

# UC-240 Twelve-channel receiver

The UC-240 is a 12-channel receiver of signals from TP-60TX wireless thermostats or from JA-60 wireless detectors. The receiver has 12 output relays which can be used to control various devices. LEDs on the receiver's front cover indicate the status of each output channel.

When used with wireless thermostats, the UC-240 can efficiently control multi-zone heating and cooling systems.

JA-60M wireless detectors can be used to control the UC-240's output relays remotely from any switching device (switch, micro switch sensor etc.). This can be convenient for automation or control tasks.

The UC-240 can also receive signals from JA-60S wireless smoke sensors and JA-60G gas leak sensors.

## Specification

Power supply:	15 – 30 V DC or 15-24 V AC
Internal self consumption:	0.05 A (all relays OFF) 0.4 A (all relays ON)
Max. supply current:	5.5 A (including 5 A which can be used for external load = actuators, power relay coils etc.)
Internal current protection:	fuse F 6.3 A
Max. output relay load:	0.4 A per relay when outputs are powered by the built in rectifier (+U terminal) 0.5A / 60 V per relay when outputs are powered by an external power supply
Output +12VDC:	12 V DC stabilized, max. 200 mA
Output +U:	rectified AC power voltage, max. 5 A
Receiver radio frequency:	433.9 MHz, ISM EN 300220
Working distance:	max. 100 m in an open area
Dimensions:	165 x 125 x 75 mm (w/o antenna)
Mechanical robustness:	IK08 according to EN 50102
EMC	EN 300683
Working environment:	IP20 EN 60529
Humidity:	max. 85 %
Working temperature):	-10 to +40 °C

## Installation

1. Remove the 4 screws holding the front cover and open the housing. Unplug the internal cable and remove the cover.
2. Attach the UC-240 in a desired place with two screws (provided).
3. Route cables through the housing and connect them to the terminals (see terminal description and examples of wiring).
4. Plug in the front panel cable and reattach the front cover to the housing.

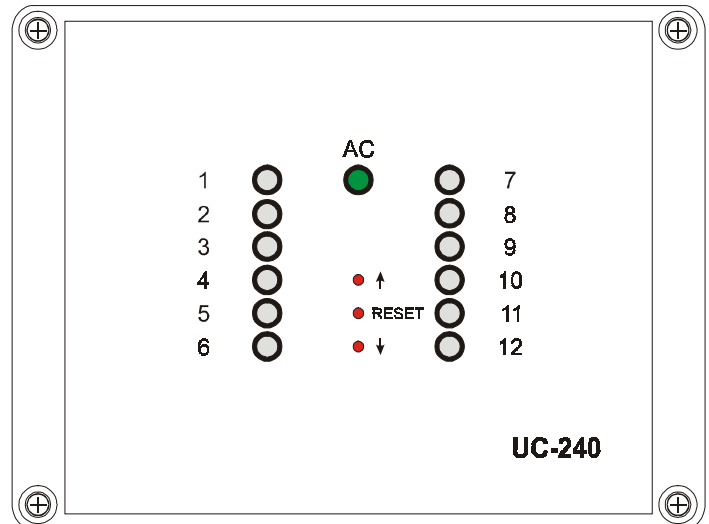
**Note:** Do not locate any cable close to the receiver antenna and do not install any other UC-240 closer than 2 meters (this could shorten the working distance). If you need a receiver with additional channels, please contact your supplier.

### Terminals description:

<b>AC, AC</b>	– AC power input 15 –24 VAC. If powered with DC voltage, connect the positive pole to the left AC terminal and the negative pole to the GND terminal
<b>+12V, GND</b>	– stabilized 12 V DC output, max. 0.2A (for optional use)
<b>+U</b>	– built in rectifier output (rectified AC voltage, max. 5A - limited also with the capacity of the power supplier)
<b>RELE</b>	– common power inlet for all output relay contacts (if powered from the built in rectifier, connect this terminal to the +U terminal)
<b>RE1- RE12</b>	– normally opened output relay contacts
<b>COM</b>	– 13 common terminals to connect common poles of the external load (actuators, power relay coils etc.)

## Indicators

Green LED **AC** indicates the presence of the receiver's power supply. When lit, the receiver is powered.



Indicators **1 to 12** indicate the status of the output channels (relays).

LED 1 - 12	Description
Off	Channel is not used (no transmitter is enrolled)
Steady Green	Channel has a transmitter enrolled, relay is off
Steady Red	Relay is on (activated by the enrolled transmitter)
Flashing Green	Communication with the enrolled transmitter is down (Low battery in transmitter, radio interference etc.)
Flashing Red	Learning mode (to enroll a transmitter)

## Enrollment of transmitters

For each channel of the receiver, a transmitter (thermostat or wireless detector) can be enrolled the following way:

- using button **▲** or **▼** (UP or down) select the desired channel (current channel will be indicated by its LED flashing)
- install batteries to the transmitter (thermostat or detector). When powered, the transmitter generates an enrollment signal and its code is stored in the selected receiver channel's memory
- enrollment of the transmitter is confirmed by the constant lighting of the green LED.

Only one transmitter can be enrolled to each UC-240 channel. The transmitter can be enrolled to multiple receivers with out any restrictions. If you try to enroll a new transmitter to an occupied channel, the new transmitter will be stored and the former one will be erased.

### Erasing of a transmitter

To erase an existing transmitter,:

- using button **▲** or **▼** (UP or down) select the desired channel (current channel will be indicated by its LED flashing)
- press the RESET button and the corresponding LED will turn off

## Use and Maintenance

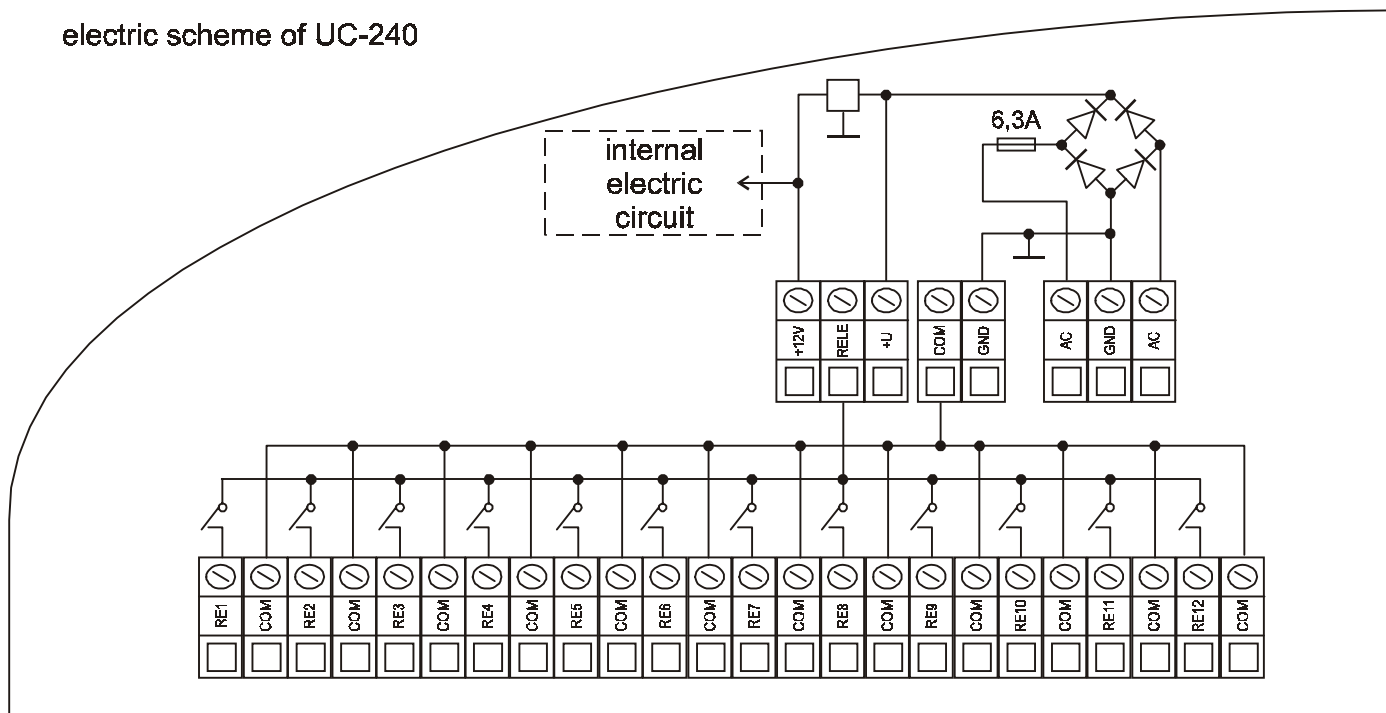
All enrolled transmitters (thermostats and detectors) transmit regular checking signals. If the receiver does not receive the signal of an enrolled transmitter for a certain period, it will indicate that communication with this item is down (flashing green LED) and the corresponding relay will turn off.

A reason for the lost connection can be low batteries in the transmitter. Average life time of the transmitter's batteries is about 1 year. Each transmitter checks its battery's conditions and signals in advance if the batteries are reaching a critically low state (see the transmitter manual for details).

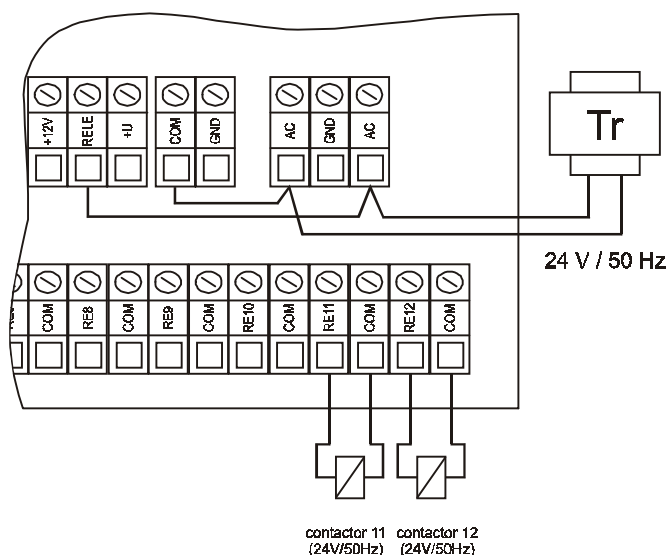
Another reason of possible connection failure can be from radio signal interference in the working band of the receiver. In such a case the UC-240 will usually indicate loss of communication with a multiple number of transmitters. In this situation, check if there is any non approved radio communicating device in the working range of the receiver.

**Warning:** manufacturer is not responsible for any damage caused by improper installation or non suitable use of this product.

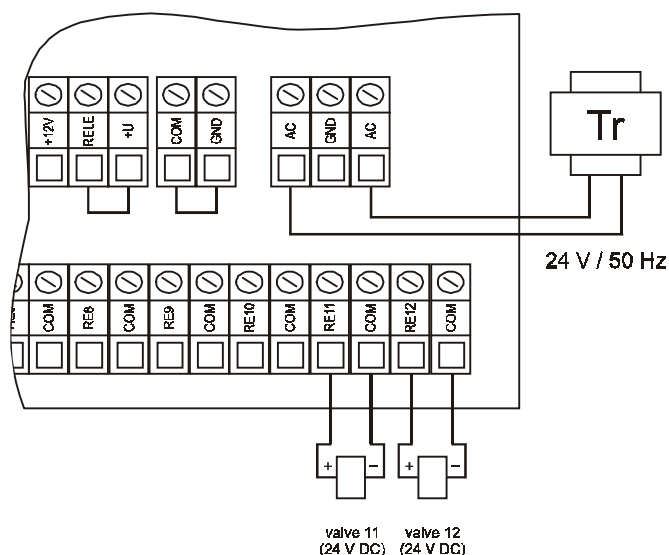
# electric scheme of UC-240



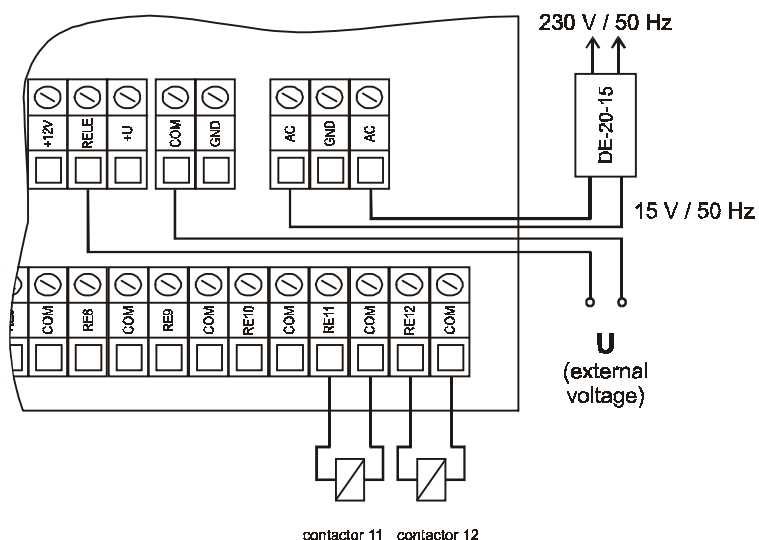
**Example 1: power supplied by 24 V AC, contacts controlled by 24 V AC**



**Example 2: power supplied by 24 V AC, valve controlled by 24 V DC**



**Example 3: power supplied 15 V AC (adapter DE-20-15), contacts controlled by external power supply**



**Example 4: power supplied by DC voltage, DC controlled contactors**

