



## High-Current Micro 280 Automotive Relay **G8V-RH**

- Available in both SPST and SPDT versions
- Miniaturized package (reduced outer length and width)
- L x W x H = 22.5 x 15 x 25 mm nominal
- 280 terminal type
- Fully automated assembly
- Made in Canada

### Available Types

| Type               | Description                                       |
|--------------------|---------------------------------------------------|
| G8V-RH-1A7T-R-DC12 | High-Current Micro 280 SPST Plug-In with Resistor |
| G8V-RH-1C7T-R-DC12 | High-Current Micro 280 SPDT Plug-In with Resistor |

### Contact Data

|                                |                                                                           |
|--------------------------------|---------------------------------------------------------------------------|
| Typical Switching Current      | Inrush 90A, Steady State 35A (N.O.) / Inrush 60A, Steady State 20A (N.C.) |
| Max Switching Voltage          | 16V                                                                       |
| Min. Carry / Switching Current | 1A                                                                        |
| Contact Material               | Silver Tin Oxide (Cadmium Free)                                           |

### Coil Ratings (at 20°C)

| Type                                       | Rated Voltage | Coil Resistance<br>±10% | Coil Resistance<br>w/ 1.1K $\Omega$ suppression<br>±10% | Nominal Power<br>Consumption* | Pull in<br>Voltage | Dropout<br>Voltage |
|--------------------------------------------|---------------|-------------------------|---------------------------------------------------------|-------------------------------|--------------------|--------------------|
| G8V-RH-1A7T-R-DC12 /<br>G8V-RH-1C7T-R-DC12 | 12VDC         | 84 - 124 $\Omega$       | 75 - 105 $\Omega$                                       | 1.6 W                         | < 7.5 V            | > 1.0 V            |

\* Power consumption includes suppression resistor. Power consumption will decrease without coil suppression.

### Typical Applications

|                 |                                                                                                 |
|-----------------|-------------------------------------------------------------------------------------------------|
| Motor Load:     | N.O. side: 240W Cooling Fan, 150W Cooling Fan<br>N.O. and N.C. side: 240W Series / Parallel Fan |
| Lamp Load:      | Brake Lamp with Parallel Resistance                                                             |
| Resistive Load: | N.O. and N.C. side                                                                              |

## Characteristics

|                                   |            |                                                                                                      |
|-----------------------------------|------------|------------------------------------------------------------------------------------------------------|
| Max. Initial Contact Voltage Drop |            | 150mV @ 35A N.O.; 175mV @20A N.C.                                                                    |
| NO Activation Time                |            | 20 ms max. (4 ms typical) @ 14 V                                                                     |
| NO Deactivation Time              |            | 20 ms max. (1.2 ms typical*) @ 14 V                                                                  |
| Insulation resistance             |            | 20 MΩ min (at 500 VDC)                                                                               |
| Dielectric strength               |            | < 1.0 mA max. leakage at 900 VAC, 50-60 Hz for 1 sec between coil and contacts and between contacts. |
| Ambient Operating Temperature     |            | -40°C to 125°C                                                                                       |
| Humidity                          |            | Up to 95%                                                                                            |
| Service life                      | Mechanical | 1,000,000 operations min.                                                                            |
|                                   | Electrical | 100,000 operations min (load dependent).                                                             |
| Weight                            |            | 19.3g                                                                                                |

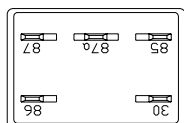
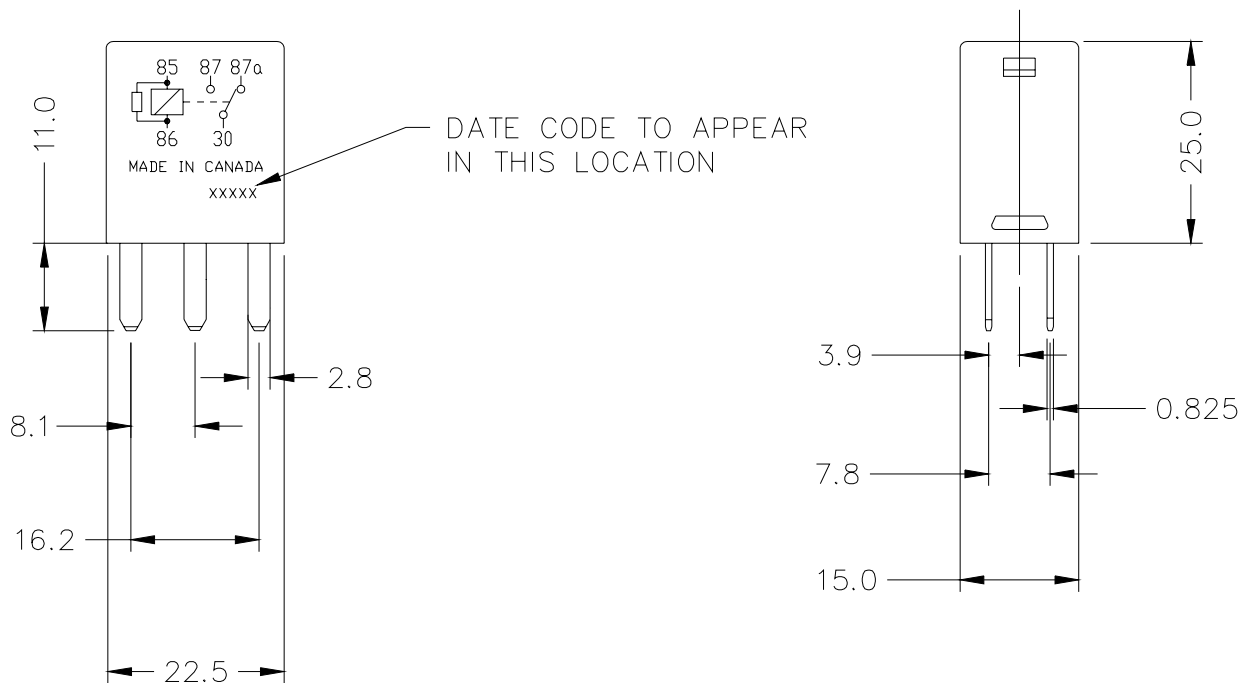
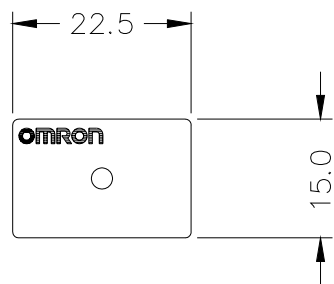
\* Typical data includes coil suppression. Release times may decrease without coil suppression.

## Characteristic Reference Data

### Durability Data

| Relay  | Load Type                                     | Current                           | Cycles Tested            |
|--------|-----------------------------------------------|-----------------------------------|--------------------------|
| G8V-RH | N.O. Motor Load                               | 90 A Inrush                       | 250,000<br>3s on, 5s off |
|        |                                               | 25 A Steady State                 |                          |
|        | N.O. Motor Load                               | 70.5 A Inrush                     | 250,000<br>3s on, 5s off |
|        |                                               | 16.3 A Steady State               |                          |
|        | N.O. & N.C. Motor Load                        | N.O. 65A Inrush, 25A Steady State | 100,000<br>3s on, 5s off |
|        |                                               | N.C. 5 A Steady State             |                          |
|        | N.O. Lamp Load                                | 100 A Inrush                      | 100,000<br>2s on, 2s off |
|        |                                               | 17 A Steady State                 |                          |
|        | N.O. Brake Lamp Load with Parallel Resistance | 92 A Inrush                       | 925,000<br>1s on, 3s off |
|        |                                               | 13.2 A Steady State               |                          |
|        | N.O. / N.C. Resistive Load                    | 35 A / 20 A Steady State          | 100,000<br>1s on, 1s off |

# Dimensions



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