# **GBVA** Automotive low profile micro 280 terminal layout relay

## This world's smallest Plug-in relay. Versatile usage for several different kinds of applications inside the relay boxes.

- Miniaturized package (reduced footprint and height)
- L x W x H = 15.5 x 15.0 x 16.4 mm nominal
- 280-terminal type
- Full automated assembly

#### Type standard



_		1234 5		
		Classification	Symbol	Meaning of the symbol
Ī	1	Number of contact poles	1	Number of contact poles
Ī	2	Contact structure	А	1a contact
	3	Protective structure	4	Simple plastic seal

т

R

Plug-in type

Built-in resistor

#### Classification

Terminal form

Surge suppressor

Classification	Terminal form	Contact structure	Protective structure	Rated coil voltage		Туре
Classification			FIOLECTIVE STRUCTURE	Voltage (V)	Resistance ( $\Omega$ )	туре
Micro 280	Plug-in 280 terminal	SPST (1a)	Simple plastic seal	DC12	132	G8VA-1A4T-R

### Ratings

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#### • Operation coil

	Rated voltage (V)	Coil resistance (Ω)		Rated	Operating	Release	Service voltage	Rated power	
		Between terminals	Internal coil	Surge suppressor resistance	current (mA)	Operating voltage (V)	voltage (V)	range (V)	consumption (mA)
	DC12	132	150	1/4W 1.1k	90.9	7.5 or less	1.0 or more	DC10 to 16	1091

#### Switching area

Item	Performance
Contact material	Silver alloy
Rated voltage	DC12V
Rated load	Resistance load, 15A
Inrush current	80A
Continuous carry current*1	15A
Min. Carry / Switching Current	DC12V 1A

Please confirm Omron Safety Precautions for all automotive relays first.

Omron can not guarantee automotive relays before finish making a contract with product specifications.



Terminal arrangement / Internal connections (BOTTOM VIEW)

2 2

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#### I Performance

| Item              |                                                  | Value of Standard                         |  |  |
|-------------------|--------------------------------------------------|-------------------------------------------|--|--|
| Voltage drop betw | ween terminals                                   | 200mV or less, 15A                        |  |  |
| Operating time*2  |                                                  | 10ms or less                              |  |  |
| Release time*2    |                                                  | 10ms or less                              |  |  |
| Insulation        | Between coil and terminal                        | 10M $\Omega$ or more                      |  |  |
| resistance*3      | Between homopolar contacts                       | 10M $\Omega$ or more                      |  |  |
| Withstand         | Between coil and terminal                        | AC500V for 1minute                        |  |  |
| voltage*4         | Between homopolar contacts                       | AC500V for 1minute                        |  |  |
| Vibration         | Durability                                       | 33Hz 44.1m/s <sup>2</sup>                 |  |  |
| tolerance         | Malfunction                                      | 33Hz 44.1m/s <sup>2</sup>                 |  |  |
| Shock             | Durability                                       | 1000m/s <sup>2</sup> (Operating time:6ms) |  |  |
| resistance        | Malfunction 100m/s <sup>2</sup> (Operating time: |                                           |  |  |
| Mechanical endu   | rance                                            | 1,000,000 times                           |  |  |
| Electrical endura | nce                                              | 100,000 times                             |  |  |
| Ambient tempera   | ture                                             | –30 to +100°C                             |  |  |
| Ambient humidity  | /                                                | 35 to 85%RH                               |  |  |
| Weight            |                                                  | 10g                                       |  |  |

#### Packing

| Packing form | Tray                    |
|--------------|-------------------------|
| MOQ*5        | 500pcs (50pcs×10 trays) |

Note: All values above are measured in early time under an ambient temperature of +20°C and humidity of 65% unless stated.

The value stated is at maximum temperature in a guaranteed ambient temperature. \*1.

\*2. It changes depend on how a rated voltage is operated, but bounce-time is not included.

\*3. Measured at DC500V.

Measured under 1mA of leak current, 50/60Hz for 1minute.
Minimum Order Quantity is subject to change, please feel free to contact our sales representatives.

#### Dimensions (Unit: mm)

#### G8VA-1A4T-R









\* Tolerance unless otherwise specified Less than 1 mm:  $\pm 0.1$  mm Less than 1 to 3 mm: ±0.2 mm 3 mm or more: ±0.3 mm

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Omron: G8VA-1A4T-R01-DC12