

# New PCB power relay G2RG-X Introduction

## G2RG-X



September 2020

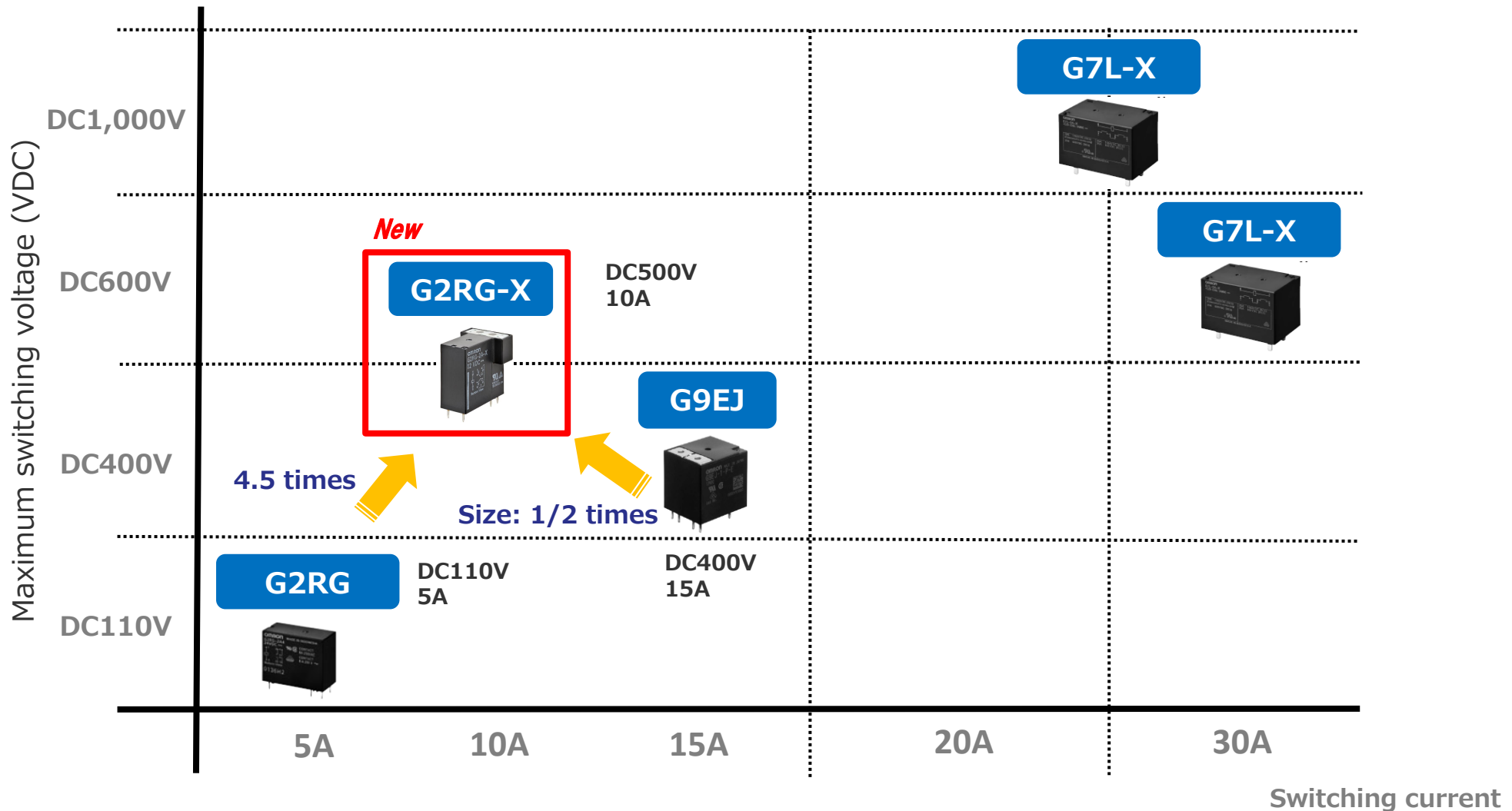
Relay Application Division

**OMRON**

# DC Power Relay Product Lineup



Expand our product lineup by downsizing combined with high voltage.  
Released the new product G2RG-X of DC500V/10A switching.



# Main specifications and features

## ◆DC High Voltage

Our arc control structural design realizes switching of the reliable high DC power relay.

Contribute to downsize high voltage components.

## ◆Compact

Compact body and small footprint (13.5mm X 29.0mm)

Contribute to downsize equipment.

*New*



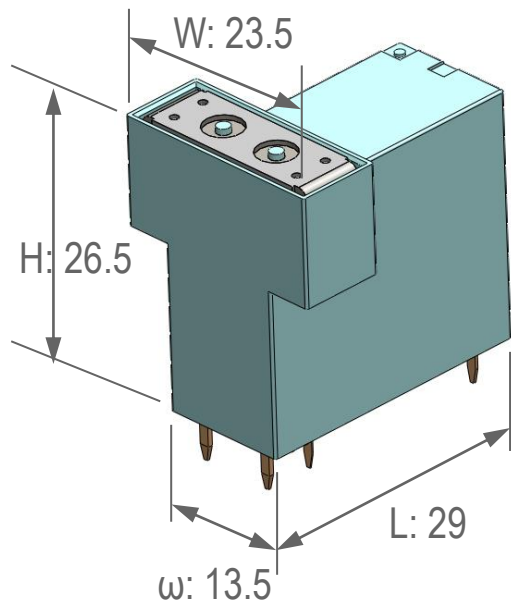
	Standard type G2RG-2A4	DC High Voltage Type G2RG-2A-X
Size	W13.5mm×L29mm ×H26.5mm (Max)	W23.5mm(φ13.5mm)×L29mm ×H26.5mm (Max)
Enclosure rating	Fully sealed	Flux protection
Contact form	2a (2-pole series wiring)	
Contact polarity	-	Polarized
Coil power consumption	0.8W	
Rated load (resistive)	DC110V 5A	DC500V 10A
Rated current	8A	
Dielectric strength (Between coil and contacts)	5,000VAC, 50/60Hz for 1 min	
Dielectric strength (Between contacts of the same polarity)	1,000VAC, 50/60 Hz for 1 min	
Electrical durability (resistive, 2-pole series wiring)	10,000 operations at DC100V, 5A	10,000 operations at DC500V, 10A 30,000 operations at DC500V, 1A
Ambient operating temperature	-40°C to 70°C	-40°C to 85°C

# Size and circuit connection (G2RG-X) **OMRON**

## Size

W:23.5mm( $\omega$ :13.5mm) $\times$ L:29mm  
 $\times$ H:26.5mm (Max)

### **G2RG-X**



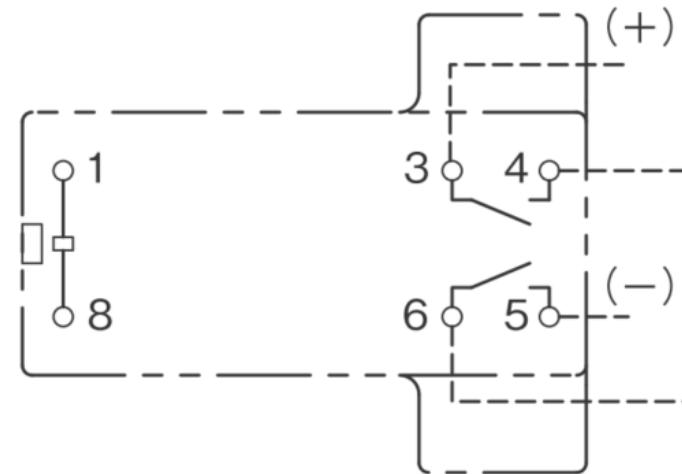
(Unit: mm)

## Circuit connection example

2-pole series wiring

\*Externally connect 2a contacts in series and use as 1a.

### **G2RG-X**



**G2RG-X can support DC500V 8~10A class high voltage applications.**

### 【Application Trend and Needs】

**Down sizing and High density mounting**  
**Increased storage battery capacity**

### 【Values】

**>>> Small size of G2RG-X**  
**>>> Proposed higher voltage**

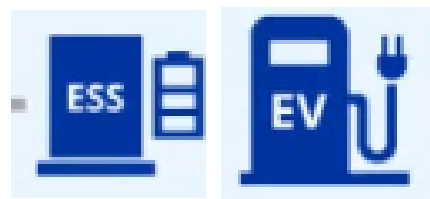
### 【Example】

- Energy Storage System (ESS)
- V2H (Vehicle to Home)
- FA (Inverter/Servo)
- Power supply, UPS

### 【Relay function】

- Power supply, Inverter switching  
(For inrush protection circuit)

例)

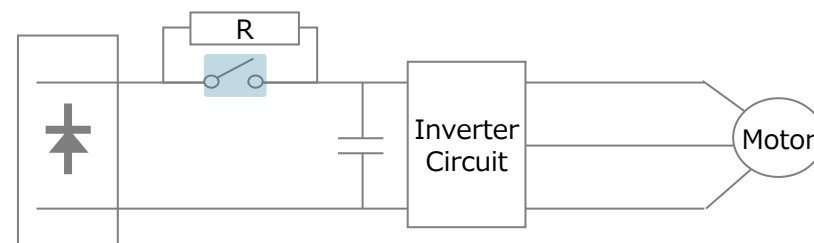


ESS, V2H



Power supply

### Inverter circuit example



\*Note: In each case, the customer should check if it is applicable to the actual device.

# Application (ESS)

- A pre-charge circuit is generally used to protect the peripheral circuits from the inrush current at the start of charging the storage battery, and the inrush prevention relay is the G2RG-X target application.

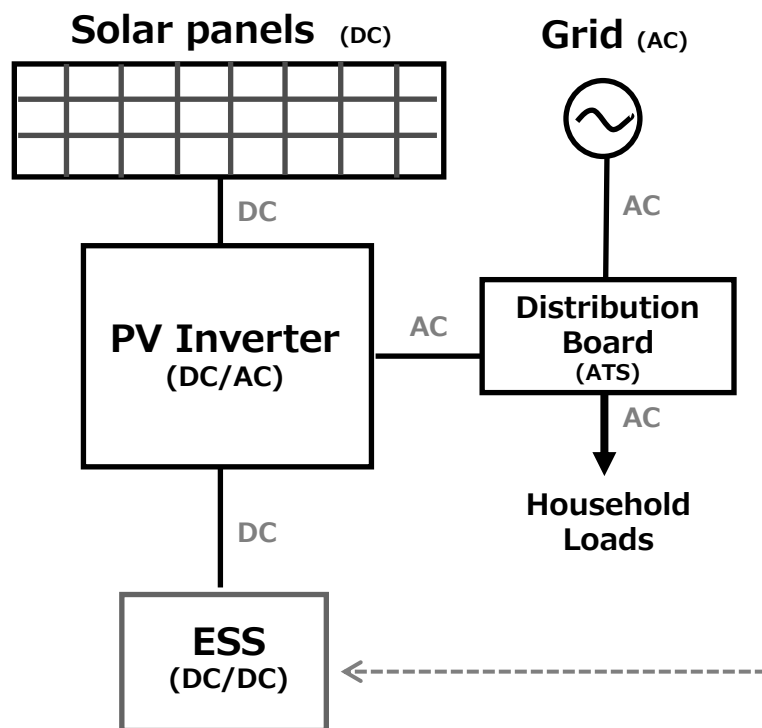
## 【Example】

- Energy Storage System (ESS) etc

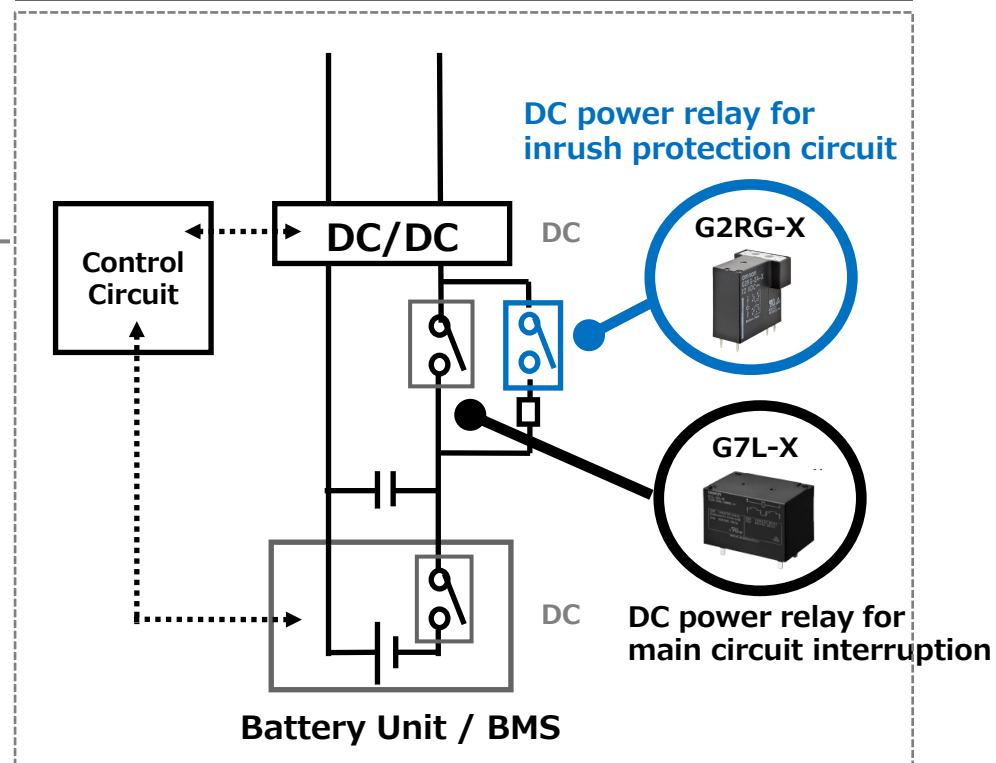
## 【Relay function】

- For inrush protection circuit

### System Configuration



### Circuit/Function block diagram





■ Thank You