

Electrical Mechanical Relay

Offering the global standard in safety.
Meeting our customers' every need with numerous variations.



Smart Building

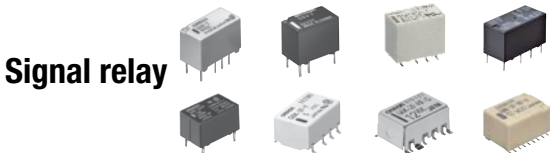


Factory Automation

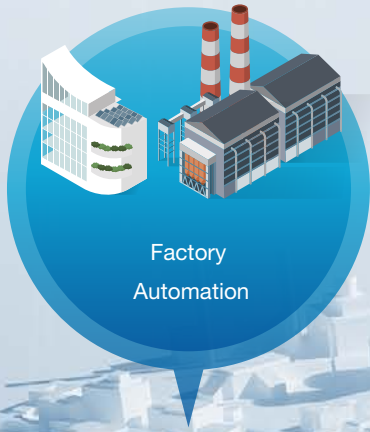
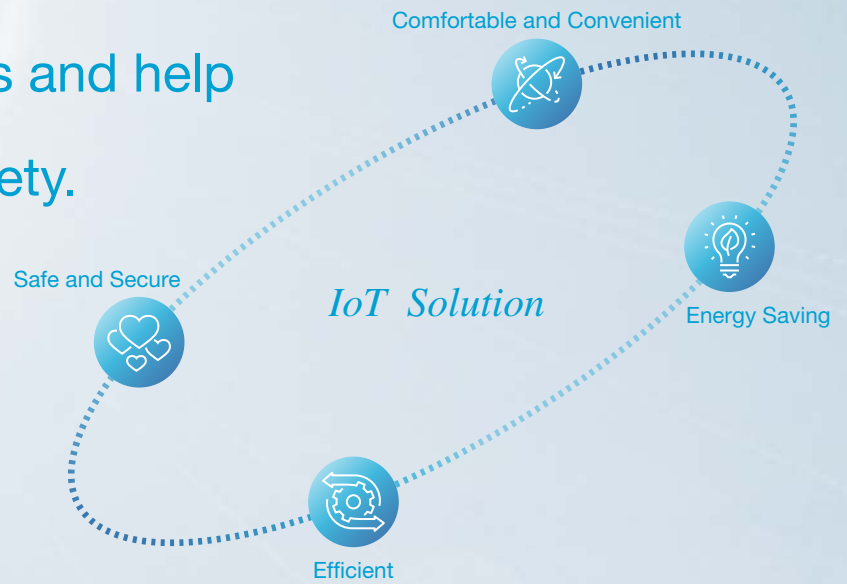


Energy

Mechanical Relay Selection Guide



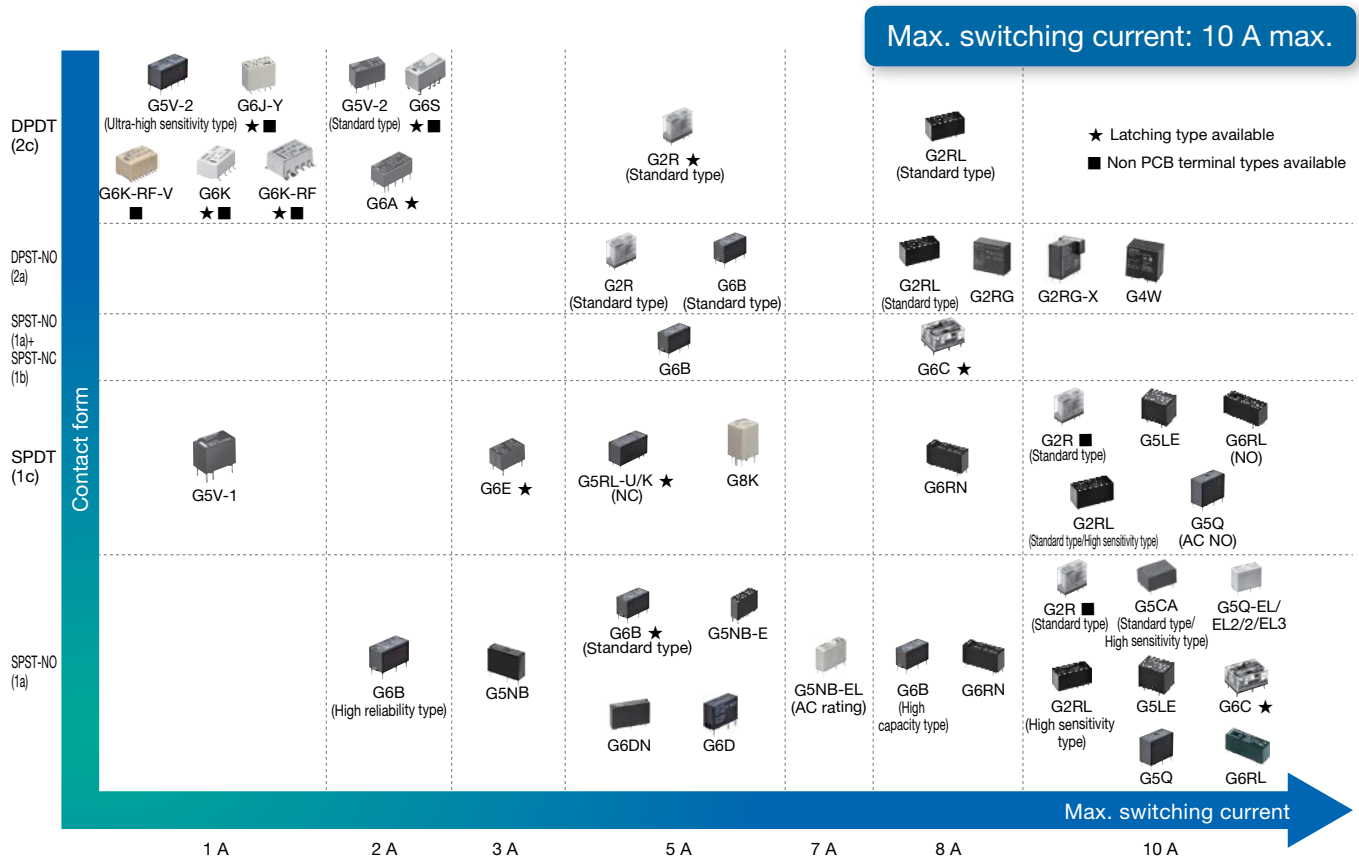
OMRON relays contribute to people's lives in various scenarios and help build a comfortable society.



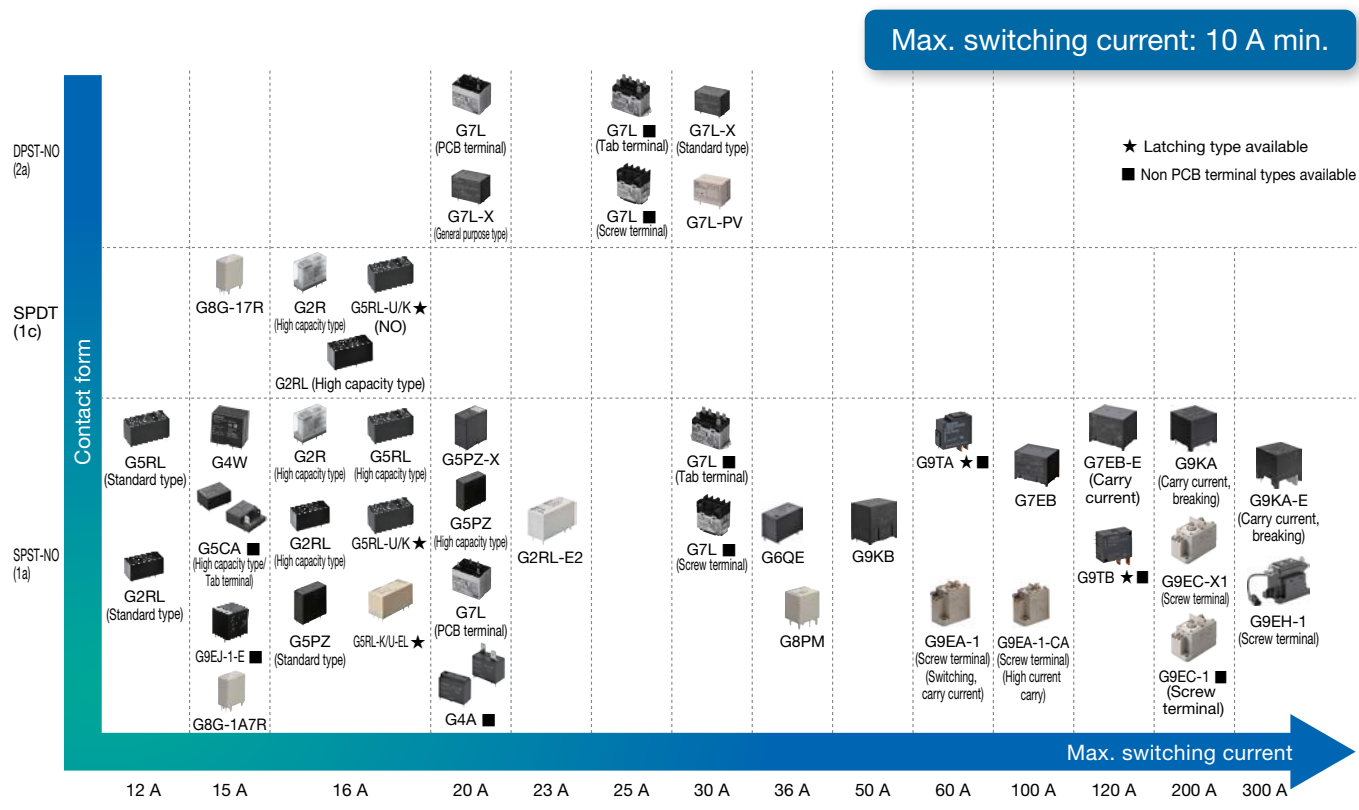
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Available in a wide range of contact forms and switching capacities to meet diverse customer needs.

















*The max. switching current may differ depending on the DC rating and b contact variations. Refer to the datasheet for details.



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Product Selection

Classification	Max. switching current	Recommended Products	
Signal relay	2 A max. AC/DC	Miniature 1-pole  G5V-1 Switching range: 1 mA - 1 A	Miniature 2-pole ★ G6J-Y  Switching range: 10 µA - 1 A Suitable for high-density mounting G5V-2  Switching range: 10 µA - 2 A
	Power relay	3-25 A AC/DC	1-pole G5NB  Max. switching current: 3 A Explosion proof, PWM control Impulse withstand voltage: 10 kV G5Q  Max. switching current: 3 A, 10 A Glow wire, PWM control Miniature, 1c contact ★ G5RL-K/U  Max. switching current: 5 A, 16 A Impulse withstand voltage: 10 kV
30-300 A AC/DC		AC High Capacity G7L-PV  Max. switching current: 30 A, 2-pole for PV inverter, low power consumption G6QE  Max. switching current: 36 A, 1-pole Low power consumption G7EB/G7EB-E  Max. switching current: 100A/120A, 1-pole Low contact resistance, DC switching available	
10-200 A (200 VDC or above) DC High Voltage		DC High Voltage G9EJ-1-E  Max. switching current: 15 A for inrush prevention circuit G9EA-1  Max. switching current: 60 A, 100 A Gas injected, hermetically sealed structure, high contact reliability G9EC-1  Max. switching current: 200 A Gas injected, hermetically sealed structure, high contact reliability G9EC-X1  Max. switching current: 200 A Supports contact voltage of 1,000 V G9EH-1  Max. switching current: 300 A Gas injected, hermetically sealed structure, high contact reliability	


★ Latching type available
Light blue frame: 2-pole type

and Features

Main Applications


★ **G6K** 

Switching range: 10 μ A - 1 A
Low power consumption of just 100 mW


★ **G6S** 

Switching range: 10 μ A - 2 A
Global standard

High frequency 2-pole

★ **G6K-RF** 

High frequency (1 GHz / 3 GHz band)
RF/LVDS signal switching

G6K-RF-V 

High frequency (8 GHz band)
RF/LVDS signal switching

 **Building Automation**


 **Factory Automation**

 **ATE Inspection Device**


G2RL 

Max. switching current: 8 A
Explosion proof, PWM control


For specific loads 1-pole

★ **G5RL-K/U-EL** 

Max. switching current: 16 A
Inrush resistance, illumination load
Ignition resistance

G5PZ 


Max. switching current: 16 A, 20 A
Low power consumption, impulse withstand voltage: 10 kV
Sealed/certified explosion-proof product available

G2RL-E2 


Max. switching current: 23 A
High capacity, ignition resistance
Long service life, impulse withstand voltage: 10 kV

 **Household Appliance**


 **Building Automation**


G5Q-EL 


Max. switching current
AC: 10 A
Explosion proof, ignition resistance, inrush resistance, long service life

G5NB-EL 


Max. switching current
AC: 7 A, DC: 5 A
Explosion proof, ignition resistance, long service life

 **Environment and Energy**


 **Factory Automation**

G9KA 


Max. switching current: 200 A, 1-pole
Low-contact resistance, low heat generation

G9KA-E 


Max. switching current: 300 A, 1-pole
Low-contact resistance, low heat generation

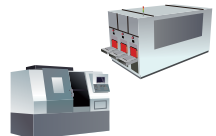
G8G 


Max. switching current: 15 A
DC motor load
32 A switching, small mounting area, high capacity

G8PM 


Max. switching current: 40 A
DC motor load 150 A switching, miniature, high capacity

 **Environment and Energy**


 **Factory Automation**

G7L-X 


Load switching at 1,000 VDC
Bi-directional switching at 600 VDC
Low-contact resistance type available, low power consumption

G2RG-X 

Max. switching current: 10 A
500 VDC 10 A switching, impulse withstand voltage





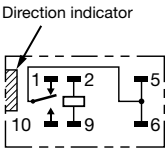
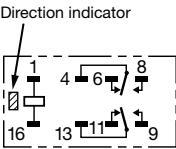
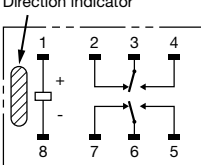
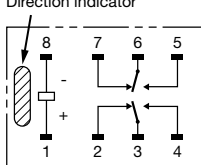
G5PZ-X 



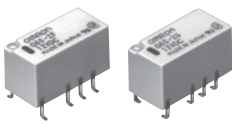
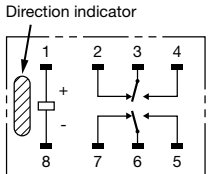
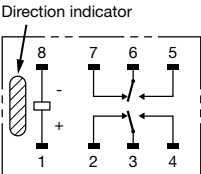
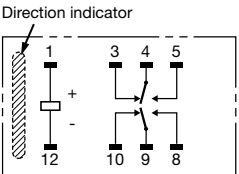
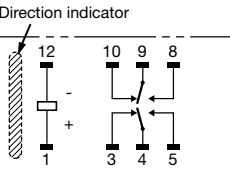
Max. switching current: 20 A
Enables bi-directional switching at 200 VDC, 20 A and 400 VDC, 20 A (2-contact series connection)

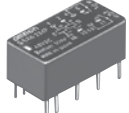

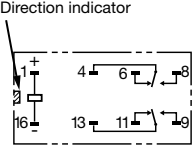
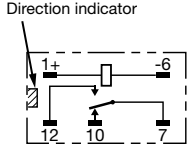
G9KB 


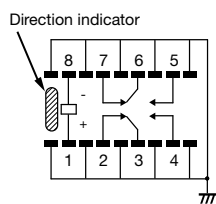
Max. switching current: 50 A
Enables bi-directional switching at 600 VDC, 50 A



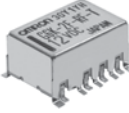
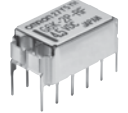
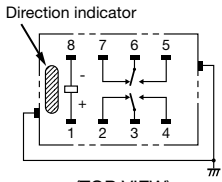
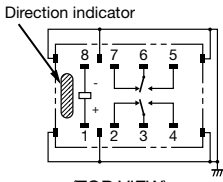
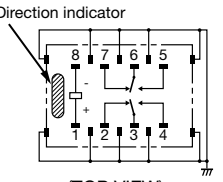
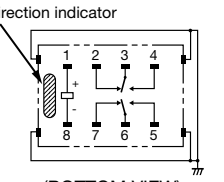
Signal Relay (2A max.) Product Lineup INDEX

Model	G5V-1		G5V-2		G6J-Y		
			Standard type	High sensitivity type	G6J-2P-Y	G6J-2F(S,L)-Y	
Outline dimensions					PCB terminal	Surface mounting terminal	
	Shape (max. value mm) Length (L) × Width (W) × Height (H)						
	12.5 × 7.5 × 10		20.5 × 10.1 × 11.5		10.9 × 6 × 9.3	10.9 × 6 × 10	
Features	General purpose 1-pole signal relay		General purpose 2-pole signal relay		Subminiature, ultra-thin surface-mounting 2-pole signal relay		
Contact	Contact form		SPDT(1c)		DPDT(2c)		
	Contact type		Single crossbar		Bifurcated crossbar		
	Rated load	Resistive load	100,000 operations min. at 125 VAC, 0.5 A 100,000 operations min. at 24 VDC, 1 A	100,000 operations min. at 125 VAC, 0.5 A 100,000 operations min. at 30 VDC, 2 A	100,000 operations min. at 125 VAC, 0.5 A 300,000 operations min. at 24 VDC, 1 A	100,000 operations min. at 125 VAC, 0.3 A 100,000 operations min. at 30 VDC, 1 A	
		Inductive load COSφ=0.4 L/R=7 ms	—	—	—	—	
	Max. switching current		1 A	2 A	1 A	1 A	
Failure rate P level (reference value)		DC5V 1 mA	DC10 mV 10 μA		DC10 mV 10 μA		
Coil	Rated voltage		3 to 24 VDC		3 to 24 VDC		
	Power consumption		Approx. 150 mW		Approx. 140 to 230 mW		
Mechanical durability		5,000,000 operations min.		15,000,000 operations min.		50,000,000 operations min.	
Terminal arrangement/ Internal connections	G5V-1		G5V-2		G6J-2P-Y	G6J-2F(S,L)-Y	
							
	(BOTTOM VIEW)		(BOTTOM VIEW)		(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(TOP VIEW) (Check carefully the coil polarity of the Relay)	





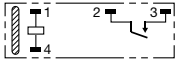
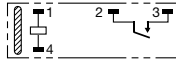
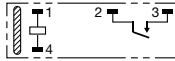
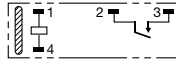
Model	G6K		G6S		
	G6K-2P G6K-2P-Y	G6K-2(F,G) G6K-2(F,G)-Y	G6S-2	G6S-2(F,G)	
Outline dimensions	PCB terminal		PCB terminal	Surface mounting terminal	
	Shape (max. value mm) Length (L) × Width (W) × Height (H)				
	10.2 × 6.7 × 5.3		15 × 7.5 × 9.4	15 × 7.5 × 9.4	
Features	Subminiature, low power consumption, low profile surface-mounting 2-pole signal relay		Miniature, general purpose, high insulation, high capacity surface-mounting 2-pole signal relay		
Contact	Contact form		DPDT(2c)		
	Contact type		Bifurcated crossbar		
	Rated load	Resistive load	100,000 operations min. at 125 VAC, 0.3 A 100,000 operations min. at 30 VDC, 1 A	100,000 operations min. at 125 VAC, 0.5 A 100,000 operations min. at 30 VDC, 2 A	
		Inductive load COSφ=0.4 L/R=7ms	—	—	
	Max. switching current		1 A	2 A	
Failure rate P level (reference value)		DC10 mV 10 μA		DC10 mV 10 μA	
Coil	Rated voltage		3 to 24 VDC		
	Power consumption		Approx. 100 mW		
Mechanical durability		50,000,000 operations min.		100,000,000 operations min.	
Terminal arrangement/ Internal connections	G6K-2P(-Y)		G6K-2(F,G)(-Y)	G6S-2	G6S-2(F,G)
					
	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)		(TOP VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(TOP VIEW) (Check carefully the coil polarity of the Relay)





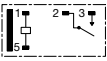
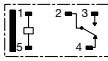
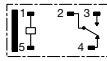
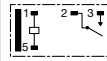
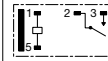
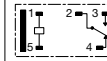
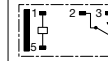
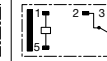
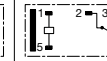
Model	G6A	G6E		
Outline dimensions				
	Shape (max. value mm) Length (L) × Width (W) × Height (H)	20.2 × 10.1 × 8.4	16 × 10 × 8	
Features	FCC standard compliant high withstand voltage type	Miniature, high sensitivity 1-pole signal relay		
Contact	Contact form	DPDT(2c)	SPDT(1c)	
	Contact type	Bifurcated crossbar	Bifurcated crossbar	
	Rated load	Resistive load	500,000 operations min. at 125 VAC, 0.5 A 500,000 operations min. at 30 VDC, 2 A	100,000 operations min. at 125 VAC, 0.4 A 500,000 operations min. at 30 VDC, 2 A
		Inductive load COSφ=0.4 L/R=7 ms	500,000 operations min. at 125 VAC, 0.3 A 500,000 operations min. at 30 VDC, 1 A	100,000 operations min. at 125 VAC, 0.2 A 500,000 operations min. at 30 VDC, 1 A
	Max. switching current	2 A (resistive load)	3 A	
Failure rate P level (reference value)	DC10 mV 10 μA	DC10 mV 10 μA		
Coil	Rated voltage	3 to 48 VDC	5 to 48 VDC	
	Power consumption	Approx. 200 mW to 400 mW	Approx. 200 mW to 400 mW	
Mechanical durability	100,000,000 operations min.	100,000,000 operations min.		
Terminal arrangement/ Internal connections	G6A-274P 	G6E-134P-US 		
	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)		

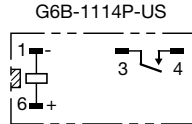

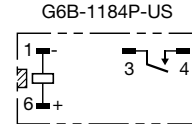
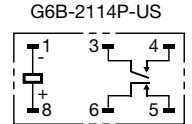
Model	G6K-2F-RF-V	
Outline dimensions		
	Shape (max. value mm) Length (L) × Width (W) × Height (H)	11.9 × 8.1 × 7.4
Features	High-speed differential transmission signal changeover 8 GHz range miniature high-frequency relay	
Characteristic impedance	50 Ω (differential impedance 100 Ω)	
High frequency characteristics	Isolation (same polarity)	15 dB min. at 8 GHz
	Isolation (different polarity)	15 dB min. at 8 GHz
	Insertion loss	Single ended characteristics: 4 dB max. at 8 GHz Differential transmission: 3 dB max. at 8 GHz
	V.SWR	3.57 max. at 8 GHz
Contact	Contact form	DPDT(2c)
	Contact type	Bifurcated crossbar
Rated load		100,000 operations min. at 125 VAC, 0.3 A 100,000 operations min. at 30 VDC, 1 A 1,000,000 operations min. at 10 VDC, 10 mA 100,000 operations min. at 8 GHz, 1 W* *Values for a V.SWR of 1.2 max. at the load
	Maximum switching power (high frequency)	1 W
Coil	Rated voltage	3 to 12 VDC
	Power consumption	Approx. 100 mW
Terminal arrangement/ Internal connections	G6K-2F-RF-V 	
	(TOP VIEW) (Check carefully the coil polarity of the Relay)	


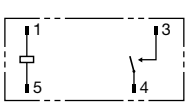
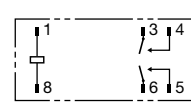
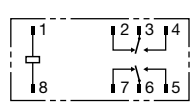
Model	G6K-RF			
	G6K(U)-2F-RF	G6K(U)-2F-RF-S	G6K(U)-2F-RF-T	G6K-2P-RF
	Surface mounting terminal	Surface mounting terminal	Surface mounting terminal	PCB terminal
Outline dimensions				
	Shape (max. value mm) Length (L) × Width (W) × Height (H)	10.6 × 7.2 × 5.7	11 × 7.2 × 5.7	11 × 7.2 × 5.7
Features	1 GHz range subminiature high-frequency relay	1 GHz range subminiature high-frequency relay (space-saving model)	3 GHz range subminiature high-frequency relay	1 GHz range subminiature high-frequency relay
Characteristic impedance	50 Ω			
High frequency characteristics	Isolation (same polarity)	20 dB min. at 1 GHz	20 dB min. at 1 GHz 18 dB min. at 3GHz	20 dB min. at 1 GHz
	Isolation (different polarity)	30 dB min. at 1 GHz	30 dB min. at 1 GHz 25 dB min. at 3GHz	30 dB min. at 1 GHz
	Insertion loss	0.2 dB max. at 1 GHz	0.2 dB max. at 1 GHz 0.6 dB max. at 3 GHz	0.2 dB max. at 1 GHz
	V.SWR	1.2 max. at 1 GHz	1.2 max. at 1 GHz 1.4 max. at 3 GHz	1.2 max. at 1 GHz
Contact	Contact form	DPDT(2c)		
	Contact type	Bifurcated crossbar		
Rated load		100,000 operations min. at 125 VAC, 0.3 A	100,000 operations min. at 30 VDC, 1 A	100,000 operations min. at 1 GHz, 1 W*
		*Values for a V.SWR of 1.2 max. at the load		
Maximum switching power (high frequency)	1 W			
Coil	Rated voltage	3 to 24 VDC		
	Power consumption	Approx. 100 mW		
Terminal arrangement/ Internal connections	G6K-2F-RF 	G6K-2F-RF-S 	G6K-2F-RF-T 	G6K-2P-RF 
	(TOP VIEW) (Check carefully the coil polarity of the Relay)	(TOP VIEW) (Check carefully the coil polarity of the Relay)	(TOP VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)

Power Relay (3 to 25 A; AC/DC) Product Lineup INDEX

Model		G5NB				
		G5NB-1A(-HA,-CF)	G5NB-1A(4)-E(-HA)	G5NB-1A(-HA,-CF)-PW	G5NB-1A(4)-EL-HA	
Outline dimensions		Standard type	High capacity type	Holding voltage, PWM control compatible type	High capacity, high durability type	
	Shape (max. value mm) Length (L) × Width (W) × Height (H)	 20.5 × 7.2 × 15.3	 20.5 × 7.2 × 15.3	 20.5 × 7.2 × 15.3	 20.5 × 7.2 × 15.3	
Features		1-pole 3 A switching relay with 10 kV impulse withstand voltage and satisfying EN61010 reinforced insulation requirements	1-pole 5 A switching relay with 10 kV impulse withstand voltage and satisfying EN61010 reinforced insulation requirements	1-pole 3 A switching relay with 10 kV impulse withstand voltage and EN61010 compliance; holding voltage/ PWM control compatible	Miniature power relay capable of 1-pole 7 A switching, complying with the international safety standards for ignition resistance	
Contact	Contact form	SPST-NO (1a)				
	Contact type	Single				
	Rated load	Resistive load	200,000 operations min. at 125 VAC, 3 A 200,000 operations min. at 30 VDC, 3 A	100,000 operations at 250 VAC, 5 A 200,000 operations at 30 VDC, 3 A	200,000 operations min. at 125 VAC, 3 A 200,000 operations min. at 30 VDC, 3 A	200,000 operations min. at 250 VAC, 5 A 50,000 operations min. at 250 VAC, 7 A 100,000 operations min. at 30 VDC, 5 A (standard type, holding voltage type)
		Inductive load	—			
	Max. switching current	3 A	5 A	3 A	AC:7 A, DC:5 A	
Failure rate P level (reference value)	5 VDC 10 mA					
Coil	Rated voltage	5 to 24 VDC				
	Power consumption	Approx. 200 mW	Approx. 200 mW	Approx. 200 mW Approx. 32 mW (when applying holding voltage)	Approx. 200 mW	
Mechanical durability		5,000,000 operations min.				
Terminal arrangement/ Internal connections		 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	




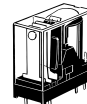
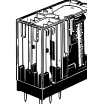
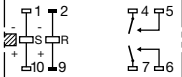
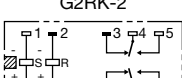

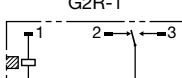
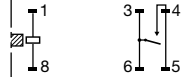
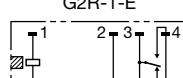
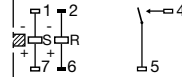

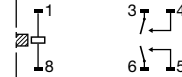

Model		G5Q								
		G5Q-1(A)(4)-(-HA)	G5Q-1(A)(4)-EU(-HA)	G5Q-1(A)(4)-(-HA)-PW	G5Q-1A-EL-HA-VH	G5Q-1A4-EL2-HA	G5Q-1A4-EL3-HA			
Outline dimensions		Standard type	High capacity	Holding voltage, PWM control compatible type	High capacity, long service life type	High capacity, inrush resistance type	High capacity, motor load switching type			
	Shape (max. value mm) Length (L) × Width (W) × Height (H)	 20.3 × 10.3 × 15.8				 20.3 × 10.3 × 15.8	 20.3 × 10.3 × 15.8	 20.3 × 10.3 × 15.8		
Features		Miniature power relay with 1-pole 10 A switching capacity Complies with the international safety standards for ignition resistance			Miniature power relay with 1-pole 10 A switching capacity Holding voltage/PWM control compatible	100,000 operations at 10 A (250 VAC) with high capacity switching and long service life, complying with the international safety standards for ignition resistance	40 A inrush current switching available thanks to inrush current resistance, complying with the international safety standards for ignition resistance	Motor load switching at 30 A inrush current and 3 A break current, complying with the international safety standards for ignition resistance		
Contact	Contact form	SPST-NO (1a)	SPDT(1c)	SPST-NO (1a)	SPDT(1c)	SPST-NO (1a)+SPDT(1c)	SPDT(1c)	SPST-NO (1a)		
	Contact type	Single								
	Rated load	Resistive load	(N.O.) 50,000 operations min. at 125 VAC, 10 A resistive load 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 50,000 operations min. at 250 VAC, 5 A resistive load 100,000 operations min. at 30 VDC, 5 A resistive load (N.C.) 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 100,000 operations min. at 30 VDC, 3 A resistive load	(N.O.) 50,000 operations min. at 125 VAC, 10 A resistive load 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 50,000 operations min. at 250 VAC, 5 A resistive load 25,000 operations min. at 250 VAC, 10 A resistive load 100,000 operations min. at 30 VDC, 5 A resistive load (N.C.) 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 100,000 operations min. at 30 VDC, 3 A resistive load	(N.O.) 50,000 operations min. at 125 VAC, 10 A resistive load 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 50,000 operations min. at 250 VAC, 5 A resistive load 25,000 operations min. at 250 VAC, 10 A resistive load 100,000 operations min. at 30 VDC, 5 A resistive load (N.C.) 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 100,000 operations min. at 30 VDC, 3 A resistive load	(N.O.) 50,000 operations min. at 125 VAC, 10 A resistive load 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 50,000 operations min. at 250 VAC, 5 A resistive load 25,000 operations min. at 250 VAC, 10 A resistive load 100,000 operations min. at 30 VDC, 5 A resistive load (N.C.) 200,000 operations min. at 125 VAC, 3 A resistive load 100,000 operations min. at 250 VAC, 3 A resistive load 100,000 operations min. at 30 VDC, 3 A resistive load	AC250 V 10 A 100,000 operations min.	—	—	
		Inductive load, capacitive load	—				—	Capacitive load: 250 VAC, inrush current: 40 A / 100 μs break current: 1 A, 100,000 operations min.	Motor load: 250 VAC, inrush current: 30 A / 0.5s, break current: 3 A, cosφ=0.5, 300,000 operations min.	
	Max. switching current	AC : 10 A(N.O.)/3 A(N.C.) DC : 5 A(N.O.)/3 A(N.C.)								
Failure rate P level (reference value)	5 VDC 10 mA									
Rated voltage	5 to 24 VDC									
Coil	Power consumption	Approx. 200 mW	Approx. 400 mW	Approx. 200 mW	Approx. 400 mW	Approx. 200 mW Approx. 32 mW (when applying holding voltage)	Approx. 400 mW Approx. 36 mW (when applying holding voltage)	Approx. 400 mW		
	Mechanical durability	10,000,000 operations min.								
Terminal arrangement/ Internal connections		 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)

Model		G6B				
Outline dimensions		G6B(U,K)-1114(P,C)	G6B-117(4,7)(P,C)	G6B-1184P	G6B-2(0,1,2)14(P,C)	
		1-pole standard type	1-pole high capacity type	1-pole high reliability type	2-pole standard type	
Shape (max. value mm) Length (L) x Width (W) x Height (H)		20 x 10 x 10	20.2 x 10 x 12.5(G6B-1174(P,C)) 20.2 x 10 x 15(G6B-1177(P,C))	20 x 10 x 10	20 x 11 x 11	
Features		Miniature 1a contact 5 A power relay	Miniature 1a contact 8 A power relay	High reliability by single crossbar contact	Miniature 1a1b, 2a, 2b contact 5 A power relay	
Contact	Contact form	SPST-NO (1a)		SPST-NO (1a)	SPST-NO (1a)+SPST-NC (1b), DPST-NO (2a), DPST-NC (2b)	
	Contact type	Single		Single crossbar	Single	
	Rated load	Resistive load	100,000 operations min. at 250 VAC, 5 A 100,000 operations min. at 30 VDC, 5 A	100,000 operations min. at 250 VAC, 8 A 100,000 operations min. at 30 VDC, 8 A	100,000 operations min. at 250 VAC, 2 A 100,000 operations min. at 30 VDC, 2 A	100,000 operations min. at 250 VAC, 5 A 100,000 operations min. at 30 VDC, 5 A
		Inductive load	100,000 operations min. at 250 VAC, 2 A (COSØ=0.4) 100,000 operations min. at 30 VDC, 2 A (L/R=7 ms)		100,000 operations at 250 VAC, 0.5 A (COSØ=0.4) 100,000 operations at 30 VDC, 0.5 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 1.5 A (COSØ=0.4) 100,000 operations min. at 30 VDC, 1.5 A (L/R=7 ms)
	Max. switching current	5 A	8 A	2 A	5 A	
Failure rate P level (reference value)	5 VDC 10 mA		1 VDC 1 mA	5 VDC 10 mA		
Coil	Rated voltage	5 to 24 VDC		5 to 24 VDC	5 to 24 VDC	
	Power consumption	Approx. 200 to 280 mW		Approx. 200 mW	Approx. 300 mW	
Mechanical durability		50,000,000 operations min.				
Terminal arrangement/ Internal connections		 <p>(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)</p>	 <p>(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)</p>	 <p>(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)</p>	 <p>(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)</p>	

Model		G2RL		G2RL-1A-E2-CV-HA	
Outline dimensions		G2RL-1(A)-H	G2RL-2	High capacity type & high-temperature compatible type	
		1-pole (high sensitivity type)	2-pole		
Shape (max. value mm) Length (L) x Width (W) x Height (H)		29 x 12.7 x 15.7			29 x 12.7 x 16.7
Features		1-pole 10 A high sensitivity type	2-pole 8 A general purpose type		
Contact	Contact form	SPST-NO (1a), SPDT(1c)	DPST-NO (2a)	DPDT(2c)	
	Contact type	Single			
	Rated load	Resistive load	250 VAC 10A 50,000 operations	250 VAC 8 A 100,000 operations min. 24 VDC 8 A 30,000 operations min.	250 VAC 8 A 50,000 operations min. 24 VDC 8 A 30,000 operations min.
		Inductive load	—		
	Max. switching current	10A	8 A		
Failure rate P level (reference value)	24 VDC 40mA			24 VDC 40mA	
Coil	Rated voltage	5 to 48 VDC			
	Power consumption	Approx. 250 mW	Approx. 400 mW to 430 mW Approx. 120 mW (when applying holding voltage)		
Mechanical durability		20,000,000 operations min.			
Terminal arrangement/ Internal connections		 <p>(BOTTOM VIEW)</p>	 <p>(BOTTOM VIEW)</p>	 <p>(BOTTOM VIEW)</p>	





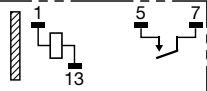
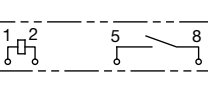
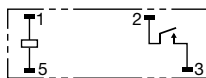
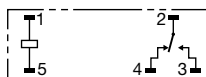

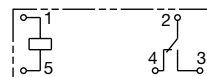
*PWM control products are also available.




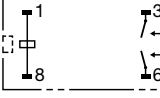
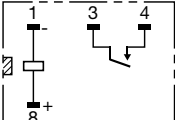
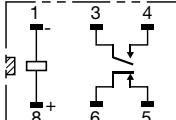
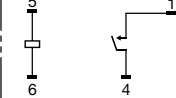
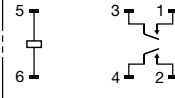
Power Relay (3 to 25 A; AC/DC) Product Lineup INDEX

Model		G2R					
		G2RK-2(A)	G2R-1(A)	G2R-1(A)-E	G2RK-1(A)	G2R-2(A)	
Outline dimensions		2-pole (double-winding latching type)	1-pole	1-pole (high capacity type)	1-pole (double-winding latching type)	2-pole	
	Shape (max. value mm) Length (L) × Width (W) × Height (H)	 29 × 13 × 25.5	 29 × 13 × 25.5	 29 × 13 × 25.5	 29 × 13 × 25.5	 29 × 13 × 25.5	
Features		3 A double-winding latching type	1-pole 10 A general purpose type	16 A high capacity type	5 A double-winding latching type	2-pole 5 A general purpose type	
Contact	Contact form	DPST-NO (2a), DPDT(2c)		SPST-NO (1a), SPDT(1c)		DPST-NO (2a), DPDT(2c)	
	Contact type	Single		Single		Single	
	Rated load	Resistive load	100,000 operations min. at 250 VAC, 3 A 100,000 operations min. at 30 VDC, 3 A	100,000 operations min. at 250 VAC, 10 A 100,000 operations min. at 30 VDC, 10 A	100,000 operations min. at 250 VAC, 16 A 100,000 operations min. at 30 VDC, 16 A	100,000 operations min. at 250 VAC, 5 A 100,000 operations min. at 30 VDC, 5 A	100,000 operations min. at 250 VAC, 5 A 100,000 operations min. at 30 VDC, 5 A
		Inductive load	100,000 operations min. at 250 VAC, 1.5 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 2 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 7.5 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 5 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 8 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 8 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 3.5 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 2.5 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 2 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)
	Max. switching current	3 A	10 A	16 A	5 A	5 A	
	Failure rate P level (reference value)	DC5V 10 mA	DC5V 100 mA	DC5V 100 mA	DC5V 100 mA	DC5V 10 mA	
Coil	Rated voltage	5 to 24 VDC	5 to 100 VDC, 12 to 200 VAC	5 to 100 VDC, 12 to 200 VAC	5 to 24 VDC	5 to 100 VDC, 12 to 200 VAC	
	Power consumption	Approx. 850 mW (set coil) Approx. 600 mW (reset coil)	DC: Approx. 530 mW, AC: Approx. 900 mVA	DC: Approx. 530 mW, AC: Approx. 900 mVA	Approx. 850 mW (set coil) Approx. 600 mW (reset coil)	DC: Approx. 530 mW, AC: Approx. 900 mVA	
Mechanical durability		10,000,000 operations min.	DC coil specification: 20,000,000 operations min. AC coil specification: 10,000,000 operations min.	10,000,000 operations min.	10,000,000 operations min.	DC coil specification: 20,000,000 operations min. AC coil specification: 10,000,000 operations min.	
Terminal arrangement/ Internal connections		  (BOTTOM VIEW)	  (BOTTOM VIEW)	  (BOTTOM VIEW)	  (BOTTOM VIEW)	  (BOTTOM VIEW)	




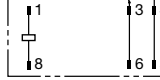
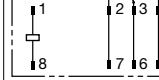
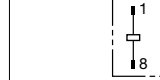
* 1-pole twin-contact types with flux protection, high sensitivity types, and plastic sealed types are also available.

* 2-pole high sensitivity types with flux protection and plastic sealed types are also available.



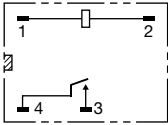
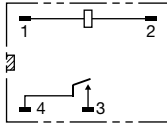
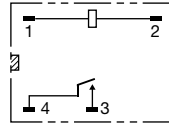
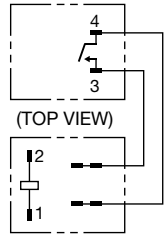
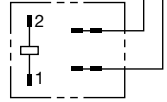
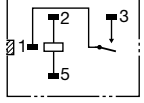
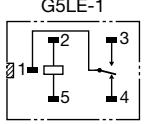
Model		G6D	G6DN	G6RN	G6RL	
Outline dimensions						
	Shape (max. value mm) Length (L) × Width (W) × Height (H)	17.5 × 6.5 × 12.5	20 × 5.08 × 12.5	29 × 10.5 × 15.5	28.5 × 10 × 12.3	
Features		Miniature power relay with 1-pole 5 A switching capacity	Miniature slim power relay with 1-pole 5 A switching capacity	Miniature power relay with 1-pole 8 A switching capacity	Low profile power relay with 1-pole 10 A switching capacity and 12.3 mm height	
Contact	Contact form	SPST-NO (1a)	SPST-NO (1a)	SPST-NO (1a), SPDT(1c)	SPST-NO (1a), SPDT(1c)	
	Contact type	Single	Bifurcated crossbar	Single	Single	
	Rated load	Resistive load	70,000 operations min. at 250 VAC, 5 A 70,000 operations min. at 30 VDC, 5 A	80,000 operations min. at 250 VAC, 5 A 80,000 operations min. at 30 VDC, 5 A	50,000 operations min. at 250 VAC, 8 A 50,000 operations min. at 30 VDC, 5 A	G6RL-1(A) 50,000 operations min. (NO) at 250 VAC, 8A (resistive load) 50,000 operations min. (NC) at 250 VAC, 8A (resistive load) 50,000 operations min. at 24 VDC, 5A (resistive load) (at 600 operations/h) G6RL-1(A)-ASI(-PL) 100,000 operations min. (NO) at 250 VAC, 10A (resistive load) 100,000 operations min. at 250 VAC, 8A (resistive load) 50,000 operations min. at 30 VDC, 5A (resistive load) (at 1,800 operations/h) G6RL-1(A)-ASI 50,000 operations min. (NO) at 250 VAC, 8A (resistive load) 50,000 operations min. (NC) at 250 VAC, 8A (resistive load) 50,000 operations min. at 24 VDC, 5A (resistive load) (at 1,800 operations/h)
		Inductive load	—	100,000 operations min. at 250 VAC, 2 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 2 A (L/R=7 ms)	—	—
	Max. switching current	5 A	5 A	8 A	10 A(NO) 8 A(NC)	
	Failure rate P level (reference value)	5 VDC 10 mA G6D-1A-ASI-AP 5 VDC 1 mA	0.1 VDC 0.1 mA	5 VDC 10mA	5 VDC 10mA	
Coil	Rated voltage	5 to 24 VDC	4.5 to 24 VDC	5 to 24 VDC	3 to 48 VDC	
	Power consumption	Approx. 200 mW	Approx. 110 mW	Approx. 220 mW	Approx. 220 to 240 mW	
Mechanical durability		20,000,000 operations min.	20,000,000 operations min.	10,000,000 operations min.	10,000,000 operations min.	
Terminal arrangement/ Internal connections		 (BOTTOM VIEW)	 (BOTTOM VIEW)	  (BOTTOM VIEW)	  (BOTTOM VIEW)	




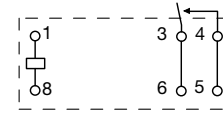
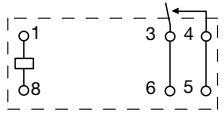
Model	G2RG		G6C		G4W		
Outline dimensions	 Shape (max. value mm) Length (L) × Width (W) × Height (H) 29 × 13.5 × 26.5		 20 × 15 × 10		G4W-1 G4W-2 1-pole 2-pole		
					 30.5 × 19.5 × 30.5		
Features	Miniature power relay capable of 110 VDC, 5 A high-voltage DC switching (2-pole series wiring with 1a contact, 1.5 mm contact gap)		Miniature power relay with 1-pole 10 A switching capacity		For 10 kV impulse voltage, 4 kV withstand voltage power switching		
Contact	Contact form	DPST-NO (2a)		SPST-NO (1a)	SPST-NO (1a)+SPST-NC (1b)		
	Contact type	Single		Single		Single	
	Rated load	Resistive load	10,000 operations min. at 250 VAC, 8 A 10,000 operations min. at 110 VDC, 5 A (with 2-pole series wiring)		100,000 operations min. at 250 VAC, 10 A 100,000 operations min. at 30 VDC, 10 A	100,000 operations min. at 250 VAC, 8 A 100,000 operations min. at 30 VDC, 8 A	100,000 operations min. at 250 VAC, 15 A 100,000 operations min. at 24 VDC, 15 A
		Inductive load	—		100,000 operations min. at 250 VAC, 5 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 5 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 3.5 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 3.5 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 10 A (COSφ=0.4) 100,000 operations min. at 24 VDC, 7.5 A (L/R=7 ms)
	Max. switching current	8 A		10 A	8 A	15 A	
Failure rate P level (reference value)			5 VDC 10 mA		5 VDC 100 mA		
Coil	Rated voltage	12 VDC, 24 VDC		3 to 24 VDC		12 to 100 VDC	
	Power consumption	Approx. 800 mW		Approx. 200 to 280 mW		Approx. 800 mW	
Mechanical durability	1,000,000 operations min.		50,000,000 operations min.		5,000,000 operations min.		
Terminal arrangement/ Internal connections	G2RG-2A4		G6C-1114P-US	G6C-2114P-US	G4W-1112P-US-TV8	G4W-2212P-US-TV5	
	 (BOTTOM VIEW)		 (BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	 (BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	





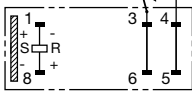
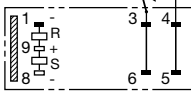
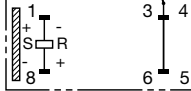
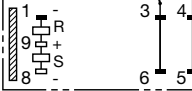
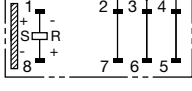
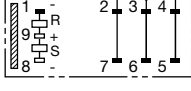
*Single-winding and double-winding latching types are also available.


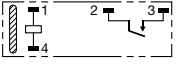
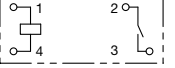
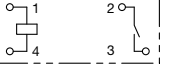
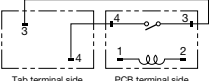
Model	G2RL							
Outline dimensions	G2RL-1(A)-(-HA)		G2RL-1(A)-E(-CV)-(-HA)		G2RL-1(A)-E-ASI			
	1-pole (standard type)		1-pole (high capacity type)		1-pole (TV-3 rating) (high capacity type)			
Shape (max. value mm) Length (L) × Width (W) × Height (H)	 29 × 12.7 × 15.7							
Features	1-pole 12 A general prpose type		16 A high capacity type		TV-3 compatible type			
Contact	Contact form	SPST-NO (1a)	SPDT(1c)	SPST-NO (1a)	SPDT(1c)	SPST-NO (1a) SPDT(1c)		
	Contact type	Single						
	Rated load	Resistive load	250 VAC 12 A 100,000 operations min. 24 VDC 12 A 30,000 operations min.	250 VAC 12 A 50,000 operations min. 24 VDC 12A 30,000 operations min.	250 VAC 16 A 50,000 operations min. 24 VDC 16 A 30,000 operations min.	250 VAC 16 A 30,000 operations min. 24 VDC 16 A 30,000 operations min.	250 VAC 16 A 50,000 operations min. 24 VDC 16 A 30,000 operations min.	250 VAC 16 A 30,000 operations min. 24 VDC 16 A 30,000 operations min.
		Inductive load	—					
	Max. switching current	12 A		16 A		16 A		
Failure rate P level (reference value)	24 VDC 40 mA							
Coil	Rated voltage	5 to 48 VDC						
	Power consumption	Approx. 400 mW to 430 mW						
Mechanical durability	20,000,000 operations min.							
Terminal arrangement/ Internal connections	G2RL-1A	G2RL-1	G2RL-1A-E	G2RL-1-E	G2RL-1A-E-ASI			
	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)			

Power Relay (3 to 25 A; AC/DC) Product Lineup INDEX





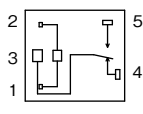
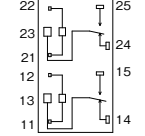
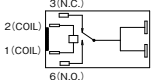
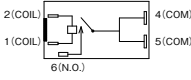
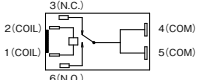
Model		G5CA				G5LE
Outline dimensions		Standard type	High capacity type	High sensitivity type	Tab terminal type	 22.5 × 16.5 × 19
		Shape (max. value mm) Length (L) × Width (W) × Height (H)		 22 × 16 × 11		
Features		Flat power relay with 10, 15 A switching capacity				10 A cubic type 1-pole power relay
Contact form		SPST-NO (1a)				SPST-NO (1a), SPDT(1c)
Contact type		Single				Single
Contact	Rated load	300,000 operations min. at 250 VAC, 10 A (plastic sealed type: 100,000 operations min.) 100,000 operations min. at 30 VDC, 10 A	100,000 operations min. at 110 VAC, 15 A 100,000 operations min. at 30 VDC, 10 A	100,000 operations min. at 250 VAC, 10 A 100,000 operations min. at 30 VDC, 10 A	100,000 operations min. at 110 VAC, 15 A 100,000 operations min. at 30 VDC, 10 A	100,000 operations min. at 120 VAC, 10 A 100,000 operations min. at 30 VDC, 8 A
	Inductive load	100,000 operations min. at 250 VAC, 3 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	100,000 operations min. at 110 VAC, 5 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 3 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	100,000 operations min. at 110 VAC, 5 A (COSφ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	—
Max. switching current		10 A	15 A	10 A	15 A	10 A
Failure rate P level (reference value)		5 VDC 100 mA				5 VDC 100 mA
Coil	Rated voltage	5 to 24 VDC				5 to 24 VDC
	Power consumption	Approx. 200 mW		Approx. 150 mW	Approx. 200 mW	Approx. 400 mW
Mechanical durability		20,000,000 operations min.				10,000,000 operations min.
Terminal arrangement/ Internal connections		G5CA-1A  (BOTTOM VIEW)	G5CA-1A-E  (BOTTOM VIEW)	G5CA-1A-H  (BOTTOM VIEW)	G5CA-1A-TP-E  (TOP VIEW)  (BOTTOM VIEW)	G5LE-1A  G5LE-1  (BOTTOM VIEW)

Model		G5RL			
Outline dimensions		Standard type (low noise)	Standard type (TV-8 rating)	High capacity type (low noise)	High capacity type (TV-8 rating)
		Shape (max. value mm) Length (L) × Width (W) × Height (H)		 29 × 12.7 × 15.7	
Features		Low noise, high insulation	High insulation, TV-8	Low noise, high insulation Miniature and low profile, 16 A switching	High insulation, TV-8 Miniature and low profile, 16 A switching
Contact form		SPST-NO (1a)			
Contact type		Single			
Contact	Rated load	100,000 operations min. at 250 VAC, 12 A 100,000 operations min. at 24 VDC, 12 A	100,000 operations min. at 250 VAC, 12 A 100,000 operations min. at 24 VDC, 12 A	50,000 operations min. at 250 VAC, 16 A 50,000 operations min. at 24 VDC, 16 A	50,000 operations min. at 250 VAC, 16 A 50,000 operations min. at 24 VDC, 16 A
	Inductive load	—			
Max. switching current		12 A		16 A	
Failure rate P level (reference value)		5 VDC 100 mA			
Coil	Rated voltage	5 to 24 VDC	5 to 48 VDC	5 to 24 VDC	5 to 48 VDC
	Power consumption	Approx. 530 mW	Approx. 400 to 430 mW	Approx. 530 mW	Approx. 400 to 430 mW
Mechanical durability		1,000,000 operations min.	10,000,000 operations min.	1,000,000 operations min.	10,000,000 operations min.
Terminal arrangement/ Internal connections		G5RL-1A-LN  (BOTTOM VIEW)	G5RL-1A-TV8  (BOTTOM VIEW)	G5RL-1A-E-LN  (BOTTOM VIEW)	G5RL-1A-E-TV8  (BOTTOM VIEW)

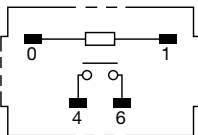
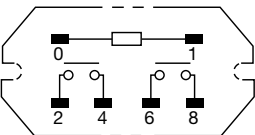
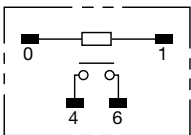
Model		G5RL				
Outline dimensions		G5RL-U1(A)-E	G5RL-K1(A)-E	G5RL-U1A-EL-HA	G5RL-K1A-EL-HA	
	Shape (max. value mm) Length (L) x Width (W) x Height (H)	Single-winding latching type, high capacity type  29 x 12.7 x 15.7	Double-winding latching type, high capacity type  29 x 12.7 x 15.7	Single-winding latching type, inrush resistance type  29 x 12.7 x 15.7	Double-winding latching type, inrush resistance type  29 x 12.7 x 15.7	
Features	Miniature and low profile latching relay with 16 A switching capacity				Inrush resistance, illumination load compatible Capacitor load, compliant with the international safety standards for ignition resistance	
Contact	Contact form	SPST-NO (1a), SPDT (1c)		SPST-NO (1a)		
	Contact type	Single				
	Rated load	Resistive load	(N.O) 50,000 operations min. at 250 VAC, 16 A 50,000 operations min. at 24 VDC, 16 A (N.C) 50,000 operations min. at 250 VAC, 5 A 50,000 operations min. at 24 VDC, 5 A		250 VAC 16 A 20,000 operations min.	
		Inductive load	-			
	Max. switching current	16 A (N.O), 5 A (N.C)		16 A		
	Failure rate P level (reference value)	-				
Coil	Rated voltage	3 to 24 VDC		5 to 24 VDC		
	Power consumption	Approx. 600 mW	Approx. 750 to 840 mW	Approx. 600 mW	Approx. 750 to 840 mW	
Mechanical durability	5,000,000 operations min.					
Terminal arrangement/ Internal connections		G5RL-U1A-E 	G5RL-K1A-E 	G5RL-U1A-EL-HA 	G5RL-K1A-EL-HA 	
		G5RL-U1-E 	G5RL-K1-E 	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	
		(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	
		(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	(BOTTOM VIEW) (Check carefully the coil polarity of the Relay)	

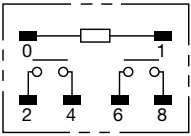
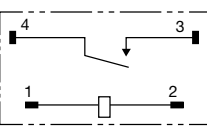
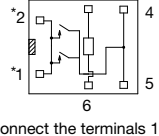
Model		G5PZ			G4A	
Outline dimensions		Standard type	High capacity type			
	Shape (max. value mm) Length (L) x Width (W) x Height (H)	Flux resistant type	Plastic sealed type			
Features	High sensitivity, 530 mW power consumption, 10 kV impulse withstand voltage, reinforced insulation Plastic sealed type (certified explosion-proof product) available				1-pole power relay suitable for air conditioner compressor loads and inverter loads	
Contact	Contact form	SPST-NO (1a)			SPST-NO (1a)	
	Contact type	Single			Single	
	Rated load	Resistive load	100,000 operations at 250 VAC, 16 A	50,000 operations at 250 VAC, 20 A	20,000 operations at 250 VAC, 20 A	100,000 operations min. at 250 VAC, 20 A
		Inductive load	-			motor load: 200,000 operations min. at 250 VAC, 80 A (inrush current: 0.3 s cos ϕ = 0.7), 20 A (break current: cos ϕ = 0.9)
Max. switching current	16 A	20 A		20 A		
Failure rate P level (reference value)	5 VDC 100 mA			5 VDC 100 mA		
Coil	Rated voltage	5 to 24 VDC			12 VDC, 24 VDC	
	Power consumption	Approx. 530 mW			Approx. 900 mW	
Mechanical durability	2,000,000 operations min.				2,000,000 operations min.	
Terminal arrangement/ Internal connections		G5PZ-1A 	G5PZ-1A-E 	G5PZ-1A4-E 	G4A-1A-E 	
		(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)	(TOP VIEW)(BOTTOM VIEW)	
		(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)	(TOP VIEW)(BOTTOM VIEW)	
		(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)	(TOP VIEW)(BOTTOM VIEW)	

Power Relay (3 to 25 A; AC/DC) Product Lineup INDEX






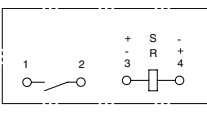
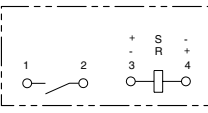
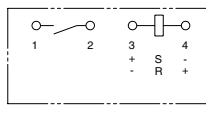
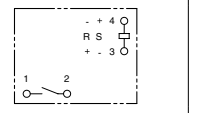
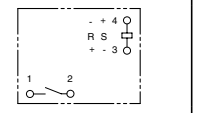
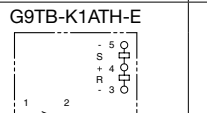
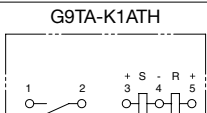
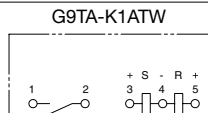
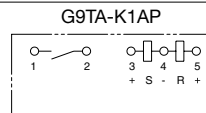
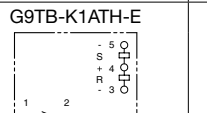
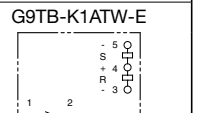
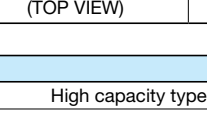
Model		G8K		G8G		
		Single type	Twin type (standalone 2-circuit type)	DC12 type	DC24 type	
Outline dimensions	Shape (max. value mm) Length (L) × Width (W) × Height (H)	 9.6 × 8.8 × 14.5	 9.6 × 17.1 × 14.5	 15 × 8 × 18	 15 × 8 × 19.1	
	Features	Subminiature relay suitable for motor/ resistance control		Medium-capacity relay suitable for motor/heater control		
Contact	Contact form	SPDT(1c)	SPDT(1c)×2	SPST-NO (1a), SPDT(1c)	SPDT(1c)	
	Contact type	Single	Single	Single	Single	
	Rated load	Resistive load	100,000 operations min. at 14 VDC, 5 A	100,000 operations min. at 14 VDC, 5 A	100,000 operations min. at 14 VDC, 35 A	100,000 operations min. at 28 VDC, 14 A
		Inductive load COSφ=0.4 L/R=7 ms	100,000 operations min. at 14 VDC, 25 A (0.3 mH)	100,000 operations min. at 14 VDC, 25 A (0.3 mH)	100,000 operations min. at 14 VDC, 32 A (0.25 mH)	100,000 operations min. at 28 VDC, 12 A (3 mH)
	Max. switching current	25 A	25 A	54 A	20 A	
Failure rate P level (reference value)	—	—	—	—		
Coil	Rated voltage	12 VDC	12 VDC	12 VDC	24 VDC	
	Power consumption	Standard type Approx. 900 mW	Standard type Approx. 900 mW	Standard type Approx. 480 mW	Approx. 2,560 mW	
Mechanical durability	1,000,000 operations min.	1,000,000 operations min.	1,000,000 operations min.	1,000,000 operations min.		
Terminal arrangement/ Internal connections	 G8K-17R (BOTTOM VIEW)	 G8K-27R (BOTTOM VIEW)	 G8G-17R Note: Connect the terminal 6 to the positive pole of the battery (BOTTOM VIEW)	 G8G-1A7R Note: Connect the terminal 6 to the positive pole of the battery (BOTTOM VIEW)	 G8G-1SV Note: Connect the terminal 6 to the positive pole of the battery (BOTTOM VIEW)	


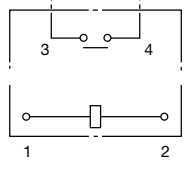
Power Relay (30 to 300 A; AC/DC) Product Lineup INDEX



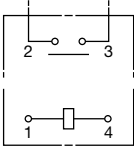
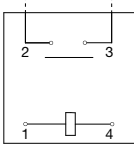
Model		G7L			
		G7L-1A(-T,-B)	G7L-2A(-T,-B)	G7L-(1,2)A-P	
		1-pole tab/screw terminal type	2-pole tab/screw terminal type	PCB terminal type	
Outline dimensions	Shape (max. value mm)	52.5 × 34.5 × 55	68.5 × 33.5 × 47	52.5 × 35.5 × 41	
	Length (L) × Width (W) × Height (H)	(G7L-1A-B E-bracket mounting type)	(G7L-2A-TUB upper bracket mounting type)		
Features		Multi-pole power relay that withstands a momentary voltage drop Wide range of applications with 100 V and 200 V coils			
Contact	Contact form	SPST-NO (1a)	DPST-NO (2a)	SPST-NO (1a), DPST-NO (2a)	
	Contact type	Double break			
	Rated load	Resistive load	220 VAC 30A 100,000 operations min.	100,000 operations min. at 220 VAC, 25 A	100,000 operations min. at 220 VAC, 20 A
		Inductive load	100,000 operations min. at 220 VAC, 25 A (COSØ=0.4)	100,000 operations min. at 220 VAC, 25 A (COSØ=0.4)	100,000 operations min. at 220 VAC, 20 A (COSØ=0.4)
	Max. switching current	30 A	25 A	20 A	
Failure rate P level (reference value)	DC5V 100mA				
Coil	Rated voltage	6 to 100 VDC, 12 to 240 VAC			
	Power consumption	DC: Approx. 1.9 W, AC: Approx. 1.7 to 2.5 VA			
Mechanical durability		1,000,000 operations min.			
Terminal arrangement/ Internal connections		G7L-1A-B	G7L-2A-TUB	G7L-1A-P	
					
		(TOP VIEW)	(TOP VIEW)	(BOTTOM VIEW)	

Model		G7L-PV	G6QE	G8PM	
Outline dimensions	Shape (max. value mm)				
	Length (L) × Width (W) × Height (H)	52.5 × 35.5 × 41	30.5 × 16 × 20.5	14.9 × 12.9 × 16.6	
Features		Solar system Relay for PV inverter	Miniature power relay capable of 1-pole 36 A high capacity switching	High-capacity relay suitable for motor/ resistance/lamp control	
Contact	Contact form	DPST-NO (2a)	SPST-NO (1a)	SPST-NO (1a)	
	Contact type	Double break	Single	Twin	
	Rated load	Resistive load	30,000 operations min. at 280 VAC, 30 A	100,000 operations min. at 250 VAC, 30 A 50,000 operations min. at 250 VAC, 32 A 10,000 operations min. at 250 VAC, 36 A	100,000 operations min. at 14 VDC, 45 A
		Inductive load	30,000 operations min. at 280 VAC, 30 A (COSØ = 0.8)	—	156,000 operations min. at 14 VDC, 150 A (0.16 mH)
	Max. switching current	30 A	36 A	67.5 A	
Failure rate P level (reference value)	5 VDC 100mA	5 VDC 100mA	—		
Coil	Rated voltage	12 VDC, 24 VDC	5 to 24 VDC	12 VDC	
	Power consumption	Approx. 2.3 W Approx. 0.32 W (when applying holding voltage)	Approx. 1,400 mW Approx. 172 mW (when applying holding voltage)	Approx. 640 mW	
Mechanical durability		1,000,000 operations min.	1,000,000 operations min.	1,000,000 operations min.	
Terminal arrangement/ Internal connections		G7L-2A-P-PV	G6QE-1A	G8PM-1AW7R	
					
		(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW) Note: Connect the terminals 1 and 2 to the positive pole of the battery	



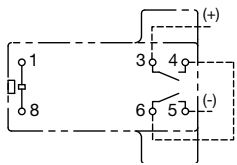
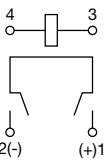
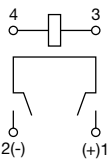
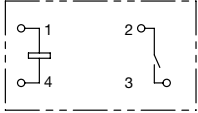
Power Relay (30 to 300 A; AC/DC) Product Lineup INDEX



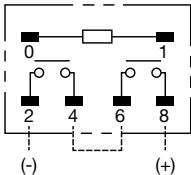
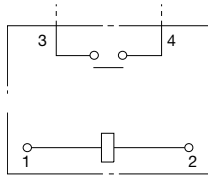
Model	G9TA			G9TB		
	G9TA-(U, K)1A-TH	G9TA-(U, K)1A-TW	G9TA-(U, K)1A-P	G9TB-(U, K)1ATH-E	G9TB-(U, K)1ATW-E	
	M5 securing screw	Welding terminals	PCB terminals	M8 securing screw	Welding terminals	
Outline dimensions						
Shape (max. value mm) Length (L) x Width (W) x Height (H)	39.1 x 18 x 34.5	39.1 x 18 x 34.5	39.1 x 18 x 36.7	43.5 x 22.5 x 37.5		
Features	60A AC power latching relay			120A AC power latching relay		
Contact form	SPST-NO (1a)			SPST-NO (1a)		
Contact type	Single			Single		
Rated load	Resistive load	5,000 operations min. at 250 VAC, 60 A			10,000 operations min. at 276 VAC, 120 A	
	Inductive load	5,000 operations min. at 250 VAC, 60 A (COSØ=0.5)			5,000 operations, 276 VAC, 100 A	
Max. switching current	60 A			120 A		
Failure rate (mA) P level (reference value)	-			-		
Rated voltage	12 V			12 V		
Power consumption	Approx. 1,000 mW (Single-winding latching) Approx. 2,600 mW (Double-winding latching)			Approx. 2,700 mW (Single-winding latching) Approx. 5,400 mW (Double-winding latching)		
Mechanical durability	100,000 operations min.			100,000 operations min.		
Terminal arrangement/ Internal connections	G9TA-U1ATH		G9TA-U1ATW		G9TA-U1AP	
						
	(TOP VIEW)		(TOP VIEW)		(BOTTOM VIEW)	
	G9TB-U1ATH-E		G9TB-U1ATW-E		G9TB-U1ATH-E	
						
	(TOP VIEW)		(TOP VIEW)		(TOP VIEW)	
G9TA-K1ATH		G9TA-K1ATW		G9TA-K1AP		
						
(TOP VIEW)		(TOP VIEW)		(BOTTOM VIEW)		
G9TB-K1ATH-E		G9TB-K1ATW-E		G9TB-K1ATH-E		
						
(TOP VIEW)		(TOP VIEW)		(TOP VIEW)		




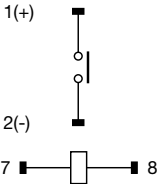
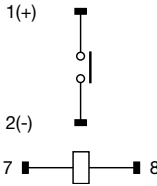
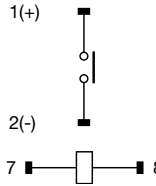
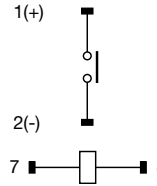
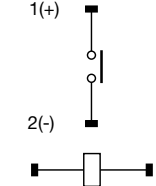
Model	G7EB	
	Standard type	High capacity type
Outline dimensions		
Shape (max. value mm) Length (L) x Width (W) x Height (H)	50.5 x 40.5 x 37	
Features	480 VAC high-temperature compatible power relay with 100 A switching capacity Supports normal/reverse polarity DC load switching (Contact gap of 3.6 mm min.)	High temperature compatible power relay with 480 VAC 100 A switching Supports normal/reverse polarity DC load switching at rated carry current of 120 A (Contact gap of 3.6 mm min.)
Contact form	SPST-NO (1a)	
Contact type	Double break	
Rated load	Resistive load	(1) 300 operations at 480 VAC, 100 A (2) 30,000 operations at 800 VAC, 40 A (switch on, switch off), 100 A (carry current) (3) 400 operations at 60 VDC, 100 A (4) 1,000 operations at 60 VDC, 50 A (5) 6,000 operations at 60 VDC, 40 A (Switching frequency: ON for 1 sec, OFF for 9 sec, 85°C)
	Inductive load	(1) 300 operations at 480 VAC, 100 A (2) 30,000 operations at 800 VAC, 40 A (switch on, switch off), 100 A (carry current) (3) 400 operations at 60 VDC, 100 A (4) 1,000 operations at 60 VDC, 50 A (5) 6,000 operations at 60 VDC, 40 A (6) 30,000 operations at 800 VAC, 40 A (switch on, switch off), 120 A (carry current) (Switching frequency: ON for 1 sec, OFF for 9 sec, 85°C)
Max. switching current	100 A	
Failure rate P level (reference value)	5 VDC 1 A	
Rated voltage	12 VDC, 24 VDC	
Power consumption	Approx. 2,800 mW Approx. 575 mW (when applying holding voltage)	
Mechanical durability	1,000,000 operations min.	
Terminal arrangement/ Internal connections	Standard type	G7EB-1A
	Special terminal type	G7EB-1AP1
		G7EB-1A-E
		G7EB-1AP1-E
		
	(BOTTOM VIEW)	

Model		G9KA		
		Standard type	High capacity type	
Outline dimensions	Shape (max. value mm)			
	Length (L) x Width (W) x Height (H)	51 x 51 x 47.2	51 x 51 x 56.7	
Features		High capacity power relay with 800 VAC 200 A breaking and ultra-low contract resistance Contact gap of 4.0 mm min. (Compliant to the photovoltaic standard VDE0126)	High-capacity power relay with 1,000 VAC 300 A breaking and ultra-low contract resistance Contact gap of 4.0 mm min. (Compliant to the photovoltaic standard VDE0126)	
Contact	Contact form	SPST-NO (1a)		
	Contact type	Double break		
	Rated load	Resistive load	High-capacity power relay with 800 VAC 200 A breaking and ultra-low contract resistance Contact gap of 4.0 mm min. (Compliant to the photovoltaic standard VDE0126)	30,000 operations at 1,000 VAC, 50 A (switch on), 300 A (carry current), 50 A (switch off) 10 operations at 1,000 VAC, 150 A (switch on), 300 A (carry current), 300 A (switch off)
		Inductive load	—	—
	Max. switching current	200 A	300 A	
Failure rate P level (reference value)	5 VDC, 1 A (M level)	5 VDC, 1 A (M level)		
Coil	Rated voltage	12 VDC, 24 VDC	12 VDC, 24 VDC	
	Power consumption	Approx. 5,000 mW Approx. 1,012 mW (when applying holding voltage)	Approx. 5,000 mW Approx. 1,012 mW (when applying holding voltage)	
Mechanical durability		100,000 operations min.	100,000 operations min.	
Terminal arrangement/ Internal connections		<p>G9KA-1A</p>  <p>(BOTTOM VIEW)</p>	<p>G9KA-1A-E</p>  <p>(BOTTOM VIEW)</p>	

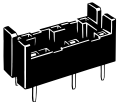
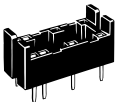
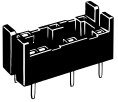
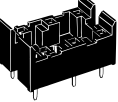
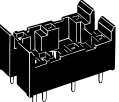
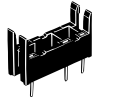
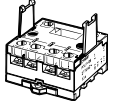
Power Relay (10 to 200 A (200 VDC min.); DC high voltage) Product Lineup INDEX

Model	G2RG-X		G9EJ-1-E		G5PZ-X
Outline dimensions			G9EJ-1-P-E	G9EJ-1-E	
			PCB terminal	Tab terminal	
Shape (max. value mm) Length (L) × Width (W) × Height (H)	29 × 23.5 × 29.5		31.5 × 27.5 × 32.7	44.5 × 27.5 × 30.5	26.4 × 15.2 × 29.5
Features	Miniature power relay capable of 500 VDC, 10 A high-voltage DC switching (2-pole series wiring with 1a contact)		Miniature power relay capable of switching 400 VDC 15 A loads	Miniature power relay capable of switching 400 VDC 15 A loads	Miniature power relay capable of bi-directional switching at 200 VDC, 20 A The product also enables 400 VDC 20 A bi-directional switching with 2-contact series connection
Contact	Contact form		SPST-NO (1a)		SPST-NO (1a)
	Contact type		Double break		Single
	Rated load	Resistive load	10,000 operations at 500 VDC, 10 A 30,000 operations at 500 VDC, 1 A		200 VDC, 20 A (1-contact connection) 400 VDC, 20 A (2-contact connection)
		Inductive load	—		—
	Max. switching current		15 A		20 A
Failure rate P level (reference value)		—		—	
Coil	Rated voltage		12 VDC, 24 VDC		12 VDC, 24 VDC
	Power consumption		Approx. 800 mW		Approx. 530 mW
Mechanical durability		1,000,000 operations min.		200,000 operations min.	2,000,000 operations min.
Terminal arrangement/ Internal connections	G2RG-2A-X		G9EJ-1-P-E-UVD	G9EJ-1-E-UVD	G5PZ-1A-X
	 Use this product in a 2-pole series connection. (BOTTOM VIEW)		 (BOTTOM VIEW)	 (BOTTOM VIEW)	 (BOTTOM VIEW)

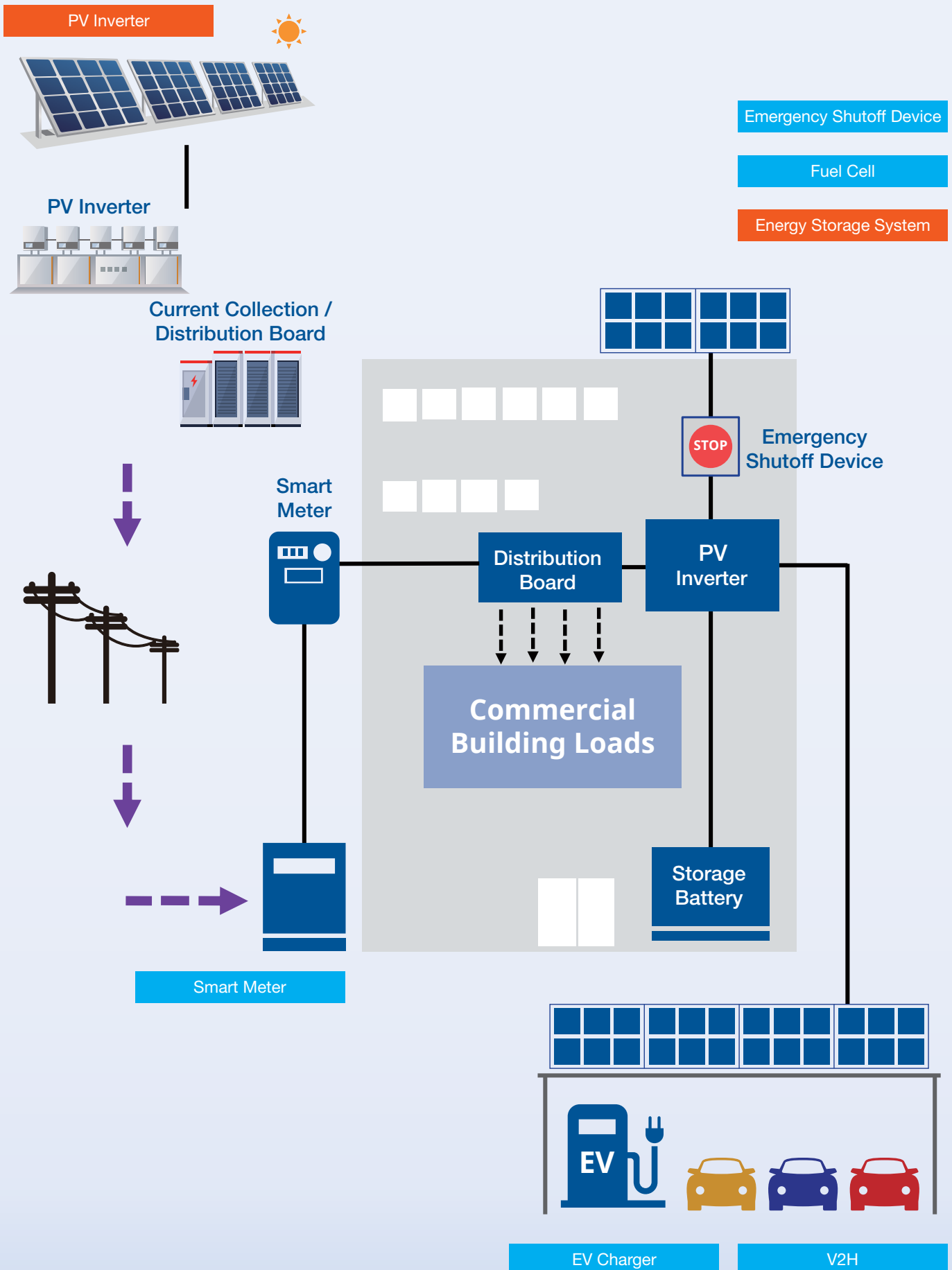
Model	G7L-X			G9KB	
Outline dimensions	Standard type	Low contact resistance type	General purpose type		
					
Shape (max. value mm) Length (L) × Width (W) × Height (H)	52.5 × 35.5 × 41			50.5 × 37 × 50.5	
Features	600 to 1,000 VDC isolation/switching thanks to 2-pole series wiring			High-capacity power relay capable of bi-directional switching at 600 VDC, 50 A Contact gap of 3.6 mm min. Achieves an initial low contact resistance of 5 mΩ max.	
Contact	Contact form			SPST-NO (1a)	
	Contact type			Double break	
	Rated load	(Normal polarity) 100 operations at 1,000 VDC, 25 A 6,000 operations at 600 VDC, 30 A (Reverse polarity) 5,000 operations at 600 VDC, -30A		(Normal polarity) 100 operations at 1,000 VDC, 20 A 6,000 operations at 600 VDC, 20 A (Reverse polarity) 5,000 operations at 400 VDC, -20A	2,000 operations at 600 VDC, 50 A 100,000 operations at 600 VDC, 1 A
		Inductive load			—
	Max. switching current			50 A	
Failure rate P level (reference value)			5 VDC 1A		
Coil	Rated voltage			12 VDC, 24 VDC	
	Power consumption			Approx. 2,800 mW Approx. 575 mW (when applying holding voltage)	
Mechanical durability		1,000,000 operations min.		1,000,000 operations min.	
Terminal arrangement/ Internal connections	G7L-2A-X	G7L-2A-X-SI	G7L-2A-X-L	G9KB-1A	
	 Use this product in a 2-pole series connection. (BOTTOM VIEW)			 (BOTTOM VIEW)	

Model		G9EA-1		G9EC-1		G9EH-1	
		G9EA-1(-B)	G9EA-1(-B)-CA	G9EC-1(-B)	G9EC-1-B-X1	G9EH-1	
		Switching, carry current type	High current carry type	Switching, carry current type	Switching, carry current type	Switching, carry current type	
		 73.5 × 36.5 × 67.7		 99 × 44.5 × 87.7		 111 × 60 × 76.7	
Features		Supports DC load interruption at high voltage and current		Supports DC load interruption at high voltage and current of 400 VDC, 200 A	Supports DC load interruption at high voltage and current of 1,000 VDC, 150 A	Supports DC load interruption at high voltage and current of 400 VDC, 300 A	
Contact	Contact form	SPST-NO (1a)		SPST-NO (1a)	SPST-NO (1a)	SPST-NO (1a)	
	Contact type	Double break		Double break	Double break	Double break	
	Rated load	Resistive load	3,000 operations min. at 400 VDC, 60 A 3,000 operations min. at 120 VDC, 100 A	1,000 operations min. at 400 VDC, 30 A	3,000 operations min. at 400 VDC, 200 A	1,000 VDC, 100 A (6,000 operations min.) 1,000 VDC, 150 A (1,000 operations min.)	3,000 operations min. at 400 VDC, 200 A 1,000 operations min. at 400 VDC, 300 A
		Inductive load	—		—	—	—
	Max. switching current	60 A	100 A	200 A	200 A	300 A	
Failure rate P level (reference value)	—		—	—	—		
Coil	Rated voltage	12 to 100 VDC		12 to 100 VDC	12 VDC, 24 VDC	12 VDC, 24 VDC	
	Power consumption	Approx. 5 to 5.4 W		Approx. 11 W	Approx. 7 W	Approx. 7 W	
Mechanical durability		200,000 operations min.		200,000 operations min.	200,000 operations min.	200,000 operations min.	
Terminal arrangement/ Internal connections		G9EA-1(-B)  (TOP VIEW)	G9EA-1(-B)-CA  (TOP VIEW)	G9EC-1(-B)  (TOP VIEW)	G9EC-1-B-X1  (TOP VIEW)	G9EH-1  (TOP VIEW)	

List of common sockets

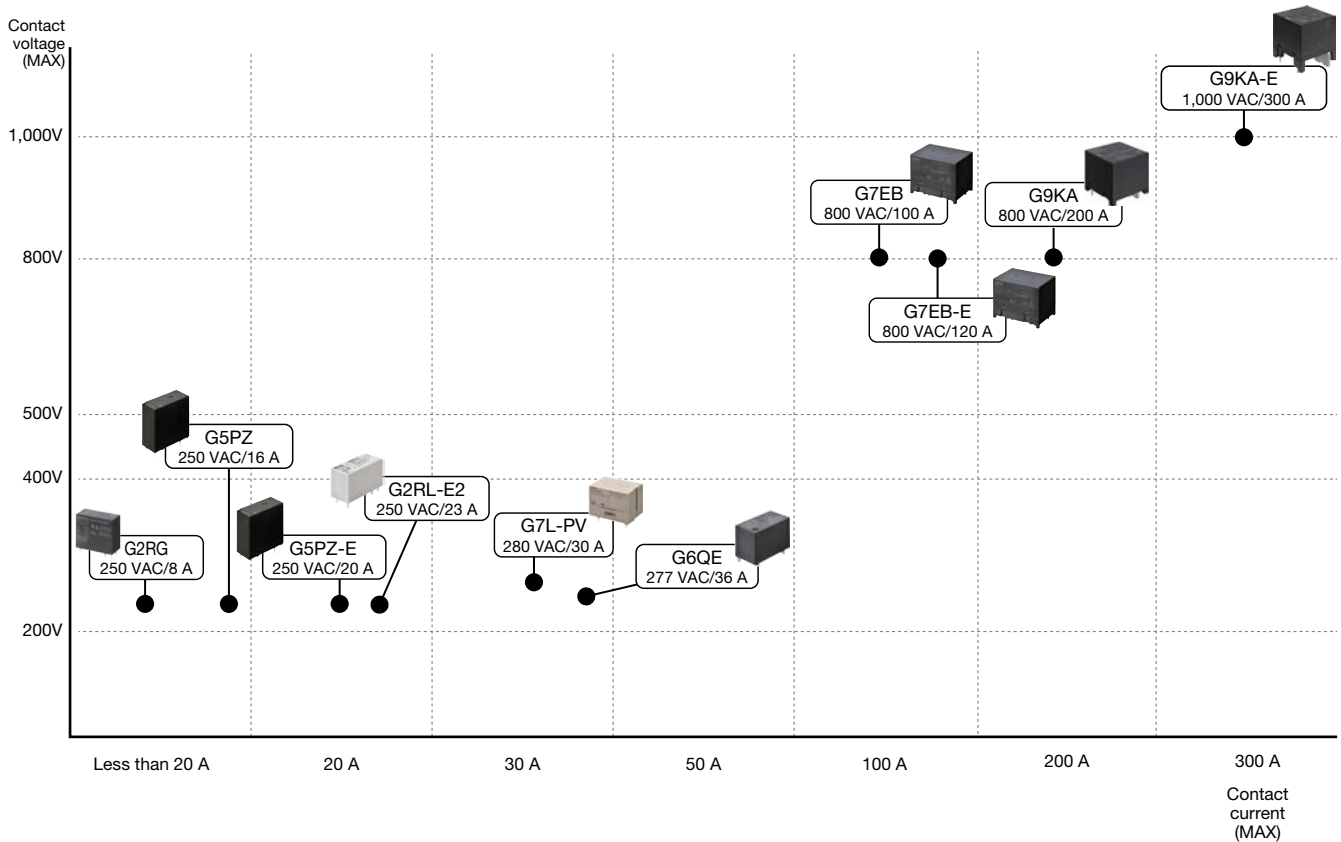
Model	G6B			G6C		G6D	G7L
Contact form	SPST-NO (1a)		SPST-NO (1a) +SPST-NC (1b), DPST-NO (2a), DPST-NC (2b)	SPST-NO (1a), SPST-NO (1a)+SPST-NC (1b)		SPST-NO (1a)	SPST-NO (1a), DPST-NO (2a)
Applicable socket	P6B-04P	P6B-06P (Double-winding latching type compatible)	P6B-26P	P6C-06P	P6C-08P (Double-winding latching type compatible)	P6D-04P	P7LF-06
Outline dimensions							

Environment and Energy



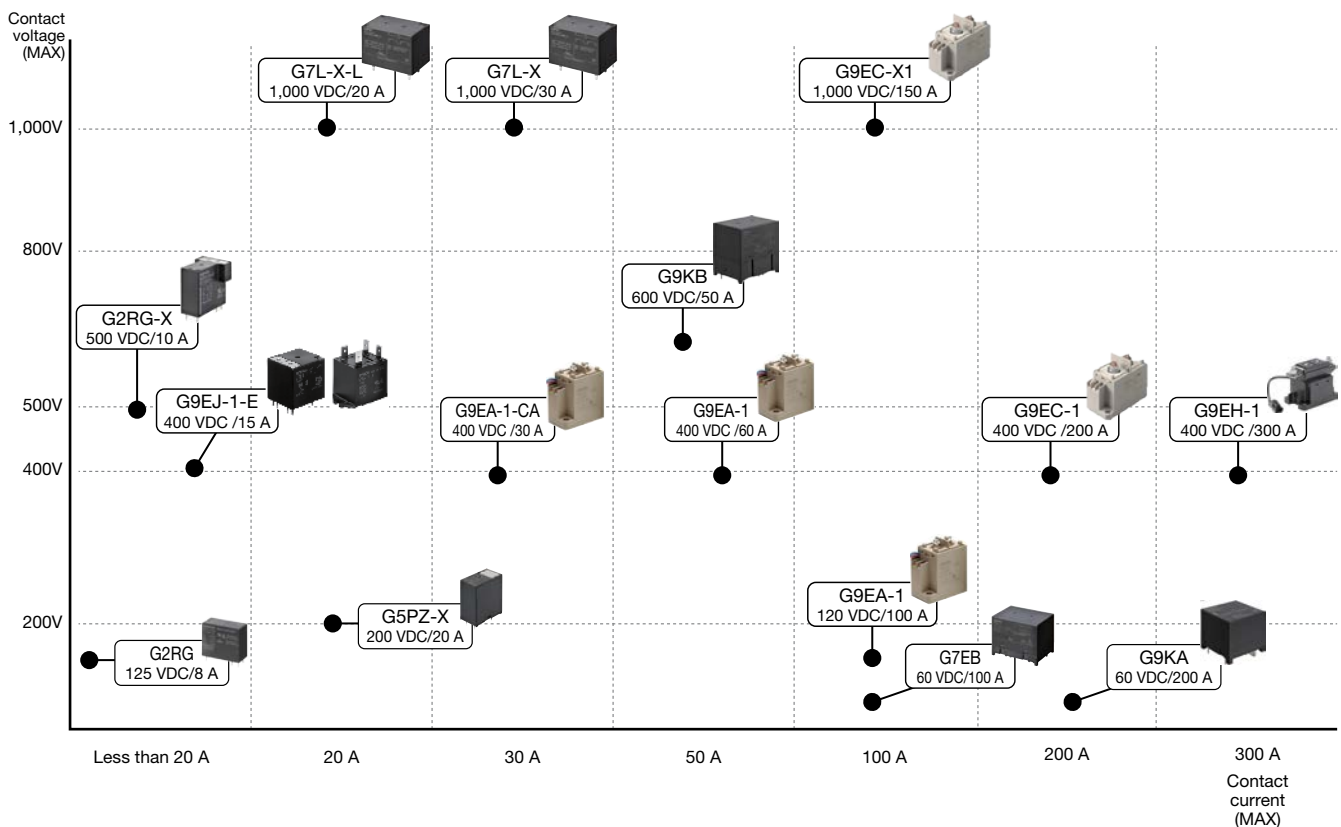
High Voltage, Large Current AC Relay Lineup*

*The values indicated refer to maximum voltages and currents, respectively.



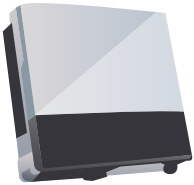
High Voltage, Large Current DC Relay Lineup*

*The values indicated refer to maximum voltages and currents, respectively.



PV Inverter

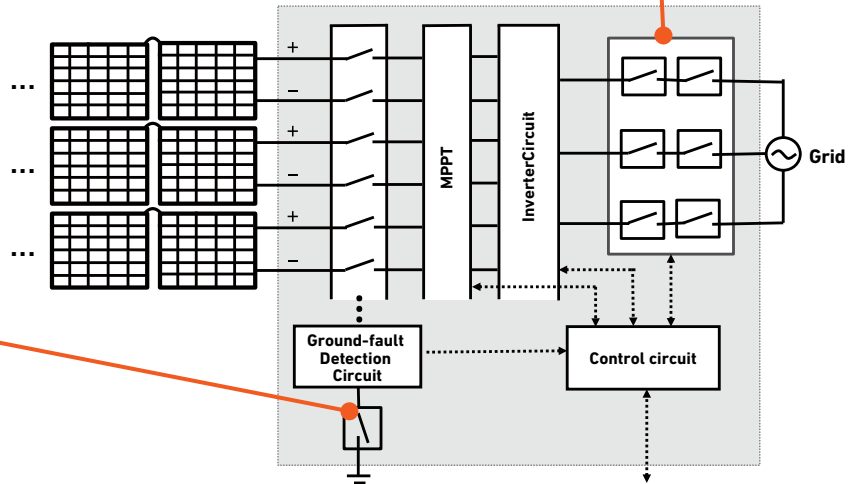
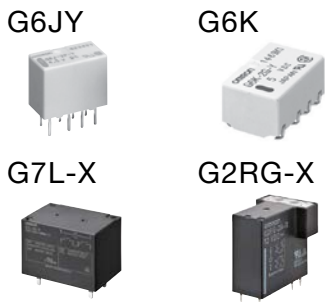
Low-contact resistance type AC relays and high-voltage switching type DC relays are available, contributing to the development of high-output and decentralized photovoltaic power systems.



System Connection/Disconnection



Ground Fault Detection Circuit



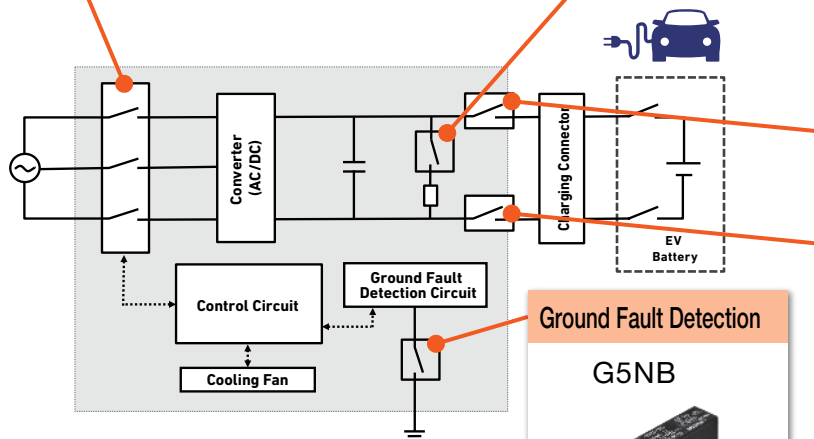
DC Fast Charger

DC fast chargers are used in locations, e.g. the expressway service areas, where short-duration charging is required. (Mode4 DC Charging)

AC Safety Shutoff



DC Discharging Circuit



DC Safety Shutoff



Energy Storage System

Available in a wide range of contact voltages and currents to meet a growing demand for energy storage solutions.

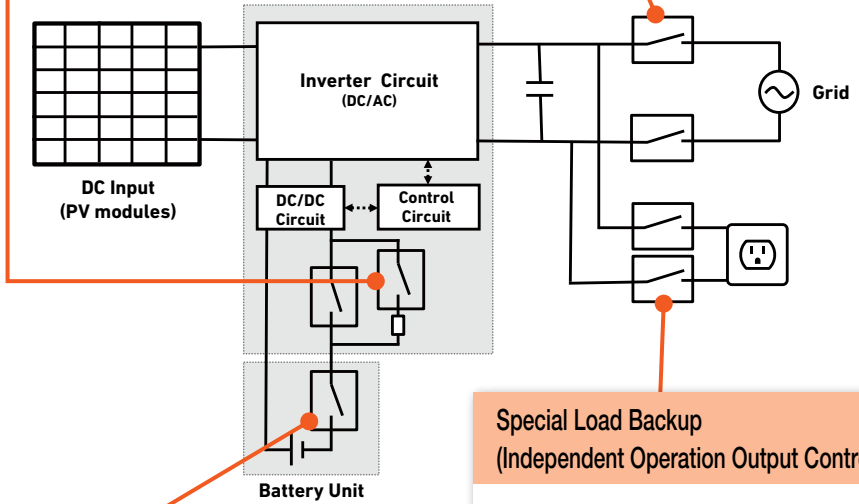


System Connection/Disconnection

G6QE	G9KA	G7EB

Inrush Prevention Circuit

G2RG-X	G5PZ-X
G7L-X	G9EJ-1-E



Special Load Backup (Independent Operation Output Control)

G6QE	G2RL-E2

DC Safety Shutoff

G9EA-1	G7L-X	G9EC-1	
G9KA	G9KB	G7EB	G5PZ-X

Smart Building



Illumination, Smart Panel/Plug

Dimmer Power Supply and Output, Illumination Switch
G5RL-LN **G5RL-TV8** Power Supply Changeover
G6B

Floor Heating, Temperature Regulation

Heater Operation
G5RL-LN **G2RL(-E)** **G2RL-E2**

Bathroom and Toilet

Oil Feed and Boiler Control
G5Q **G6RN**

Signal Receiver
G6S **G6J-Y** **G6K**

Commercial Air Conditioning System

Power Supply Switching
G5PZ **G6QE** **G7EB** **G9KA**

Communications Control
G6S

G6J-Y

Exterior Light Control

G8G

Fire Alarm

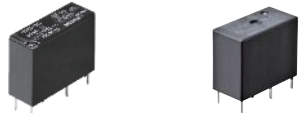
Alarm Output for Abnormality Signal
G6S **G6J-Y** **G6K** **G5V-1**

HVAC Controller (Controller for Cooling and Heating Equipment in a Building)

This series of miniature and high switching capacity power relays helps deliver increased sophistication in terms of control of air flow and temperature in air conditioning equipment, contributing to the creation of a cleaner and more comfortable environment.


Fan Motor/Valve Control

G5NB(-EL) G5Q




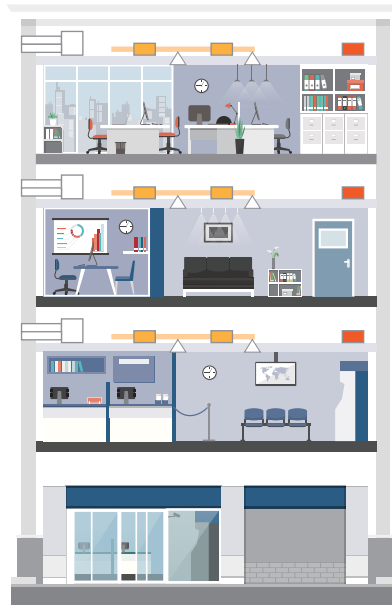
Boiler Control

G2RL G6RN



Compressor Control

G5PZ-E G7L

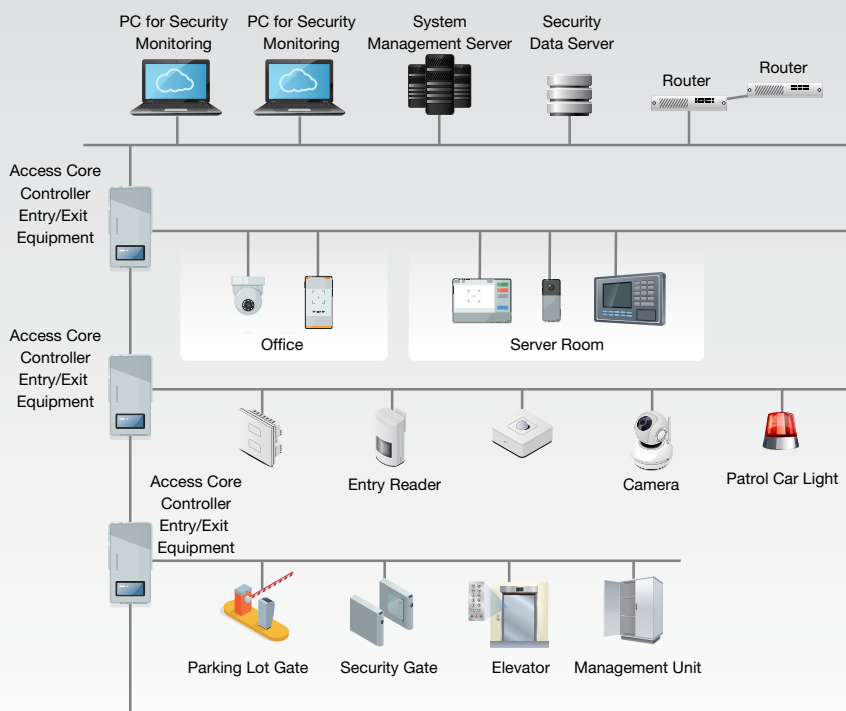
Access Signal Control, Abnormality Alarm Output

G6J-Y G6K G6S



Access Control System

Despite its subminiature size, the product helps deliver safe and secure control systems focused on signal relays with excellent contact reliability and insulation performance.



Electronic Locking

G6S



G6E



Automated Shutters/Blinds Control

G5Q



G6RN



G8K



Factory Automation



Programmable Controller

By providing miniature and slim output power relays with excellent switching performance for use in FA systems, OMRON is contributing to the evolution of manufacturing.

External Output Circuit



Robot Controller

OMRON supports the evolution of robotics technology through its extensive product lineup, covering everything from power supply switching to control functionality.

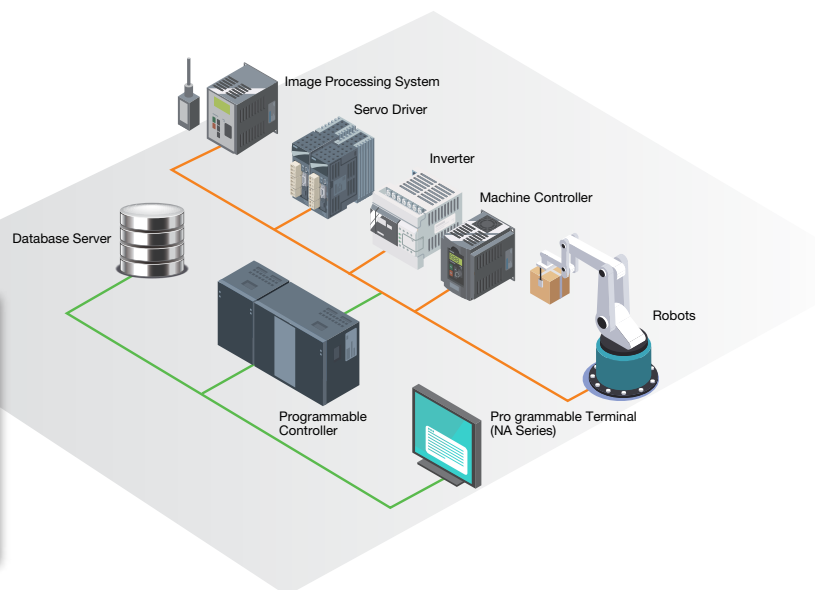
Power Supply Circuit

G2RL(-E)



Control Signal Changeover

G6K G6S



High-Voltage DC Power Supply

From control signal changeover to DC high current breaking.

OMRON products can be used in a wide range of applications, satisfying demands for new and innovative solutions.



Circuit Changeover

G6J-Y



G6K



G6S



DC Circuit Emergency Shutoff (Safety Shutoff)

G7L-X



G9EA-1



G9EC-1



G9EH-1



Semiconductor Inspection Device

OMRON's comprehensive range of subminiature high-density mounting type signal relays and high frequency relays with superior characteristics will support the ever advancing semiconductor manufacturing and inspection processes with high reliability.

Test Signal Changeover

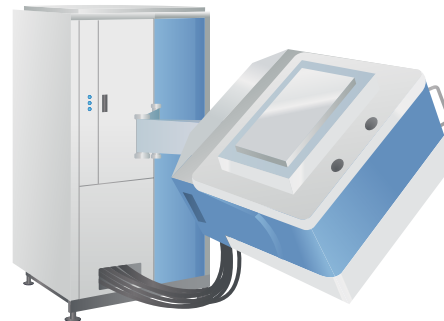
G6K



G6J-Y



G6K-RF-V



Servo Inverter

Miniature and high capacity relays allow for the miniaturization design in pursuit of greater cost effectiveness, regardless of the capacity of the device itself.

Main Power Circuit Switching

G9KA



Inrush Prevention Circuit Main Power Circuit Switching

G6QE



Inrush Prevention Circuit Brake Circuit

G2RL(-E)



Control Signal Changeover

G6K



Industrial Motor Changeover

G8K



G8G



G8PM



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