A Power Relay for a Variety of Purposes with Various Models

- ROHS compliant
- Conforms to EN 61810-1, UL508, CSA22.2, SEV, SEMKO.
- Meets EN60335-1 requirements for household products according to VDE0110.
- Clearance and creepage distance: 8 mm/8 m.
- Models with CTI250 material available.
- High-sensitivity (360 mW) and high-capacity (16 A) types available.
- Double-winding latching type available.







Ordering Information

Cla	assification	Enclosure	Coil	Contact Form			
		Ratings	Ratings	SPST-NO	SPDT	DPST-NO	DPDT
PCB terminal	General-purpose	Flux protection	AC/DC	G2R-1A	G2R-1	G2R-2A	G2R-2
		Fully sealed		G2R-1A4	G2R-14	G2R-2A4	G2R-24
	Bifurcated contact	Flux protection D		G2R-1AZ	G2R-1Z	-	-
		Fully sealed		G2R-1AZ4	G2R-1Z4	-	-
	High-capacity	Flux protection	AC/DC	G2R-1A-E	G2R-1-E	-	-
	High-sensitivity	Flux protection	DC	G2R-1A-H	G2R-1-H	G2R-2A-H	G2R-2-H
	Double-winding latching	Flux protection		G2RK-1A	G2RK-1	G2RK-2A	G2RK-2
Quick connect	General-purpose	Unsealed	AC	G2R-1A3-S	G2R-13-S	_	_
(upper bracket mounting)			DC	-	-	-	-

Note: 1. When ordering, add the rated coil voltage to the model number. Example: G2R-1A 12 VDC

Rated coil voltage

Models with CTI250 material are also available.
 Contact your OMRON representative for more details.

Model Number Legend

1. Relay Function

None: Single-side stable K: Double-winding latching

2. Number of Poles

1: 1 pole 2: 2 poles **3. Contact Form**

None: □PDT

A: □PST-NO

4. Contact Type
None: Single

Z: Bifurcated

5. Enclosure Ratings
None: Flux protection
4: Fully sealed

6. Terminals

None: Straight PCB

: Quick-connect (upper bracket mounting)

7. Classification

None: General-purpose E: High-capacity H: High-sensitivity

8. Safety Standards

None: UL/CSA/EN/SEV/TÜV SKVD: UL/CSA/EN/SEV/TÜV/SEMKO

9. Rated Coil Voltage Refer to Coil Ratings

Specifications -

■ Coil Ratings

Rated voltage	•	12 VAC	24 VAC	100/(110) VAC	120 VAC	200/(220)VAC	220 VAC	230 VAC	240 VAC
Rated Current	50Hz	93 mA	46.5 mA	11 mA	9.3 mA	5.5 (4.0) mA	5.1 mA	4.7 mA	4.7 mA
	60Hz	75 mA	37.5 mA	9/(10.6) mA	7.5 mA	4.5 (5.3) mA	4.1 mA	3.8 mA	3.8 mA
Coil resistanc	e	65 Ω	260 Ω	4,600 Ω	6,500 Ω	20,200 Ω	25,000 Ω	26,850	30,000 Ω
Coil inductance	Armature OFF	0.19	0.81	13.34	21	51.3	57.5	62	65.5
(H) (ref. value)	Armature ON	0.39	1.55	26.84	42	102	117	124	131
Must operate	voltage	80% max.	of rated vo	oltage					
Must release	voltage	30% min.	of rated vo	ltage					
Max. voltage	Max. voltage 140% of rated voltage (at 23°C)								
Power consur	Power consumption Approx. 0.9 VA at 60 Hz (approx. 0.7 VA at 60 Hz)								

Rated voltage	Rated voltage 5 VDC		6 VDC	12 VDC	24 VDC	48 VDC	100 VDC
Rated current (50/60Hz)		106 mA	88.2 mA	43.6 mA	21.8 mA	11.5 mA	5.3 mA
Coil resistance		47 Ω	68 Ω	275 Ω	1,100 Ω	4,170 Ω	18,860 Ω
Coil inductance	Armature OFF	0.20	0.28	1.15	4.27	13.86	67.2
(H) (ref. value)	Armature ON	0.39	0.55	2.29	8.55	27.71	93.2
Must operate	voltage	70% max. of rat	ed voltage				
Must release	voltage	15% min. of rate	ed voltage				
Max. voltage	voltage 170% of rated voltage (at 23°C)						
Power consumption Approx. 0.53 W							

High-sensitivity Relays

Rated voltage		5 VDC	6 VDC	12 VDC	24 VDC	48 VDC
Rated current (50/60Hz) (see Note. 1)		71.4 mA	60 mA	30 mA	15 mA	7.5 mA
Coil resistance	e (see Note. 1)	70 Ω	100 Ω	400 Ω	1,600 Ω	6,400 Ω
Coil inductance	Armature OFF	0.37	0.53	2.14	7.80	31.20
(H) (ref. value)	Armature ON	0.75	1.07	4.27	15.60	62.40
Must operate	voltage	70% max. of rated	voltage			
Must release	voltage	15% min. of rated voltage				
Max. voltage 170% of rated voltage (at 23°C)						
Power consur	nption	Approx. 0.36 W				

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of *15%/_20% (AC rated current) or ±10% (DC coil resistance)

- 2. Operating characteristics are measured at a coil temperature of 23°C
- 3. Depending on the type of relay, some relays do not have coil specifications. Contact your Omron representative for more details.

Double-winding Latching Relays

Rated voltage			5 VDC	6 VDC	12 VDC	24 VDC		
Set Coil	Rated current (see note 1.)		167 mA	138 mA	70.6 mA	34.6 mA		
	Coil resistance	e (see note 1.)	30 Ω	43.5 Ω	170 Ω	694 Ω		
	Coil inductance	Armature OFF	0.073	0.104	0.42	1.74		
	(H) (ref. value)	Armature ON	0.146	0.208	0.83	3.43		
Reset Coil	Reset Coil Rated current		119 mA	100 mA	50 mA	25 mA		
	Coil resistance)	42 Ω	60 Ω	240 Ω	960 Ω		
	Coil inductance	Armature OFF	0.003	0.005	0.018	0.079		
	(H) (ref. value)	Armature ON	0.006	0.009	0.036	0.148		
Must set voltag	e	•	70% max. of rated	voltage				
Must reset volta	age		70% max. of rated voltage					
Max. voltage			140% of rated voltage (at 23°C)					
Power consump	Power consumption			Set coil: Approx. 850 mW; Reset coil: Approx. 600 mW				

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C with a tolerance of ±10%.

2. Operating characteristics are measured at a coil temperature of 23°C.

■ Contact Ratings

PCB/Flux Protection, Plug-in, Quick-connect Terminal Relays

Item	Gene	ral-purpose, qu	ick-connect term	inal	High-capacity	
Number of poles	1 pole		2 poles		1 pole	
Load	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)
Rated Load	10 A at 250 VAC; 10 A at 30 VDC	7.5 A at 250 VAC; 5 A at 30 VDC	5 A at 250 VAC; 5 A at 30 VDC	2 A at 250 VAC; 3 A at 30 VDC	16 A at 250 VAC; 16 A at 30 VDC	8 A at 250 VAC; 8 A at 30 VDC
Contact material	AgSnIn	•				
Rated carry current	10 A		5 A		16 A	
Max. switching voltage	380 VAC, 125 VDC		380 VAC, 125 VDC		380 VAC, 125 VDC	
Max. switching current	10 A		5 A		16 A	
Max. switching power	2,500 VA, 300 W	1,875 VA, 150 W	1,250 VA, 150 W	500 VA, 90 W	4,000 VA, 480 W	2,000 VA, 240 W
Failure rate (reference value)	100 mA at 5 VDC		10 mA at 5 VDC		100 mA at 5 VDC	

Note: 1. P level: $\lambda_{60} = 0.1 \times 10^{-6}$ /operation.

PCB/Flux Protection Relays

Item	Bifurcated	l contacts	High-sensitivity				
Number of poles	1 pole		1 pole	1 pole		2 poles	
Load	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	
Rated Load	5 A at 250 VAC; 5 A at 30 VDC	2 A at 250 VAC; 3 A at 30 VDC	5 A at 250 VAC; 5 A at 30 VDC	2 A at 250 VAC; 3 A at 30 VDC	3 A at 250 VAC; 3 A at 30 VDC	1 A at 250 VAC; 1.5 A at 30 VDC	
Rated carry current	5 A		5 A		3 A		
Max. switching voltage	380 VAC, 125 VD	С	380 VAC, 125 VDC		380 VAC, 125 VDC		
Max. switching current	5 A		5 A		3 A		
Max. switching power	1,250 VA, 150 W	500 VA, 90 W	1,250 VA, 150 W	500 VA, 90 W	750 VA, 90 W	250 VA, 45 W	
Failure rate (reference value)	1 mA at 5 VDC		100 mA at 5 VDC		10 mA at 5 VDC		

Note: P level: $\lambda_{60} = 0.1 \times 10^{-6}$ /operation.

PCB/Fully Sealed Relays

Item		General-purpose	(single contact)		Bifurcated contact		
Number of poles	1 pole		2 poles		1 pole	1 pole	
Load	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	
Rated Load	8 A at 250 VAC; 8 A at 30 VDC	6 A at 250 VAC; 4 A at 30 VDC	4 A at 250 VAC; 4 A at 30 VDC	1.5 A at 250 VAC; 2.5 A at 30 VDC	5 A at 250 VAC; 5 A at 30 VDC	2 A at 250 VAC; 3 A at 30 VDC	
Rated carry current	8 A		4 A		5 A		
Max. switching voltage	380 VAC, 125 VD	iC	380 VAC, 125 VDC		380 VAC, 125 VDC		
Max. switching current	8 A		4 A		5 A		
Max. switching power	2,000 VA, 240 W	1,500 VA, 120 W	1,000 VA, 120 W	375 VA, 75 W	1,250 VA, 150 W	500 VA, 90 W	
Failure rate (reference value)	100 mA at 5 VDC		10 mA at 5 VDC		1 mA at 5 VDC		

Note: P level: $\lambda_{60} = 0.1 \times 10^{-6}$ /operation.

Latching Relays

Number of poles	1 p	ole	2 p	oles		
Load	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)	Resistive load (cosφ = 1)	Inductive load (cosφ = 0.4; L/R = 7 ms)		
Rated Load	5 A at 250 VAC; 5 A at 30 VDC	3.5 A at 250 VAC; 2.5 A at 30 VDC	3 A at 250 VAC; 3 A at 30 VDC	1.5 A at 250 VAC; 2 A at 30 VDC		
Rated carry current	5 A		3 A			
Max. switching voltage	380 VAC, 125 VDC		380 VAC, 125 VDC			
Max. switching current	5 A		3 A			
Max. switching power	1,250 VA, 150 W 875 VA, 75 W		750 VA, 90 W 375 VA, 60 W			
Failure rate (reference value)	100 mA at 5 VDC	100 mA at 5 VDC		10 mA at 5 VDC		

Note: P level: $\lambda_{60} = 0.1 \times 10^{-6}$ /operation.

■ Characteristics

Standard Relays

Ite	m	1 Pole	2 Poles			
Contact resistance	Э	30 m Ω max. (high-capacity type: 100 m Ω max.)	50 mΩ max.			
Operate (set) time		15 ms max				
Release (reset) tim	ne	AC: 10 ms max.; DC: 5 ms max. (w/built-in dic	de: 20 ms max.)			
Max. operating fre	quency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated loa	d)			
Insulation resistan	се	1,000 MΩ min. (at 500 VDC)				
Impulse withstand	voltage	10KV 1*40µsec				
Insulation	Creepage (Typ)	10.0 mm				
Distance	Clearance (Typ)	9.3 mm				
Tracking Resistant	ce (CTI)	175 V				
Dielectric strength		5,000 VAC, 50/60 Hz for 1 min between coil and contacts*; 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity	5,000 VAC, 50/60 Hz for 1 min between coil and contacts*; 3,000 VAC, 50/60 Hz for 1 min between contacts of different polarity 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity			
Vibration resistance	e	Destruction: 10 to 55 to 10 Hz, 0.75mm single Malfunction: 10 to 55 to 10 Hz, 0.75mm single				
Shock resistance		Destruction: 1,000 m/s ² Malfunction: 200 m/s ² when energized; 100 m/s ²	/s² when not energized			
Endurance		Mechanical: AC coil: 10,000,000 operations min.; DC coil: 20,000,000 operations min. (at 18,000 operations/hr) Electrical:100,000 operations min. (at 1,800 operations/hr under rated load)				
Ambient temperate	ure	Operating: -40°C to 70°C (with no icing)				
Ambient humidity		Operating: 5% to 85%				
Weight		Approx. 17 g				

Double-winding Latching Relays

Item	1 Pole	2 Poles			
Contact resistance	$30 \text{ m}\Omega$ max. $50 \text{ m}\Omega$ max.				
Set time	20 ms max				
Reset time	20 ms max.				
Min. set/reset signal width	30 ms max.				
Max. operating frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated loa	ad)			
Insulation resistance	1,000 MΩ min. (at 500 VDC)				
Dielectric strength	5,000 VAC, 50/60 Hz for 1 min between coil and contacts*; 1,000 VAC, 50/60 Hz for 1 min between contacts of same pole; 1,000 VAC, 50/60 Hz for 1 min between set and reset coil	5,000 VAC, 50/60 Hz for 1 min between coil and contacts*; 3,000 VAC, 50/60 Hz for 1 min between contacts of different poles 1,000 VAC, 50/60 Hz for 1 min between contacts of same pole 1,000 VAC, 50/60 Hz for 1 min between set and reset coil			
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 0.75mm single Malfunction: 10 to 55 to 10 Hz, 0.75mm single				
Shock resistance	Destruction: 1,000 m/s² (approx. 100G) Malfunction: Set: 500 m/s² (approx. 50G); 200 Reset: 100 m/s² (approx. 10G)	m/s² (approx. 20G)			
Endurance	Mechanical: 10,000,000 operations min (at 18,000 operations/hr) Electrical: 100,000 operations min. (at 1,800 operations/hr under rated load)				
Ambient temperature	Operating: -40°C to 70°C (with no icing)				
Ambient humidity	Operating: 5% to 85%	<u> </u>			
Weight	Approx. 17 g (Quick-connect type: approx. 20g	g)			

Note: Values in the above table are the initial values.

^{*2,000} VAC, 50/60 Hz for 1 minute when the P2R-05A or P2R-08A socket is mounted.

■ Approved Standards

UL 508 (File No. E41643), CSA 22.2 No.14 (File No. LR31928)

Model	Contact form	Coil ratings	Contact ratings
G2R-1 G2R-14 G2R-1-H G2R-1-S G2R-1-T	SPDT	3 to 110 VDC 3 to 240 VAC	10 A, 30 VDC (resistive) 10 A, 250 VAC (general use) TV-3 (NO contact only)
G2R-1A G2R-1A4 G2R-1A-H G2R-1A-S G2R-1A-T	SPST-NO		
G2R-1-E	SPDT		16 A, 30 VDC (resistive, NO contact only) 16 A, 250 VAC (general use, NO contact only)
G2R-1A-E	SPST-NO		TV-3 (NO contact only); (1/3 hp, 120 VAC For UL)
G2R-2 G2R-24 G2R-2-H G2R-2-S	DPDT		5 A, 30 VDC (resistive) 5 A, 250 VAC (general use) TV-3 (NO contact only)
G2R-2A G2R-2A4 G2R-2A-H G2R-2A-S	DPST-NO		
G2R-1A-ASI	SPST-NO		10 A, 30 VDC (resistive) 10 A, 250 VAC (general use) TV-5/TV-8 (NO contact only), (For UL) TV-8 (NO contact only); 1/4 hp, 125 VAC (For CSA)

SEV

Contact form	Coil ratings	Contact ratings
1 pole	3 to 110 VDC 3 to 240 VAC	16 A, 250 VAC1 (AgSnIn contact) 16 A, 30 VDC1 (AgSnIn contact) 10 A, 250 VAC1 5 A, 250 VAC3 10 A, 30 VDC1
2 poles		5 A, 250 VAC1 2 A, 380 VAC1 5 A, 30 VDC1

SEMKO

Contact form	Coil ratings	Contact ratings
1 pole	3 to 240 VAC	10/80 A, 250 VAC 3/100 A, 250 VAC 16/128 A, 250 VAC (AgSnIn contact)
2 poles		5/40 A, 250 VAC

TÜV (EN61810-1)

Contact form	Coil ratings	Contact ratings
1 pole	3 to 110 VDC, 6 VAC to 240 VAC (for Standard coil) 3 to 48 VDC (for K, U coil) 3 to 70 VDC (for H coil)	10 A, 250 VAC $(\cos \phi = 1.0)$ 10 A, 30 VDC (0 ms) 16 A, 250 VAC $(\cos \phi = 1.0)$ (AgSnIn contact)
2 poles		8 A, 250 VAC ($\cos\varphi = 0.4$) 5 A, 250 VAC ($\cos\varphi = 1.0$) 5 A, 30 VDC (0 ms) 2.5 A, 250 VAC ($\cos\varphi = 0.4$)

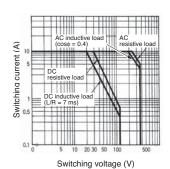
EN 61810-1 (VDE)

Contact form	Coil ratings	Contact ratings
1 pole	5, 6, 9, 12, 18, 24, 48, 60, 100, 110 VDC 12, 18, 24, 48, 50, 100/(110), 110, 120, 200/(220), 220, 230, 240 VAC	10 A, 250 VAC ($\cos \varphi = 1.0$) 10 A, 30 VDC (0 ms) 16 A, 250 VAC ($\cos \varphi = 1.0$)
2 poles	5, 6, 9, 12, 18, 24, 48, 60, 100, 110 VDC 12, 18, 24, 48, 50, 100/(110), 110, 120, 200/(220), 220, 230, 240 VAC	5 A, 250 VAC (cosφ =1.0) 5 A, 30 VDC (0 ms)

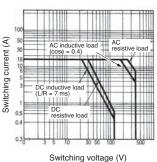
Engineering Data

Maximum Switching Power

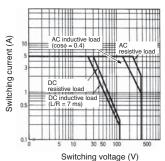
Flux Protection/Plug-in Relays G2R-1, G2R-1A, G2R-1-T, G2R-1A-T



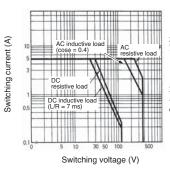
G2R-1-E, G2R-1A-E



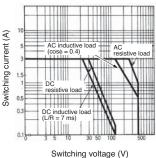
G2R-1Z, G2R-1AZ



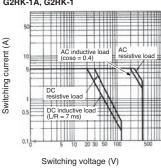
G2R-1-H, G2R-1A-H, G2R-2, G2R-2A



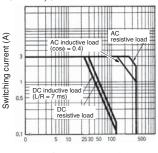
G2R-2-H, G2R-2A-H



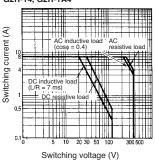
G2RK-1A, G2RK-1

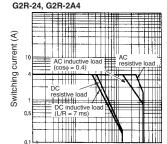


G2RK-2A, G2RK-2

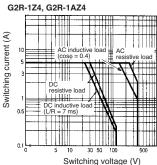


Fully Sealed Relays G2R-14, G2R-1A4





Switching voltage (V)

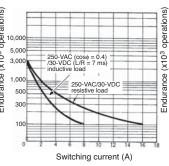


Endurance

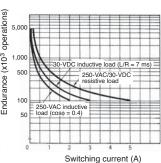
Flux Protection/Plug-in Relays G2R-1, G2R-1A, G2R-1-T, G2R-1A-T

Switching current (A)

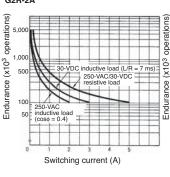
G2R-1-E, G2R-1A-E



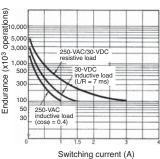
G2R-1Z, G2R-1AZ



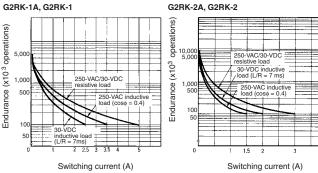
G2R-1-H, G2R-1A-H, G2R-2 G2R-2A

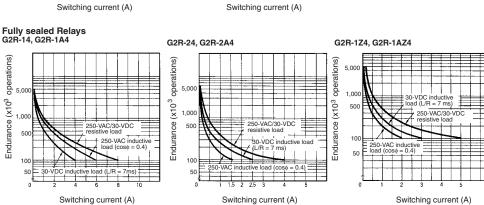


G2R-2-H, G2R-2A-H

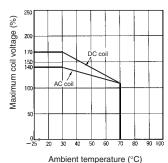


Engineering Data (cont.)





Ambient Temperature vs Maximum Coil Voltage



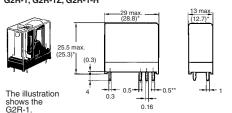
Note: The maximum coil voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

Dimensions

Note: 1. All units are in millimetres unless otherwise indicated.

2. Orientation marks are indicated as follows:

Relays with PCB Terminals SPDT Relays G2R-1, G2R-1Z, G2R-1-H



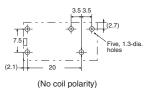
*Average value **0.3 (-H Type)

Terminal Arrangement/ Internal Connections (Bottom View)

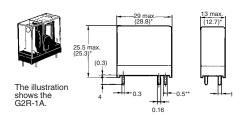


Mounting Holes (Bottom View)

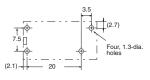
Tolerance: ±0.1



SPST-NO Relays G2R-1A, G2R-1AZ, G2R-1A-H



1 ---3

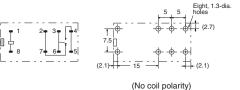


(No coil polarity)

SPDT/High-capacity Relays G2R-1-E





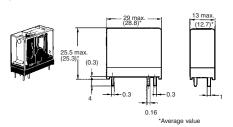


*Average value

0.16

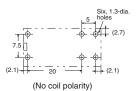
SPST-NO/High-capacity Relays G2R-1A-E

(0.3)



0.3

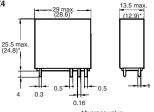




Relays with PCB Terminals

SPDT Relays G2R-14, G2R-1Z4





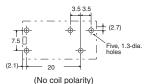
*Average value

Terminal Arrangement/ Internal Connections (Bottom View)



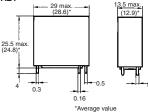
Mounting Holes (Bottom View)

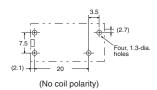
Tolerance: ±0.1



SPST-NO Relays G2R-1A4, G2R-1AZ4



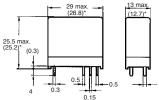




Relays with PCB Terminals

DPDT Relavs G2R-2, G2R-2-H



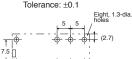


*Average value

Terminal Arrangement/ Internal Connections (Bottom View)



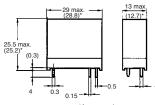
Mounting Holes (Bottom View)



(No coil polarity)

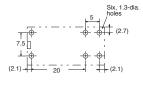
DPST-NO Relays G2R-2A, G2R-2A-H





*Average value

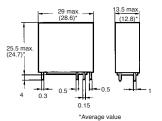
Ö

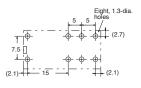


(No coil polarity)

DPDT Relays G2R-24



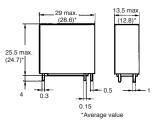




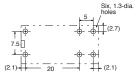
(No coil polarity)

DPST-NO Relavs G2R-2A4







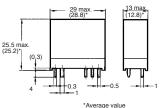


(No coil polarity)

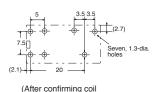
Double-winding Latching Relays with PCB Terminals

SPDT Relavs G2RK-1



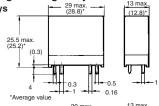






Double-winding Latching Relays with PCB Terminals

SPST-NO Relays G2RK-1A

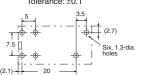


Terminal Arrangement/ Internal Connections (Bottom View)



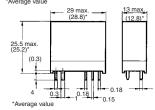


polarity, wire correctly.)

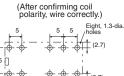


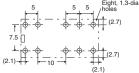


DPDT Relays



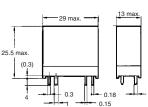
S∳ R













(After confirming coil polarity, wire correctly.) Six, 1.3-dia. holes (2.7) 7.5 (2.7)(After confirming coil polarity, wire correctly.)

Relays with Quick-connect Terminals Terminal Arrangement/Internal Connections SPDT Relays (Bottom View) G2R-1-T Five, 1.3-dia. holes (No coil polarity) Mounting Holes (Bottom View) 8.5 Tolerance: ±0.1 Two M3 or two 3.5 dia. 29.5 max. 45 max *Average value 14 max. (13.1)* 30.5 max (29.7)* Terminal Arrangement/Internal Connections SPST-NO Relays (Bottom View) G2R-1A-T Five, 1.3-dia, holes (No coil polarity) Mounting Holes (Bottom View) Two M3 or two 3.5 dia. 29.5 max. Note: Model number of quick-connect terminal 45 may

(13.1)

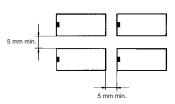
Precautions -

■ Mounting

When mounting a number of relays on a PCB, be sure to provide a minimum mounting space of 5 mm between the two juxtaposed relays as shown below.

*Average value

(43.9)*



The above minimum mounting space is necessary due to mutual thermal interference generated by the relays. This restriction may be ignored, however, depending on the operating conditions of the relays. Consult OMRON for details.

There is no restriction on the mounting direction of each relay on the PCB.

When using this circuit, confirm the set and reset states and then take into account the circuit constant.