

### GENERAL:

The FV1 radio remote control connector system is optimised for the wireless transmission of switch states. Every change at the inputs of the FV1 SQ transmitter is immediately forwarded by wireless transmission to the relay contact of one or more FV1 ES receivers.

To enable several wireless connections of this type to be operated side by side, the devices are individually addressable. Remote control protocols are only transmitted in response to changes at the inputs and at defined intervals (increased transmission reliability).

Particular priority has been given to the ease of use of the devices.

### APPLICATION:

Expansion of existing electrical installations, e.g. switching additional lamps with an existing lamp, transmitting the contact of a motion sensor to several lamps, transmitting the status of a heater thermostat to a control valve and forwarding status and fault signals (door open, heating off etc.) by wireless transmission.

### OPERATION:

Transmitters and receivers are factory-set to a default address and respond to one another immediately after connection. Individual addressing of specific devices is only necessary in order to prevent faulty switching when additional FV systems are installed (at a later time) in the same transmission range.

A new address is generated at the transmitter by holding down the Prog. button for 2-8s (Adr LED flashes).

The new address is taught in at the receiver by activating teach-in mode, i.e. by briefly pressing the Prog. button (Lrn LED lights up). The new address is then automatically loaded with the next transmission protocol.

The relay is switched off if no valid protocol is received by the receiver for more than 150s.

## Radio remote control connector system FV1

**FV1 SQ** Transmitter with 4 inputs  
**FV1 ES** Receiver with 1 relay output

### SPECIAL FEATURES:

- Easy to use as substitute line (input status at transmitter is transmitted to the relay contact at the receiver)
- Point-to-multipoint connection also possible (one transmitter controls several receivers)
- Several wireless connections can be installed close to one another (individual addressing)
- Free-field range 50m (no external antenna)
- Repeater available for increasing the range
- Fits in flush-mounted switch box

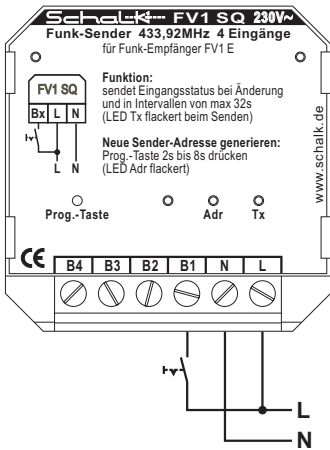
### TECHNICAL DATA:

Radio frequency:	433.92MHz
Modulation type:	OOK PWM
Range:	50m in free field
Operating voltage	230V~ 50/60Hz
Power consumption	0.7W
Interference immunity	IEC 0801-4 level 4
Equipment protection	IEC 0801-5 level 3
Creepage/clearances	VDE 0110 Gr. C/250V
Ambient temperature	-10°C to +45°C
Insulated housing	Flameproof to VDE 0304 Part 3, level FV 0
Connections	Socket terminals with captive screws M3
External dimensions	43x43x18.5mm <sup>3</sup>
Weight	30g
Colour (RAL)	Grey 7035 / green 6029
Transmitter FV1 SQ:	
Inputs B1-B4:	
Line capacitance	max. 10nF
Glow lamps	max. 3mA
Receiver FV1 ES:	
Relay contact:	1 no contact 6A / 250V~
Switching capacity	See data sheet "Relay contacts"

### ORDERING INFORMATION:

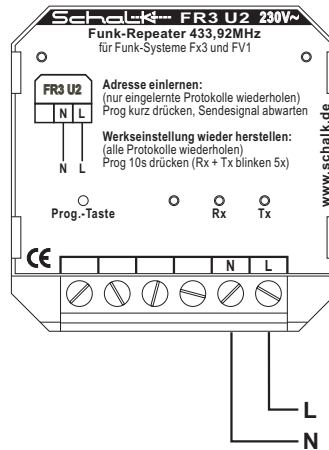
Part No.	Type	Description
Fv1sq9	FV1 SQ	FV1 transmitter, 4 inputs 230V~
Fv1es9	FV1 ES	FV1 receiver, 1 relay 230V~
<b>Accessories</b>		
fr3u29	FR3 U2	Radio remote control repeater, (for Fx3 and FV1 system)
hc3500	HC 35	Top hat rail clip for flush-mount housing

## Electrical connection:

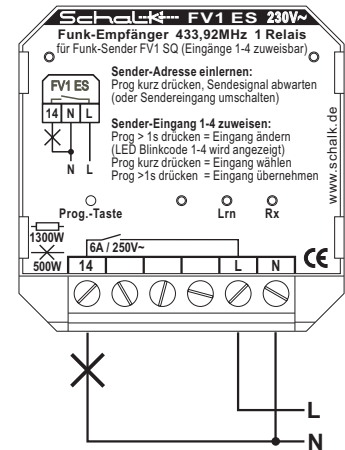


50m  
free-field  
range

### FR3 U2 repeater as option (increase range)



50m  
free-field  
range



## Commissioning:

First, connect the transmitter and receiver to the power supply. The Rx LED on the receiver should then flash briefly when a switch state is changed on the transmitter (receiver present). If the receiver and transmitter are still set to their factory settings, the receiver relay already responds to the switch at the B1 input of the transmitter.

### Assigning the transmitter input to the receiver:

Since the FV1 SQ transmitter has 4 inputs, the relay output of the FV1 ES can be allocated to one of these inputs. This setting is carried out exclusively on the receiver. No settings are required on the transmitter.

#### Procedure:

1. Hold down the "Prog" button on the FV1 ES for longer than 1s. An LED flashing code indicates the currently selected input. The Lrn LED lights up and remains constantly lit, and the Rx LED flashes periodically 1-4 times in succession, depending on the selected input.
2. Press and release the Prog. button repeatedly until the flashing code on the Rx LED indicates the desired input.
3. Hold down the Prog. button for longer than 1s to load the setting (the LEDs go out).

### Individual addressing of transmitter and receiver:

To prevent faulty switching when additional radio remote control connections are installed (at a later date) within the transmission range, a new address should always be issued.

#### Procedure:

1. Create a new address on the transmitter (hold down the Prog. button for 2-8s => Adr LED flashes while a new address is being generated).
2. Teach the new address into the receiver (briefly press and release Prog. button => Lrn LED lights up and goes out when the address has been validly received).

### Receiver addressing by radio protocol:

(only after replacing a transmitter if the receiver is inaccessible)

After the supply voltage is applied, the receiver reserves 15s for accepting a special addressing command.

If the Prog. button is held down for 10s when applying the supply voltage, the transmitter sends the addressing command.

In this case, addressing can be implemented as follows:

1. Generate an individual address on the new transmitter (hold down Prog. button for 2-8s).
2. Disconnect the transmitter and all associated receivers from the supply voltage.
3. Press and hold down the recessed Prog. button on the transmitter.
4. Switch on the supply voltage for all devices simultaneously and hold down the Prog. button for a further 10s (Adr and Tx LEDs light up alternately for 10s, Tx LED flashes briefly, Adr and Tx LEDs flash simultaneously 3 times).

All receivers allocated to the transmitter should then respond to this wireless protocol.

However, we recommend extreme caution when using this method, because all receivers within this range will accept this addressing command after the power supply is switched on (even receivers allocated to another transmitter).

#### EC Declaration of Conformity

We hereby declare that this device conforms to the basic requirements and other relevant provisions of Directive 1999/5/EC see also [www.schalk.de](http://www.schalk.de)