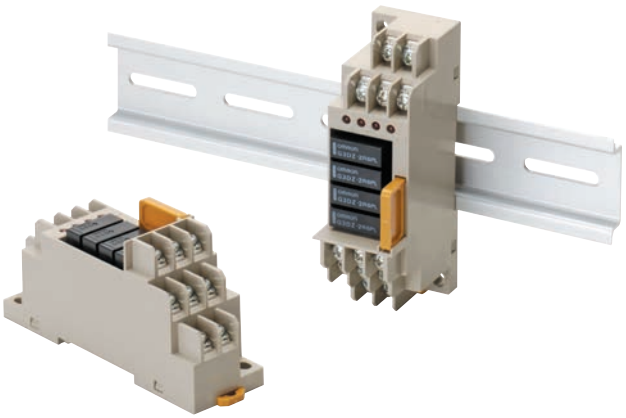
Terminal Relay

G6D-4B/G3DZ-4B

CSM_G6D-4B_G3DZ-4B_DS_E_5_3

Space-saving Vertical Terminal Relays with 4 Outputs

- Space saving size: 28 × 90 × 45 mm (W × H × D)
- Lineup includes models with G6D Relays and models with G3DZ Power MOS FET Relays.
- Easy wiring with separate I/O terminal construction.
- LED operation indicator.
- Built-in diode absorbs coil surge.
- Special socket used for easy Relay replacement.
- Mounts either on DIN track or with screws.
- Relay Removal Tool.



Ordering Information

When your order, specify the rated voltage.

■List of Models

Output	Contact configuration	Model	Rated voltage
Relay outputs	Four SPST-NO relays	G6D-4B	12 VDC
			24 VDC
Power MOS FET relay outputs		G3DZ-4B	12 VDC
			24 VDC

■Accessories (Order Separately)

Replacement Relays

Applicable Terminal Relay	Model	Rated voltage
G6D-4B	G6D-1A-ASI	12 VDC
		24 VDC
G3DZ-4B	G3DZ-2R6PL	12 VDC
		24 VDC

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Specifications

■Ratings

Relay Specifications

Coil Ratings (per G6D Relay)

Rated voltage (V)		Rated current (mA)	Coil resistance (Ω)	Must operate voltage (V)	Must release voltage (V)	Max. voltage (V)	Power consumption (mW)
DC	12	18.7	720	70% max. (See note 1.)	10% min.	130%	Approx. 200
	24	10.5	2,880				

Note: 1. The must operate voltage is 75% max. when the Terminal Relay is mounted upside down.
2. Rated current and coil resistance were measured at a coil temperature of 23°C with a tolerance of ±10%.
3. Operating characteristics were measured at a coil temperature of 23°C.
4. The maximum voltage is the maximum value of the allowable voltage range for the relay coil operating power supply. There is no continuous allowance.
5. The rated current includes the terminal's LED current.

Contact Ratings (per G6D Relay)

Item / Load	Resistive load (cosϕ = 1)
Rated load	3 A at 250 VAC, 3 A at 30 VDC
Rated carry current	3 A
Max. switching voltage	250 VAC, 30 VDC
Max. switching current	3 A
Max. switching power (reference value)	750 VA, 90 W

Power MOS FET Relay Specifications

Input (per G3DZ Power MOS FET Relay)

Rated voltage (V)		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)

Load voltage	Load current	Inrush current resistance
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

Model / Item		G6D-4B Relay output
Contact resistance (See note 2.)		100 mΩ max.
Must operate time (See note 3.)		10 ms max.
Release time (See note 3.)		15 ms max.
Insulation resistance		1,000 MΩ min. (at 500 VDC)
Dielectric strength		2,000 VAC, 50/60 Hz for 1 min between coil and contacts
		750 VAC, 50/60 Hz for 1 min between contacts of same polarity
Impulse withstand voltage (between coil and contacts)		4,000 V (1.2 × 50 μs)
Vibration resistance	Destruction	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
	Malfunction	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
Shock resistance	Destruction	500 m/s²
	Malfunction	100 m/s²
Endurance	Mechanical	20,000,000 operations min. (at 18,000 operations/hr)
	Electrical (See note 3.)	100,000 operations min. (3 A at 250 VAC, resistive load)
		100,000 operations min. (3 A at 30 VDC, resistive load) (at 1,800 operations/hr)
Minimum permissible load (reference value) (See note 4.)		10 mA at 5 VDC
Ambient operating/ storage temperature		–25 to 55°C (with no icing)
Ambient operating humidity		45 to 85%
Weight		Approx. 70 g

Note: 1. The above values are initial values.
2. Measurement condition: 1 A at 5 VDC
3. Ambient temperature: 23°C
4. This value is measured at 120 operations/min.

Model / Item	G3DZ-4B Power MOS FET relay outputs
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	2,000 VAC, 50/60 Hz for 1 min between input and output terminals
Vibration resistance	10 to 55 to 10 Hz, 0.75-mm single amplitude (1.5-mm double amplitude)
Shock resistance	500 m/s²
Ambient operating/ storage temperature	–25 to 55°C (with no icing)
Ambient operating humidity	45% to 85%
Weight	Approx. 65 g

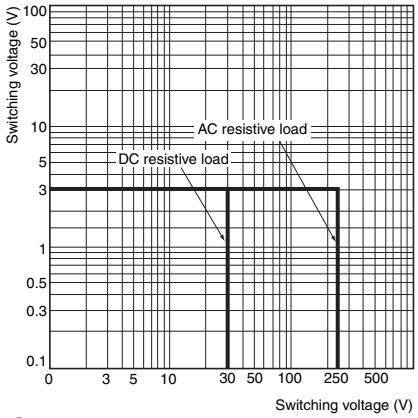
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Engineering Data

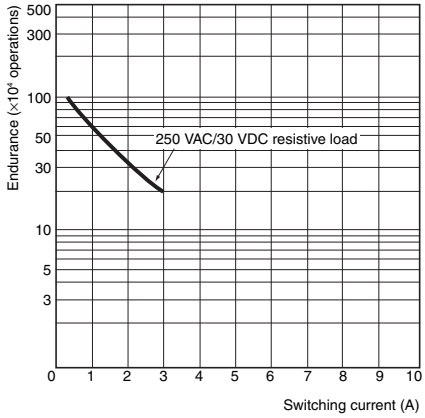
■Reference Data

G6D-4B

Maximum Switching Power

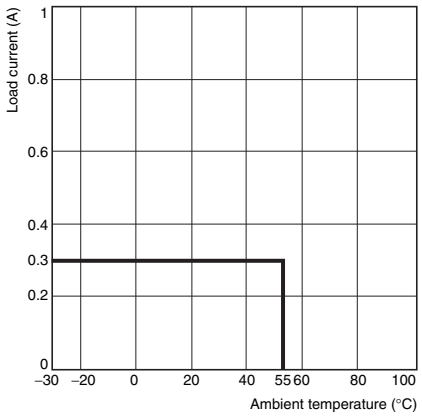


Endurance

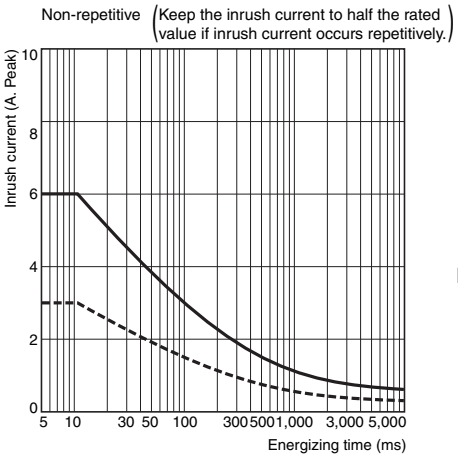


G3DZ-4B

Load Current vs. Ambient Temperature



Inrush Current Resistance



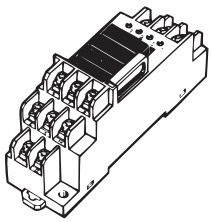
Note: Measurement values taken from production line samples have been plotted in graphs to provide this data. Use this data only as a guide.
Relays are mass-produced, so allowances must be made for a certain amount of variation in measurement data.

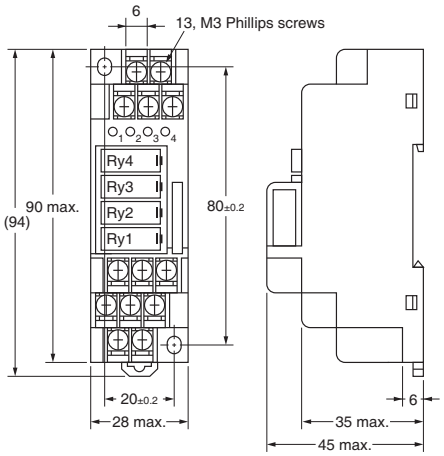
Dimensions

Note: All units are in millimeters unless otherwise indicated.

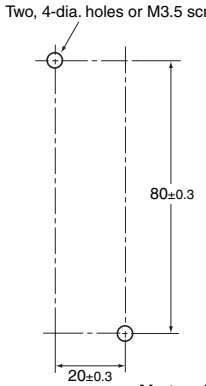
■Relays

G6D-4B
G3DZ-4B

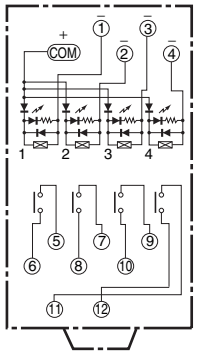




Mounting Holes



Terminal Arrangement/ Internal Connections (Top View)



Note: 1. Make sure that the polarity of the input terminal is correct.
2. There is no output polarity for the G6D-4B and G3DZ-4B.

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■Accessories (Order Separately)

Relay Mounting Products (Order Separately)

Safety Precautions

Refer to *Safety Precautions for All Relays*.

Mounted Relays

Relays and SSRs cannot be mounted together.

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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