

## Features

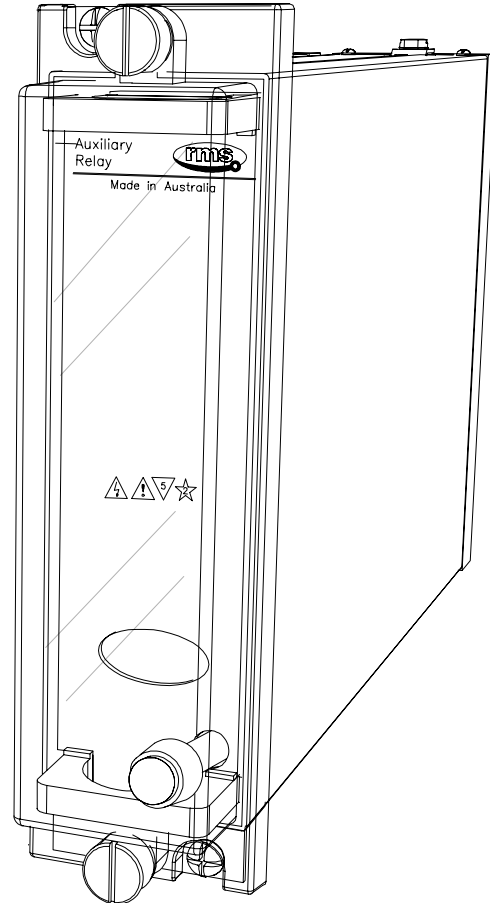
- Wide range of battery voltages catered for
- High sensitivity
- 2L11 model differentiates between positive & negative earth faults
- Low burden
- Fast operate time  
<35 ms with zero resistance E/F
- High output contact rating with optional magnetic arc blowouts
- Optional hand reset flag
- Size 2M draw out case

## Application

Sub-station battery supplies are critical to the correct operation of critical protection & other functions. The 2L10 & 2L11 are designed to operate on earth faults or degradation of the insulation to earth of a battery or other DC supply which has neither pole connected to earth.

The relay earths the battery through a high resistance with a consequent limit to the earth fault current.

It should be noted that the relay will not operate for an earth fault to the centre of the battery.



2L10 depicted in a 2M28 case

## Operation

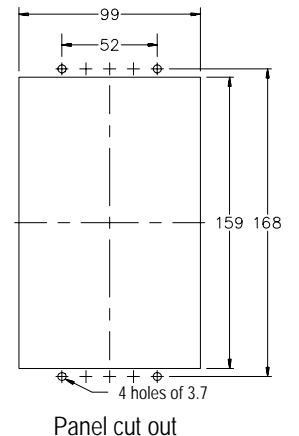
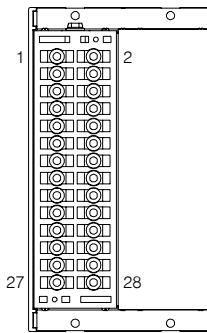
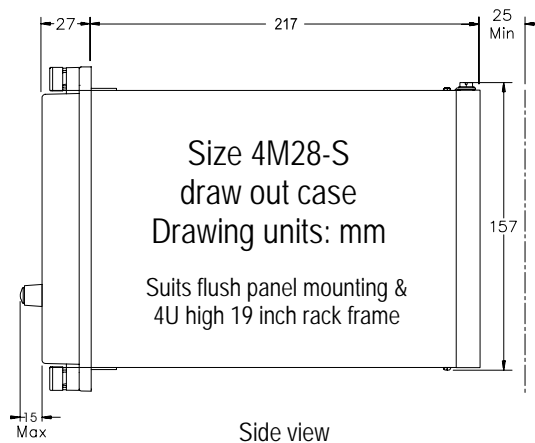
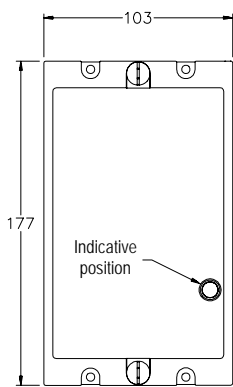
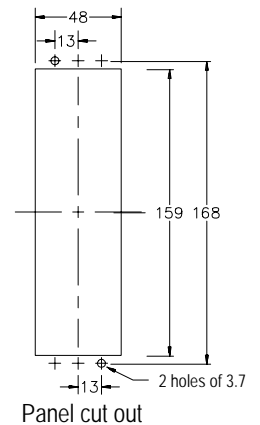
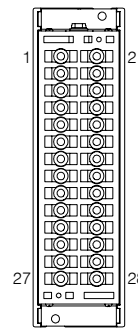
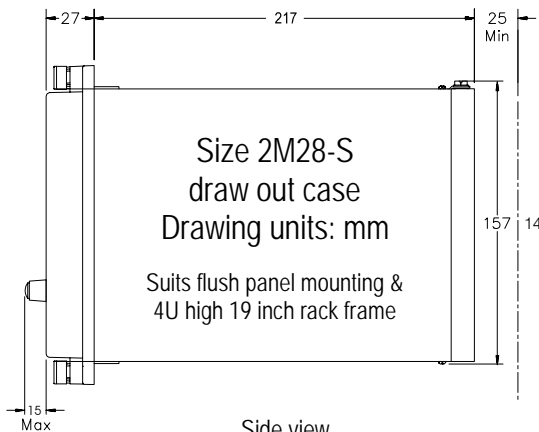
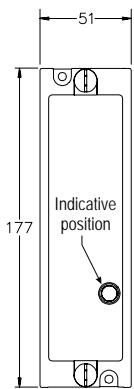
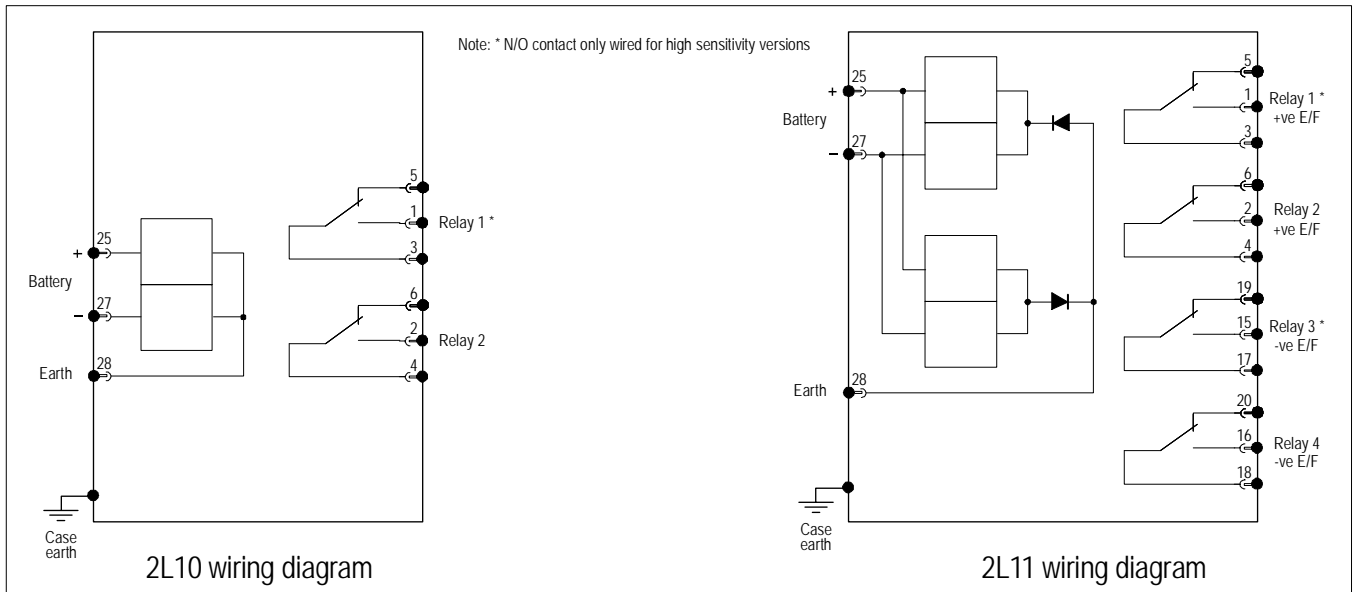
Made in Australia

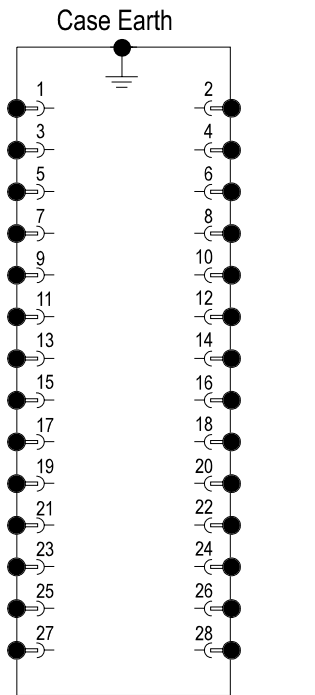
The 2L10 & 2L11 Series relays are double wound relays suitable for connection across a battery with the coils in series opposition, the centre tap being connected to earth. For a battery without an earth fault the relay remains inoperative due to the opposing coils. For an earth fault the centre earth connection shorts one coil & produces full voltage on the other thus operating the relay. The relays are rated to withstand an earth fault continuously.

The **2L10** relays are single relays which operate on earth faults of either polarity.

The **2L11** relays comprise two relay elements, one operates on positive earth faults & the other on negative earth faults.







2M28 Case terminations (REAR VIEW)

# Ordering Information

## ORDER CODE

The order code determines the production build in the factory & cannot be changed in the field.

Generate the required order code as follows: e.g. 2L10-EAAA

General Type	Order Code				
	1	2	3	4	5
2L1	-				

### 1 ELEMENTS PER CASE

- 0 One element
- 1 Two elements

### 2 BATTERY SUPPLY

- |                     |                     |
|---------------------|---------------------|
| A 12V DC            | B 24V DC            |
| C 32V (30-32) DC    | D 50V (48-50) DC    |
| E 110V DC           | F 125V (120-125) DC |
| G 240V (200-250) DC |                     |

### 3 TRIP FLAG

- A Hand reset flag
- B No flag fitted

### 4 SENSITIVITY

- A Standard
- B High

### 5 MAGNETIC BLOWOUTS

- A Not required
- B Required

### **Australian Content**

Unless otherwise stated the product(s) quoted are manufactured by RMS at our production facility in Melbourne Australia. Approximately 60% of our sales volume is derived from equipment manufactured in house with a local content close to 90%. Imported components such as semi-conductors are sourced from local suppliers & preference is given for reasonable stock holding to support our build requirements.

### **Quality Assurance**

RMS holds NCSI (NATA Certification Services International), registration number 6869 for the certification of a quality assurance system to AS/NZS ISO9001-2008. Quality plans for all products involve 100% inspection and testing carried out before despatch. Further details on specific test plans, quality policy & procedures may be found in section A4 of the RMS product catalogue.

### **Product Packaging**

Protection relays are supplied in secure individual packing cardboard boxes with moulded styrene inserts suitable for recycling. Each product & packing box is labeled with the product part number, customer name & order details.

### **Design References**

The products & components produced by RMS are based on many years of field experience since Relays Pty Ltd was formed in 1955. A large population of equipment is in service throughout Australia, New Zealand, South Africa & South East Asia attesting to this fact. Specific product & customer reference sites may be provided on application.

### **Product Warranty**

All utility grade protection & auxiliary relay products, unless otherwise stated, are warranted for a period of 24 months from shipment for materials & labour on a return to factory basis. Repair of products damaged through poor application or circumstances outside the product ratings will be carried out at the customer's expense.

### **Standard Conditions of Sale**

Unless otherwise agreed RMS Standard Terms & Conditions (QF 907) shall apply to all sales. These are available on request or from our web site.



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