

Features

- High speed operation
- High burden
- Self reset contacts (after approx. 2 sec relay drop out)*
- Hand reset flag indicator
- 5 or 10 contacts
- 2HSM521 specification

* Drop out delay requires an auxiliary supply connection

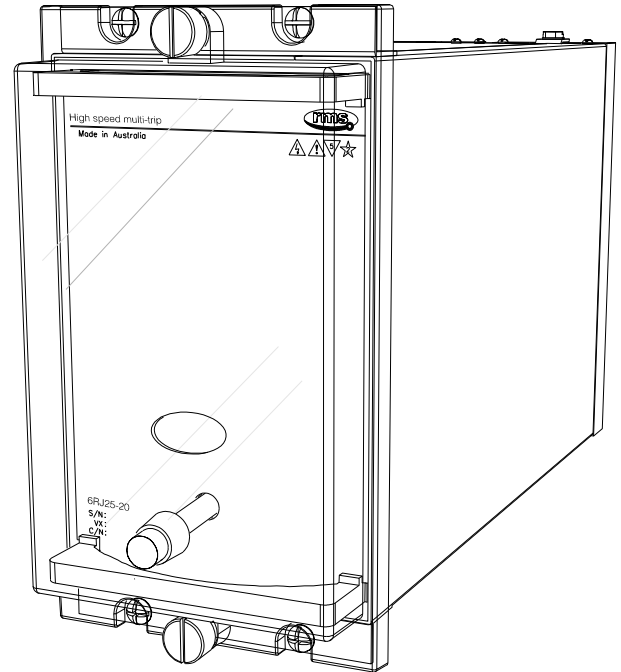
Application

The effect of a fault on a power system is dependent on the speed with which the fault can be detected & isolated. The 6RJ Series multi-contact high-speed trip relays are used for this isolating function providing simultaneous tripping outputs.

A high speed coil provides fast operation (<10ms at nominal voltage), with specially constructed anti bounce buffers ensuring effective damping of the contacts to avoid excessive bounce.

6RJ22

High Burden Self Reset High Speed Trip Relay



4M28 draw out case

High Burden 5 & 10 Contact Tripping Relay

The 6RJ22 is a high burden self reset high speed tripping relay suitable for application in high security circuit breaker tripping circuits & where the initiating contact may be remote from the relay. The high burden may also allow the satisfactory operation of external series elements.

High burden tripping relays are designed to withstand the 10uF capacitor discharge test such that the relay will not operate when a 10uF capacitor charged to 120% of nominal operating voltage is applied across the coil of the relay.

The high speed relay coil is automatically economized by an integrated economizing circuit once the relay has picked up.

A delay release element provides an approximate 2 sec contact reset delay upon removal of the relay operate voltage.

The contacts & trip flag indication operate on application of a control voltage. Contacts are reset after removal of the relay operate voltage and an approximate 2 sec delay.

The flag is reset using the front panel push button provided the contacts are in the reset position.

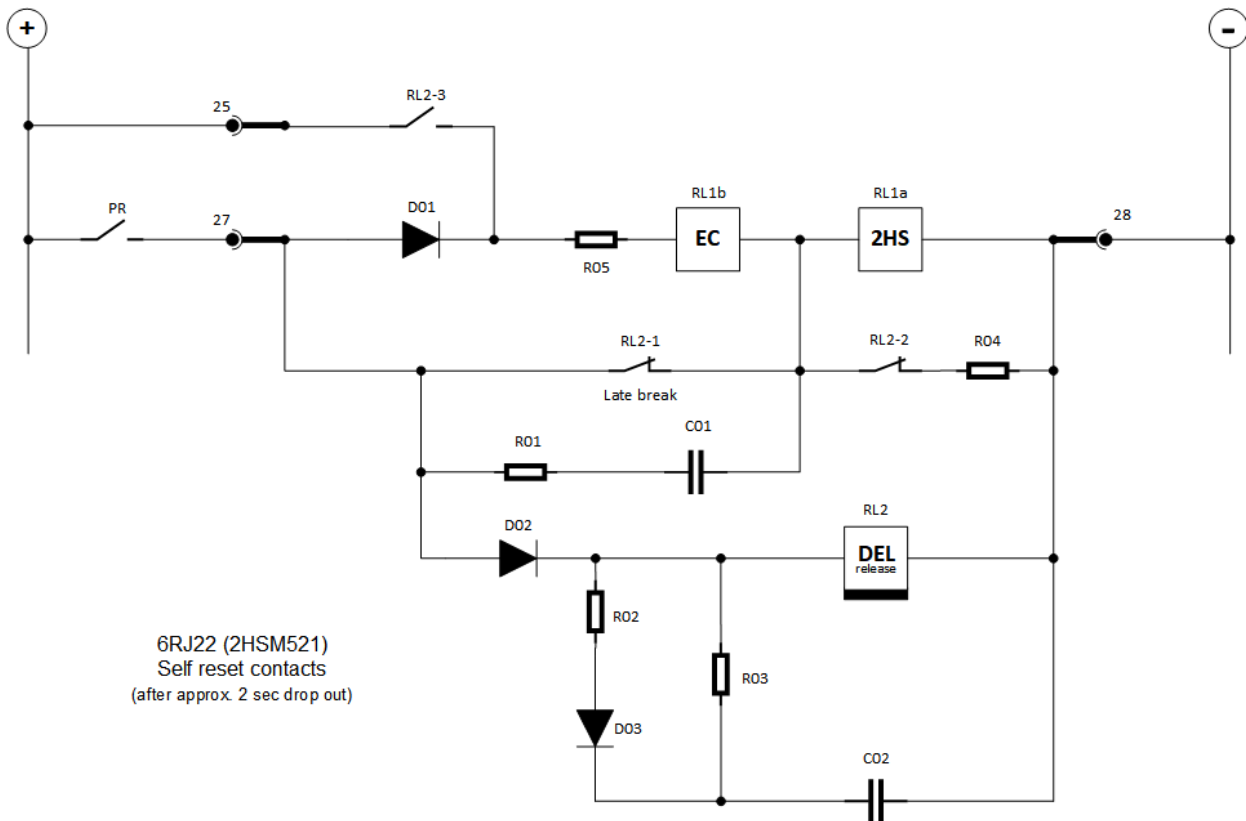
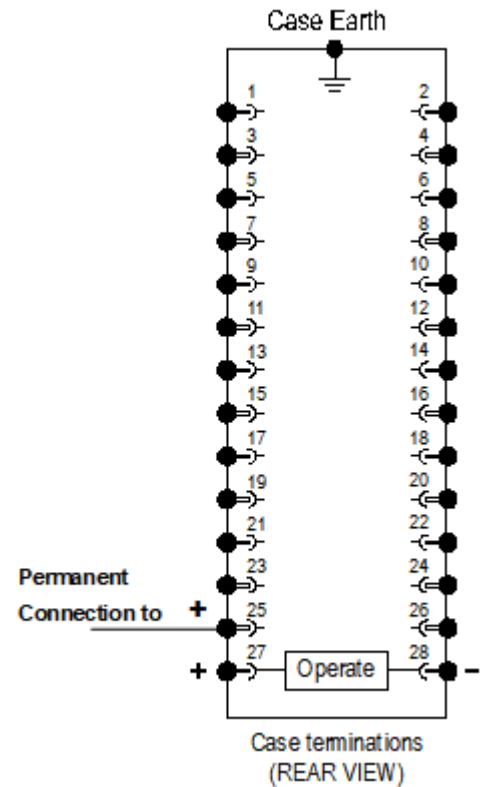
Terminal Wiring

6RJ22-5 Terminal Numbers

Contacts	1-3	2-4	5-7	6-8	9-11
5M	M	M	M	M	M
4M+1B	M	M	M	M	B
3M+2B	M	M	M	B	B
2M+3B	M	M	B	B	B
1M+4B	M	B	B	B	B
5B	B	B	B	B	B

6RJ22-10 Terminal Numbers

Contacts	1-3	2-4	5-7	6-8	9-11	10-12	13-15	14-16	17-19	18-20
10M	M	M	M	M	M	M	M	M	M	M
9M+1B	M	M	M	M	M	M	M	M	M	B
8M+2B	M	M	M	M	M	M	M	M	B	B
7M+3B	M	M	M	M	M	M	M	B	B	B
6M+4B	M	M	M	M	M	M	B	B	B	B
5M+5B	M	M	M	M	M	B	B	B	B	B
4M+6B	M	M	M	M	B	B	B	B	B	B
3M+7B	M	M	M	B	B	B	B	B	B	B
2M+8B	M	M	B	B	B	B	B	B	B	B
1M+9B	M	B	B	B	B	B	B	B	B	B
10B	B	B	B	B	B	B	B	B	B	B



Relay circuit diagram

OPERATING BURDEN (Burden during pick up at nominal)
 High burden relays: 150W Maximum

OPERATED BURDEN (Burden after pick up at nominal)
 Self reset contacts: 15W Maximum

COIL THERMAL RATING

All operate circuits are designed to withstand continuous application of 120% of nominal voltage. The high speed operate coil element (150 watt max.) has a thermal rating of 30 seconds, however this is protected by use of the series economy coil.

CONTACT OPERATION

Self reset contacts. N/O contacts pick up when the relay is energised & drop out following an approx. 2 sec delay when the operate voltage is removed.

OPERATING TIME

Less than 10ms at nominal rated operating voltage.

FLAG OPERATION

Drops on coil energisation.
 Hand reset when the contacts are in the reset position.

OPERATING VOLTAGE RANGE

Guaranteed operation between 65% & 120% of nominal rated operating voltage.

Note: The 65% of nominal value allows for correct operation of the tripping systems even when there is a loss of battery charger supply for considerable periods.

To ensure guaranteed operation at 65% of nominal voltage the relay is manufactured to operate at a lower level to guarantee operation if the voltage falls to 65% of nominal voltage. Consequently, it will be found that these relays will operate below 65% of nominal voltage, this is normal and correct.

The 65% of nominal voltage figure does not indicate the relay pickup voltage.

RESET VOLTAGE

Self reset relays will reset at not less than 5% of nominal rated operate voltage. Note there is an approx. 2 sec delay from when the operate voltage is removed and the relay drops out.

AC VOLTAGES

Standard 6RJ relays are not intended for operation with AC voltages. Application of continuous AC voltage below the pick up level will cause excessive power dissipation in the capacitor discharge resistor & likely result in thermal damage to the device.

NOMINAL OPERATING VOLTAGES

24, 32, 48, 110, 125, 220, 240 & 250V DC available.

MINIMUM OPERATING CURRENT

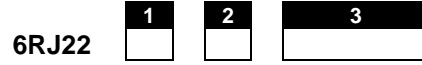
High burden relays: 100mA

CONTACTS

5 or 10 contacts
 User to specify combination of make & break contacts

Ordering Codes

Generate the required ordering code as follows:
 e.g. 6RJ22-10-D-8M2B



1 NUMBER OF CONTACTS

- 5 5 contacts
- 10 10 contacts

2 NOMINAL OPERATE VOLTAGE

- | | |
|-----------|-----------|
| A 24V DC | E 125V D |
| B 32V DC | G 220V DC |
| C 48V DC | H 240V DC |
| D 110V DC | F 250V DC |

3 CONTACT ARRANGEMENT (Not to exceed maximum)

Specify the number of "MAKES" followed by M; i.e. 8M
 Specify the number of "BREAKS" followed by B; i.e. 2B

6R RELAY CONTACT RATINGS

Make & Carry Continuously

3,000 VA AC resistive with maximums of 660V & 12A
 3,000 W DC resistive with maximums of 660V & 12A

Make & Carry for 3 Seconds

7,500 VA AC resistive with maximums of 660V & 30A
 7,500 W DC resistive with maximums of 660V & 30A

AC Break Capacity

3,000 VA AC resistive with maximums of 660V & 12A

DC Break Capacity (Amps)

Voltage		24V	48V	125V	300V
Resistive rating		12	2	0.5	0.3
L/R=40ms	Maximum break	12	1	0.25	0.15

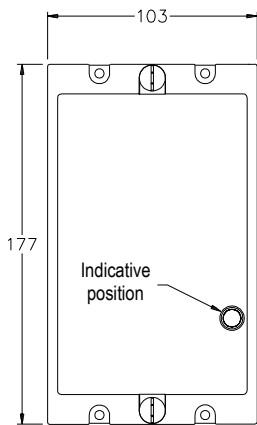
INSULATION WITHSTAND in accordance with IEC 255-5:

2KV RMS & 1.2/50 5KV impulse between:

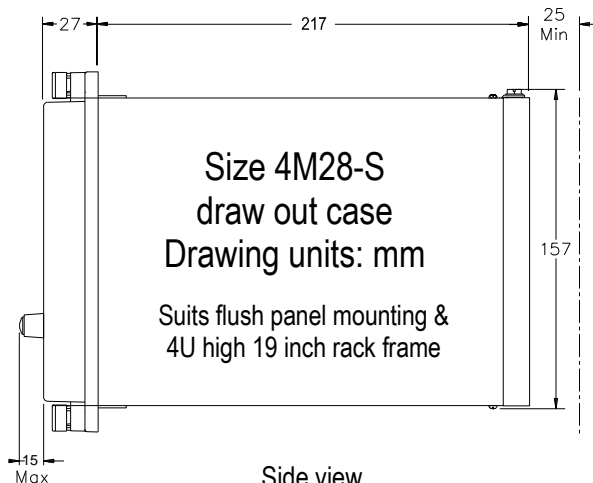
- ◆ all terminals & frame
- ◆ each contact group
- ◆ all contacts & coil

CASE SIZE

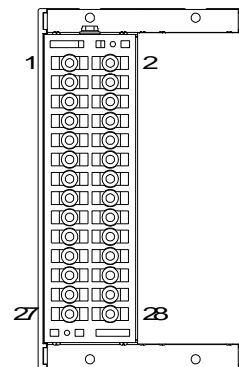
4M28-S draw out case



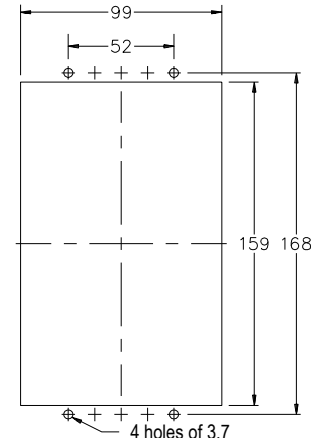
Front view



Side view



Terminal layout



Panel cut out

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