VAA
Auxilliary Relays

Type VAA
Auxiliary Relays

Features

- Simple and robust construction
- Positive action and high mechanical stability
- Heavy duty contacts available, where required
- Slugged relays with delay on operation / reset available in dc version.

Application

Control, alarm, indication and other auxiliary duties in ac or dc systems.

The type VAA Plug-in-relay is specially designed for industrial control duties requiring repetitive switching operations. It is capable of providing over 5 million operations without servicing and will withstand an operation rate of upto 600 per hour.

General description

VAA relays are voltage operated relays.
The relays are attracted armature units of compact design with positive action and a high degree of mechanical stability. The relays can be supplied with self, or hand reset contacts and changeover contacts. See table 1

Standard contacts are of silver/copper alloy. They are shaped and positioned to ensure a reliable and law resistance normally open or normally closed contact. Standard VAA 11/21 relays are suitable for ac/dc supply and standard VAA 13/23 relays are suitable for dc supply only.

VAA 21/22/23 are double pole versions of VAA 11/12/13 respectively.

When it is necessary to break heavy or highly inductive dc loads, heavy duty magnetic blow out type contacts can be provided. These contacts use the magnetic field of a small permanent magnet to force the arc onto the arcing horns away from the contact tips. The breaking capacity of the heavy duty contact is shown by the curves in Figure 1.

Customer Benefits

- Auxiliary relay
- Simple and robust construction
- More number of contact configurations available with self / hand reset facility
- Operation annunciation in the form of flag
- Completely dust proof by IP5X class protection

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Auxiliary relays with delay on pick-up or drop-off can be supplied on specific request. Similarly relays with magnetic blow out contacts can also be supplied on specific request.

The standard VAA relays provide only instantaneous self or hand reset contacts.

To ensure a longer operating life, the tips of the silver contacts have a domed profile, the optimum design for the repetitive operation duties of industrial applications.

Although the standard designs are suitable for dc and full-wave rectified ac systems only, alternative versions for ac operation are available.

Technical data

Coil rating

VAA

24-30 or 48-50 or 110-125 or 220-250	ac or dc continuously rated

DC

VAA operates satisfactorily between 75% - 120% of rated volts.

AC

VAA operates satisfactorily between 80% - 115% of rated volts.

VAA plug in: 30, 50, 110 & 220V dc, other voltage on request.

Minimum operating voltage

Not greater than 70% voltage rating.

Operating times

VAA & VAA 'Plug' in:

15-20 ms typical minimum at nominal voltage.

Burdens

VAA 11
3 watts for 30, 125V
6 watts for 50, 250V
VAA ' Plug' in:
Nominal 3 watts

Contacts case & operation indicators

Relay type	Standard contacts	Contact reset	Case size	Operation indicator
VAA 11	2 N/O + 2 C/O	Self reset	1/4 N (15T)	Either no flag or a mechanically operated hand reset flag provided
VAA 12	4 pairs of any combination with a max. of 3 N/C	Self and hand reset	1 / 4 N or ID	Mechanically operated hand reset.
VAA 13	2 N/O + 2 C/O	Hand reset	1 / 4 N (15T)	Mechanically operated hand reset.

Contact ratings

Type of Contact	Current	Make and carry continuously	Make and carry for 3 seconds	Break
Standard	AC	1250VA with maxima of 5A and 660V	7500VA with maxima of 30A and 660V	1250VA with maxima of 5A and 660V
Standard	DC	1250W with maxima of 5A and 660V	7500W with maxima of 30A and 660V	100W (resistive) or 50W (inductive) with maxima of 5A and 660V

VAA 'Plug' in magnetic blow-out contact ratings

Make and carry continuously	Make and carry for 3 seconds	Break
1875W with maxima of 7.5A and 660V	7500W with maxima of 30A and 660V	Details on application. Please state duty etc.

Maximum rate of operations: 600 per hour

Insulation

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

Information required with order

1. VAA coil voltage rating, ac or dc
2. Whether operation indicator required
3. Case size for VAA 21/23 - ½ N or ID

The relays comply with the requirements of IS 3231 - 1965 and are suitable for use in normal tropical environments.

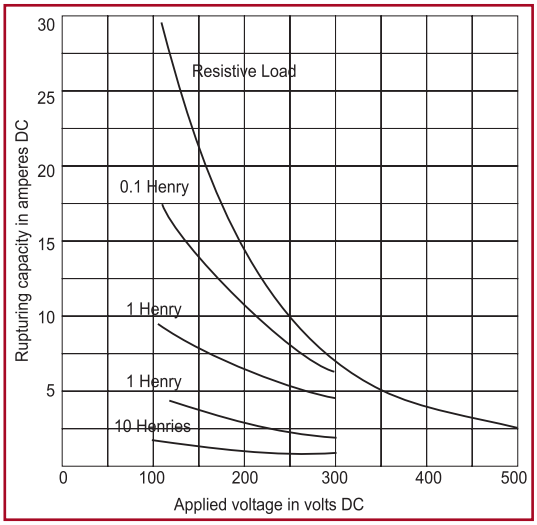

Figure 1:
Curve showing breaking capacity of magnetic blowout contacts

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