

High Speed Interposing Relay

The 6RZ Series comprises a range of compact low burden interposing relays for power utility protection and control applications.

- > <8ms and <30ms performance versions
- > Single and dual element versions
- > Draw out case
- > Flush panel or rack mount
- > Made in Australia



Cross Reference

	6RZ Code
MVAZ09	6RZ09
MVAZ19	6RZ19
MVAZ29	6RZ29



Features

- > Optional pick-up LED indicators
- > Optional contact configuration
- > Optional input shunt resistor
- > Low burden
- > <8ms & <30ms pick-up time versions
- > Size 2M28-S draw out case

Description

The 6RZ Series are *All or Nothing* relays housed in a size 2 draw out case for rack or flush mounting.

6 contacts per element are provided:

- 2 N/O + 4 N/C
- 4 N/O + 2 N/C
- 6 N/O

Three main versions are available:

6RZ09

A single element relay with an operate time of <8ms.

6RZ19

A two element relay with an operate time of <30ms.

6RZ29

A two element relay with an operate time of <8ms.

Application

Contact multiplication and isolation of input and output signals.

Options

Operate LED	One per element
Input shunt resistor	<p>Quantity: One per element</p> <p>Function: Allows a small current to flow in the operate circuit for voltages below the relay minimum operate threshold. This current may be used to operate an external low power LED to signal that a voltage is applied to the 6RZ element.</p> <p>Value : 125V dc 22K ohm</p> <p>Rating: 2W</p>

Operate Voltage

Nominal Operate Voltage	125V dc
Minimum Operate Voltage	105V dc
Non-operate Voltage	65V dc
Maximum Voltage	140V dc
Minimum Dropout Voltage	15V dc
Burden	
6RZ09, 19, 29 at 125V dc:	<7W per element
Input shunt resistor:	Add 0.75W per element

Operate Time

6RZ09	
Class	Very fast
Operate Time	<8ms
Release Time	15ms
6RZ19	
Class	Fast
Operate Time	<30ms
Release Time	15ms
6RZ29	
Class	Very fast
Operate Time	<8ms
Release Time	15ms

Contact Ratings

Maximum Contact Power	300W resistive 225W inductive L/R = 7ms
Maximum Break Capacity 125V dc L/R = 40ms	0.2A
Make and Carry 125V dc resistive	1A continuous 15A for 1s 30A for 200ms
Make and Carry 125V dc L/R = 0ms	25A for 200ms
AC Resistive	10A
Minimum Load	30mA / 24V dc

Insulation

Standard	IEC 60255-5	
Type	Level	
Any Terminal and Earth	2.0kV ac rms for 1min	
	5.0kV 1.2/50us 0.5J	
Between Independent Circuits	2.0kV ac rms for 1min	
	5.0kV 1.2/50us 0.5J	
Across Normally Open Contacts	1.0kV ac rms for 1min	

High Frequency Disturbance

Standard	IEC 60255-22-1	
Type	Level	Variation
Common (Longitudinal)	2.5kV	≤5%
Differential (Transverse)	1.0kV	≤5%

Electrostatic Discharge

Standard	IEC 60255-22-2 Class 3	
Type	Level	Variation
Contact Discharge	8.0kV	≤5%

Fast Transients

Standard	IEC 60255-22-4 Class A	
Type	Level	Variation
5/50ns 100kHz	4.0kV	≤5%

Surge Immunity

Standard	IEC 60255-22-5	
Type	Level	Variation
Between all Terminals and Earth	4.0kV	≤10%
Between any Two Independent Circuits	2.0kV	

Conducted Radio Frequency Interference

Standard	IEC 60255-22-6	
Type	Level	Variation
0.15 to 80MHz	10V	≤5%

Radiated Immunity

Standard	IEC 60255-22-3 Class III	
Type	Level	Variation
80MHz to 2,760MHz	10V/m	≤5%

Temperature

Standard	IEC 60068-2-1/2
Operating Range	-10 to +55 degrees Celsius
Storage Range	-25 to +70 degrees Celsius

Humidity

Standard	IEC 60068-2-78
Operating Range	40 degrees Celsius and 93% RH non condensing

IP Rating

Standard	IEC 60529
Installed	IP5x

Vibration - Sinusoidal

Standard	IEC 60255-21-1 Class I	
Vibration Response	0.5gn	≤5%
Vibration Endurance	1.0gn	≤5%

Shock and Bump

Standard	IEC 60255-21-2 Class I	
Shock Response	5gn, 11ms	≤5%
Shock Withstand	15gn, 11ms	≤5%
Bump Test	10gn, 16ms	≤5%

Seismic

Standard	IEC 60255-21-3 Class I	
Seismic Response	1gn	≤5%

Mechanical Classification

Durability	>10 ⁶ operations at no load
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Contact Configuration		Top Element Case Terminal Number Pairs					
		1-3	5-7	9-11	2-4	6-8	10-12
2	2M+4B	B	B	M	B	B	M
4	4M+2B	B	M	M	B	M	M
6	6M	M	M	M	M	M	M

Contact Configuration		Bottom Element Case Terminal Number Pairs					
		15-17	19-21	23-25	16-18	20-22	24-26
2	2M+4B	B	B	M	B	B	M
4	4M+2B	B	M	M	B	M	M
6	6M	M	M	M	M	M	M

Standard Wiring Configuration

The case termination diagrams depicts the rear screw terminals and position of the operate coils for all 6RZ relay versions.

The contact function between each pairs of terminals is determined by the order code selected.

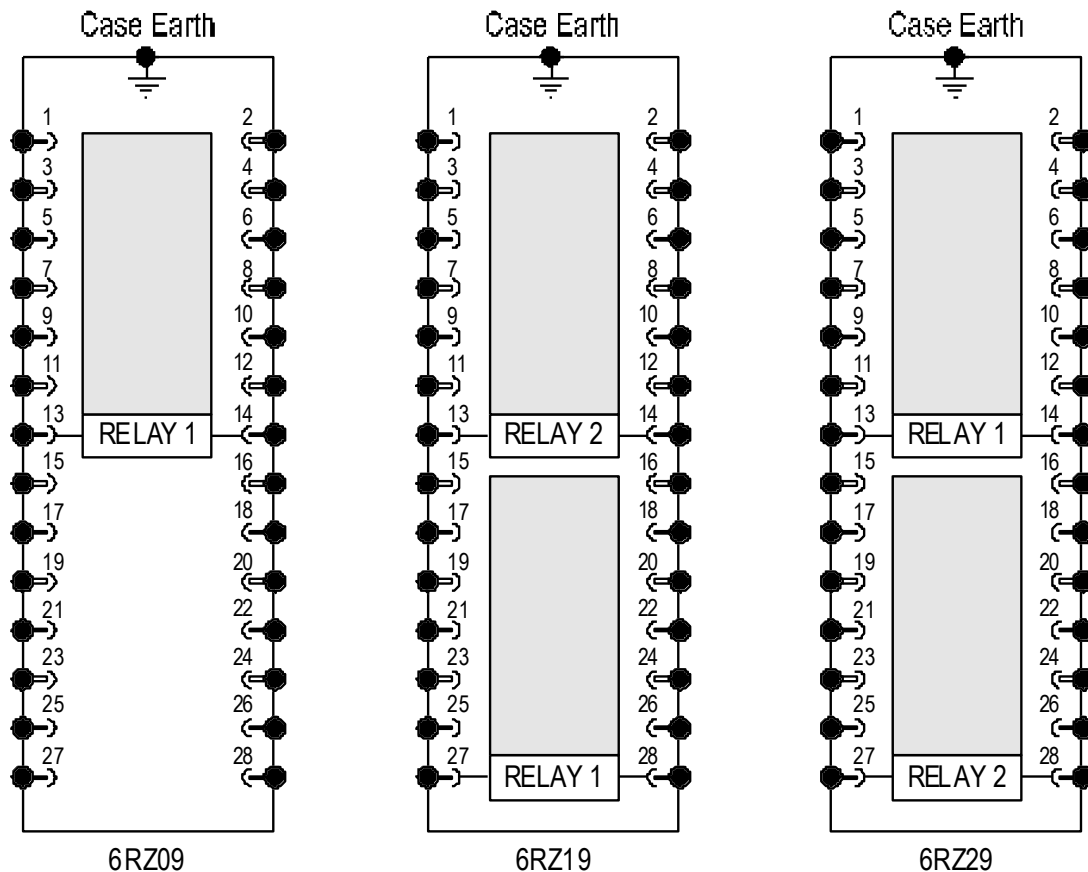
M Normally open Make (M) contact

This contact closes when the relay operate coil is energized.

B Normally closed Break (B) contact

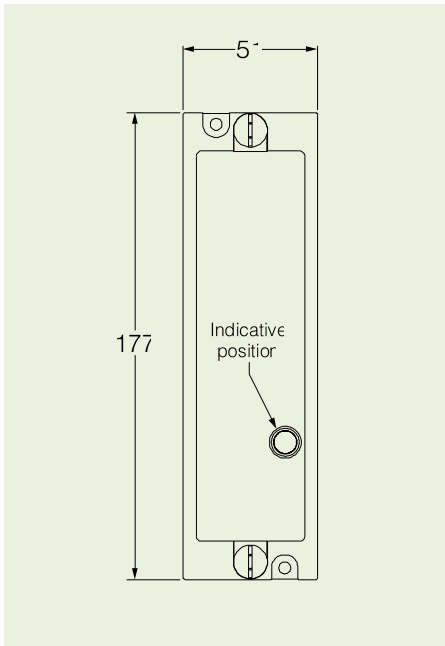
This contact opens when the relay operate coil is energized.

Table 1 provides the terminal wiring assignment for each of the contact configurations available with the 6RZ relay.

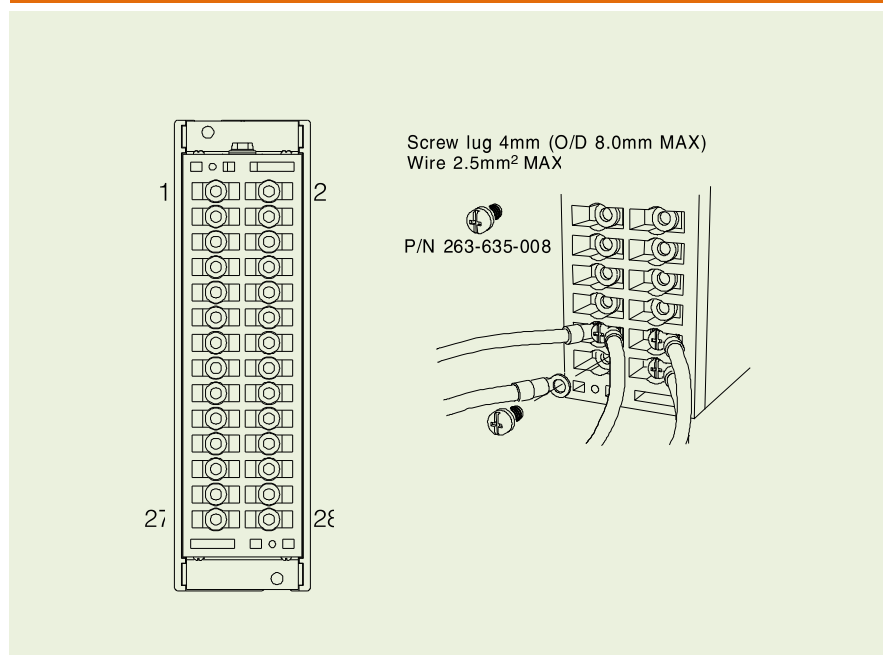


Case terminations
(REAR VIEW)

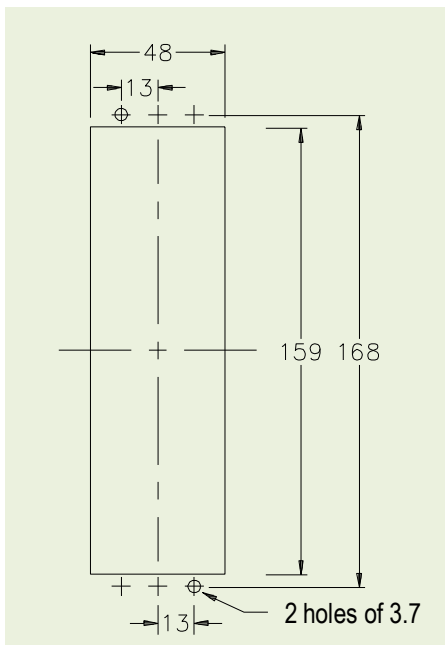
Front View



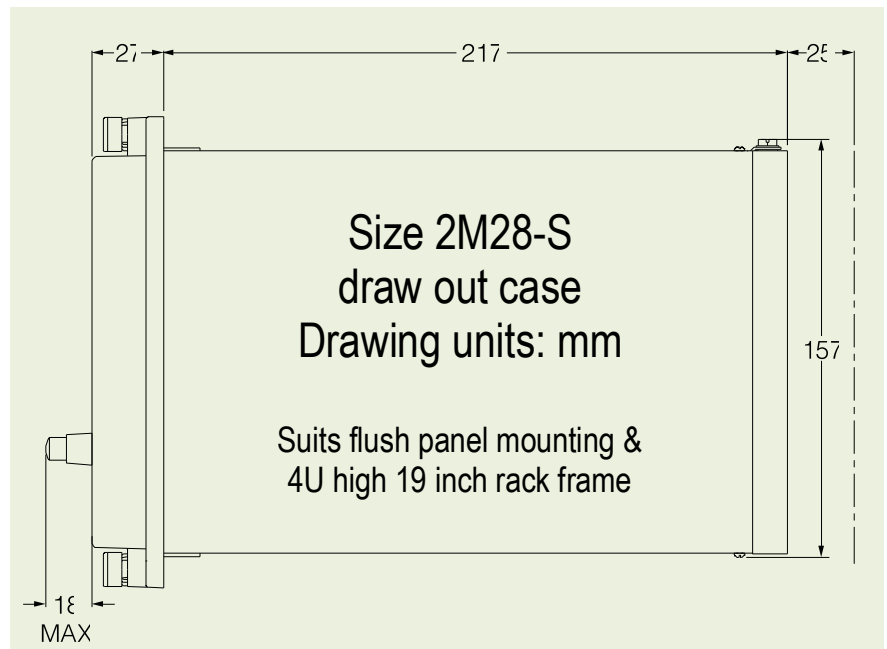
Rear View



Panel Cut-out



Side View



6RZ Order Codes

6RZ -					
Configuration	09				Single element - <8ms P/U
	19				Dual element - <30ms P/U
	29				Dual element - <8ms P/U
Nominal Operate Voltage		E			125 V dc
Contact Configuration per element			2		2 N/O + 4 N/C
			4		4 N/O + 2 N/C
			6		6 N/O
Options (Select all option codes required)				-	No options required
				L	Coil operation LED
				R	Input shunt resistor



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Relay Monitoring Systems Pty Ltd

6 Anzed Court
Mulgrave, Victoria 3170
AUSTRALIA
Ph: +61 3 8544 1200
Fax +61 3 8544 1201
Email: rms@rmspl.com.au
www.rmspl.com.au
www.relays.com.au

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