Solid State Relays

CSM_G3FM_DS_E_5_5

100-μA-max. Leakage Current, No Bleeder Resistor Required

- Reduces wiring work by 60% when combined with the PFY-08-PU Push-In Plus Socket (according to actual OMRON measurements).
- 1 mA to 500 mA micro-load switching.
- Switch to both AC and DC with no polarity.
- Switch for a wide range of voltages; 19.2 to 264 VAC, 19.2 to 125 VDC.
- Switch full- and half-wave rectifier AC loads.
- Same sizes and terminal arrangements as OMRON Power Relay MY Series.
- Switch MY Series (without bleeder resistor).
- Superior surge absorption with a built-in varistor.
- Optimum SSR to control minute load, valves, and solenoids.



Refer to Safety Precautions for All Solid State Relays.



Note: The socket is optional.

Model Number Structure

■ Model Number Legend

G3FM-					
1	2	3	4	5	6

1. Basic Model Name

G3FM: Solid State Relay

2. Rated Load Power Supply Voltage

2: 200 VAC **3. Rated Load Current**R5: 0.5 A

4. Terminal Type S: Plug-in terminals

5. Zero Cross Function

L: Not equipped with zero cross function

6. Operation Indicator

N: Equipped with operation indicator

Ordering Information

■ List of Models

Isolation	Zero cross function	Indicator	Rated output load	Rated input voltage	Model
Photo-voltage coupler	No	Yes	0.5 A at 24 to 240 VAC	5 VDC	G3FM-2R5SLN
			0.5 A at 24 to 110 VDC	12 VDC	
				24 VDC	

Note: When ordering, specify the rated input voltage.

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■ Accessories (Order Separately) Connection Sockets

Classification	Terminal type	Appearance	Model
Front-mounting	Screw terminals (Terminal cover structure) *		PYFZ-08
	Screw terminals (finger protection structure)		PYFZ-08-E
	Screw terminals (finger protection structure)		PYF08A-N
	Push-In Plus terminal blocks (Socket combination)		PYF-08-PU
Back-mounting	Relays with PCB Terminals		PY08-02

^{*} Terminal cover type is PYCZ-C08. (Order Separately) For details, refer to the *Terminal Covers*.

Refer to Common Socket and DIN Track Products for details on Connection Sockets and DIN Track products (sold separately) of your OMRON website

Refer to PYF D-PU/P2RF-D-PU for details on A Push-In Plus Terminal Block Socket of your OMRON website.

Hold-down Clips

Applicable Socket			Hold-down Clips
Classification	ssification Terminal type Model		Model
For front-mounting	Screw terminals	PYFZ-08	PYC-A1 *
	Screw terminals (finger protection structure) PYFZ-08-E		
	Screw terminals (finger protection structure)	PYF08A-N	
For back-mounting	Relays with PCB Terminals	PY08-02	PYC-P

^{*} PYC-A1 is provided with two clips.

Terminal Covers

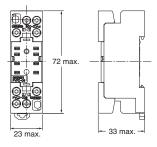
Applicable Socket	Terminal Covers		
Model	Appearance	Model	
PYFZ-08		PYCZ-C08 (2 pcs/set)	

Note: Use these covers in a combination with PYFZ-08.

Dimensions with terminal cover

(Unit: mm)





OMRON

DIN Track Mounting Parts

Classification/ division	Туре		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	0000	PFP-100N2	
	End Plate		5	PFP-M	
	Spacer			PFP-S	

Specifications

■ Ratings (at an Ambient Temperature of 25°C)

Model	Input			Output					
	Rated Operating Impedance		Voltage levels		Applicable load				
	voltage	voltage	voltage	Must operate voltage	Must release voltage	Rated load voltage	Load voltage range	Load current	Inrush current
G3FM-2R5SLN	5 VDC	4 to 6 VDC	250 Ω±20%	4 VDC max.	1 VDC min.	240 VAC 24 to	264 VAC 50 19.2 to at	1 to	6 A
	12 VDC	9.6 to 14.4 VDC	600 Ω±20%	9.6 VDC max.				500 mA at 40°C	(10 ms)
	24 VDC	19.2 to 28.8 VDC	1.2 kΩ±20%	19.2 VDC		110 VDC	125 VDC		

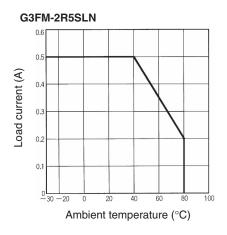
■ Characteristics

Operate time	5 ms max.
Release time	10 ms max.
Output ON voltage drop	3 V (RMS) max.
Leakage current	0.1 mA max. (at 200 VAC)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	1,500 VAC, 50/60 Hz for 1 min
Vibration resistance	10 to 55 to 10 Hz, 0.75-mm single amplitude
Shock resistance	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%
Weight	Approx. 50 g

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Engineering Data

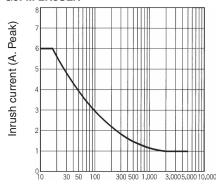
Load Current vs. Ambient Temperature Characteristics



One Cycle Surge Current: Non-repetitive

Non-repetitive (Keep the inrush current to half the rated value if it occurs repetitively.)

G3FM-2R5SLN



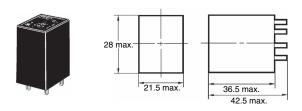
Energized time (ms)

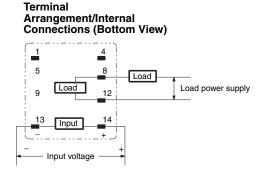
4

Dimensions

Note: All units are in millimeters unless otherwise indicated.

■ Relay





■ Accessories (Order Separately)

Connection Socket

Hold-down Clips

Terminal Covers

DIN Track Mounting Parts

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

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

Safety Precautions

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

Refer to the Common Solid State Relay Precautions for common precautions of your OMRON website.

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

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

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.

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