

CAUTION FOR THE USER

Any change or modification of the product is forbidden if not expressly approved by the manufacturer

1. GENERAL INFORMATION

These receivers integrate the functions of standard Multipass and Multipass Roll code receivers and decoders. They feature a storage capacity of up to 200 different codes generated by transmitters of the Multipass and Multipass Roll family at 433.920 MHz (M/RA1E - M/RA2E).

2. ROLLING CODING

This type of coding affords extra security as it prevents the risk of code violation by interception or re-transmission. It is based on the transmission of a batch of bits consisting of a fixed part (which is different for each transmitter), of channel bits associated with the switch of the activated transmitter, and of a part which changes in a pseudo-random manner (rolling code) in accordance with a proprietary Prastel algorithm. The configuration of these latter bits changes unpredictably from one transmission to the following. The receiver memorises by self-learning the fixed part of the code associated with each transmitter plus the relevant rolling code, updating the latter upon each transmission. Transmitter recognition occurs only if the transmitted rolling code corresponds to the 255 configurations subsequent to the last recognised transmission. Realignment and recognition of a previously memorised transmitter which has overrun the permissible interval (an event which may occur for example following on an excess of unrecognised transmissions or upon battery replacement) can however be made by pressing and releasing the transmitter learning button. This procedure permits the system to check for code correctness, while safeguarding the advantages afforded by the rolling code.

3. TECHNICAL FEATURES

Power supply	12 - 24 Vac/dc
Average consumption	Stand-by: 20 mA with relay energized: 45 mA
Reception frequency	433 MHz
Digital Code	With a number of bits varying from 40 to 54
Number of storable codes	200
Number of channels	1 (M/RA1E); 2 (M/RA2E)
Type of output	Monostable, bistable
Output	Relay
Contact rating	0,5 A @ 24 Vac/dc
Signals	red LED
Working temperature range	-10/+55 °C
Storage temperature	-40/+85 °C
Receiver weight	250 g.
Receiver dimensions	77 x 80 x 38 mm

**4. VOLTAGE SELECTION**

Both the M/RA2E-M/RA1E receivers can operate at 24V and 12V ac/dc.

5. CODE PROGRAMMING AND DELETION

Entry and storage of a new code and deletion of the full code list can be made by acting on key P1, while deletion of single user codes can be made using the **GT/BASER** portable terminal.

How to Program

- Power the receiver as specified.
- Press P1. The red LED lights up indicating that programming is in progress.
- Press any of the transmitter's keys to make a transmission.
- The code will now be entered in the memory. While loading is in progress, LED will flash. Upon code being stored, the LED stops flashing and becomes fixed. A new code can now be entered.
- Load the codes of all the transmitters by making a transmission with each of them.

- Upon this operation being completed, press P1 again to exit from programming mode. The LED will go off. In any case, the system will automatically exit from programming mode upon 10 seconds having elapsed since last loading.
- Codes remain stored even if receiver is powered off.

Attention: Make a transmission within 10 seconds after pressing P1 as system will automatically exit from programming mode after this time has elapsed if no transmission has been made. To re-access programming mode, press P1 again.

Deletion of all codes

- Press and hold down key P1 until the red LED starts flashing.
- Press P1 again within 6 seconds to confirm deletion. Confirmation is signalled by the LED flashing more rapidly.

6. CHANNEL SELECTION AND RELAY OPERATING MODE

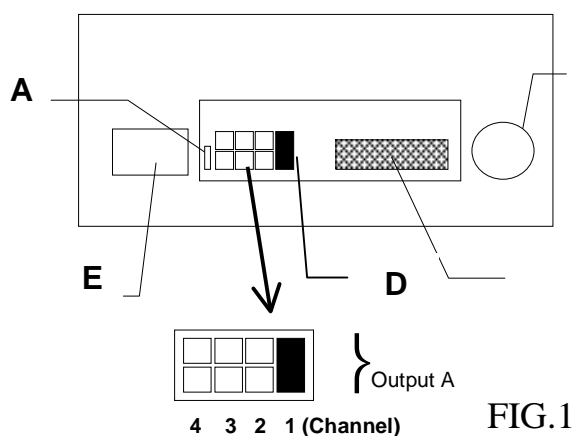
Set output as desired by means of jumper A (jumper A closed for monostable relay operation and jumper A open for bistable relay operation). **Note: Relay operating mode selection is not contemplated on the M/RA2E receiver.**

7. ANTENNA CONNECTION

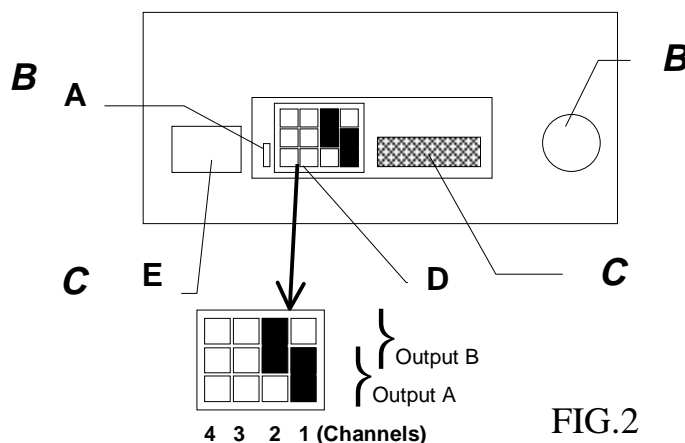
The receivers may be connected to external antennas of corresponding frequencies by means of the appropriate F-type female connectors.

The **M/RA1E** and **M/RA2E** receivers can instead be connected to **ANT/433SD** type antennas, to the **wire antenna** provided or the like.

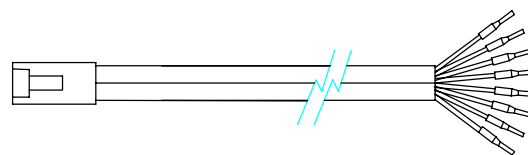
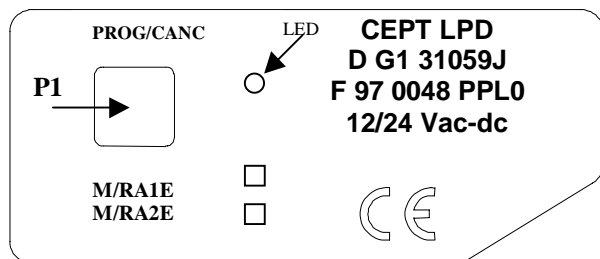
M/RA1E



M/RA2E



A	Relay operating mode selection
B	F-type female antenna connector
C	Micro-match for memory control
D	Channel selection jumper
E	Plug connector input



2m

24 V	BLUE
0	ORANGE
12 V	BLACK
N.C. out A	RED
C out A	GREEN
N.O. out A	YELLOW
C out B	BROWN
N.O. out B	GREY

FCC ID: ON3MRAE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.