Solid State Relays G3□-VD
G3F/G3FD

CSM_G3F_G3FD_DS_E_5_4

International Standards for G3F Series, Same Profile as MY Power Relays

- Reduces wiring work by 60% when combined with the PFY-08-PU Push-In Plus Socket (according to actual OMRON measurements).
- Shape-compatible with mechanical relays.
- Certified by UL, CSA, and VDE (model numbers with a suffix of "-VD").
- Socket type, same size as MY Power Relays.
- Operation indicator provided to confirm input (model numbers with "N" before the suffix).

⚠ Refer to *Safety Precautions for All Solid State Relays* and *Safety Precautions* on page 7.

Note: The socket is optional.

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Model Number Structure

■ Model Number Legend

G3F-□□□□□-□
1 2 3 4 5 6 7

1. **Basic Model Name**
   G3F: Solid State Relay
2. **Rated Load Power Supply Voltage**
   2: 200 VAC
3. **Rated Load Current**
   02: 2 A
   03: 3 A
4. **Terminal Type**
   S: Plug-in terminals
5. **Zero Cross Function**
   Blank: Equipped with zero cross functions
   L: Not equipped with zero cross function
6. **Operation Indicator**
   Blank: Not equipped with operation indicator
   N: Equipped with operation indicator
7. **Certification**
   VD: Certified by UL, CSA, and VDE

G3FD-□□□□-□
1 2 3 4 5 6 7

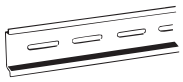
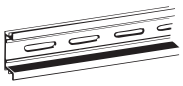
1. **Basic Model Name**
   G3F: Solid State Relay
2. **Load Power Supply Type**
   D: DC
3. **Rated Load Power Supply Voltage**
   X: 50 VDC
   1: 100 VDC
4. **Rated Load Current**
   02: 2 A
   03: 3 A
5. **Terminal Type**
   S: Plug-in terminals
6. **Operation Indicator**
   Blank: Not equipped with operation indicator
   N: Equipped with operation indicator
7. **Certification**
   VD: Certified by UL, CSA, and VDE

Hold-down Clips

Applicable Socket			Hold-down Clips
Classification	**Terminal type**	**Model**	**Model ***
For front-mounting	Screw terminals (finger protection structure)	PYF08A-E and PYF08A-N	PYC-A1
	Screw terminals	PYF08A	
For back-mounting	Relays with PCB Terminals	PY08-02	PYC-P

* PYC-A1 is provided with two clips.

DIN Track Mounting Parts

Classification/ division	Type		Appearance	Model
For front-mounting	DIN Tracks	Shallow type, total length: 1 m		PFP-100N
		Shallow type, total length: 0.5 m		PFP-50N
		Deep type, total length: 1 m		PFP-100N2
	End Plate			PFP-M
	Spacer			PFP-S

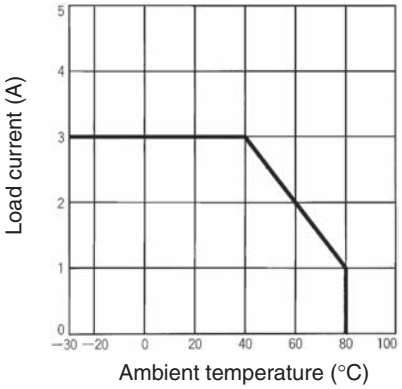
■ Characteristics

Item	G3F-203SN-VD G3F-202SN-VD G3F-203S-VD	G3F-203SLN-VD G3F-203SL-VD	G3FD-X03SN-VD G3FD-X03S-VD	G3FD-102SN-VD	G3FD-102S-VD
Operate time	1/2 of load power source cycle + 1 ms max. (DC input) 3/2 of load power source cycle + 1 ms max. (AC input)	1 ms max.	0.5 ms max.	0.5 ms max. (DC input) 20 ms max. (AC input)	0.5 ms max.
Release time	1/2 of load power source cycle + 1 ms max. (DC input) 3/2 of load power source cycle + 1 ms max. (AC input)	1/2 of load power source cycle + 1 ms max.	2 ms max.	2.5 ms max. (DC input) 20 ms max. (AC input)	2.5 ms max.
Output ON voltage drop	1.6 V (RMS) max.		1.5 V max.		
Leakage current	5 mA max. (at 100 VAC) 10 mA max. (at 200 VAC)	2.5 mA max. (at 100 VAC) 5 mA max. (at 200 VAC)	5 mA max. (at 50 VDC)	0.1 mA max. (at 100 VDC)	0.1 mA max. (at 100 VDC)
Insulation resistance	100 MΩ min. (at 500 VDC)				
Dielectric strength	2,000 VAC, 50/60 Hz for 1 min		1,500 VAC, 50/60 Hz for 1 min		
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 0.75-mm single amplitude				
Shock resistance	Destruction: 1,000 m/s^2				
Ambient temperature	Operating: –30°C to 80°C (with no icing or condensation) Storage: –30°C to 100°C (with no icing or condensation)				
Ambient humidity	Operating: 45% to 85%				
Certified standards	G3F: UL508, CSA C22.2 No. 14, EN60947-4-3 G3FD: UL508, CSA C22.2 No. 14, EN60950-1				
EMC	Emission: EN55011 Group 1 Class B Immunity: EN61000-6-2				
Weight	Approx. 50 g				

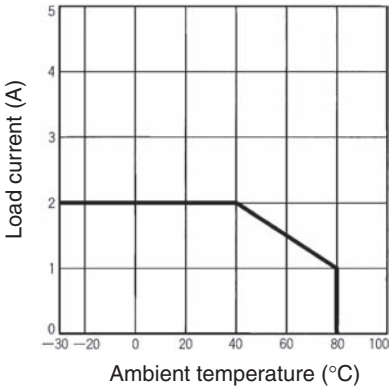
Engineering Data

Load Current vs. Ambient Temperature Characteristics

G3F-203SN-VD/203S-VD/203SLN-VD/ 203SL-VD
G3FD-X03SN-VD/X03S-VD



G3F-202SN-VD
G3FD-102SN-VD/102S-VD



Safety Precautions

Be sure to read 'the Common Precautions' in the website at the following URL:
http://www.ia.omron.com/.

Refer to *Safety Precautions for All Solid State Relays* of your OMRON website.

Refer to *Products Related to Common Sockets and DIN Tracks for precautions on the applicable Sockets* of your OMRON website.

Refer to *PYF-□□-PU/P2RF-□□-PU for precautions on Push-In Plus Terminal Block Sockets* of your OMRON website.

■ Precautions for Correct Use

Please observe the following precautions to prevent failure to operate, malfunction, or undesirable effect on product performance.

Connection

The SSR for DC switching use can connect to a load regardless of the polarity of the positive and negative output terminals.

Close Mounting of Multiple Relays

If multiple Relays are mounted side by side, be aware that the outer wall of each SSR works as a heat sink.

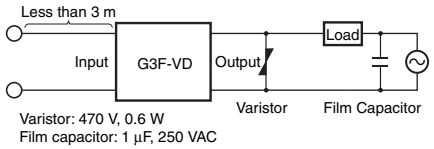
The SSR casing serves to dissipate heat. Install the Relays so that they are adequately ventilated. If poor ventilation is unavoidable, reduce the load current by half.

Protective Terminal

When using for AC inductive loads, connect the load terminals of the SSR to an inrush absorber (varistor).

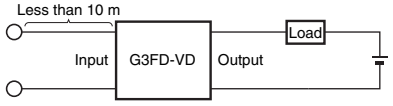
EMC Directive Compliance

1. AC-switching models comply with EMC Directives under the following conditions ("-VD" models only).



- Connect a varistor between the output terminals.
- Connect a film capacitor to the load power supply.
- The input cable must be less than 3 m.

2. DC-switching models comply with EMC Directives under the following conditions ("-VD" models only).



- The input cable must be less than 10 m.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

In the interest of product improvement, specifications are subject to change without notice.