicates the selected function in programming mode (see above).

Indication of radio reception:
‣ flickers red = reception of unknown Schalk-protocols
‣ flickering green = reception of taught-in Schalk-protocols

Programming instructions

‣ Select function (if necessary, press the "Prog." key several times briefly)
→ selected function is indicated by LED
‣ Press the button on the transmitter.
→LED goes out (transmitter code is automatically accepted)

B1 input (for connecting a wired push-button):

One of the functions Toggle, On or Off can be assigned to input B1. To do this, select the desired function with the "Prog." button and then briefly press the button connected to B1. A continuous signal at input B1 blocks radio reception. Thus, for example, the relay contact can be disabled or permanently switched on at certain times via a time switch.

Optimize range:

The free field range with the above transmitters is at least 50 m. However, the range may be reduced considerably by walls, concrete ceilings, metal surfaces, damp soil, etc. Insufficient range can also have the following causes:

‣ Alignment of transmitter and receiver to each other unfavourable
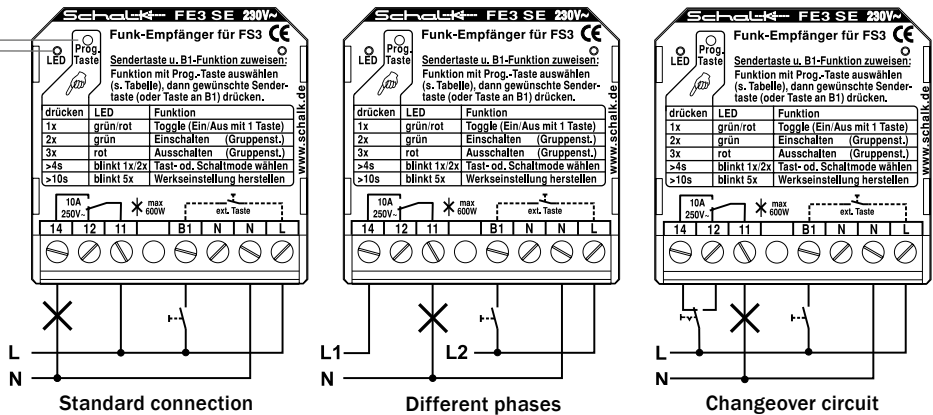‣ Transmitter and receiver mounted too close to the ground (min. 1 m above ground is recommended)

‣ Devices mounted on metal surfaces (radio signal is heavily attenuated)
‣ Radio or mains interference from other electrical devices reduce receiver sensitivity

Programming example

Assign button 3 of a remote control to the toggle function
(toggle = switch on/off with the same button)

1. Briefly press the "Prog." button on the receiver (FE3 SE).
→ LED flashes alternately red/green
2. Press button 3 on the remote control
→ The LED on the receiver goes out.

If the relay only is energised as long as the button on the transmitter is pressed, the receiver must still be switched from push-button to switching mode as follows:

‣ Press "Prog." button on receiver (FE3 SE) longer than 4s
→ LED flashes 2 times green = switching mode

Further information see also data sheet "Practical tips for the Schalk radio control system".
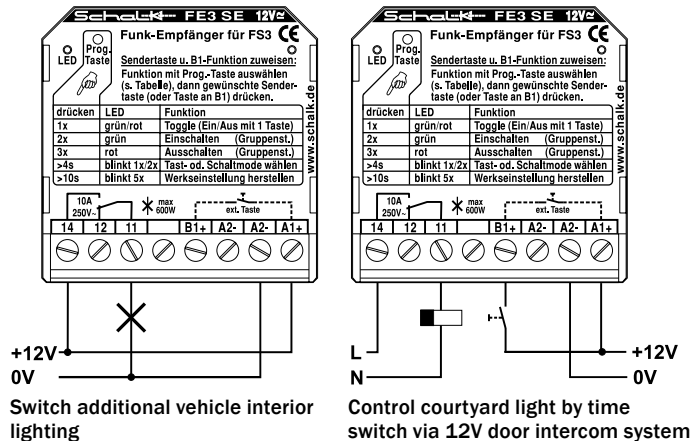
Connection examples

230 V AC variant

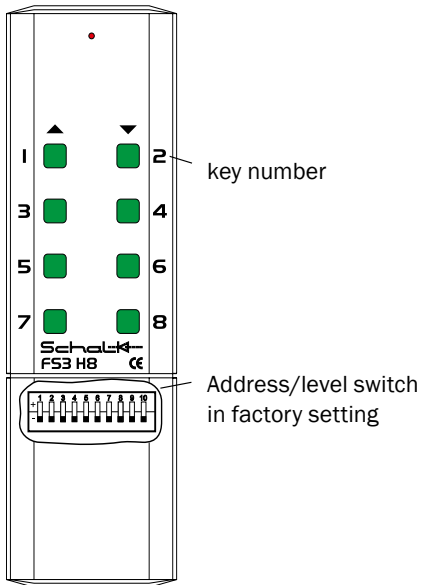"Prog." button for programming functions

LED status (red or green)

Standard connection

Different phases

Changeover circuit

12V UC variant

Switch additional vehicle interior lighting

Control courtyard light by time switch via 12V door intercom system

Example: FS3 H8

key number

Address/level switch
in factory setting

FS3 H8

Example: FS3 HS 1/2/4

1
(5)

1
(5)

2
(6)

1
(5)

3
(7)

4
(8)

2
(6)
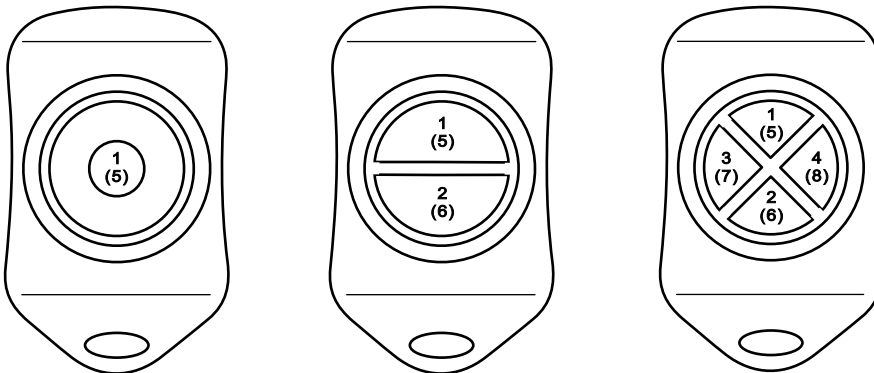
Technical data

Receiving frequency	433.92MHz
Modulation type	OOK PWM
Functionalities	Toggle, On, Off teachable
Operating voltage:	230 V AC 50/60Hz
Power consumption:	0.5W

Input B1:

Line capacitance (L-B1)	max. 4nF
Glow lamps (L-B1)	max. 1 pc. (1 mA)
Relay contact	1 change-over contact 10A 250V AC, potential-free, KLS 8mm
Switch rating	see "Relay contacts" data sheet
Ambient temp.	-10°C to +45°C
Connection terminals	Socket terminals with captive screws M3
Clamping range	0.5 mm² - 2.5 mm²
Strip length	6.5 mm - 7.0 mm
Screwing torque	0.50 Nm
Mounting orientation	If necessary, alignment to the transmitter
External dimensions	43 x 43 x 18,5mm³
Weight	34g
RAL colour	grey 7035 / green 6029

Order data

Item no.	EAN	Type	Designation
FE3SE9	4 046929 101226	FE3 SE (230V AC)	Radio-controlled switch, 1-channel 230V AC (FMD)
FE3SE2	4 046929 101295	FE3 SE (12V UC)	Radio-controlled switch, 1-channel 12V UC (FMD)
MFS209	4 046929 101424	MFS 2	Mini radio set, consisting of FE3 SE (230V) and FS3 HS 2

Accessories

Item no.	EAN	Type	Designation
HC3500	4 046929 901048	HC 35	Top-hat rail clip

Compatible devices: Radio receiver/transmitter of the FE3 / FD3 / FS3 series, radio repeater FV2 R