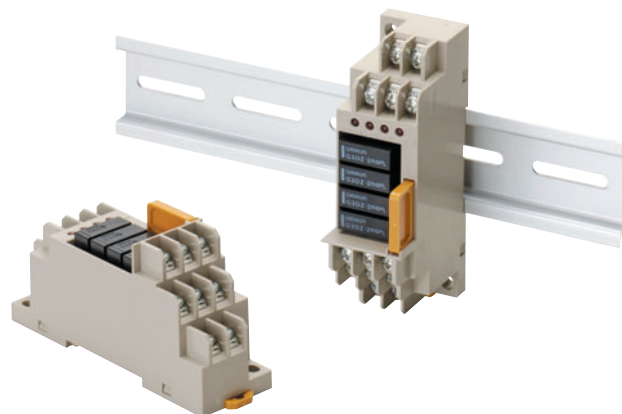


Terminal Relay G6D-4B/G3DZ-4B

CSM_G6D-4B_G3DZ-4B_DS_E_5_1

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

■ 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

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 ($\cos\phi = 1$)
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	19.2VDC 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		G6D-4B
Item		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/s ²
	Malfunction	100 m/s ²
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.

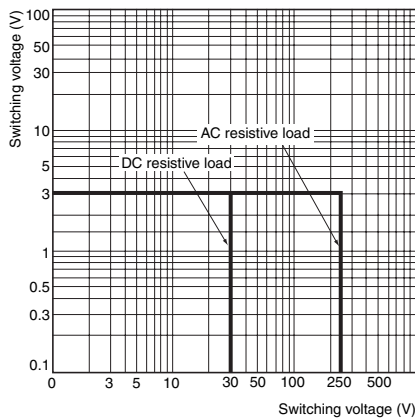
Model		G3DZ-4B
Item		Power MOS FET relay outputs
Must operate time		10 ms max.
Release time		15 ms max.
Output ON resistance		2.4 Ω max.
Leakage current at OFF state		10 μA max. (at 125 VDC)
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		2,000 VAC, 50/60 Hz for 1 min between input 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/s ²
Ambient operating/storage temperature		-25 to 55°C (with no icing)
Ambient operating humidity		45% to 85%
Weight		Approx. 65 g

Engineering Data

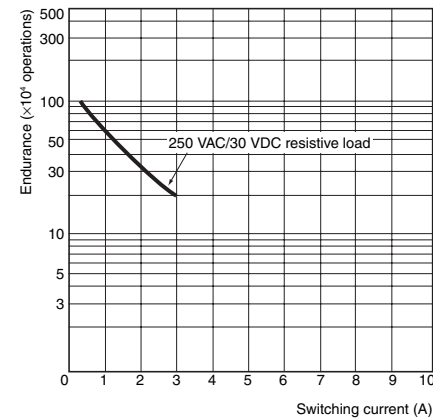
Reference Data

G6D-4B

Maximum Switching Power

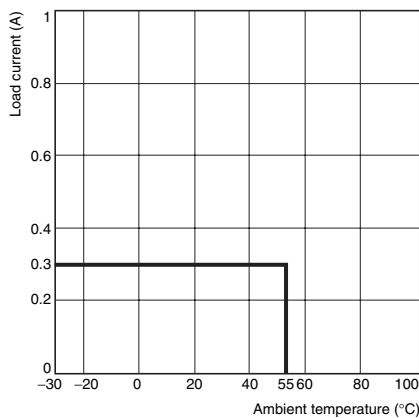


Endurance

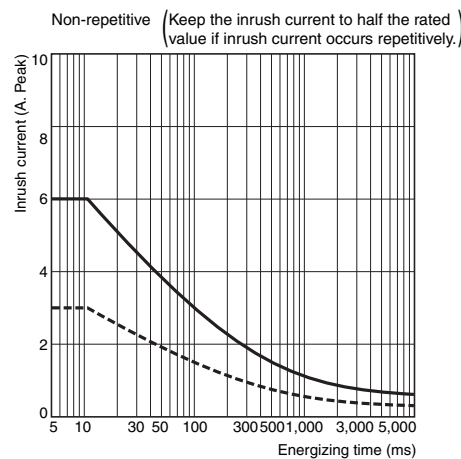


G3DZ-4B

Load Current vs. Ambient Temperature



Inrush Current Resistance



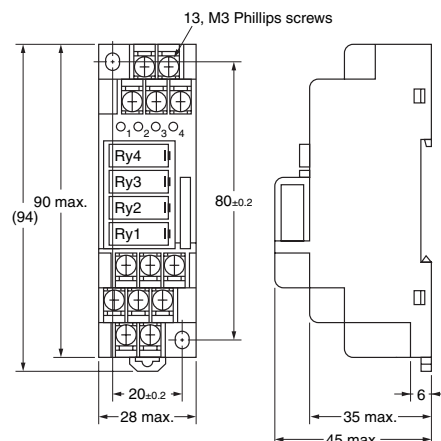
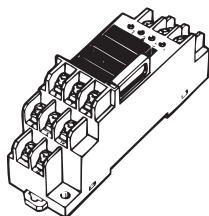
Note: Measurement values taken from production line samples have been plotted in graphs to provide this data. Use this data only as a guide. Relays are mass-produced, so allowances must be made for a certain amount of variation in measurement data.

Dimensions

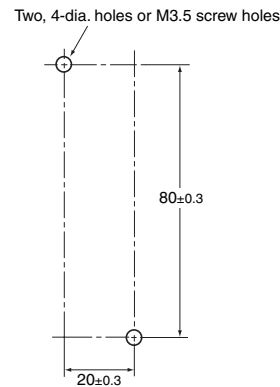
Note: All units are in millimeters unless otherwise indicated.

Relays

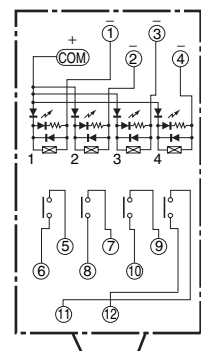
G6D-4B G3DZ-4B



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.

■ 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.

Terms and Conditions Agreement

Read and understand this catalog.

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranties.

(a) Exclusive Warranty. Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied.

(b) Limitations. OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) Buyer Remedy. Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty.

See <http://www.omron.com/global/> or contact your Omron representative for published information.

Limitation on Liability; Etc.

OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY.

Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.

Suitability of Use.

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

Performance Data.

Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

Errors and Omissions.

Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.