



Technical Manual

PFREW-RXSRV-069/SMARTMOVE

Rev .27/01/2024

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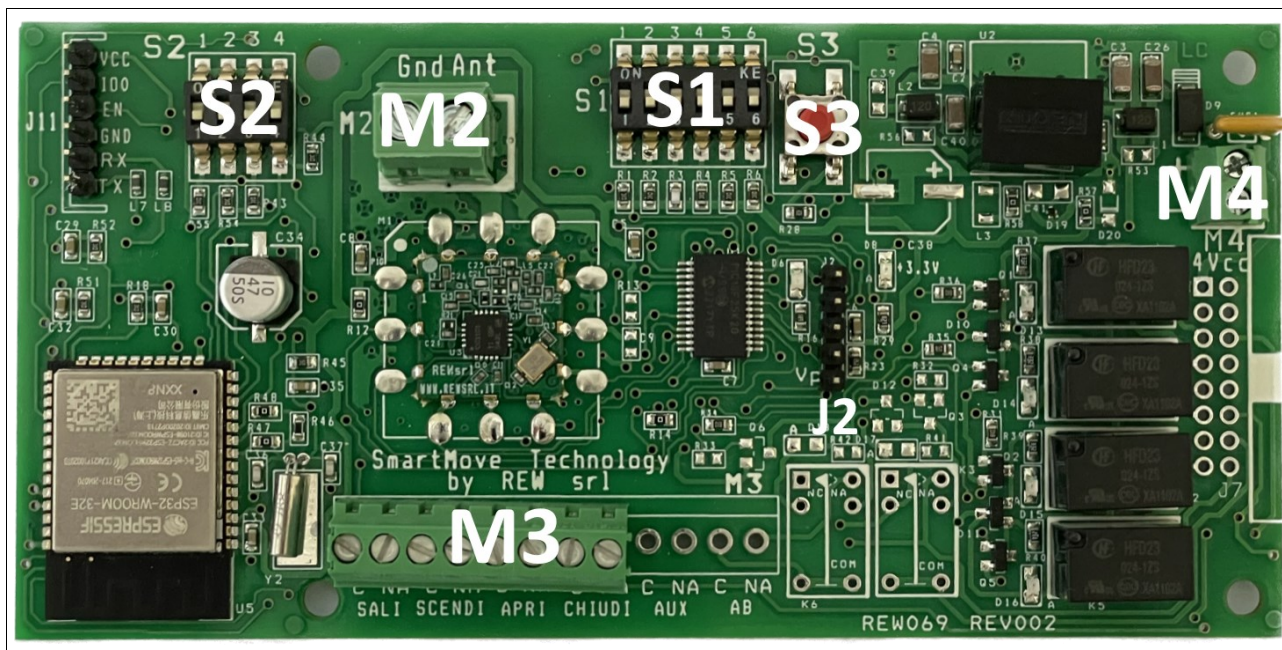


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PFREW-RXSRV-069 Receiver



PFREW-RXSRV-069 receiver it is a device with two separate sections:

- Radio 433 Mhz Section
- Bluetooth Section

The 433 Mhz radio section is able to work with all the transmitters of the REW-SRV System.

The Bluetooth section works via APP on Smartphone with Android or IOS operating system.

Connections

Terminal Block M4 (24Vcc)

Signal	Description
+	Power Supply + 24VDC
-	Power Supply GROUND VDC

Terminal block M2 (Antenna 433 Mhz)

Signal	Description
Ant	Antenna + 433 Mhz
Gnd	Antenna - 433 Mhz

N.B.: The antenna of the receiving device consists of a rigid unipolar wire.

For optimal operation of the receiver, the antenna must be orthogonal to the ground.



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Terminal Block M3 (OUT)

Segnale		Significato del segnale
UP	C	UP - COMMON command output
	NA	UP command output - NO
DOWN	C	DOWN - COMMON command output
	NA	DOWN command output - NO
OPEN	C	PLATFORM OPENING command output - COMMON
	NA	PLATFORM OPENING command output - NO
CLOSE	C	PLATFORM CLOSE command output - COMMON
	NA	PLATFORM CLOSE command output - NO
AUX	C	RESERVE command output - COMMON
	NA	RESERVE command output - NO
AB	C	RESERVE command output - COMMON
	NA	RESERVE command output NO

Relay Max Current: 1 Amper - 24 Vdc

TECHNICAL FEATURES:

- Power supply: 24 Vdc + - 10%
- Max power supply voltage: 28Vdc
- Absorption: about 200 Ma
- Number of 433 Mhz band channels: 16 (from 433.150 Mhz to 434.650 Mhz)
- 433 Mhz band channeling: 100 Khz
- 433 Mhz section deviation: + - 25 Khz
- Type Modulation section 433 Mhz: GFSK
- Maximum transmission power 433 Mhz section: 0 dbm
- 433 Mhz section sensitivity: about -110 dbm
- Bluetooth Section: V4.2 BR/EDR and LE
- Bluetooth section power: 0 dbm (typical)
- Bluetooth section power range: -12 dbm to + 9 dbm
- Bluetooth section sensitivity: -89 dBm



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433 Mhz Section

Dip Switch S1 Configuration

Reception Channel

The 433 Mhz section can be configured via dip switch S1.

Like the transmitter, the radio channel used can be selected on the receiver.

The receiver comes from the factory with channel 1 selected.

The dip switches from 1 to 4 allow you to select the reception FREQUENCY up to a maximum of 16 channels (from 433.150 Mhz to 434.650 Mhz), according to the indications in the following table:

S1-1	S1-2	S1-3	S1-4	Reception Frequency
OFF	OFF	OFF	OFF	1 (433,150 Mhz)
ON	OFF	OFF	OFF	2 (433,250 MHz)
OFF	ON	OFF	OFF	3 (433,350 Mhz)
ON	ON	OFF	OFF	4 (433,450 Mhz)
OFF	OFF	ON	OFF	5 (433,550 Mhz)
ON	OFF	ON	OFF	6 (433,650 Mhz)
OFF	ON	ON	OFF	7 (433,750 Mhz)
ON	ON	ON	OFF	8 (433,850 Mhz)
OFF	OFF	OFF	ON	9 (433,950 Mhz)
ON	OFF	OFF	ON	10 (434,050 Mhz)
OFF	ON	OFF	ON	11 (434,150 Mhz)
ON	ON	OFF	ON	12 (434,250 Mhz)
ON	OFF	ON	ON	13 (434,350 Mhz)
ON	OFF	ON	ON	14 (434,450 Mhz)
OFF	ON	ON	ON	15 (434,550 Mhz)
ON	ON	ON	ON	16 (434,650 Mhz)

N.B.: Make sure to set all the transmitters and the receiver relating to the same installation to the same radio channel.

Command Reverse UP/DOWN

In the receiving device, the UP and DOWN outputs can be inverted using the dip switch 5. This function is useful for managing the difference between RIGHT and LEFT systems while maintaining the same wiring for both types of systems.

When **S1-5 is OFF**, the UP output is activated in correspondence with the UP command of the transmitter and the DOWN output is activated in correspondence with the DOWN command of the transmitter.

When **S1-5 is ON** the UP output is activated in correspondence with the DOWN command of the transmitter and the DOWN output is activated in correspondence with the UP command of the transmitter.

Command Self – Holding time Setting

When the receiver "loses" a radio command at 433 Mhz, the command that had been received up to that moment is maintained for a SELF-HOLD time which can be configured via dip switch S1-6, according to the following table:

S1-6	Self – Holding time (seconds)
OFF	1,5 (sec)
ON	3 (sec)



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During operation, the transmitter provides for the stop command upon the release of one of the commands (UP, DOWN, OPEN, CLOSE). This allows the relays to de-energize immediately.

The self-holding time intervenes only and exclusively if the radio signal is momentarily lost for a few instants.

Operation:

The receiver is equipped with 6 NO relay outputs, described in the wiring table.

- The UP relay is closed when the receiver receives an UP or DOWN radio command based on the configuration of dip switch S1-5.
- The DOWN relay is closed when the receiver receives a DOWN or UP radio command according to the configuration of dip switch S1-5.
- The OPEN relay is closed when the receiver receives a PLATFORM OPEN radio command.
- The CLOSE relay is closed when the receiver receives a CLOSE PLATFORM radio command.
- The AUX and AB relays are NOT active but can be used for specific functions upon request.

The Bluetooth section active the same relays in the same way.

The board is equipped with some LEDs:

- **RED LED (D8):** When it is on, it indicates that the board is powered
- **GREEN LED:** It blinks when the board is receiving a 433 Mhz radio command
- **RED LEDS (UP, DOWN, OPEN, CLOSE, AUX and AB):** They light up when the relative relay is active.



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Transmitter learning

The latest revision of the 81.40 standard provides that each remote control must be able to operate only the stairlift device on which it is intended for use. In particular paragraph 5.5.13.1:

“The cabless control system shall be designed to work with a single stairlift. It shall be designed such that the stairlift shall not initiate movement to coded signal from another stairlift or other emitting sources”

In compliance with the above, each remote control leaves the factory with a unique number memorized inside. This number must be associated with the radio receiver. This association guarantees that only the remote controls associated with the receiver will be able to move the stairlift.

There are two methods for associating a remote control with the receiver.

METHOD 1

This method provides for memorizing the remote control without acting on the receiver. It is indicated in cases of remote control replacement or the addition of a new remote control.

Procedure:

- Open the remote control and put ON dip 5 of S1.
- Press one of the command for 4 seconds.
- Put OFF dip 5 of S1.
- Power down the receiver and power up the receiver again. Receiver is ready for use.

METHOD 2

This method acts directly on the radio receiver, therefore the latter must be reachable by the installer.

Procedure:

- With the receiver powered, press the S3 button once and check that the green LED lights up
- Activate a command on the transmitter and check that the green LED is flashing. **Keep the control pressed until the green LED lights up steadily**
- It is possible to learn another transmitter by pressing a command again on another transmitter by carrying out the procedure described above
- To exit the procedure, press the S3 button again

DELETING of the transmitters from the receiver

This procedure deletes all the remote controls memorized on the receiver.

Procedure:

- With the receiver powered, press and hold the S3 button for approximately 5 seconds
- Check that the green LED is flashing
- Receiver has deleted all the remote controls.



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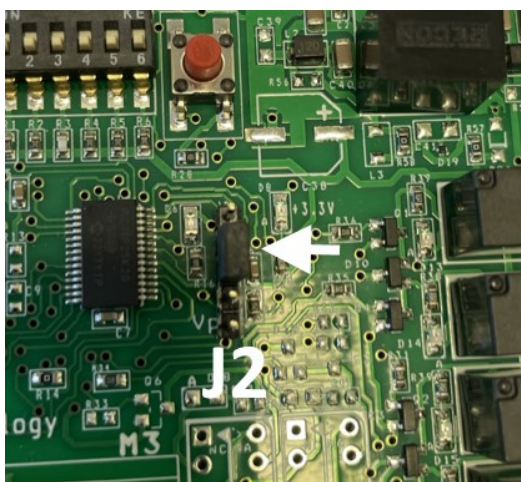
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NEAR/FAR Operating with radio 433 Mhz command

The PLATFORM OPENING and CLOSING commands are transmitted with a reduced range compared to the other commands to prevent the user from moving the platform without seeing it. This range has a factory setting but can be changed by the installer as described below.

- **MAXIMUM distance.** If you want the PLATFORM OPEN and CLOSE commands to be transmitted with the same range as the other commands (MAXIMUM range) just insert a jumper on the J2 connector, as shown in the photo below.



- **REGULATED range.** If you want to set the range of the PLATFORM OPEN and CLOSE commands, it is necessary to follow the procedure below:

- 1 – Remove power from the receiver board. Insert jumper J2
- 2 – Power up the receiver board again, pressing the S3 button on the receiver board, until the GREEN LED lights up.
- 3 – Release S3 and position yourself with a 433 Mhz transmitter at the distance beyond which you do not want the PLATFORM OPEN and CLOSE commands to work.
- 4 – Send any command via the transmitter until the GREEN LED turns off
- 5 – Turn off the receiver and remove jumper J2

N.B.: The setting of the operating distance cannot be accurate. This is because radio waves are affected by objects, walls and the position of the transmitter (orientation relative to the receiver). During the calibration procedure described above, take this into consideration in order to find the optimal calibration distance.



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NEAR/FAR Operating with command via APP (Bluetooth)

The PLATFORM OPEN and CLOSED, UP and DOWN commands transmitted by the APP via the smartphone can also be transmitted with a reduced range to prevent the user from moving the platform without seeing it. This range can be changed by the installer by acting on the Dip Switch S2, according to the table below:

Dip S2-1	Dip S2-2	Operating Distance
Off	Off	100 % (MAX distance)
Off	ON	75 % of MAX distance
ON	Off	50 % of MAX distance
ON	ON	25 % of MAX distance

Attention: To change the dip setting, remove the power supply, move the dip switches to the desired configuration and supply power again.

N.B.: The setting of the operating distance cannot be accurate. This is because radio waves are affected by objects, walls and the position of the transmitter (orientation relative to the receiver). During the calibration procedure described above, take this into consideration in order to find the optimal calibration distance

Operation with APPs

Attention: For operation with SmartPhone, refer to the manuals relating to the Apps.



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RECOMMENDATIONS

- The devices described in this manual are intended to be installed on stairlifts made in compliance with the applicable parts of the EN 81-40:2020 standard.
- The devices described in this manual cannot be used to directly control the power supply of the drives and/or brakes of the stairlift on which it is installed.
- The signals output to the receiver must be managed by a control board (or similar component) which must be set up by the stairlift manufacturer.

Warnings

-  The symbol shown on the equipment indicates that the waste must be disposed of "separately". Therefore, the user must confer (or have conferred) the waste to the differentiated collection centers set up by the local administrations, or deliver it to the retailer against the purchase of a new equipment of an equivalent type.. The differentiated collection of waste and the subsequent treatment, recovery and disposal operations favor the production of equipment with recycled materials and limit the negative effects on the environment and health that may be caused by improper waste management. Illegal disposal of the product by the user involves the application of the administrative sanctions referred to in article 50 and following of Legislative Decree no. 22/1997.



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