

# Megawin Switchgear

## MVAA Auxiliary Relays



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### Application

Used in control, Alarm, Indication and other auxiliary circuits of D.C. Systems.

### Features

- Robust in construction and designed for trouble free operation

### General

MVAA type relays are voltage operated. The relays consist of attracted armature units and are compact in design. They ensure positive action and a high degree of mechanical stability.

### Technical Data

#### Coil Rating

24, 30, 50, 110 or 220 Volts DC as standard, other voltage ratings are available on request.

#### Voltage Band (for Satisfactory Operation)

70 to 120% of rated voltage

#### Operating Time

Voltage operated units have a minimum operating time of approximately 0.010 second at nominal voltage. The actual operating time depend on the coil rating and the number of contacts. Normally, relays employing a resistor in series with the coil and having only two pairs of contacts have the shortest operating times. Operating times increase for voltages below nominal but the reset times are independent of applied voltage.



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D.C. Operated relays can be fitted with copper slug to give a time delay in operation and reset. Either one or two slugs may be fitted depending on the time delay required. Relays are continuously rated when fitted with one slug or tubular slug and short time rated when fitted with two slugs. If the operating time is important, this should be specified in the enquiry

## Burden

MVAA-D.C.3.0 Watts upto 150 Volts. For voltages above 150 volts, a resistor is connected in series with the coil which increases the total burden progressively upto 8 watts at 660 volts.

## Contacts / Operating Indicators

Standard contacts are made of silver / copper alloy, normally open or normally closed. The relays can be supplied with self and / or hand reset contacts. They are designed for high reliability and low resistance. To break heavy or highly inductive DC Loads, heavy duty magnetic blow-out type contacts are recommended. These contacts use the magnetic field of a small permanent magnet to force the arc on to the arcing horns away from the contact tips. Standard contacts are break before make.

The ratings of standard and heavy duty blow-out magnet contacts are given in Table-2.

## Insulation

As per IS 3231 : 1986 / IEC 255-5 Series C – 2kV for 1 minute

## Technical Data

Relay Type	Standard Contacts	Contact Reset	Operation Indicator
MVAA11	2 NO + 2 C/O contacts	Self Reset	Mechanically operated hand reset
MVAA12	2 NO + 2 C/O (1NO + 1 C/O – S/R)	Self and hand Reset	Mechanically operated hand reset
MVAA13	2 NO + 2 C/O	Hand reset	Mechanically operated hand reset
MVAA21	2 NO + 2 C/O	Self Reset	Mechanically operated hand reset
MVAA23	2 NO + 1 C/O	Hand Reset	Mechanically operated hand reset
MVAA31	2 NO or 1 NO + 1 NC	Self Reset	Mechanically operated hand reset
MVAA33	2 NO or 1 NO + 1 NC	Hand Reset	Mechanically operated hand reset

## Contact Ratings – Table-2

Type of contact	Current	Make & carry continuous	Make & carry 3 Secs.	Break
Standard	DC	1250	7500W with max of 30a & 660V	100W (resistive) or 50W (inductive) with max of 5A & 660V
Heavy duty (relays with four pairs of contacts)	DC	1875 Watts with max.of 7.5A 660V	7500 with max of 30A and 660V	100W (inductive) of 200W (resistive) with max of 7A & 660V

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## Case and Finish

Relays are available in non-drawout cases of size ¼ N & ½ N. The cases are suitable for flush mounting and are finished bright back. Details of the number of units that can be accommodated the various sizes of non-drawout cases are given in Table – 3.

## Information required with order

- Type of relay (MVAA11 / MVAA12 / MVAA13 / MVAA21 / MVAA22 / MVAA23 / MVAA31 / MVAA32 / MVAA33)
- DC Auxiliary voltage
- Whether operation indicator required
- Number of make and break contacts (table-1)

## Dimensions and Weights – Table-3

Relay Type	Case Size	Maximum no: of units per case			Max. No. of Terminals	Maximum overall dimensions (mm)			Appx. Gross Weight * kg
		Each with 2NO + 2NC Contact	Each with 2NO + 1CO Contact	Each with 2 Pair of Contact		H	W	D	
MVAA11/12/13	1/4 M	1	--	--	10	118	105	115	1.5
MVAA21/23	1/2 M	--	2	--	20	124	153	130	2.5
MVAA31/33	1/2 M	--	--	3	20	124	153	130	2.5



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