

# RL-8

## 8-Relay Output Adapter for the MCR-308

## Installation Instructions

### 1. INTRODUCTION

The RL-8 is an "open collector to dry contact" adapter, designed as an interface unit between the outputs of the MCR-308 wireless receiver and alarm control panels or remote controlled devices. Similarly, the RL-8 can serve as a suitable output interface for other electronic security devices that have open-collector outputs. The benefit offered by the RL-8 is the ability to overcome features imposed by open collector outputs - the current limit and the "pull-to-ground" action - both of which are undesirable in certain applications.

The 8 on-board relays of the RL-8, with normally open (N.O.) contacts, can control up to 8 zones of an alarm control panel, or 8 different electronic devices, or a combination of both.

When activated by PowerCode messages, open collector outputs of the MCR-308 energize the associated relays on the RL-8 board. The relay contacts close, thus closing the circuit into which they are wired (see Figure 1).

Operating power for the RL-8 is obtained from the same source that supplies input voltage to the MCR-308. The RL-8 is sold as a "bare" module, but can be housed in the MCR-308 casing, next to the MCR-308 printed circuit board (see Section 3).

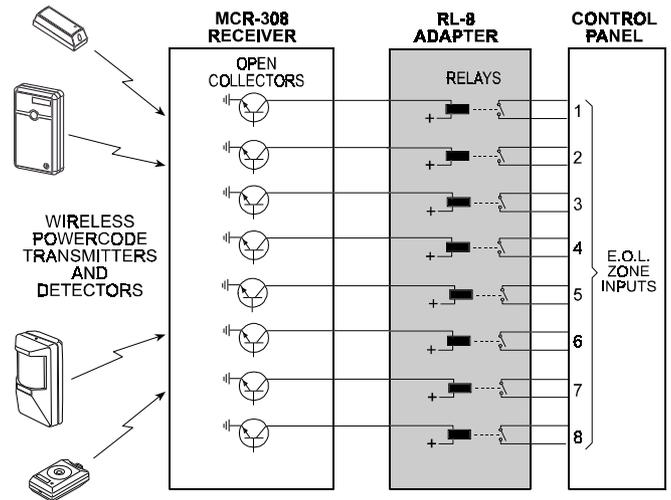


Figure 1. Typical Remote Control Configuration with RL-8

### 2. SPECIFICATIONS

**Number of Relays:** 8

**Relay Coil Impedance:** 2500 Ohms

**Relay Contact Ratings:** Form 1A (N.O.), 1A max. / 30 V

**Input Voltage Range:** 10.5 - 16 VDC

**Current Drain:** 5 mA per relay @ 12 VDC

**Operating Temperatures:** -10° to 50°C (14° to 122°F)

**Storage Temperatures:** -20° to 60°C (-4° to 140°F)

**Module Dimensions:** 92 x 67 x 15 mm (3-5/8 x 2-5/8 x 19/32 in.)

**Weight:** 86 g (3 oz)

### 3. INSTALLATION

#### 3.1 Mechanical Mounting

The RL-8 module may be mounted in any host cabinet, provided that 6 mm (1/4") clearance is left between the bottom surface of the printed circuit board and the cabinet wall. This is easily achieved by using cylindrical plastic bushings as spacers through which mounting screws are inserted.

It is sometimes preferable to mount the RL-8 in the MCR-308 case (see Figure 2). If this is done, the RL-8 will be protected by the same tamper switch used to protect the MCR-308. Open the MCR-308 case as shown in the MCR-308 installation instructions, and **clip off the 2 plastic standoffs indicated in Figure 2.**

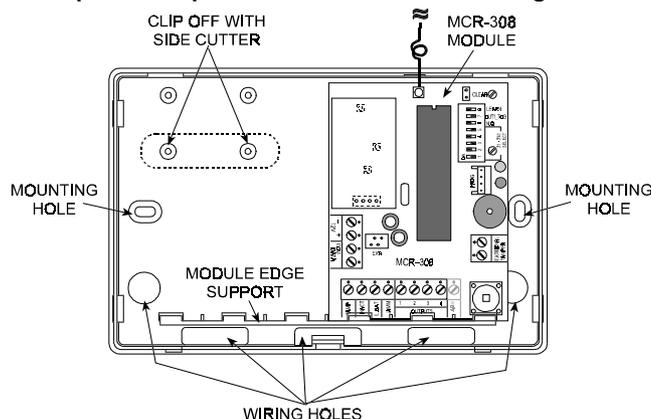


Figure 2. Standoffs to be Clipped Off before Installing the RL-8

After that, place the RL-8 as shown in Figure 3 and attach it to the upper standoffs with two screws.

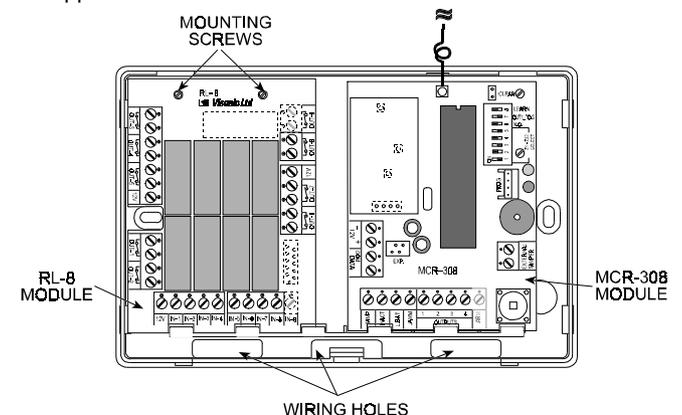


Figure 3. RL-8 Installed within the MCR-308 Casing

#### 3.2 Wiring

Each relay operating coil in the RL-8 is permanently connected to the 12V terminal of the unit. Applying 12 VDC (+) to the 12V terminal therefore maintains one end of each coil at 12 V (+) potential. Each relay will be energized if the other end of its coil is grounded through the appropriate input. If wiring is completed as in Figure 4, and provided that the MCR-308 outputs are defined as normally open (N.O.), the other end of the coil will be pulled to ground by the respective open-collector output of the MCR-308.

Refer to Figure 4 and make the following connections:

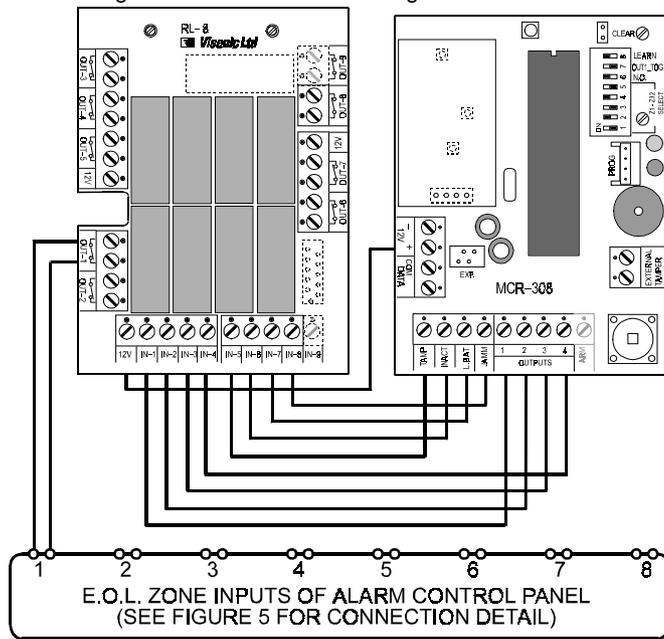


Figure 4. Typical Wiring Configuration

- A. Interconnect the MCR-308 12 V (+) terminal and any one of the RL-8 12 V terminals.
- B. Connect each output terminal of the MCR-308 to the selected input terminal of the RL-8.

**Note:** To prevent confusion, it is recommended to connect each output to the correspondingly numbered input: Output 1 to Input 1, Output 2 to Input 2, and so on.

**IMPORTANT!** If the open collector outputs of the MCR-308 have been defined as normally closed (N.C.), each relay controlled by such an output will be permanently energized (fail safe). This means that the relay contacts will be permanently closed, and will open only upon de-activation of the respective open-collector output by wireless signaling or by power loss.

- C. Connect the output terminals of each relay to the corresponding zone input of the alarm control panel. Figure 4 shows just one output connected as an example. All other 7 outputs may be similarly wired. Remember to connect an E.O.L. resistor of the correct value, as required for the particular control panel (see Figure 5).

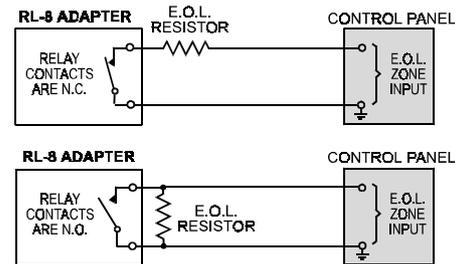


Figure 5. Wiring E.O.L. Zones

**Note:** The output relay contacts may also be wired to switch auxiliary electronic devices on and off. This application does not require E.O.L. resistors.

## WARRANTY

Visonic Ltd. and/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

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**Warning:** The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his/her safety and the protection of his/her property.

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