



VAA

Auxiliary Relays

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.

Description

Standard contacts are of silver/copper alloy. They are shaped and positioned to ensure a reliable and low 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.

VAA21/22/23 are double pole versions of VAA 11/12/13 respectively.
VAA 31/33 are Triple 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.

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.

Application

Control, alarm, indication and other auxiliary duties in ac or dc systems. The type VAA Plug-in-relays 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 of upto 600 per hour.

Features

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

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



Technical data

Coil Rating

DC
VAA operates satisfactorily between 75%-120% of rated volts.
AC
VAA operates satisfactorily between 80% -115% of rated volts.

Minimum Operating Voltage

Not greater than 70% voltage rating.

Operating Time

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



Cases

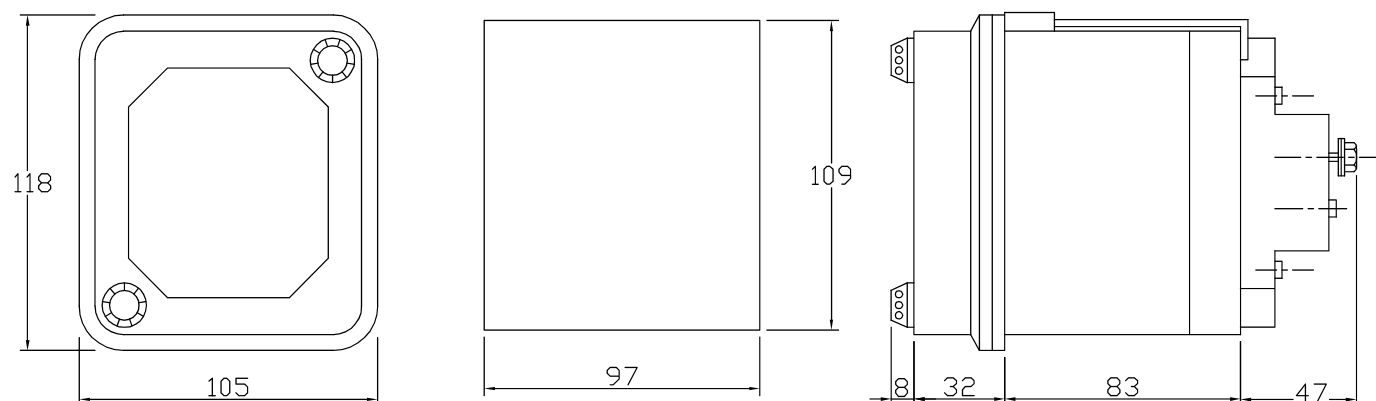


Figure 2 : Case and panel cut-out dimensions for case 1/4 N (all dimensions in mm)

Contacts Case & Operation Indicators

Relay type	Standard contacts	Contact reset	Case size	Operation indicator
VAA 11	6 N/O, 2 N/O + 2 C/O, 3 N/O + 3 N/C, 2 N/O + 4 N/C	Self reset	¼ N(15T)	Either no flag or a mechanically operated hand reset flag provided
VAA 12	4 N/O, 3 N/O + 1 N/C, 2 N/O + 2 N/C	Self and hand reset	¼ N(10T)	Mechanically operated hand reset
VAA 13	4 N/O, 3 N/O + 1 N/C, 2 N/O + 2 C/O	Hand reset	¼ N (15T)	Mechanically operated hand reset.

Contacts Ratings

	Make and carry continuously	Make and carry for 3 seconds	Break
AC	1250 VA with maxima of 5 A & 660 V	7500 VA with maxima of 30 A & 660 V	1250 VA with maxima of 5 A & 660 V
DC	1250 W with maxima of 5 A & 660 V	7500 W with maxima of 30 A & 660 V	100 W (resistive), 50 W (inductive) with maximum of 5 A & 660 V

Contact Ratings for VAA in Magnetic Blow-out

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

Maximum rate of operations: 600 per hour

Insulation

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

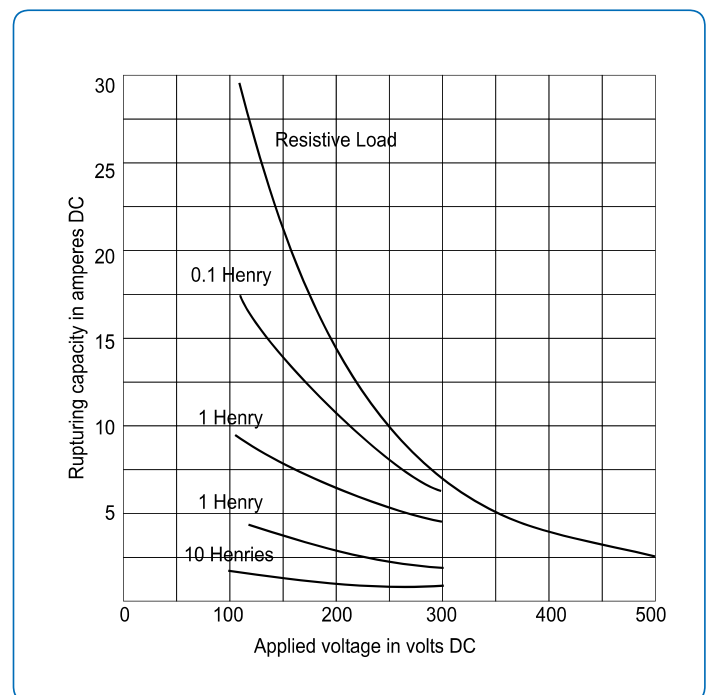


Figure 1 : Curve showing breaking capacity of magnetic blowout contacts

Information Required with Order

Relay Type:	VAA11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Case:	1/4N 15Terminals	YF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auxiliary Voltage:	24-30Vdc / 48-54Vdc	025	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	110-125Vdc / 220-250 Vdc	075	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	110-125Vac / 220-250 Vac	575	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Combination:	6 N/O	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2 N/O + 2 C/O	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 N/O + 3 N/C	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2 N/O + 4 N/C	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flag Option:	Without flag	A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	With flag	B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Issue:	Factory Define:	A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VAA 11 Without Time delay on Drop off

Relay Type:	VAA11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Case:	1/4N 15Terminals	YF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auxiliary Voltage:	110-125Vdc / 220-250 Vdc	875	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	110-125Vac / 220-250 Vac	775	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Combination:	2 N/O + 2 C/O	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flag Option:	Reverse flag	C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Issue:	Factory Defined	A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VAA 11 With Time delay on Drop-off - 100 ms±20 ms

Relay Type:	VAA12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Case:	1/4N 10Terminals	YF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auxiliary Voltage:	24-30Vdc	025	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	48-50Vdc	050	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	110-125Vdc	075	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	220-250Vdc	010	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Combination:	2N/O self reset 2N/O Hand reset	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2 N/O self reset 1 N/O 1N/C hand reset	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1 N/O 1 N/C self reset 1 N/O 1N/C hand reset	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flag Option:	With flag	B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Issue:	Factory Define:	A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

To order VAA 12

Relay Type:	VAA13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Case:	1/4N 15Terminals	YF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auxiliary Voltage:	24-30Vdc/48-50Vdc	025	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	110-125Vdc/220-250Vdc	075	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	110-125Vac/220-250ac	575	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Combination:	4 N/O	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 N/O 1N/C	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2 N/O 2 C/O	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flag Option:	With flag	B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Issue:	Factory Define:	A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

To order VAA 13

For more information please contact
GE
Grid Solutions

Worldwide Contact Center

Web: www.GEGridSolutions.com/contact
Phone: +44 (0) 1785 250 070

GEGridSolutions.com

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