

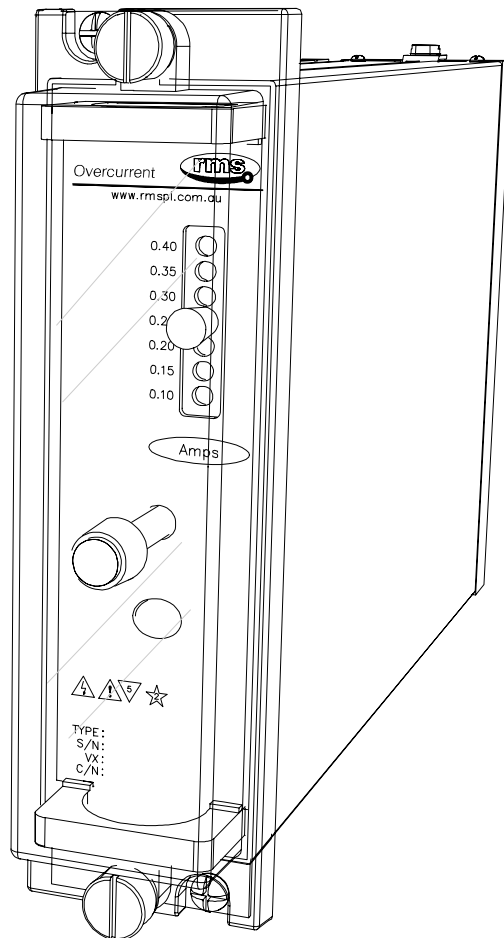
## Features

- High speed operation
- High sensitivity
- 50Hz or 60Hz operation
- Seven (7) current settings using plug bridge
- Choose from 5 setting ranges
- <10ms operation at 5x setting
- Hand reset mechanical flag
- 2 N/O or 4 N/O trip contacts
- Rugged attracted armature sensing element
- Use 3 independent units for 3 phase applications
- Size 2M draw out case

## Application

The 2C74 relay provides high speed overcurrent protection for various items of power system plant such as frame earth leakage protection of metal clad switchgear & tank earth fault protection of sub-station power transformers.

The 2C74 relay is a single phase device built in a compact size 2M draw out case suitable for rack and flush mounting. Where 3 phase monitoring is required, 3 single phase units should be employed.



2C74 depicted in a 2M28-S case

## Operation

Made in Australia

The relay measuring element is basically an attracted armature unit of simple & rugged construction. The operating coil of this unit is energised from a transformer which is tapped to provide seven (7) current settings. Setting is achieved using a plug bridge arrangement on the front panel.

### RELATED EQUIPMENT

- ◆ Refer to the 2C65 Technical Bulletin for details on the sensitive current check relay;
- ◆ Refer to the 2C138 Technical Bulletin for details on sensitive earth fault relay;
- ◆ Refer to the 2C720 Technical Bulletin for details on compact modular current monitoring relays;
- ◆ The 2C73 Technical Bulletin Technical Bulletin for details on the high impedance differential current operated relay.

**RATED FREQUENCY**

50Hz or 60hz

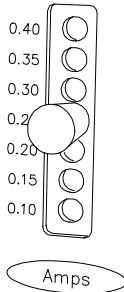
**BURDEN**

<3VA 2.5-10A setting range  
<1VA All other setting ranges

**STANDARD CURRENT SETTING**

7 plug bridge setting steps as per order code details

Adjustable via front panel plug bridge



**PICK UP ACCURACY**

+/-5% of setting at rated frequency  
Effect of frequency: <0.1% / HZ

**DROP OUT**

**AUTOMATIC CT SHORTING FACILITIES**

While current setting changes would not normally be made with the relay energised, a CT shorting feature is incorporated. This automatically operates by shorting CT input terminal 5 to the maximum current tap setting when the front panel plug bridge is removed.

It should be noted that the CT input is also automatically shorted when the 2C74 module is withdrawn from the case. This feature may be used to take the 2C74 relay out of service.

**OPERATE TIMES**

Pick up: Typically <10ms at 5x I<sub>s</sub> (Typical 8ms)  
Reset: Typically <75ms from 5x I<sub>s</sub> to zero

**THERMAL WITHSTAND – RELAY ALONE**

2x tap setting to a maximum of 10A continuous  
20x tap setting for 3s

**OUTPUT RELAY CONTACTS**

2 N/O tripping duty contacts or  
4 N/O tripping duty contacts

**CONTACT RATINGS**

**Make & Carry Continuously**

1,250 VA AC resistive with maximums of 300V & 5A  
1,250 W DC resistive with maximums of 300V & 5A

**Make & Carry for 3 Seconds**

7,500 VA AC resistive with maximums of 300V & 30A  
7,500 W DC resistive with maximums of 300V & 30A

**AC Break Capacity**

1,250VA AC resistive with maximums of 300V & 5A

**DC Break Capacity**

100W DC resistive with maximums of 300V & 5A  
50W DC inductive with maximums of 300V & 5A

**OUTPUT RELAY OPERATION INDICATOR**

Hand reset mechanical indicator

**TRANSIENT OVERVOLTAGE**

Between all terminals & earth  
Between independent circuits without damage or flashover

**IEC60255-5 CLASS III**

5kV 1.2/50us 0.5J  
5kV 1.2/50us 0.5J

**INSULATION COORDINATION**

Between all terminals & earth  
Between independent circuits  
Across normally open contacts

**IEC60255-5 CLASS III**

2.0kV RMS for 1 minute  
2.0kV RMS for 1 minute  
1.0kV RMS for 1 minute

**HIGH FREQUENCY DISTURBANCE**

2.5kV 1MHz common mode  
1.0kV 1MHz differential mode

**IEC60255-22-1 CLASS III**

≤ 5% variation

**TEMPERATURE RANGE**

Operating:  
Storage:

-5 to +55°C  
-25 to +75°C

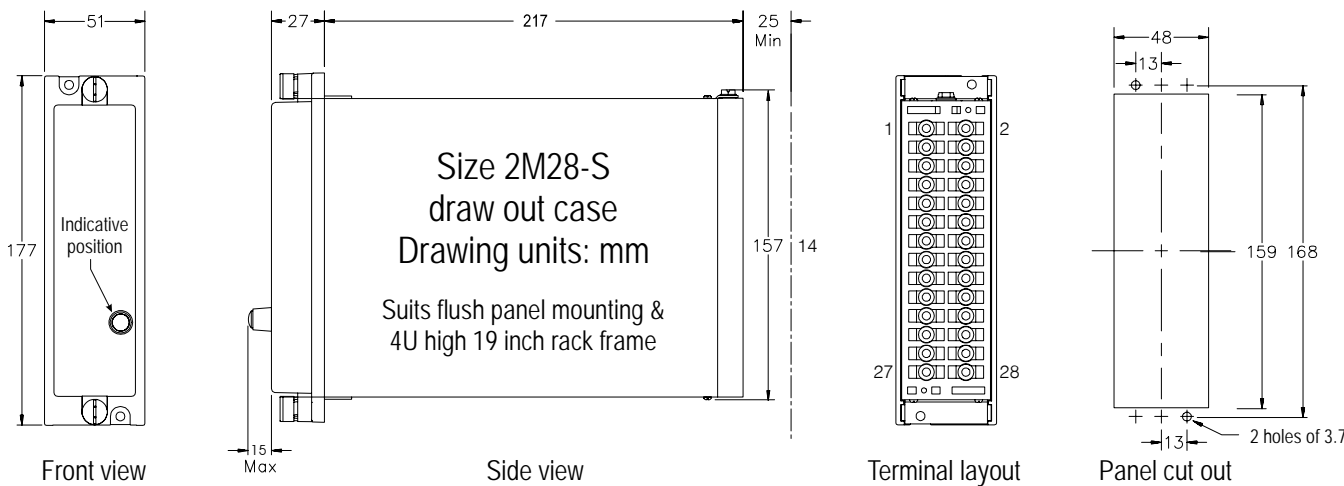
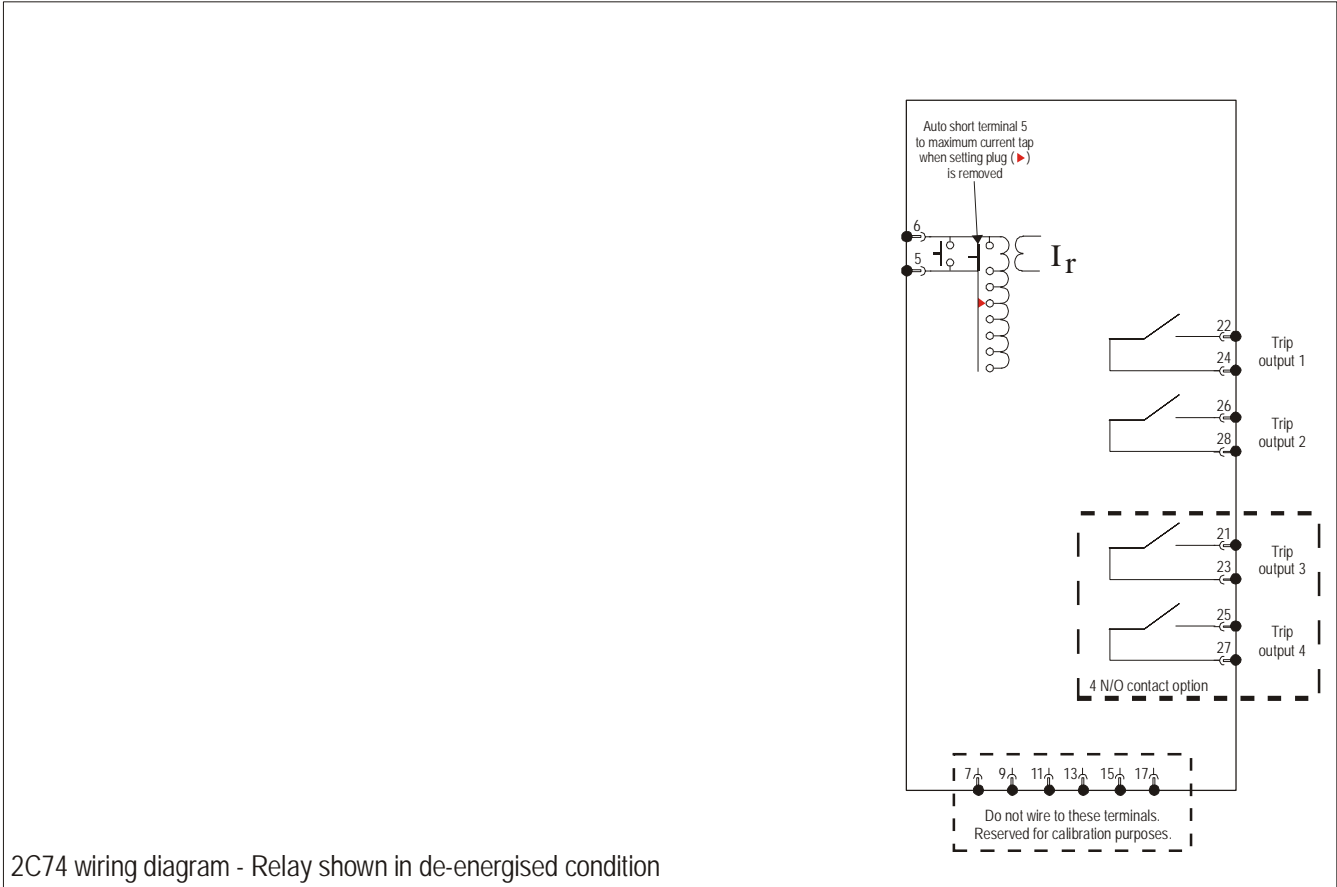
**HUMIDITY**

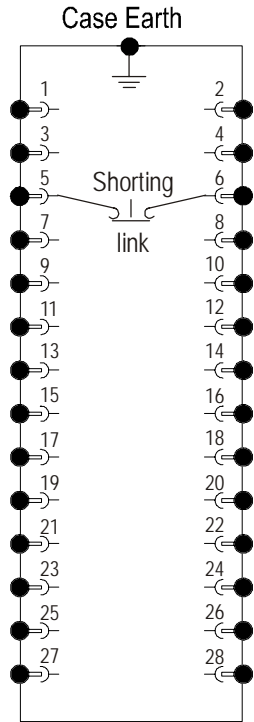
40 °C & 95% RH non condensing

**IEC68-2-1/2**

**CASE**

Size 2M28-S draw out case  
28 M4 screw terminals  
Flush panel mount or 4U high 1/8 width 19 inch rack mount





2M28 Case terminations (REAR VIEW)

## Ordering Information

Generate the required ordering code as follows: e.g. 2C74-BAA

General Type	Order Code		
	1	2	3
2C74	-		

### 1 SETTING RANGE

- A 0.1A to 0.4A in 50mA steps
- B 0.2A to 0.8A in 100mA steps
- C 0.5A to 2.0A in 250mA steps
- D 1.0A to 4.0A in 500mA steps
- E 2.5A to 10A in 1,250mA steps

### 2 OUTPUT CONTACTS

- A 2 N/O

### 3 RATED FREQUENCY

- A 50Hz
- B 60Hz

## **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 ISO9001-2000. 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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