

MVAJM 11, 13, 14, 15, 25, 41, 45

High Speed Tripping and Control Relays



Features

- High speed operation.
- High degree of mechanical stability.
- Positive action without chatter.
- Proof against high capacitance discharge currents.

Models available

Type MVAJM relays may broadly be divided into three groups:

- High burden tripping relays
- Low burden tripping relays
- Control relays

Technical data

Coil rating
Refer Table 2.

Voltage band for satisfactory

operation

50% to 120% of rated voltage for trip relays. 75% to 120% for MVAJM 14.

Operating time

10 milliseecs nominal at rated voltage

Contacts

The number of contacts available is shown in Table 2.

Insulation

The relay meets the requirements of IS 3231 -1965/IEC/255-5 Series C- 2KV for 1 minute.

Thermal rating

Relays with hand reset contacts:

Relay coil short time rated. Hand reset coil cut off contact provided in series with operating coil.

Relays with self reset contacts:

120% of rated voltage, continuous.

Burden

Refer Table 2.

Customer Benefits

- Directly operates circuit breaker trip coils
- High reliability
- High speed operation
- Immunity to wiring capacitance discharge



Table 1 lists the general characteristics and includes information on how the relay burden is modified at or just after operation. ‘Economy’ indicates that the burden is reduced to a low value. Instantaneous cut-off is a feature of some hand and electrically reset elements and reduces the burden to zero.

SL. NO.	RELAY TYPE	CONTACT MECHANISM	OPERATION INDICATOR FACILITY	CUT-OFF	GROUP	CASE SIZE
1	MVAJM 11	S/R	Available (H/R)		Low burden	Size 2
2	MVAJM 13	H/R	Available (H/R)	Instantaneous	Low burden	Size 2
3	MVAJM 14	E/R	Available (H/R)	Instantaneous	Low burden	Size 4
4	MVAJM 15	H/R	Available (H/R)	Instantaneous	High burden	Size 2
5	MVAJM 25	H/R	Available (H/R)	Instantaneous	High burden	Size 4
6	MVAJM 41	S/R	Available (H/R)	Economy	High burden	Size 6
7	MVAJM 45	H/R	Available (H/R)	Instantaneous	High burden	Size 8

KEY: i) S/R: Self reset ii) H/R: Hand reset iii) E/R: Electrical reset

High burden tripping relays

Types MVAJM 15, 25, 41, 45

Application

These relays are suitable for use in high security circuit breaker tripping circuits. In particular they can be used in distributed tripping or control relay contact logic schemes where the initiating contact may be remote from the relay.

The high burden provides immunity to capacitance discharge currents, which can result at the inception of an earth fault on battery wiring and immunity to the subsequent leakage current.

The high burden relays are recommended for use with series connected operation indicators, supervision relays and series seal-in units on protective relays.

Low burden tripping relays

Types MVAJM 11, 13

Application

These relays are suitable for applications where immunity to capacitance discharge and high minimum operation current are not required. These relays are generally used when a number of simultaneous operations are to be initiated by a single protective relay having insufficient contacts of its own and where series connected operation indicators are not used.

Control relay Type MVAJM 14

Application

This is an electrically reset control relay. The relay is meant for switching the secondary circuits of current transformer in busbar protection. Also wherever “latch-in” type of control relay is required for contact multiplication control schemes, relay type MVAJM 14 can be employed.

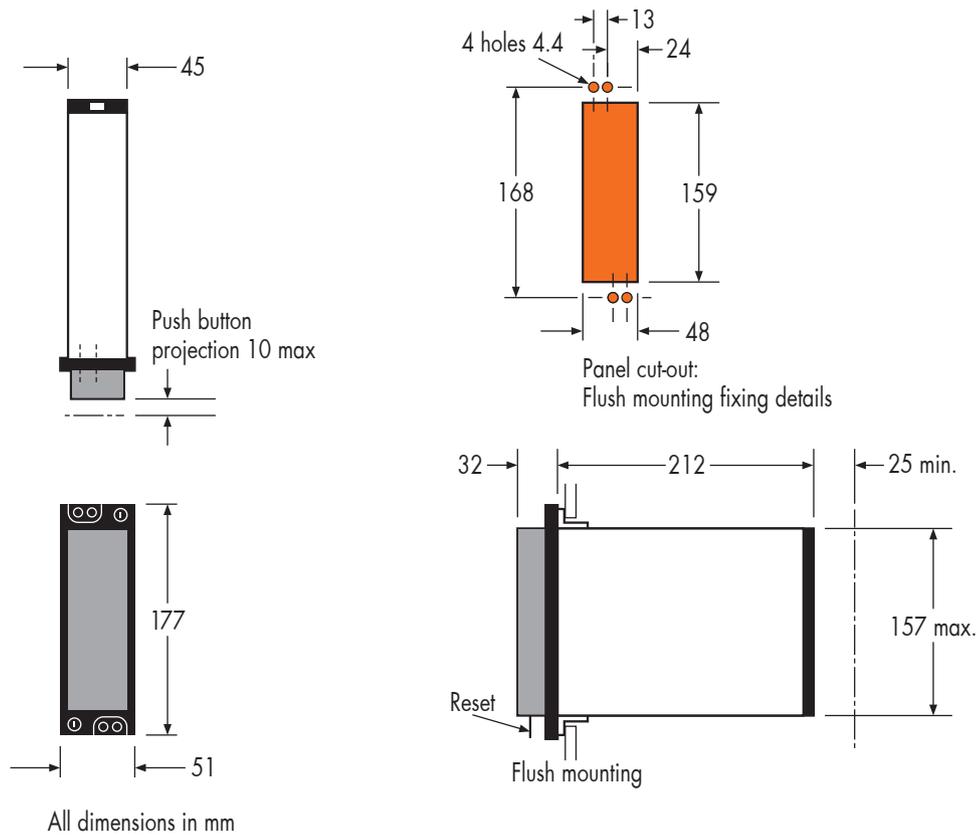
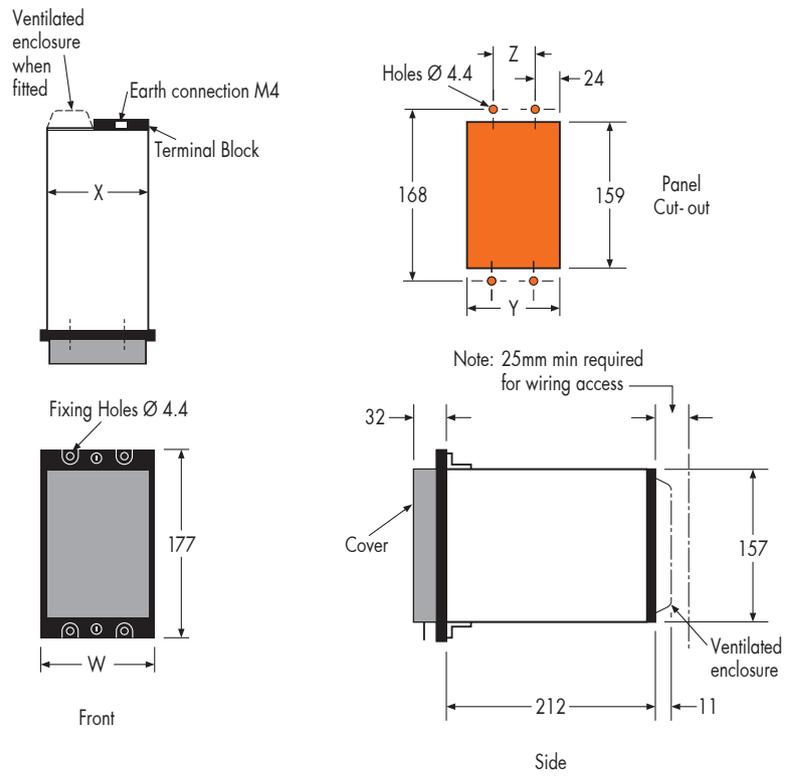


Figure : Case Outline Size 2



Case Size					
Dimensions in mm	3	4	6	8	16
w	77	103	155	206	414
x	71	97	149	200	408
y	73	99	151	203	411
z	26	51.8	103.6	155.4	362.6

Figure: Case and panel cut-out dimensions for relay case sizes 3 to 16

Table 2

SL.NO.	RELAY TYPE	STANDARD COIL RATING	NO. OF OUTPUT CONTACTS	STANDARD CONTACT CONFIGURATION	BURDEN
1	MVAJM 11	100/125V dc	4	4M	14/16W
		200/250V dc	4	4M	28/47W
2	MVAJM 13	100/125V dc	4	2M+2B, 3M+1B	18W
		200/250V dc	4	2M+2B, 3M+1B	37W
3	MVAJM 14	30V dc	8	5M+3B	20W
		100/125V dc	8	8M	20W
		200/250V dc		5M+3B, 4M+4B, 3M+5B	
4	MVAJM 15	100/125V dc	4	4M 3M+1B,	150W
		200/250V dc		2M+2B	
5	MVAJM 25	100/125, 200/250V dc	8	6M+2B	150W
6	MVAJM 41	100/125, 200/250V dc	13	13M	150W
7	MVAJM 45	100/125, 200/250V dc	16	13M+3B	150W

KEY: M - Make B - Break

Note: Other contact configurations are also available on request.

Contact ratings

	MAKE AND CARRY CONTINUOUSLY	MAKE AND CARRY FOR 3 SECONDS	BREAK
AC	1250VA with maxima of 5A and 660V	7500VA with maxima of 30A and 660V	1250VA with maxima of 5A and 660V
DC	1250W with maxima of 5A and 660V	7500W with maxima of 30A and 660V	100W (resistive) 50W (inductive) with maxima of 5A and 660V

Information required with order

1. Type of relay
2. Coil voltage rating
3. Number of 'make' and 'break' contacts
4. Whether operation indicator required
5. Case size

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