

## DIGITAL RADIO CONTROL SYSTEM RCL433A03

This product must only be installed by technically qualified personnel in conformity with the local standards and regulations in force.

All wiring and connections must be prepared for a 230V single phase power supply. The materials used must guarantee suitable isolation according to the local electrical standards and regulations in force. The programmer only carries out remote commands via radio and all safety devices required by the system must be prepared apart.

The device's signal reception could be disturbed by several factors such as:

- the presence of electrical frequency noise being transmitted by other appliances working in the same environment and on the same frequency.
- appliances installed in containers with metal parts; only use containers made of plastic.
- the aerial wire cabled together with power cables; position the aerial wire as far away as possible from power cables.

### Product description

Radio control devices in the UHF band with superheterodyne receivers and transmitters using a saw resonator controlled carrier frequency for ON/OFF type, impulsive or bistable commands.

The rolling code signal transmission makes duplication impossible.

The first code inserted for each channel must be inserted directly using the button located inside the receiver while successive transmitters can be inserted via radio using a transmitter that is already present in the receiver's memory. This allows you to insert new transmitters into an existing system without having to open the receiver. This operation can be carried out by the end user without having to call an installer but still guaranteeing the secrecy of the code.

The code is memorised in the receiver in an EEprom module that maintains the information even in case of blackouts. This module can be transferred into another receiver in case of failure without compromising the integrity of the memorised codes.

The receiver is supplied in a waterproof container IP54. The channel outputs have 16A contacts and the voltage is 230V $\sim$ . Each channel can accept a resistive load of up to 1000VA.

### Transmitter versions TXP...TXW...

The transmitters are pre-coded by the manufacturer and each has its own unique code.

#### Transmitters

TXR433A01 1-channel transmitter  
TXR433A02 2-channel transmitter  
TXR433A04 4-channel transmitter

#### Mini-transmitters

TXP433A01 Mini 1-channel transmitter  
TXP433A02 Mini 2-channel transmitter  
TXP433A04 Mini 4-channel transmitter

#### Wall mounted versions

TXW433A02 2-channel transmitter  
TXW433A04 4-channel transmitter

### SW1 functions (the "ON" position is indicated by the arrow on the dip-switch).

In the "ON" position the channels are impulsive. In the "OFF" position the channels are bistable "ON/OFF"

Dip 1 : function selection Ch1 (relay 1)  
Dip 2 : function selection Ch2 (relay 2)  
Dip 3 : function selection Ch3 (relay 3)

### Memorising remote controls

For security reasons cancel the entire memory content before each installation

Each channel is associated with a button:

M1 with relay 1, M2 with relay 2, M3 with relay 3.

1) Press and hold down the button corresponding to the relay that you want to associate with the channel on the transmitter that is to be memorised. The buzzer **B1** will emit a constant sound.

2) Transmit the channel to be memorised. The buzzer **B1** will emit an intermittent sound.

To insert a new code repeat operations 1 and 2.

If the code hasn't been memorised it could be due to the following reasons:

- The code already exists in memory
- The memory is full (maximum of 32 different codes), in this case the buzzer will sound at 3-second intervals each time you switch on.

### To cancel a code :

1) Press and hold down one of the buttons M1-M2-M3. The buzzer B1 will sound slowly.

2) Transmit the code to be cancelled and once cancelled the buzzer B1 will sound constantly.

To cancel a code repeat operations 1 and 2.

### To cancel all codes in memory :

1) Press and hold down the buttons M1 and M4 simultaneously. The buzzer **B1** will emit a rapid intermittent sound, keep the buttons held down until the buzzer **B1** emits a constant sound. After completion release the buttons.

### How to insert a transmitter via radio, using an already memorised transmitter and without accessing the receiver (memorisation procedure using indexing)

1) Press the internal button P3 in an already memorised transmitter, the enabled receiver will emit a continuous sound for 5 seconds.

2) Transmit a channel that is present in the memory of the receiver that has to memorise the new code within 5 seconds. The buzzer will stop sounding for 1 second and then sound again for another 5 seconds. (this operation is required to index the new code in the empty receiver).

3) Transmit the new code to be memorised within 5 seconds. Successful memorisation is indicated by the buzzer emitting an intermittent sound.

To insert other functions repeat operations 1-2-3. If the receiver's memory is full the buzzer B1 will sound intermittently indicating that the receiver cannot be enabled.

If the code hasn't been memorised it could be due to the following reasons:

- the code already exists in memory
- the memory is full and in this case the buzzer will sound at 3-second intervals each time you switch on.

### Aerials

To obtain the best performance the installation of an aerial is fundamental. Connect a 17 cm wire to the middle binding post on the aerial.

For better results connect a tuned aerial to the receiver using coaxial cable RG58 (impedance 50  $\Omega$ ) with a maximum length of 15 metres (mod. ANT433).

### TRANSMITTERS

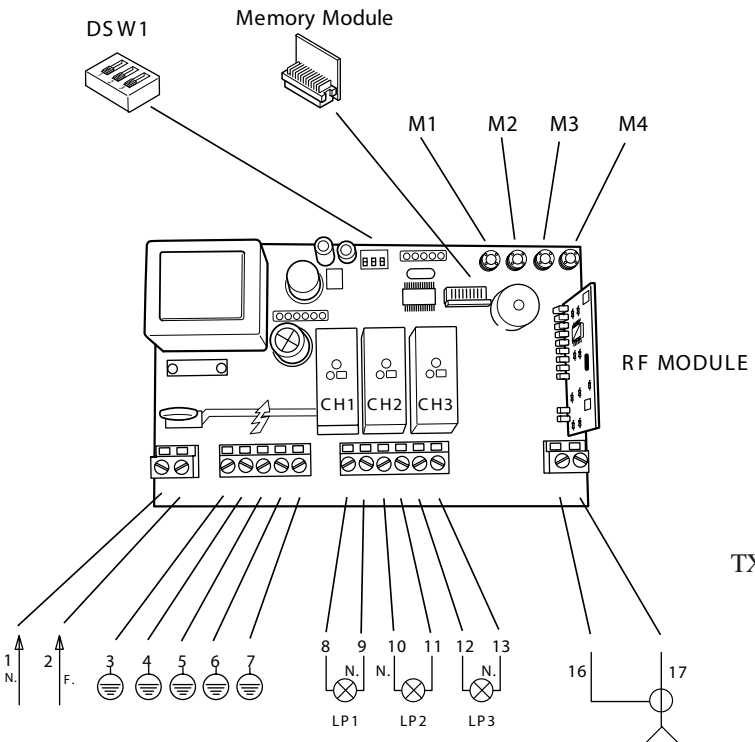
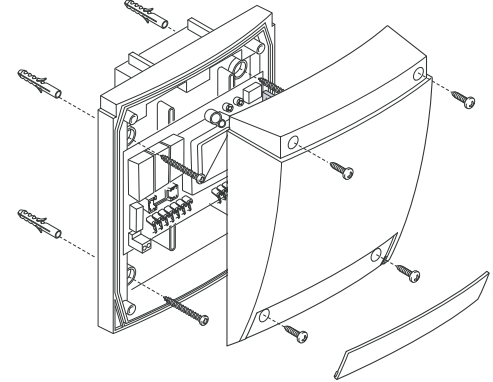
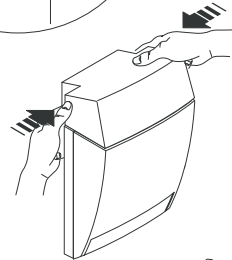
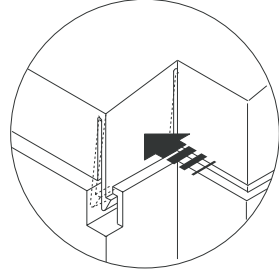
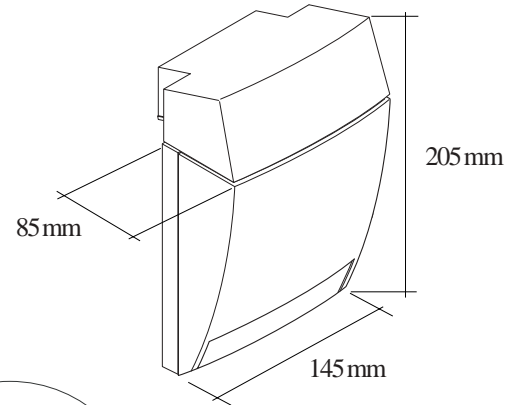
-carrier frequency	433.92 MHz
-carrier frequency tolerance	$\pm 75$ KHz
-band width	>25 KHz
-apparent radiated power	-10 $\div$ -7dBm (100-200 $\mu$ W)
- apparent power of the harmonic products	<-54 dBm (<4nW)
-modulation	AM/ASK
-modulated signal	PCM, 1.3 ms/bit
-power supply For TXW433	12V $\pm$ 10%
	(alkaline battery GP23A)
-power supply For TXP433	3V $\pm$ 10% (lithium battery CR2032)
-operating temperature range	- 10 $^{\circ}$ - +55 $^{\circ}$ C

Code Number:	Series	Model number	Draft	Date
RCL433A03	RS433		T214.01	21-11-03

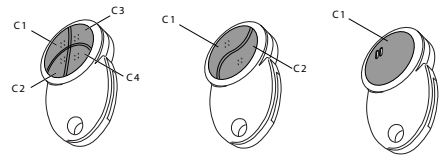
**RECEIVER**

- reception frequency 433.92 MHz
- local oscillation frequency 433.42 MHz
- local oscillation frequency tolerance ±75 KHz
- local oscillation frequency emission <57dBm
- intermediate frequency IF 500 KHz
- aerial input impedance 50 Ω
- sensitivity (finely tuned signal) 1 μV
  
- power supply 230V~
- maximum power consumption at rest 14 mA
- maximum power consumption at rest with 1 activated relay 40 mA

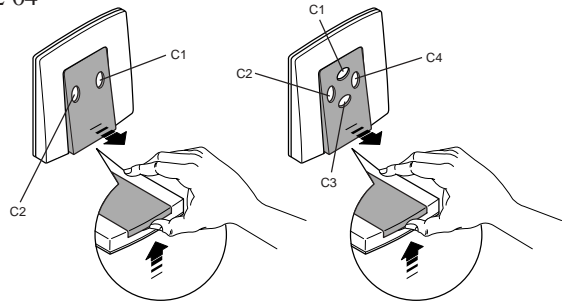
- maximum commutable power at the relay with resistive load:
- maximum voltage 230 V~
  - current at the relay with cos-ph 1 16 A
  - channel activation delay 150 ms
  - channel disactivation delay 300 ms
  - operating temperature range -20° - + 55°C



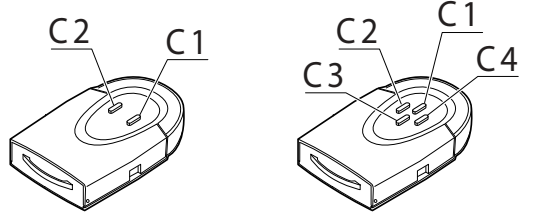
TXP433A01-02-04



TXW433A02-04



TXR433A01-02-04



**Connection binding posts:**

- Binding post nr.1 Neutral power supply 230V~
- Binding post nr.2 Live power supply 230V~
- Binding post nr.3 Unit earth connection
- Binding post nr.4 Earth connection light LP1
- Binding post nr.5 Earth connection light LP2
- Binding post nr.6 Earth connection light LP3
  
- Binding post nr.8 230V~ output light LP1
- Binding post nr.9 Neutral power supply 230V~ light LP1
  
- Binding post nr.10 Neutral power supply 230V~ light LP2
- Binding post nr.11 230V~ output light LP2
  
- Binding post nr.12 230V~ output light LP3
- Binding post nr.13 Neutral power supply 230V~ light LP3
  
- Binding post nr.16 Aerial mass
- Binding post nr.17 Aerial pole