G9EA-1(-B)-AQ

DC Power Relay (80A type)

Capable of Interrupting High-voltage, High-current Loads

- **A compact relay (L73 x W36x H67.2 mm) capable of switching DC400V, 80A. (Capable of interrupting max. DC400V, 500A)**
- **The switching section and driving section are gas-injected and hermetically sealed, allowing these compact relays to interrupt high-capacity loads. The sealed construction also achieves no arc space, space saving, and helps ensure safe applications.**
- **Downsizing and optimum design allow no restrictions on the mounting direction.**

■ Type standard

G9EA-□-□-□-□

① ② ③ ④

	Classification	Symbol	Symbol Meaning of the symbol
①	Number of contact poles	1	1 pole
②	Contact structure	Blank	1a contact
③	Coil terminal form	B	M3.5 screw terminal
		Blank	Lead wires
④	Automotive use	AQ	Available for automotive use

■ Classification

Classification	Terminal form		Contact structure	Rated coil voltage	Type name
	Coil terminals	Contact terminals			
Switching / current conduction type	Screw terminals	Screw terminals	1a	DC12V DC24V	**G9EA-1-B-AQ**
	Lead wires				**G9EA-1-AQ**

Note:1. Come with two M5 screws for main terminals(contacts).
2. Come with two M3.5 screws for screw-type coil terminal products.
3. If you are interested in a connector joint for F-coil terminal, please contact our sales representatives.

■ Ratings

● Operation coil

Rated voltage (V)	Rated current (mA)	Coil resistance (Ω)	Operating voltage (V)	Release voltage (V)	Maximum voltage (V)	Power consumption (W)
DC 12	485	26.2	75% or less of rated voltage	8% or more of rated voltage	130% of rated voltage (at 23°C within 10min.)	Approx.5.5
DC 24	229	104.7				

Note:1. Values of the rated current and the coil resistance are at coil temperature of +23°C, and have a tolerance of ±10%.
2. The figures for the operating characteristics are at a coil temperature of 23°C.
3. Value of the maximum voltage is the maximum voltage that can be applied to the relay coil.

● Switching area

Item	Resistance load
	G9EA-1(-B)-AQ
Rated load	DC400V 80A
Rated current	80A
Maximum switching voltage	400V
Maximum switching current	80A

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■ Performance

Item		G9EA-1(-B)-AQ
Contact resistance *1		30 mΩ or less (Typ. 0.2 mΩ)
Contact voltage drop		0.1V or less (at 80A)
Operating time		50 ms or less
Release time		30 ms or less
Insulation resistance *2	Between coil and contacts	1,000 MΩ or more
	Between homopolar contacts	1,000 MΩ or more
Withstand voltage	Between coil and contacts	AC2,500V for 1min.
	Between homopolar contacts	AC2,500V for 1min.
Vibration tolerance	Durability	5 to 200 to 5Hz Single amplitude 0.75mm (Acceleration: 2.94 to 88.9m/s^2)
	Malfunction	5 to 200 to 5Hz Single amplitude 0.75mm (Acceleration: 2.94 to 88.9m/s^2)
Shock resistance	Durability	490 m/s^2
	Malfunction	100 m/s^2
Mechanical endurance *3		200,000 times or more
Electrical endurance (Resistance load) *4		DC400V 80A 1,000 times or more
Short time carry current		120A (for 15 min.)
Maximum interruption current		DC400V 500A (3 times)
Overload interruption		DC400V 120A (50 times or more)
Reverse polarity interruption		DC400V −120A (50 times or more)
Minimum load current		1A
Ambient temperature		−40 to +85°C (with no icing or condensation)
Ambient humidity		5% to 85%RH
Weight (including accessories)		Approx. 320g

Note: All values above are in early time under an ambient temperature of +23°C unless stated.
*1. Measurement condition: By voltage drop method at DC5V 1A.
*2. Measurement condition: By insulation resistance at DC500V.
*3. Test condition / Switching frequency: 3,600 times/hour.
*4. Test condition / Switching frequency: 60 times/hour.

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■ Dimensions (Unit: mm)

●Relay with Screw Terminals

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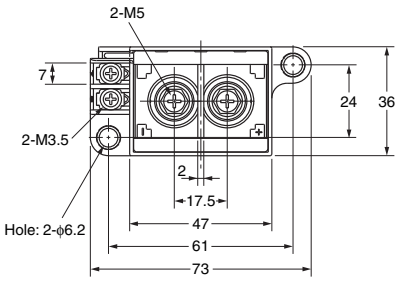
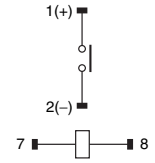
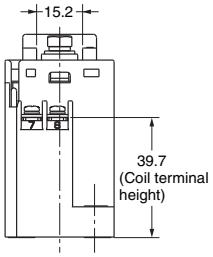
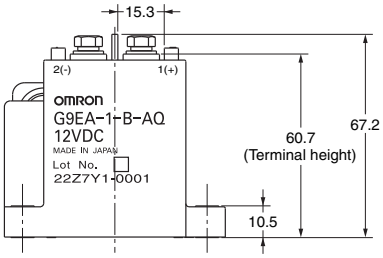


Terminal arrangement / Internal connections
(BOTTOM VIEW)

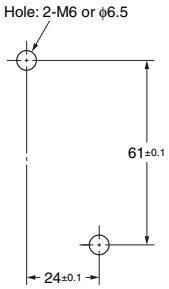


Note: Be sure to connect terminals with the correct polarity. Coils do not have polarity.





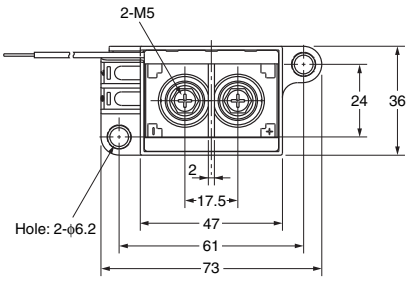
Mounting holes
(BOTTOM VIEW)



Size (mm)	Tolerance (mm)
to 10	±0.3
10 to 50	±0.5
50 to	±1

●Relay with Lead Wires

G9EA-1-AQ



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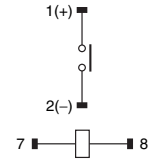

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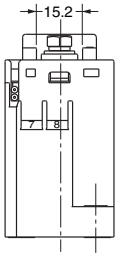
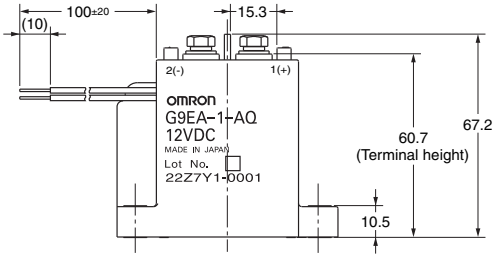
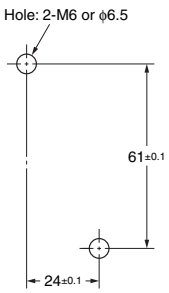




Mounting holes
(BOTTOM VIEW)



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