Terminal Relay
G6D-F4PU/G3DZ-F4PU (Push-In Plus Technology)
G6D-F4B/G3DZ-F4B (Screw Terminal)

Model with Push-In Plus technology Added to Terminal Relays with Four-point Output Lineup

- Realized 5 A rating by optimal designs for wide variety of applications (Push-In Plus technology).
- Push-In Plus terminal enables work reduction and requires no retightening.
- Short Bars (order separately) ensure easy common wiring and crossover wiring to adjacent terminal relays.
- Double wire method enables branch wiring (Push-In Plus technology)
- Each relay has independent coils and contacts for PLC output compatible (both NPN and PNP).
- Mechanical Relay models and power MOS FET relay models (for high frequency contact ratings) are available.
- LED operation indicator, diode for coil surge absorption, and tools for easy removal of relays are included as standard equipment.
- UL and CSA certification for standard models.
  VDE certification for Screws terminal, TÜV certification for Push-In Plus terminal.
  IP20 protection code for Push-In Plus models.

G6D-F4PU
G3DZ-F4PU

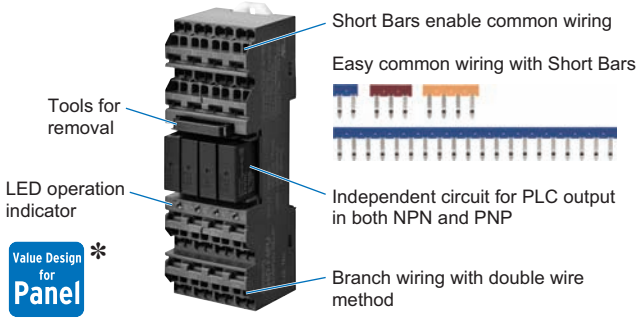
G6D-F4B
G3DZ-F4B

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

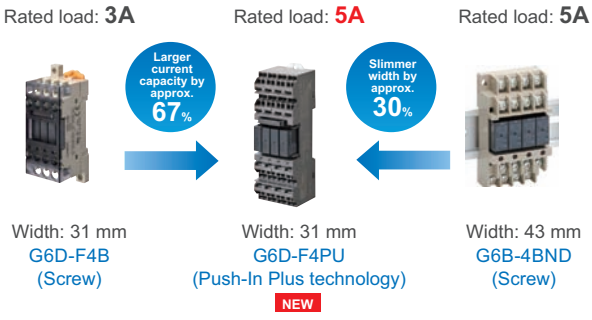
Refer to *Safety Precautions* on page 12.

Features (G6D-F4PU/G3DZ-F4PU (Model with Push-In Plus technology))

Pursuing High Usability



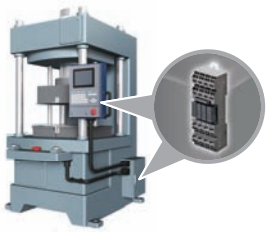
Slimmer Width Yet Larger Power Supply Capacity



Wide Variety of Application

Short Hight for Installation in Narrow Spaces

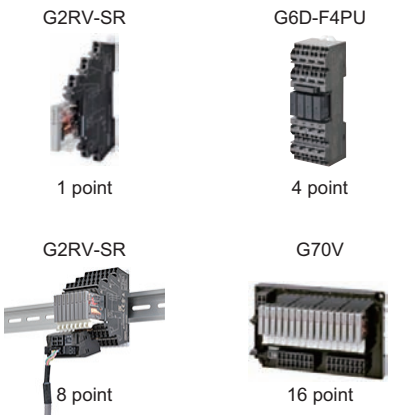
Connector terminal box, etc.



Operating panel of each device, etc.

Control box, etc.

Applicable to Various Number of I/O Points



✻ Value Design for Panel
Our shared concept “Value Design for Panel” for the specifications of products used in control panels (hereinafter called “Value Design”) will create new value to your control panels. Combining multiple products that share the Value Design concept will further increase the value provided to control panels.

● Short Bar (G6D-F4PU/G3DZ-F4PU (Model with Push-In Plus technology))

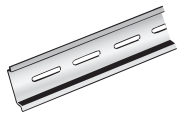
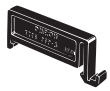
Pitch	Applicable models	Number of poles	Color	Model✻1	Maximum carry current
7.75 mm	G6D-F4PU G3DZ-F4PU P6DF-F4PU	2	Red (R) Blue (S) Yellow (Y)	**PYDN-7.75-020□**	20 A
		3		**PYDN-7.75-030□**	
		4		**PYDN-7.75-040□**	
		20		**PYDN-7.75-200□**	

Note: Use the Short Bars for crossover wiring within one Socket or between Sockets.
✻1. Replace the box (□) in the model number with the code for the covering color. Selection of the box (□): R=Red, S=Blue, Y=Yellow

● Short Bar (G6D-F4B/G3DZ-F4B (Model with Screw Terminal))

Applicable Terminal Relay Model	Model
G6D-F4B	**G6D-4-SB**
G3DZ-F4B	

● Parts for DIN Track Mounting

Appearance	Type		Model
	DIN Tracks	1 m	**PFP-100N**
		0.5 m	**PFP-50N**
	End Plate ✻1		**PFP-M**
	Spacer		**PFP-S**

✻1. When mounting support rail, please use End Plate (Model PFP-M).

■ Ratings

● Power MOS FET Relay Specifications

Input (per G3DZ Power MOS FET Relay)

Rated voltage		Operating voltage	Must operate voltage level	Must release voltage level	Input impedance	Rated current
DC	12	9.6 to 14.4 VDC	9.6 VDC max.	1 VDC min.	2 kΩ ±20%	8.0 mA ±20%
	24	19.2 to 28.8 VDC	19.2 VDC max.		4 kΩ ±20%	8.2 mA ±20%

Note: The rated current includes the terminal's LED current.

Output (per G3DZ Power MOS FET Relay)

Rated operating voltage	Load voltage range	Load current	Inrush current resistance
5 to 240 VAC 5 to 100 VDC	3 to 264 VAC 3 to 125 VDC	100 μ to 0.3 A	6 A (10 ms)

Note: There is no output polarity for the G3DZ.

■ Characteristics

Item \ Model	G3DZ-F4PU (Model with Push-In Plus technology)
	Power MOS FET relay output
Must operate time	10 ms max.
Release time	15 ms max.
Output ON-resistance	2.4 Ω max.
Leakage current at OFF state	10 μA max. (at 125 VDC)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength between I/O	2,000 VAC, 50/60 Hz for 1 min
Vibration resistance	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
Shock resistance	500 m/s^2
Ambient operating temperature, Ambient storage temperature	-25 to 55°C (with no icing)
Ambient operating humidity	45% to 85%
LED color	Yellow
Sealing	IP20
Weight	Approx. 95 g

Item \ Model	G3DZ-F4B (Model with Screw terminal)
	Power MOS FET relay output
Must operate time	10 ms max.
Release time	15 ms max.
Output ON-resistance	2.4 Ω max.
Leakage current at OFF state	10 μA max. (at 125 VDC)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength between I/O	2,000 VAC, 50/60 Hz for 1 min
Vibration resistance	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
Shock resistance	500 m/s^2
Ambient operating temperature, Ambient storage temperature	-25 to 55°C (with no icing)
Ambient operating humidity	45% to 85%
LED color	Yellow
Sealing	---
Weight	Approx. 65 g

G6D-F4B/G3DZ-F4B

●UL-certified Models (File No. E87929)

Model	Standard number	Category	Listed/ Recognized Classification	Operating coil ratings	Number of poles	Contact ratings	Operations
G6D-F4B	UL508	SWIV2	Recognized	12 VDC 24 VDC	4	Rated load voltage 250 VAC 30 VDC Load Current 5 A, Resistive	6,000 operations.
G3DZ-F4B						Rated load voltage 3-264 VAC 3-125 VDC Load Current 0.3 A	---

●CSA-certified Models (File No. LR35535)

Model	Standard number	Class number	Operating coil ratings	Number of poles	Contact ratings	Operations
G6D-F4B	C22.2 NO. 14	CLASS 3211 07	12 VDC 24 VDC	4	Rated load voltage 250 VAC 30 VDC Load Current 5 A, Resistive	---
G3DZ-F4B					Rated load voltage 3-264 VAC 3-125 VDC Load Current 0.3 A, Resistive	---

●VDE Certification (Certification No.40017757)

Model	Operating coil ratings	Number of poles	Contact ratings	Operations
G6D-F4B	12 VDC 24 VDC	4	250 VAC, 3 A 24 VDC, 3 A	---

●VDE Certification (Certification No.40046252)

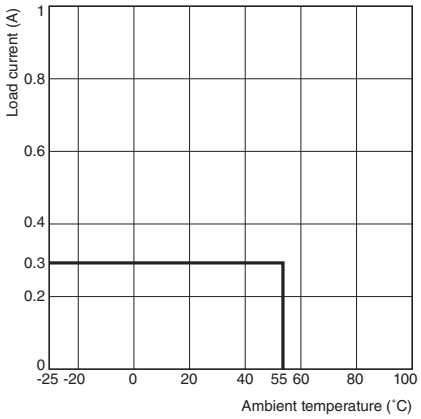
Model	Operating coil ratings	Number of poles	Contact ratings	Operations
G3DZ-F4B	12 VDC 24 VDC	4	5-240 VAC, 0.3 A 5-100 VDC, 0.3 A	---

●VDE Certification (Certification No.40046241)

Model	Operating coil ratings	Number of poles	Contact ratings	Operations
P6DF-F4B	12 VDC 24 VDC	4	250 VAC, 0.3 A	---

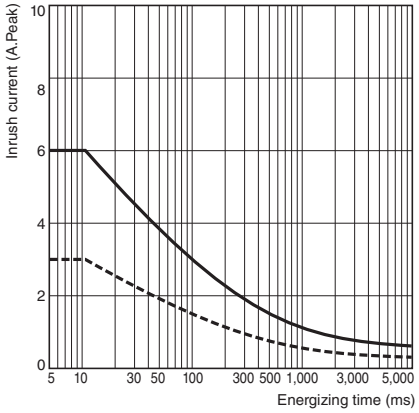
● G3DZ-F4PU

Load Current vs. Ambient Temperature



Inrush current resistance

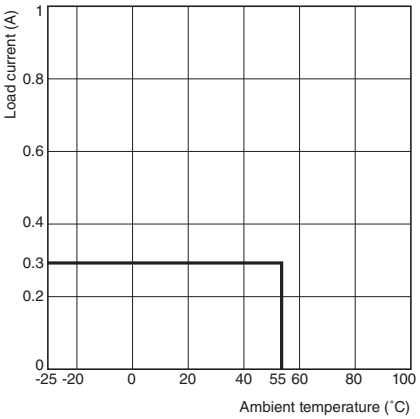
Non-repetitive
(Keep the inrush current to below the inrush current resistance value (i.e., below the broken line) if it occurs repetitively.)



Note: These data are actual measured values that were sampled from the production line and prepared in graph format, and are for reference purposes only.
A relay is manufactured by mass production, and as a basic rule must be used with allowance made for a certain amount of deviation.

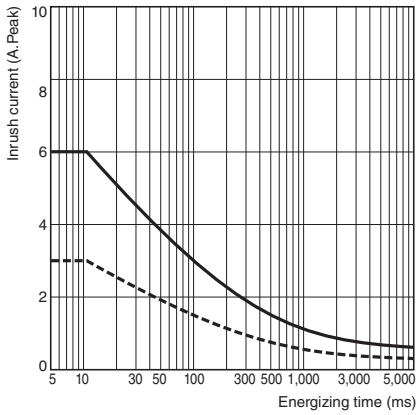
● G3DZ-F4B

Load Current vs. Ambient Temperature



Inrush current resistance

Non-repetitive
(Keep the inrush current to below the inrush current resistance value (i.e., below the broken line) if it occurs repetitively.)

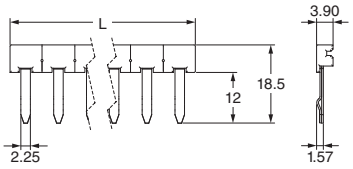


Note: These data are actual measured values that were sampled from the production line and prepared in graph format, and are for reference purposes only.
A relay is manufactured by mass production, and as a basic rule must be used with allowance made for a certain amount of deviation.

■ Accessories (Order Separately)

●Short Bars

PYDN-7.75-□□ (7.75 mm)



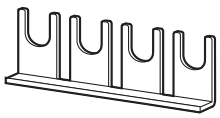
Pitch	Applicable model	Number of poles	L (Length)	Color	Model✻
7.75 mm	G6D-F4PU G3DZ-F4PU P6DF-F4PU	2	15.1	Red (R) Blue (S) Yellow (Y)	**PYDN-7.75-020□**
		3	22.85		**PYDN-7.75-030□**
		4	30.6		**PYDN-7.75-040□**
		20	154.6		**PYDN-7.75-200□**

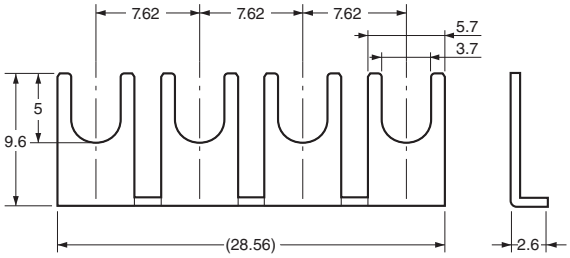
✻ Replace the box (□) in the model number with the code for the covering color. Selection of the box (□): R=Red, S=Blue, Y=Yellow

Note: Use the Short Bars for crossover wiring within one Socket or between Sockets.

●Short Bars

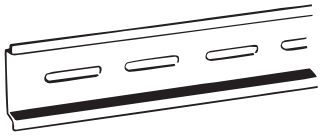
G6D-4-SB

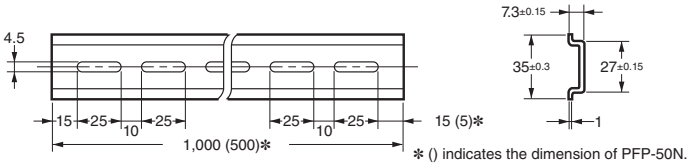




●Parts for DIN Track Mounting

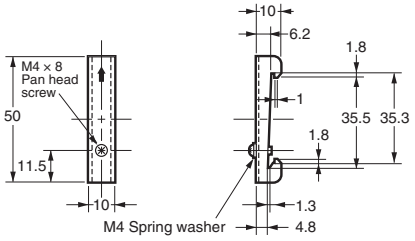
DIN Tracks
PFP-100N
PFP-50N



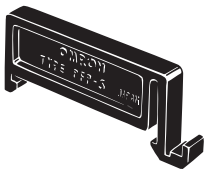


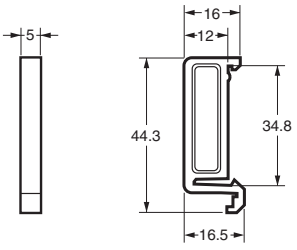
✻ () indicates the dimension of PFP-50N.

End Plate
PFP-M

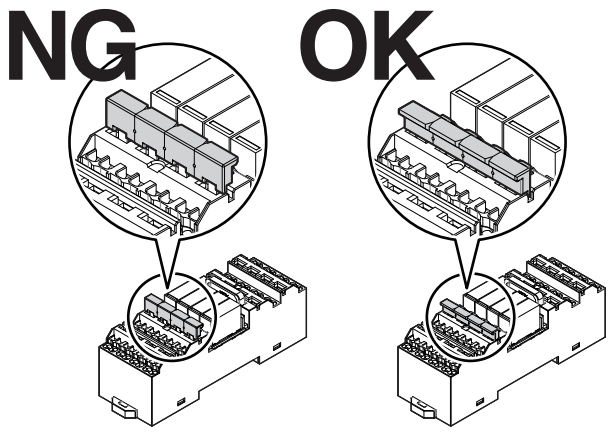


Spacer
PFP-S





- Insert Short Bars so that the protrusion part of a Short Bar comes to the wire insertion side. If the Short Bar is inserted in the upside down direction, the Short Bar may not be inserted securely.



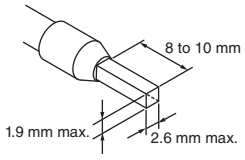
●Recommended Ferrules and Crimp Tools

Recommended ferrules

Applicable wire		Ferrules Conductor length (mm)	Stripping length [mm] (Ferrules used)	Recommended ferrules		
(mm²)	(AWG)			Manufactured by Phoenix Contact	Manufactured by Weidmuller	Manufactured by Wago
0.25	24	8	10	AI0,25-8	H0.25/12	216-301
		10	12	AI0,25-10	---	---
0.34	22	8	10	AI0,34-8	H0.34/12	216-302
		10	12	AI0,34-10	---	---
0.5	20	8	10	AI0,5-8	H0.5/14	216-201
		10	12	AI0,5-10	H0.5/16	216-241
0.75	18	8	10	AI0,75-8	H0.75/14	216-202
		10	12	AI0,75-10	H0.75/16	216-242
1/1.25	18/17	8	10	AI1-8	H1.0/14	216-203
		10	12	AI1-10	H1.0/16	216-243
1.25/1.5	17/16	8	10	AI1,5-8	H1.5/14	216-204
		10	12	AI1,5-10	H1.5/16	216-244
Recommended crimp tool				CRIMPFOX6 CRIMPFOX6T-F CRIMPFOX10S	PZ6 roto	Variocrimp4

Note: 1. Make sure that the outer diameter of the wire coating is smaller than the inner diameter of the insulation sleeve of the recommended ferrule.

2. Make sure that the ferrule processing dimensions conform to the following figures.



3. Wires of AWG24 to AWG22/0.25 mm² to 0.34 mm² are not certified by UL standard.

4. Do not connect a ferrule for the applicable wires (AWG17 to AWG16/1.25 mm² to 1.5 mm²) with an adjacent terminal insertion hole.

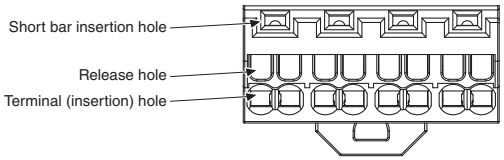
Precautions for Correct Use

- Do not drop the Socket or subject it to abnormal vibration or shock during transportation or mounting. Doing so may result in deterioration of performance, malfunction, or failure.
- Use a power supply with low noise.

●G6D-F4PU/G3DZ-F4PU (Model with Push-In Plus technology)

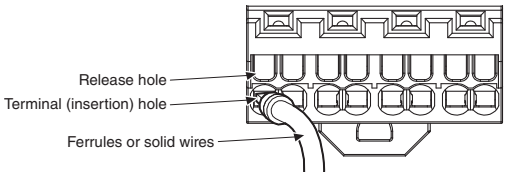
1. Connecting Wires to the Push-In Plus Terminal

Part Names of the Terminal



Connecting Wires with Ferrules and Solid Wires

Insert the solid wire or ferrule straight into the terminal until the end strikes the terminal.



- If a wire is difficult to connect because it is too thin, use a flat-blade screwdriver in the same way as when connecting stranded wire.

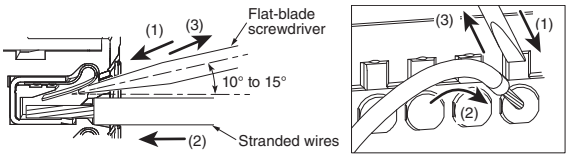
Connecting Stranded Wires

Use the following procedure to connect the wires to the terminal.

1. Hold a flat-blade screwdriver at an angle and insert it into the release hole.
The angle should be between 10° and 15°. If the flat-blade screwdriver is inserted correctly, you will feel the spring in the release hole.

2. With the flat-blade screwdriver still inserted into the release hole, insert the wire into the terminal hole until it strikes the terminal.

3. Remove the flat-blade screwdriver from the release hole.



Checking Connections

- After the insertion, pull gently on the wire to make sure that it will not come off and the wire is securely fastened to the terminal.
- To prevent short circuits, insert the stripped part of a stranded or solid wire or the conductor part of a ferrule until it is hidden inside the terminal insertion hole.
- If you use recommended ferrules, part of the conductor may be visible after the ferrule is inserted into the terminal, but the product insulation distance will still be satisfied.

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