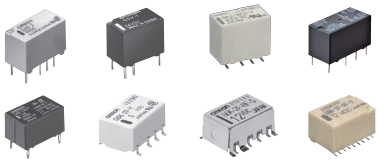
OMRON

Electrical & Mechanical

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

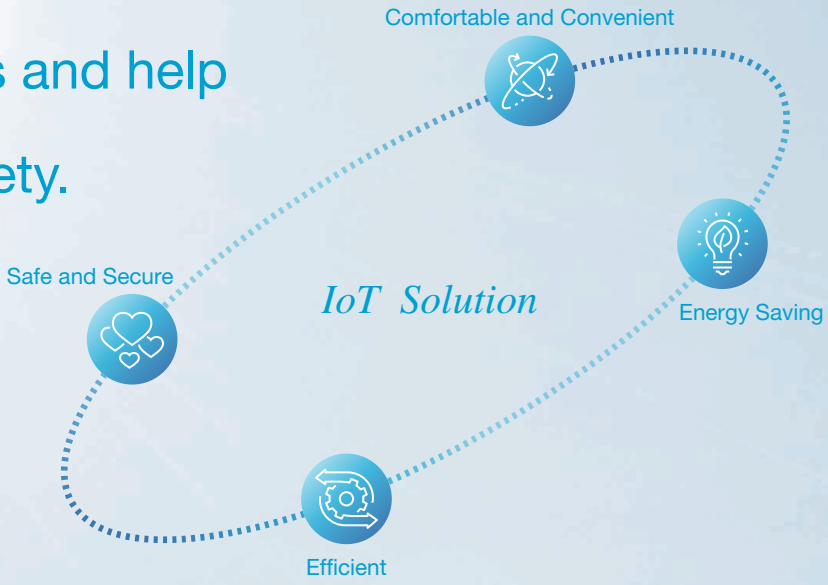
Mechanical Relay Selection Guide

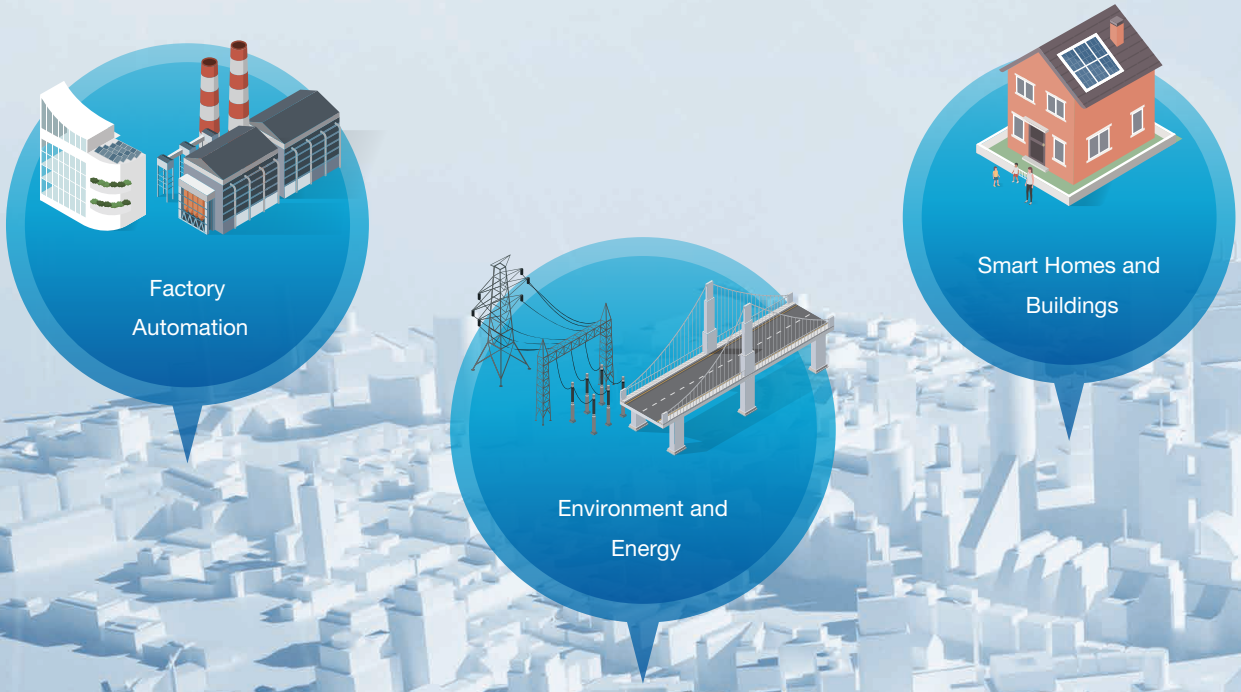
Signal relay



Power relay

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

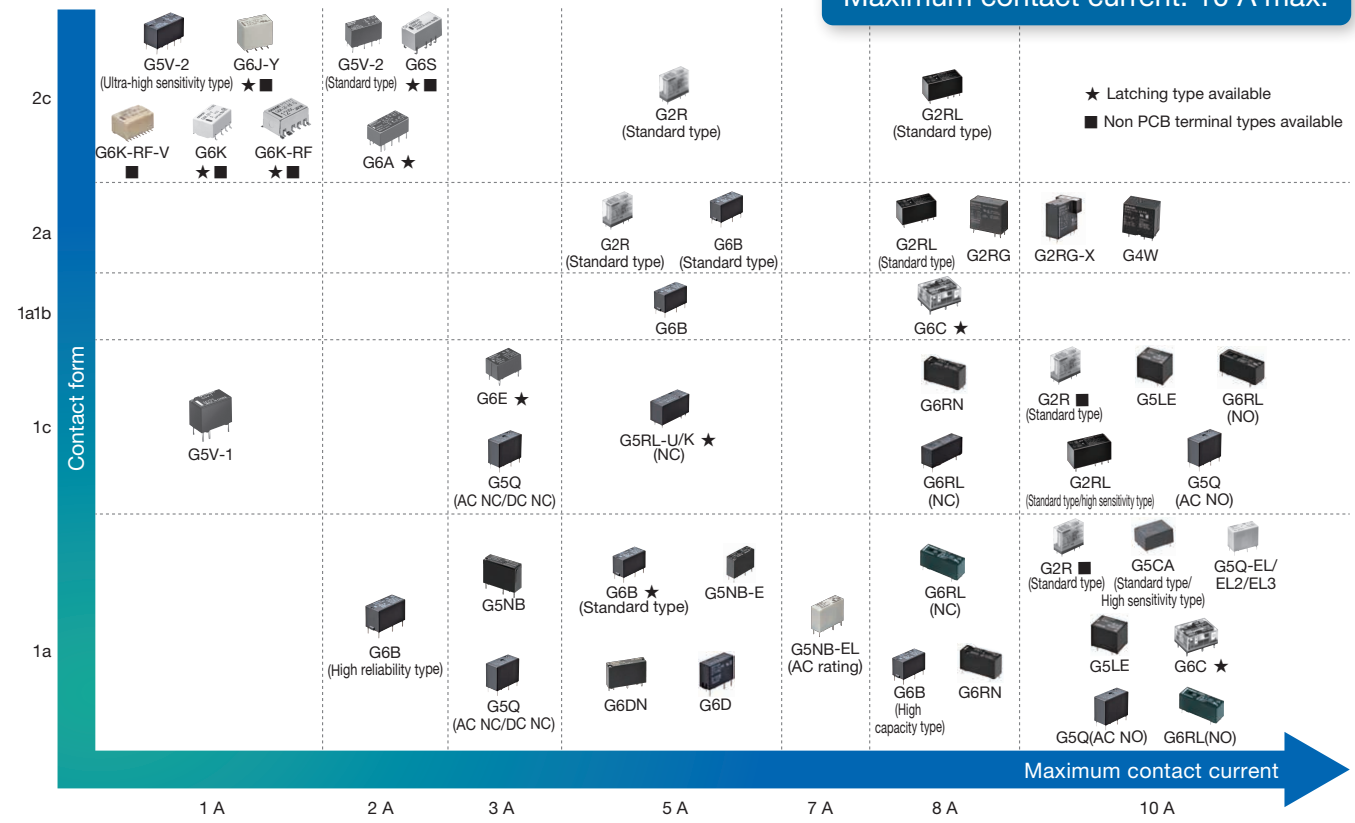




Contents

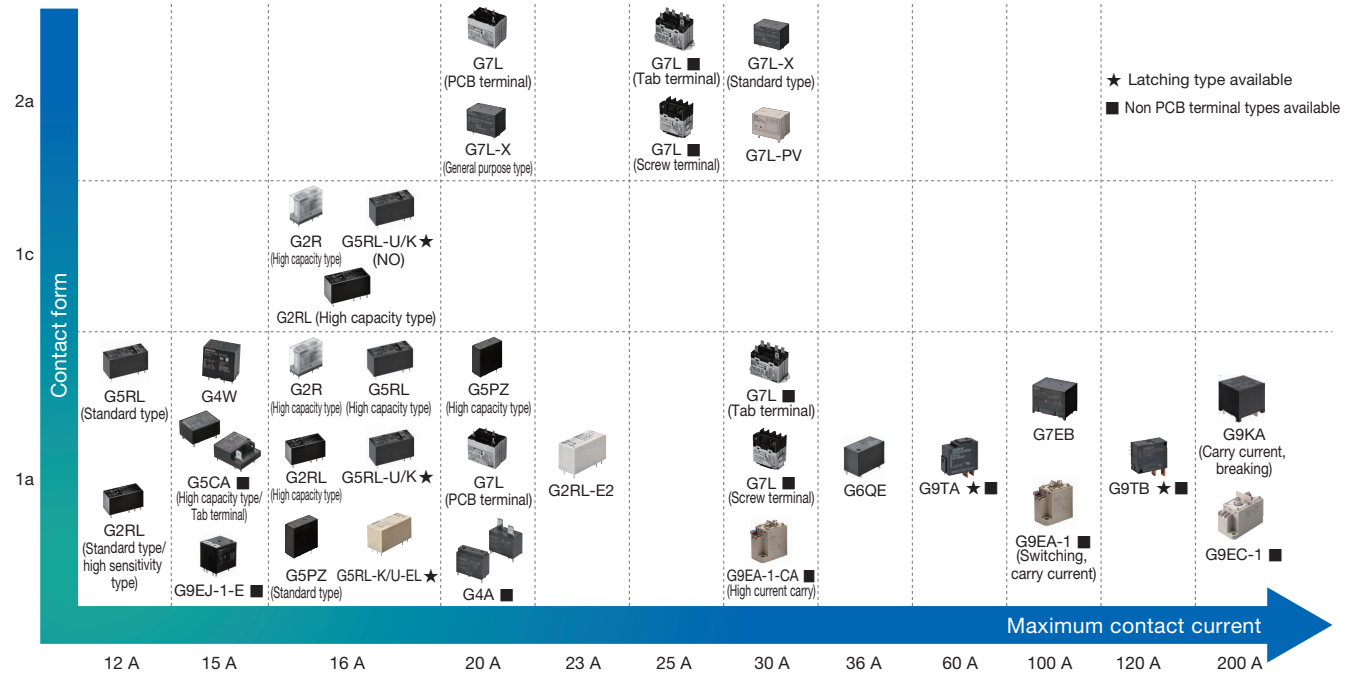
Available in a wide range of contact forms and switching capacities to meet diverse customer needs.

Maximum contact current: 10 A max.



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

Maximum contact current: 10 A min.



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

Product Selection

Maximum contact current	Recommended Products
2 A max.	**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
3-23 A AC/DC	**1-pole** **G5NB**  Maximum contact current: 3 A Explosion proof, PWM control Impulse withstand voltage: 10 kV **G6DN**  Maximum contact current: 5 A High contact reliability, low power consumption **G5Q**  Maximum contact current: 3 A, 10 A Glow wire, PWM control Miniature, 1c contact **G2RL**  Maximum contact current: 12 A, 16 A High sensitivity, explosion proof, PWM control ★**G5RL-K/U**  Maximum contact current: 5 A, 16 A Impulse withstand voltage: 10 kV **G5RL**  Maximum contact current: 12 A, 16 A Low noise, inrush current resistance **2-pole**
30-200 A AC/DC	**AC High Capacity** **G7L-PV**  Maximum contact current: 30 A, 2-pole for PV inverter, low power consumption **G6QE**  Maximum contact current: 36 A, 1-pole High capacity, low power consumption
10-200 A (400 VDC or above) DC High Voltage	**DC High Voltage** **G9EJ-1-E**  Maximum contact current: 15 A for inrush prevention circuit **G9EA-1**  Maximum contact current: 30 A, 100 A Gas injected, hermetically sealed structure, high contact reliability **G9EC-1**  Maximum contact current: 200 A Gas injected, hermetically sealed structure High contact reliability **2-pole**

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

and Features

Main Applications

★ G6K

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

G6S

Switching range: 10 µA - 2 A
Global standard

High frequency 2-pole

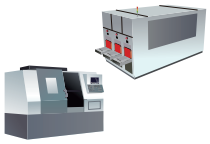
★ G6K-RF

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

Maximum contact current: 8 A
Explosion proof,
PWM control

For specific loads 1-pole

★ G5RL-K/U-EL

Maximum contact current: 16 A
Inrush resistance, illumination load
Ignition resistance

G5PZ

Maximum contact current: 16 A, 20 A
Low power consumption, impulse withstand voltage: 10 kV
For high sensitivity and high capacity inverters

G5Q-EL

Maximum contact current
AC: 10 A
Explosion proof, ignition resistance, inrush resistance, long service life

G5NB-EL

Maximum contact current
AC: 7 A, DC: 5 A
Explosion proof, ignition resistance, long service life

G2RL-E2

Maximum contact current: 23 A
High capacity, ignition resistance
Long service life, impulse withstand voltage: 10 kV

Household Appliance

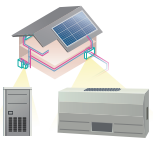
Building Automation

G7EB

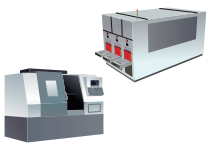
Maximum contact current: 100 A, 1-pole
Low contact resistance, DC switching available/bi-directional breaking

G9KA

Maximum contact current: 200 A, 1-pole
Low contact resistance,
low heat generation



Environment and Energy



Factory Automation

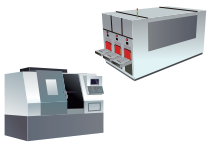
G7L-X

Maximum contact current: 20 A, 30 A
Bi-directional breaking and switching,
for PV inverter, low power consumption

G2RG-X

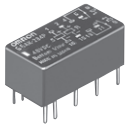
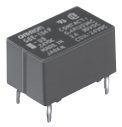
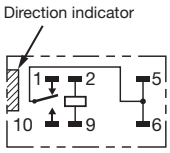
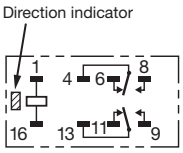
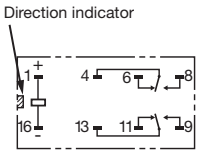
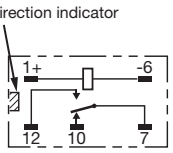
Maximum contact current: 10 A
500 VDC 10 A switching,
impulse withstand voltage

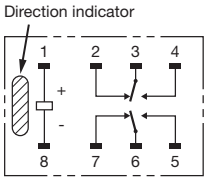
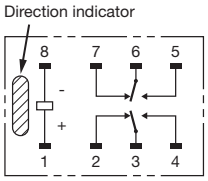
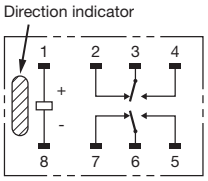
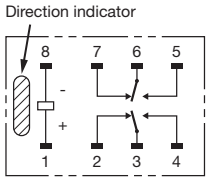
Environment and Energy

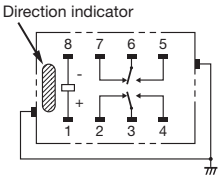
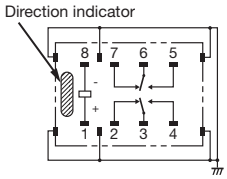
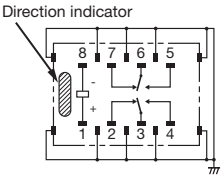
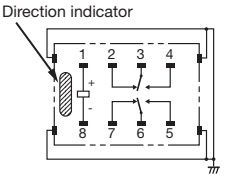


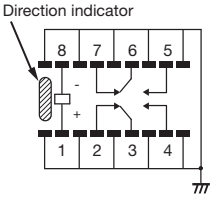
Factory Automation

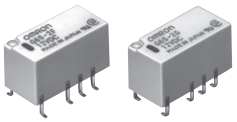
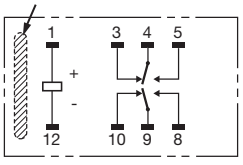
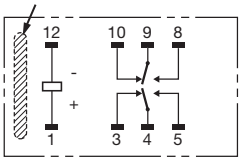
Signal Relay Product Lineup INDEX

Model			G5V-1	G5V-2		G6A	G6E
				Standard type	High sensitivity type		
Outer shape							
Shape (max. value mm) Length (L) x Width (W) x Height (H)			12.5 × 7.5 × 10	20.5 × 10.1 × 11.5		20.2 × 10.1 × 8.4	16 × 10 × 8
Features			General purpose low-cost 1-pole signal relay	General purpose low-cost 2-pole signal relay		FCC standard compliant high withstand voltage type	Miniature, high sensitivity 1-pole signal relay
Contact	Contact form		1c	2c		2c	1c
	Contact type		Crossbar single	Crossbar twin		Crossbar twin	Crossbar twin
	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	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 COSØ=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
	Maximum contact current		1 A	2 A	1 A	2 A (resistive load)	3 A
	Failure rate P level (reference value)		DC5V 1 mA	DC10 mV 10 µA		DC10 mV 10 µA	DC10 mV 10 µA
Coil	Rated voltage		3 to 24 VDC	3 to 48 VDC	5 to 48 VDC	3 to 48 VDC	5 to 48 VDC
	Rated power consumption		Approx. 150 mW	Approx. 500 to 580 mW	Approx. 150 to 300 mW	Approx. 200 mW to 400 mW	Approx. 200 mW to 400 mW
Mechanical durability			5,000,000 operations min.	15,000,000 operations min.		100,000,000 operations min.	100,000,000 operations min.
Terminal array diagram / internal connection diagram			G5V-1  (BOTTOM VIEW)	G5V-2  (BOTTOM VIEW)		G6A-274P  (BOTTOM VIEW) (Take note of coil polarity)	G6E-134P-US  (BOTTOM VIEW) (Take note of coil polarity)

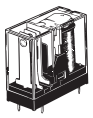
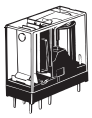
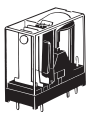
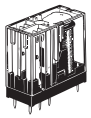
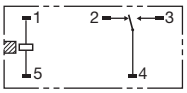
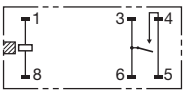
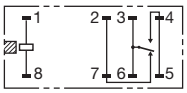
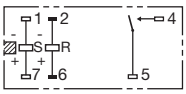
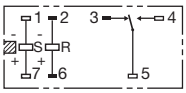
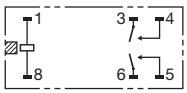
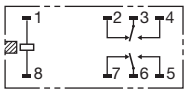
Model			G6J-Y		G6K	
			G6J-2P-Y	G6J-2F(S,L)-Y	G6K-2P G6K-2P-Y	G6K-2(F,G) G6K-2(F,G)-Y
			PCB terminal	Surface mounting terminal	PCB terminal	Surface mounting terminal
Outer shape						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			10.9 × 6 × 9.3	10.9 × 6 × 10	10.2 × 6.7 × 5.3	Outer L shape: 10.2 × 6.7 × 5.4 Inner L shape: 10.2 × 6.7 × 5.6
Features			Subminiature, ultra-thin surface-mounting 2-pole signal relay		Subminiature, low power consumption, low profile surface-mounting 2-pole signal relay	
Contact	Contact form		2c		2c	
	Contact type		Crossbar twin		Crossbar twin	
	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, 0.3 A 100,000 operations min. at 30 VDC, 1 A	
		Inductive load COSØ=0.4 L/R=7ms	—		—	
	Maximum contact current		1 A		1 A	
	Failure rate P level (reference value)		DC10 mV 10 µA		DC10 mV 10 µA	
Coil	Rated voltage		3 to 24 VDC		3 to 24 VDC	
	Rated power consumption		Approx. 140 to 230 mW		Approx. 100 mW	
Mechanical durability			50,000,000 operations min.		50,000,000 operations min.	
Terminal array diagram / internal connection diagram			G6J-2P-Y  (BOTTOM VIEW) (Take note of coil polarity)	G6J-2F(S,L)-Y  (TOP VIEW) (Take note of coil polarity)	G6K-2P(-Y)  (BOTTOM VIEW) (Take note of coil polarity)	G6K-2(F,G)(-Y)  (TOP VIEW) (Take note of coil polarity)

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
Outer shape				
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	13.6 × 7.2 × 5.5
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	50Ω			
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
High frequency characteristics: 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
High frequency characteristics: 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
High frequency characteristics: 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	2c			
Contact: Contact type	Crossbar twin			
Contact: 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			
Coil: Rated power consumption	Approx. 100 mW			
Terminal array diagram / internal connection diagram	G6K-2F-RF Direction indicator  (TOP VIEW) (Take note of coil polarity)	G6K-2F-RF-S Direction indicator  (TOP VIEW) (Take note of coil polarity)	G6K-2F-RF-T Direction indicator  (TOP VIEW) (Take note of coil polarity)	G6K-2P-RF Direction indicator  (BOTTOM VIEW) (Take note of coil polarity)

Model	G6K-2F-RF-V
Outer shape	
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
High frequency characteristics: Isolation (different polarity)	15 dB min. at 8 GHz
High frequency characteristics: Insertion loss	Single ended characteristics: 4 dB max. at 8 GHz Differential transmission: 3 dB max. at 8 GHz
High frequency characteristics: V.SWR	3.57 max. at 8 GHz
Contact: Contact form	2c
Contact: Contact type	Crossbar twin
Contact: 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
Coil: Rated power consumption	Approx. 100 mW
Terminal array diagram / internal connection diagram	G6K-2F-RF-V Direction indicator  (TOP VIEW) (Take note of coil polarity)

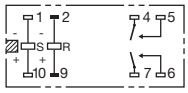
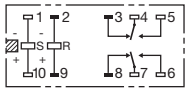
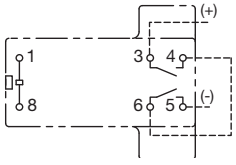
Model	G6S	
	G6S-2	G6S-2(F,G)
	PCB terminal	Surface mounting terminal
Outer shape		
Shape (max. value mm) Length (L) × Width (W) × Height (H)	15 × 7.5 × 9.4	15 × 7.5 × 9.4
Features	Miniature, general purpose, high insulation, high capacity surface-mounting 2-pole signal relay	
Contact: Contact form	2c	
Contact: Contact type	Crossbar twin	
Contact: Rated load: Resistive load	100,000 operations min. at 125 VAC, 0.5 A 100,000 operations min. at 30 VDC, 2 A	
Contact: Rated load: Inductive load COSØ=0.4 L/R=7 ms	—	
Contact: Maximum contact current	2 A	
Contact: Failure rate P level (reference value)	DC10 mV 10 μA	
Coil: Rated voltage	3 to 24 VDC	
Coil: Rated power consumption	Approx. 100 to 300 mW	
Mechanical durability	100,000,000 operations min.	
Terminal array diagram / internal connection diagram	G6S-2 Direction indicator  (BOTTOM VIEW) (Take note of coil polarity)	G6S-2(F,G) Direction indicator  (TOP VIEW) (Take note of coil polarity)

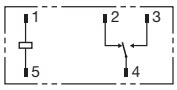
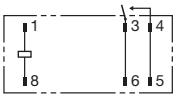
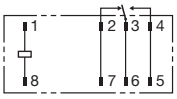
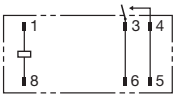
Power Relay Product Lineup INDEX

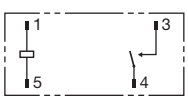
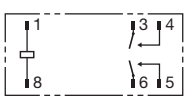
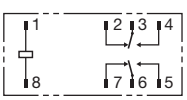
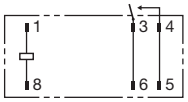
Model			G2R			
			G2R-1(A)	G2R-1(A)-E	G2RK-1(A)	G2R-2(A)
			1-pole	1-pole (high capacity type)	1-pole (double-winding latching type)	2-pole
Outer shape						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			29 × 13 × 25.5	29 × 13 × 25.5	29 × 13 × 25.5	29 × 13 × 25.5
Features			1-pole 10 A general purpose type	16 A high capacity type	5 A double-winding latching type	2-pole 5 A general purpose type
Contact	Contact form		1a, 1c		1a, 1c	2a, 2c
	Contact type		Single		Single	Single
	Rated load	Resistive load	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, 7.5 A (COSØ=0.4) 100,000 operations min. at 30 VDC, 5 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 8 A (COSØ=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 (COSØ=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 (COSØ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)
	Maximum contact current		10 A	16 A	5 A	5 A
	Failure rate P level (reference value)		DC5V 100 mA	DC5V 100 mA	DC5V 100 mA	DC5V 10 mA
Coil	Rated voltage		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
	Rated power consumption		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			DC coil specification: 20,000,000 operations min. AC coil specification: 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 array diagram / internal connection diagram			G2R-1A  G2R-1  (BOTTOM VIEW)	G2R-1A-E  G2R-1-E  (BOTTOM VIEW)	G2RK-1A  G2RK-1  (BOTTOM VIEW)	G2R-2A  G2R-2  (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.

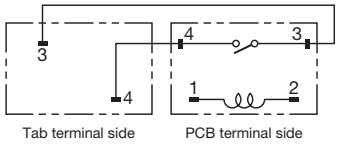
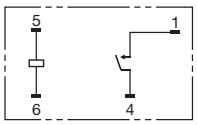
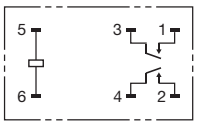
Model			G2R	G2RG	G2RG-X
			G2RK-2(A)		
			2-pole (double-winding latching type)		
Outer shape					
Shape (max. value mm) Length (L) x Width (W) x Height (H)			29 × 13 × 25.5	29 × 13.5 × 26.5	29 × 23.5 × 29.5
Features			3 A double-winding latching type	Miniature power relay capable of 110 VDC, 5 A high-voltage DC switching (2-pole series wiring with 1a contact, 1.5 mm contact gap)	Miniature power relay capable of 500 VDC, 10 A high-voltage DC switching (2-pole series wiring with 1a contact, 1.5 mm contact gap)
Contact	Contact form		2a, 2c	2a	2a (with 2-pole series wiring)
	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	10,000 operations min. at 250 VAC, 8 A 10,000 operations min. at 110 VDC, 5 A (with 2-pole series wiring)	10,000 operations min. at 500 VDC, 10 A 30,000 operations min. at 500 VDC, 1 A
		Inductive load	100,000 operations min. at 250 VAC, 1.5 A (COSØ=0.4) 100,000 operations min. at 30 VDC, 2 A (L/R=7 ms)	—	—
	Maximum contact current		3 A	8 A	10 A 8 A (carry current)
	Failure rate P level (reference value)		DC5V 10 mA	DC5V 10 mA	—
Coil	Rated voltage		5 to 24 VDC	12 VDC, 24 VDC	12 VDC, 24 VDC
	Rated power consumption		Approx. 850 mW (set coil) Approx. 600 mW (reset coil)	Approx. 800 mW	Approx. 800 mW
Mechanical durability			10,000,000 operations min.	1,000,000 operations min.	1,000,000 operations min.
Terminal array diagram / internal connection diagram			G2RK-2A  G2RK-2  (BOTTOM VIEW)	G2RG-2A4  (BOTTOM VIEW)	G2RG-2A-X  Use this product in a 2-pole series connection. (BOTTOM VIEW)

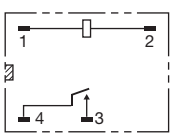
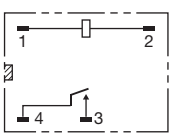
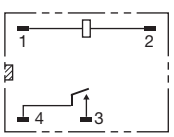
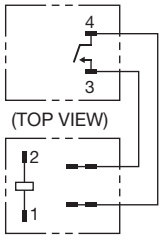
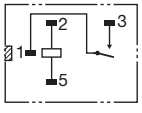
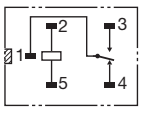
Model			G2RL					
Outer shape			G2RL-1(A)(-HA)		G2RL-1(A)-E(-CV)(-HA)		G2RL-1(A)-E-ASI	
			1-pole (standard type)		1-pole (high capacity type)		1-pole (TV-3 rating) (high capacity type)	
								
Shape (max. value mm) Length (L) x Width (W) x Height (H)			29 × 12.7 × 15.7					
Features			1-pole 12 A general prpose type		16 A high capacity type		TV-3 compatible type	
Contact	Contact form		1a	1c	1a	1c	1a	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 12 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.	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	—					
	Maximum contact current		12 A		16 A		16 A	
	Failure rate P level (reference value)		24 VDC 40 mA					
Coil	Rated voltage		5 to 48 VDC					
	Rated power consumption		Approx. 400 mW to 430 mW					
Mechanical durability			20,000,000 operations min.					
Terminal array diagram / internal connection diagram			G2RL-1A	G2RL-1	G2RL-1A-E	G2RL-1-E	G2RL-1A-E-ASI	
								
			(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)	

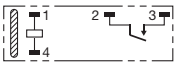
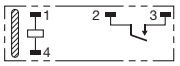
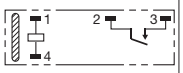
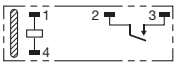
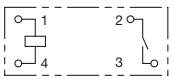
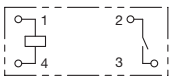
Model			G2RL			G2RL-1A-E2-CV-HA
Outer shape			G2RL-1(A)-H	G2RL-2		High capacity type & high-temperature compatible type
			1-pole (high sensitivity type)	2-pole		
						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			29 × 12.7 × 15.7			29 × 12.7 × 16.7
Features			1-pole 10 A high sensitivity type	2-pole 8 A general purpose type		Miniature, low profile, high capacity, 10 kV impulse withstand voltage, ignition resistance
Contact	Contact form		1a, 1c	2a	2c	1a
	Contact type		Single			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.	250 VAC 23A 100,000 operations min.
		Inductive load	—			—
	Maximum contact current		10A	8 A		23A
	Failure rate P level (reference value)		24 VDC 40mA			24 VDC 40mA
Coil	Rated voltage		5 to 48 VDC			5 to 24 VDC
	Rated power consumption		Approx. 250 mW	Approx. 400 mW to 430 mW Approx. 120 mW (when applying holding voltage)		Approx. 400 mW
Mechanical durability			20,000,000 operations min.			20,000,000 operations min.
Terminal array diagram / internal connection diagram			G2RL-1A(-H)	G2RL-2A	G2RL-2	G2RL-1A-E2-CV-HA
						
			(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)	(BOTTOM VIEW)

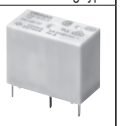
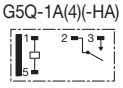
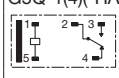
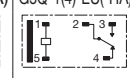
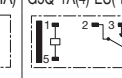
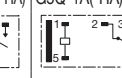
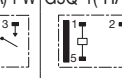
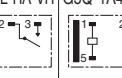
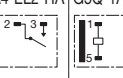
*PWM control products are also available.

Power Relay Product Lineup INDEX

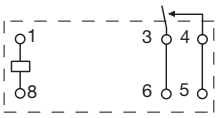
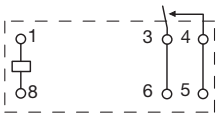
Model			G4A	G4W	
				G4W-1	G4W-2
				1-pole	2-pole
Outer shape					
Shape (max. value mm) Length (L) x Width (W) x Height (H)			30.5 × 16 × 23.5 (tab terminal) 30.5 × 16 × 26.8 (PCB terminal)	30.5 × 19.5 × 30.5	
Features			1-pole power relay suitable for air conditioner compressor loads and inverter loads	For 10 kV impulse voltage, 4 kV withstand voltage power switching	
Contact	Contact form		1a	1a	2a
	Contact type		Single	Single	
	Rated load	Resistive load	100,000 operations min. at 250 VAC, 20 A	100,000 operations min. at 250 VAC, 15 A 100,000 operations min. at 24 VDC, 15 A	100,000 operations min. at 250 VAC, 10 A 100,000 operations min. at 24 VDC, 10 A
		Inductive load	motor load: 200,000 operations min. at 250 VAC, 80 A (inrush current: 0.3 s cosØ = 0.7), 20 A (break current: cosØ = 0.9)	100,000 operations min. at 250 VAC, 10 A (COSØ=0.4) 100,000 operations min. at 24 VDC, 7.5 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 7.5 A (COSØ=0.4) 100,000 operations min. at 24 VDC, 5 A (L/R=7 ms)
	Maximum contact current		20 A	15 A	10 A
	Failure rate P level (reference value)		5 VDC 100 mA	5 VDC 100 mA	
Coil	Rated voltage		12 VDC, 24 VDC	12 to 100 VDC	
	Rated power consumption		Approx. 900 mW	Approx. 800 mW	
Mechanical durability			2,000,000 operations min.	5,000,000 operations min.	
Terminal array diagram / internal connection diagram			G4A-1A-E  Tab terminal side PCB terminal side (TOP VIEW)(BOTTOM VIEW)	G4W-1112P-US-TV8  (BOTTOM VIEW)	G4W-2212P-US-TV5  (BOTTOM VIEW)

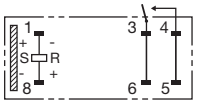
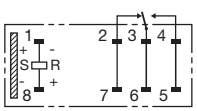
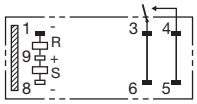
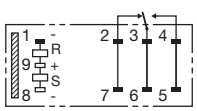
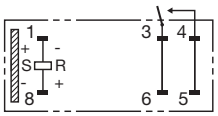
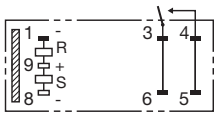
Model			G5CA				G5LE
			Standard type	High capacity type	High sensitivity type	Tab terminal type	
Outer shape							
Shape (max. value mm) Length (L) x Width (W) x Height (H)			22 × 16 × 11			25.1 × 22.1 × 11	22.5 × 16.5 × 19
Features			Flat power relay with 10, 15 A switching capacity				10 A cubic type 1-pole power relay
Contact	Contact form		1a				1a, 1c
	Contact type		Single				Single
	Rated load	Resistive 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 (COSØ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	100,000 operations min. at 110 VAC, 5 A (COSØ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	100,000 operations min. at 250 VAC, 3 A (COSØ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	100,000 operations min. at 110 VAC, 5 A (COSØ=0.4) 100,000 operations min. at 30 VDC, 3 A (L/R=7 ms)	—
	Maximum contact 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
	Rated 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 array diagram / internal connection diagram			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)

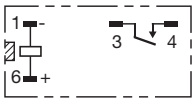
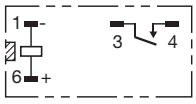
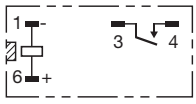
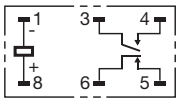
Model			G5NB				G5PZ	
			G5NB-1A(-HA,-CF)	G5NB-1A(-HA,-CF)-PW	G5NB-1A(4)-E(-HA)	G5NB-1A(4)-EL-HA	Standard type	High capacity type
			Standard type	Holding voltage, PWM control compatible type	High capacity type	High capacity, high durability type		
Outer shape								
Shape (max. value mm) Length (L) × 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	24 × 10.5 × 25	
Features			1-pole 3 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	1-pole 5 A switching relay with 10 kV impulse withstand voltage and satisfying EN61010 reinforced insulation requirements	Miniature power relay capable of 1-pole 7 A switching, complying with the international safety standards for ignition resistance	High sensitivity, 530 mW power consumption, 10 kV impulse withstand voltage, reinforced insulation	
Contact	Contact form		1a				1a	
	Contact type		Single				Single	
	Rated load	Resistive load	200,000 operations min. at 125 VAC, 3 A 200,000 operations min. at 30 VDC, 3 A	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 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)	100,000 operations min. at 250 VAC, 16 A	50,000 operations min. at 250 VAC, 20 A
		Inductive load	—				—	
	Maximum contact current		3 A	3 A	5 A	AC:7 A, DC:5 A	16 A	20 A
	Failure rate P level (reference value)		5 VDC 10 mA				5 VDC 100 mA	
Coil	Rated voltage		5 to 24 VDC				5 to 24 VDC	
	Rated power consumption		Approx. 200 mW	Approx. 200 mW Approx. 32 mW (when applying holding voltage)	Approx. 200 mW	Approx. 200 mW	Approx. 530 mW	
Mechanical durability			5,000,000 operations min.				2,000,000 operations min.	
Terminal array diagram / internal connection diagram			G5NB-1A(-HA,-CF)  (BOTTOM VIEW)	G5NB-1A(-HA,-CF)-PW  (BOTTOM VIEW)	G5NB-1A(4)-E(-HA)  (BOTTOM VIEW)	G5NB-1A(4)-EL-HA  (BOTTOM VIEW)	G5PZ-1A  (BOTTOM VIEW)	G5PZ-1A-E  (BOTTOM VIEW)

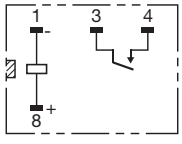
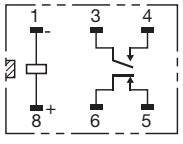
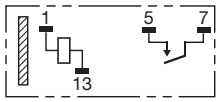
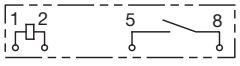
Model			G5Q						G5Q		
			G5Q-1(A)(4)(-HA)		G5Q-1(A)(4)-EU(-HA)		G5Q-1(A)(-HA)-PW		G5Q-1A-EL-HA-VH	G5Q-1A4-EL2-HA	G5Q-1A4-EL3-HA
			Standard type		High capacity		Holding voltage, PWM control compatible type		High capacity, long service life type	High capacity, inrush resistance type	High capacity, motor load switching type
Outer shape											
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		1a	1c	1a	1c	1a1c	1c	1a		
	Contact type		Single						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 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, cosØ=0.5, 300,000 operations min.
	Maximum contact current		AC : 10 A(N.O.)/3 A(N.C.) DC : 5 A(N.O.)/3 A(N.C.)						10A		
	Failure rate P level (reference value)		5 VDC 10 mA						DC5V 10 mA		
Coil	Rated voltage		5 to 24 VDC						5 to 24 VDC		
	Rated 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.						10,000,000 operations min.		
Terminal array diagram / internal connection diagram			G5Q-1A(4)(-HA)  (BOTTOM VIEW)	G5Q-1(4)(-HA)  (BOTTOM VIEW)	G5Q-1(4)-EU(-HA)  (BOTTOM VIEW)	G5Q-1A(4)-EU(-HA)  (BOTTOM VIEW)	G5Q-1A(-HA)-PW  (BOTTOM VIEW)	G5Q-1(-HA)-PW  (BOTTOM VIEW)	G5Q-1A-EL-HA-VH  (BOTTOM VIEW)	G5Q-1A4-EL2-HA  (BOTTOM VIEW)	G5Q-1A4-EL3-HA  (BOTTOM VIEW)

Power Relay Product Lineup INDEX

Model			G5RL			
			Standard type (low noise)	Standard type (TV-8 rating)	High capacity type (low noise)	High capacity type (TV-8 rating)
Outer shape						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			29 × 12.7 × 15.7		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	Contact form		1a			
	Contact type		Single			
	Rated load	Resistive 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	—			
	Maximum contact 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
	Rated 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 array diagram / internal connection diagram			G5RL-1A-LN  (BOTTOM VIEW)	G5RL-1A-TV8  (BOTTOM VIEW)	G5RL-1A-E-LN  (BOTTOM VIEW)	G5RL-1A-E-TV8  (BOTTOM VIEW)

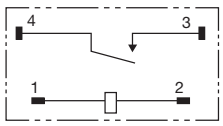
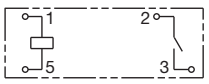
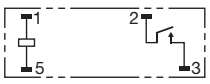
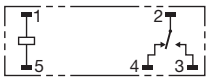
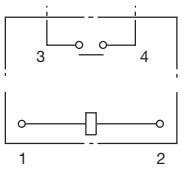
Model			G5RL			
			G5RL-U1(A)-E	G5RL-K1(A)-E	G5RL-U1A-EL-HA	G5RL-K1A-EL-HA
			Single-winding latching type, high capacity type	Double-winding latching type, high capacity type	Single-winding latching type, inrush resistance type	Double-winding latching type, inrush resistance type
Outer shape						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			29 × 12.7 × 15.7	29 × 12.7 × 15.7	29 × 12.7 × 15.7	29 × 12.7 × 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		1a, 1c		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	—			
	Maximum contact 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		
	Rated 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 array diagram / internal connection diagram			G5RL-U1A-E  G5RL-U1-E  (BOTTOM VIEW) (Take note of coil polarity)	G5RL-K1A-E  G5RL-K1-E  (BOTTOM VIEW) (Take note of coil polarity)	G5RL-U1A-EL-HA  (BOTTOM VIEW) (Take note of coil polarity)	G5RL-K1A-EL-HA  (BOTTOM VIEW) (Take note of coil polarity)

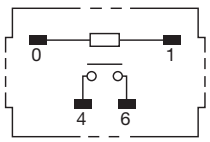
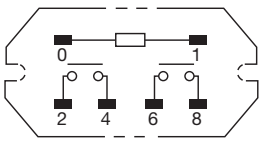
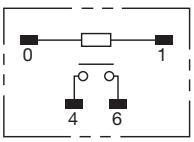
Model			G6B			
Outer shape			G6B(U,K)-1114(P,C)	G6B-117(4,7)(P,C)	G6B-1184P	G6B-2(0,1,2)14(P,C)
			1-pole standard type	1-pole high capacity type	1-pole high reliability type	2-pole standard type
						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			20 × 10 × 10	20.2 × 10 × 12.5(G6B-1174(P,C)) 20.2 × 10 × 15(G6B-1177(P,C))	20 × 10 × 10	20 × 11 × 11
Features			Miniature 1a contact 5 A power relay	Miniature 1a contact 8 A power relay	High reliability by crossbar single contact	Miniature 1a1b, 2a, 2b contact 5 A power relay
Contact	Contact form		1a		1a	1a1b, 2a, 2b
	Contact type		Single		Crossbar single	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)
	Maximum contact 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
	Rated power consumption		Approx. 200 to 280 mW		Approx. 200 mW	Approx. 300 mW
Mechanical durability			50,000,000 operations min.			
Terminal array diagram / internal connection diagram			G6B-1114P-US  (BOTTOM VIEW) (Take note of coil polarity)	G6B-1174P-US  (BOTTOM VIEW) (Take note of coil polarity)	G6B-1184P-US  (BOTTOM VIEW) (Take note of coil polarity)	G6B-2114P-US  (BOTTOM VIEW) (Take note of coil polarity)

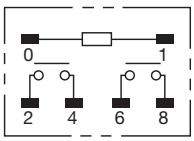
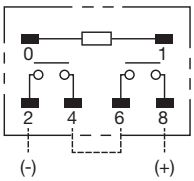
Model			G6C		G6D	G6DN
Outer shape						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			20 × 15 × 10		17.5 × 6.5 × 12.5	20 × 5.08 × 12.5
Features			Miniature power relay with 1-pole 10 A switching capacity		Miniature power relay with 1-pole 5 A switching capacity	Miniature slim power relay with 1-pole 5 A switching capacity
Contact	Contact form		1a	1a1b	1a	1a
	Contact type		Single		Single	Crossbar twin
	Rated load	Resistive load	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	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
		Inductive load	100,000 operations min. at 250 VAC, 5 A (COSØ=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 (COSØ=0.4) 100,000 operations min. at 30 VDC, 3.5 A (L/R=7 ms)	—	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)
	Maximum contact current		10 A	8 A	5 A	5 A
	Failure rate P level (reference value)		5 VDC 10 mA		5 VDC 10 mA G6D-1A-ASI-AP 5 VDC 1 mA	0.1 VDC 0.1 mA
Coil	Rated voltage		3 to 24 VDC		5 to 24 VDC	4.5 to 24 VDC
	Rated power consumption		Approx. 200 to 280 mW		Approx. 200 mW	Approx. 110 mW
Mechanical durability			50,000,000 operations min.		20,000,000 operations min.	20,000,000 operations min.
Terminal array diagram / internal connection diagram			G6C-1114P-US  (BOTTOM VIEW) (Take note of coil polarity)	G6C-2114P-US  (BOTTOM VIEW) (Take note of coil polarity)	G6D-1A-ASI(-AP)  (BOTTOM VIEW)	G6DN-1A  (BOTTOM VIEW)

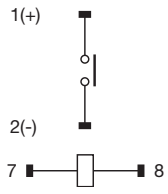
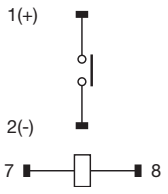
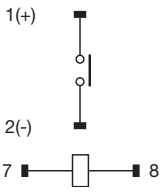
*Single-winding and double-winding latching types are also available.

Power Relay Product Lineup INDEX

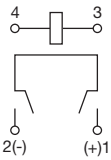
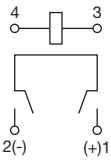
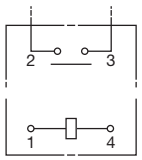
Model			G6QE	G6RL	G6RN	G7EB
Outer shape						
Shape (max. value mm) Length (L) x Width (W) x Height (H)			30.5 × 16 × 20.5	28.5 × 10 × 12.3	29 × 10.5 × 15.5	50.5 × 40.5 × 37
Features			Miniature power relay capable of 1-pole 36 A high capacity switching	Low profile power relay with 1-pole 10 A switching capacity and 12.3 mm height	Miniature power relay with 1-pole 8 A switching capacity	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. (Compliant to the photovoltaic standard VDE0126)
Contact	Contact form		1a	1a, 1c	1a, 1c	1a
	Contact type		Single	Single	Single	Double break
	Rated load	Resistive load	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	50,000 operations min. at 250 VAC, 8 A 50,000 operations min. at 24 VDC, 5 A	50,000 operations min. at 250 VAC, 8 A 50,000 operations min. at 30 VDC, 5 A	300 operations min. at 480 VAC, 100 A 30,000 operations min. at 800 VAC, 40 A (switch on, switch off), 100 A (carry current) 400 operations min. at 60 VDC, 100 A 1,000 operations min. at 60 VDC, 50 A 6,000 operations min. at 60 VDC, 40 A
		Inductive load	—	—	—	—
	Maximum contact current		36 A	10 A(NO) 8 A(NC)	8 A	100 A
	Failure rate P level (reference value)		5 VDC 100mA	5 VDC 10mA	5 VDC 10mA	5 VDC 1A
Coil	Rated voltage		5 to 24 VDC	3 to 48 VDC	5 to 24 VDC	12 VDC, 24 VDC
	Rated power consumption		Approx. 1,400 mW Approx. 172 mW (when applying holding voltage)	Approx. 220 to 240 mW	Approx. 220 mW	Approx. 2,800 mW Approx. 575 mW (when applying holding voltage)
Mechanical durability			1,000,000 operations min.	10,000,000 operations min.	10,000,000 operations min.	1,000,000 operations min.
Terminal array diagram / internal connection diagram			G6QE-1A  (BOTTOM VIEW)	G6RL-1A  G6RL-1  (BOTTOM VIEW)	G6RN-1A  G6RN-1  (BOTTOM VIEW)	G7EB-1A  (BOTTOM VIEW)

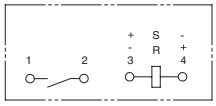
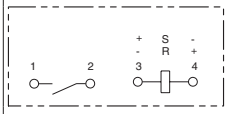
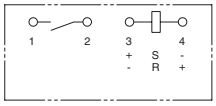
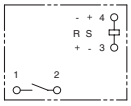
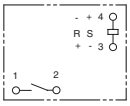
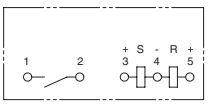
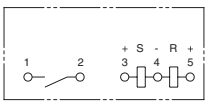
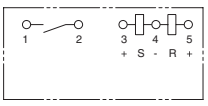
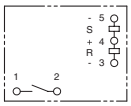
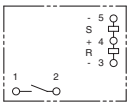
Model			G7L		
			G7L-1A(-T,-B)	G7L-2A(-T,-B)	G7L-(1,2)A-P
			1-pole tab/screw terminal type	2-pole tab/screw terminal type	PCB terminal type
Outer shape					
Shape (max. value mm) Length (L) x Width (W) x Height (H)			52.5 × 34.5 × 55 (G7L-1A-B E-bracket mounting type)	68.5 × 33.5 × 47 (G7L-2A-TUB upper bracket mounting type)	52.5 × 35.5 × 41
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		1a	2a	1a, 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)
	Maximum contact 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		
	Rated power consumption		DC: Approx. 1.9 W, AC: Approx. 1.7 to 2.5 VA		
Mechanical durability			1,000,000 operations min.		
Terminal array diagram / internal connection diagram			G7L-1A-B  (TOP VIEW)	G7L-2A-TUB  (TOP VIEW)	G7L-1A-P  (BOTTOM VIEW)

Model			G7L-PV	G7L-X	
				G7L-X	G7L-X-L
Outer shape Shape (max. value mm) Length (L) x Width (W) x Height (H)			 52.5 × 35.5 × 41	 52.5 × 35.5 × 41	
Features			Solar system Relay for PV inverter	600 to 1,000 VDC isolation/switching thanks to 2-pole series wiring	
Contact	Contact form		2a	2a (with 2-pole series wiring)	
	Contact type		Double break	Double break	
	Rated load	Resistive load	30,000 operations min. at 280 VAC, 30 A	(Normal polarity) 100 operations min. at 1,000 VDC, 25 A 6,000 operations min. at 600 VDC, 30 A (Reverse polarity) 5,000 operations min. at 600 VDC, -30 A	(Normal polarity) 100 operations min. at 1,000 VDC, 20 A 6,000 operations min. at 600 VDC, 20 A (Reverse polarity) 5,000 operations min. at 400 VDC, -20 A
		Inductive load	30,000 operations min. at 280 VAC, 30 A (COSØ = 0.8)	—	
	Maximum contact current		30 A	30 A	20 A
	Failure rate P level (reference value)		5 VDC 100mA	—	
Coil	Rated voltage		12 VDC, 24 VDC	12 VDC, 24 VDC	
	Rated power consumption		Approx. 2.3 W Approx. 0.32 W (when applying holding voltage)	Approx. 2.3 W Approx. 0.6 W (when applying holding voltage)	
Mechanical durability			1,000,000 operations min.	1,000,000 operations min.	
Terminal array diagram / internal connection diagram			G7L-2A-P-PV  (BOTTOM VIEW)	G7L-2A-X(-L) 2-pole series wiring diagram  Use this product in a 2-pole series connection. (BOTTOM VIEW)	

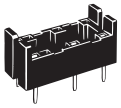
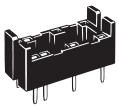
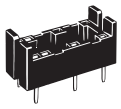
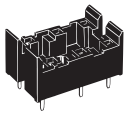
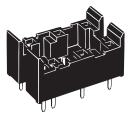
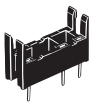
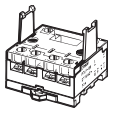
Model			G9EA-1		G9EC-1
			G9EA-1(-B)	G9EA-1(-B)-CA	
			Switching, carry current type	High current carry type	
			 73.5 × 36.5 × 67.7		 99 × 44.5 × 87.7
Features			Supports DC load interruption at high voltage and current		Supports DC load interruption at high voltage and current of 400 VDC, 200 A
Contact	Contact form		1a		1a
	Contact type		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
		Inductive load	—		—
	Maximum contact current		100 A		200 A
	Failure rate P level (reference value)		—		—
Coil	Rated voltage		12 to 100 VDC		12 to 100 VDC
	Rated power consumption		Approx. 5 to 5.4 W		Approx. 11 W
Mechanical durability			200,000 operations min.		200,000 operations min.
Terminal array diagram / internal connection diagram			G9EA-1-B  (TOP VIEW)	G9EA-1-CA  (TOP VIEW)	9EC-1  (TOP VIEW)

Power Relay Product Lineup INDEX

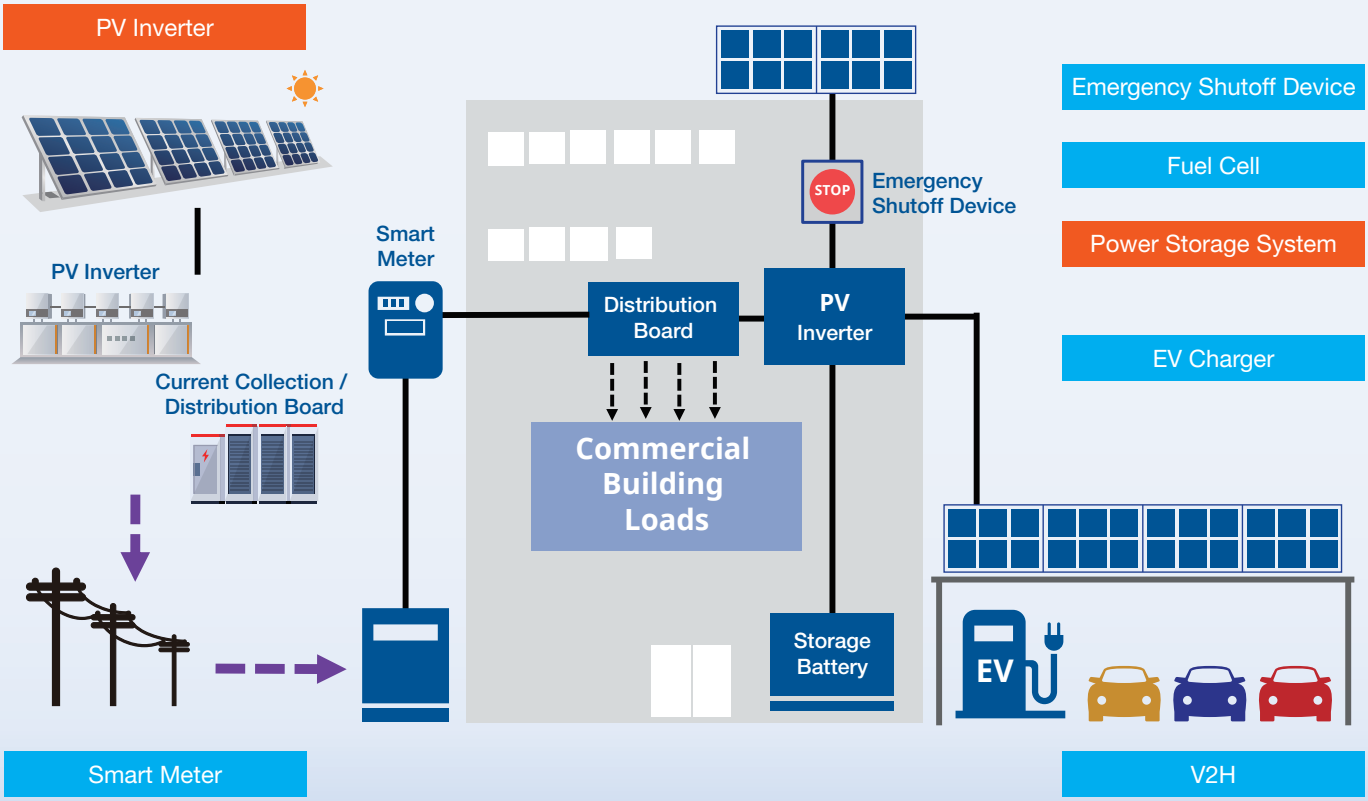
Model			G9EJ-1-E		G9KA
Outer shape			G9EJ-1-P-E PCB terminal	G9EJ-1-E Tab terminal	
					
Shape (max. value mm) Length (L) x Width (W) x Height (H)			31.5 × 27.5 × 32.7	44.5 × 27.5 × 30.5	51 × 51 × 47.2
Features			Miniature power relay capable of switching 400 VDC 15 A loads	Miniature power relay capable of switching 400 VDC 15 A loads	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)
Contact	Contact form		1a		1a
	Contact type		Double break		Double break
	Rated load	Resistive load	10,000 operations min. at 400 VDC, 15 A		800 VAC, 50 A (switch on, switch off) 200 A (carry current), 30,000 operations min. 800 VAC, inrush 150 A (switch on) 200 A (carry current, breaking), 10 operations min.
		Inductive load	—		—
	Maximum contact current		15 A		200 A
	Failure rate P level (reference value)		—		5 VDC, 1 A (M level)
Coil	Rated voltage		12 VDC, 24 VDC		12 VDC, 24 VDC
	Rated power consumption		Approx. 1.2 W		Approx. 5,000 mW Approx. 1,012 mW (when applying holding voltage)
Mechanical durability			200,000 operations min.		100,000 operations min.
Terminal array diagram / internal connection diagram			G9EJ-1-P-E-UVD  (BOTTOM VIEW)	G9EJ-1-E-UVD  (BOTTOM VIEW)	G9KA-1A  (BOTTOM VIEW)

Model			G9TA			G9TB	
Outer shape			G9TA-(U, K)1A-TH M5 securing screw	G9TA-(U, K)1A-TW Welding terminals	G9TA-(U, K)1A-P PCB terminals	G9TB-(U, K)1ATH-E M8 securing screw	G9TB-(U, K)1ATW-E Welding terminals
							
Shape (max. value mm) Length (L) x Width (W) x Height (H)			39.1 × 18 × 34.5	39.1 × 18 × 34.5	39.1 × 18 × 36.7	43.5 × 22.5 × 37.5	
Features			60A AC power latching relay			120A AC power latching relay	
Contact	Contact form		1a			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 opearions, 276 VAC, 100 A	
	Maximum contact current		60 A			120 A	
	Failure rate (mA) P level (reference value)		—			—	
Coil	Rated voltage		12 V			12 V	
	Rated 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 array diagram / internal connection diagram			G9TA-U1ATH  (TOP VIEW)	G9TA-U1ATW  (TOP VIEW)	G9TA-U1AP  (BOTTOM VIEW)	G9TB-U1ATH-E  (TOP VIEW)	G9TB-U1ATW-E  (TOP VIEW)
			G9TA-K1ATH  (TOP VIEW)	G9TA-K1ATW  (TOP VIEW)	G9TA-K1AP  (BOTTOM VIEW)	G9TB-K1ATH-E  (TOP VIEW)	G9TB-K1ATW-E  (TOP VIEW)

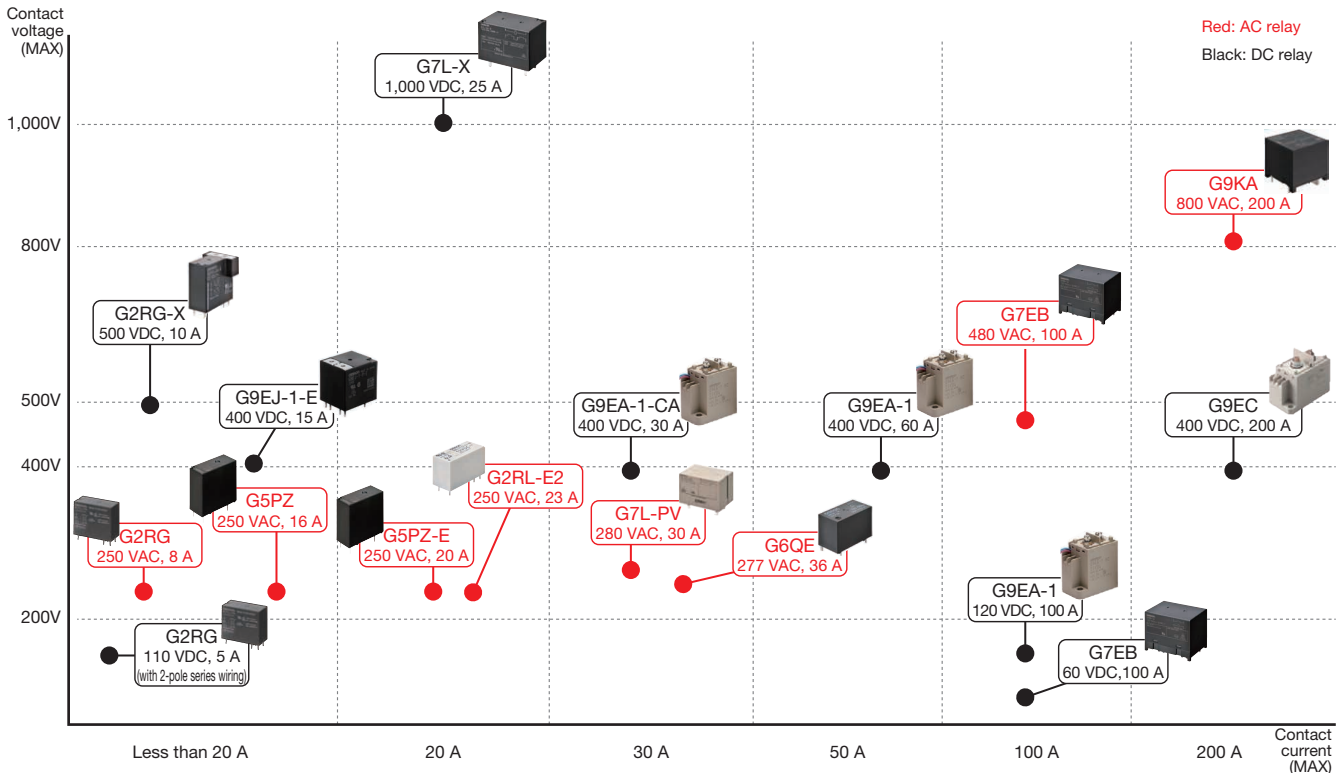
List of common sockets

Model	G6B			G6C		G6D	G7L
Contact form	1a		1a1b, 2a, 2b	1a, 1a1b		1a	1a, 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
Outer shape							

Environment and Energy



High Voltage, Large Current Relay Lineup



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

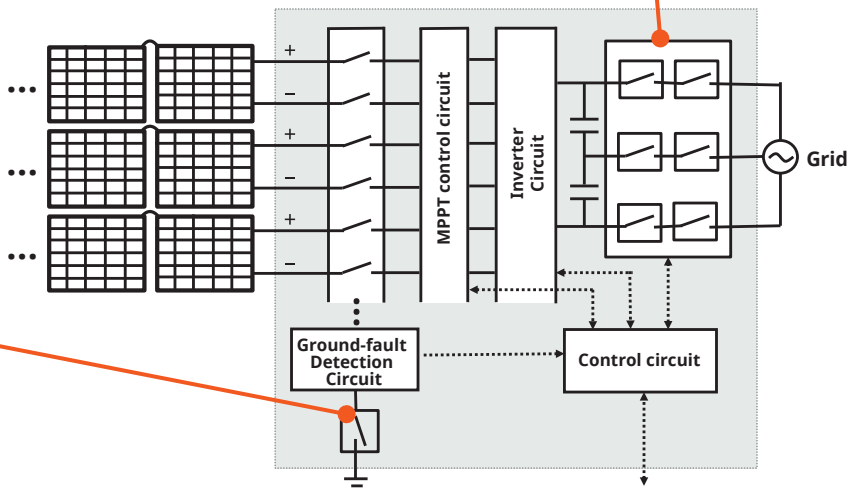
G7EB

G9KA

Ground Fault Detection Circuit

G7L-X

G2RG-X



Power Storage System

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

System Connection/Disconnection

G5PZ-E

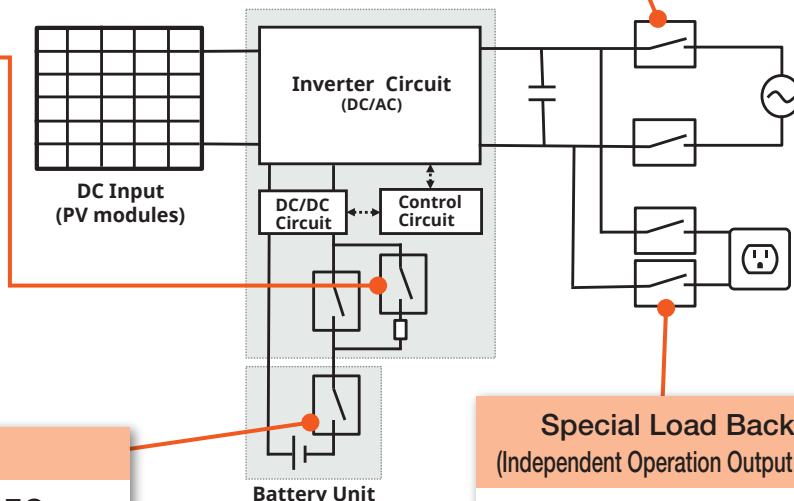
G6QE

G7L-PV

Inrush Prevention Circuit

G2RG-X

G9EJ-1-E



DC Safety Shutoff

G9EA-1

G7L-X

G9EC

Special Load Backup
(Independent Operation Output Control)

G6QE

G2RL-E2

Smart Building

Illumination, Smart Panel/Plug

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

Power Supply Changeover
G6B

Elevator

Control Panel
G2RL(-E)

Floor Heating, Temperature Regulation

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

Bathroom and Toilet

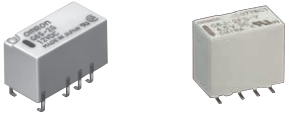
Oil Feed and Boiler Control
G5Q G6RN

Signal Receiver
G6S G6J-Y G6K

Commercial Air Conditioning System

Power Supply Switching
G5PZ G6QE G7EB G9KA

Communications Control
G6S G6J-Y



Fire Alarm

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

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

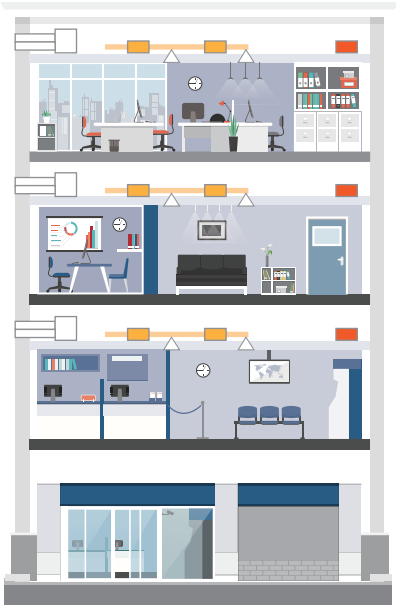
This series of miniature and high switching capacity power relays helps deliver increased sophistication in terms of control of air flow and temperature in air conditioning equipment, contributing to the creation of a cleaner and more comfortable environment.

Fan Motor/Valve Control

G5NB(-EL) G5Q


Compressor Control

G5PZ-E G7L

Boiler Control

G2RL G6RN

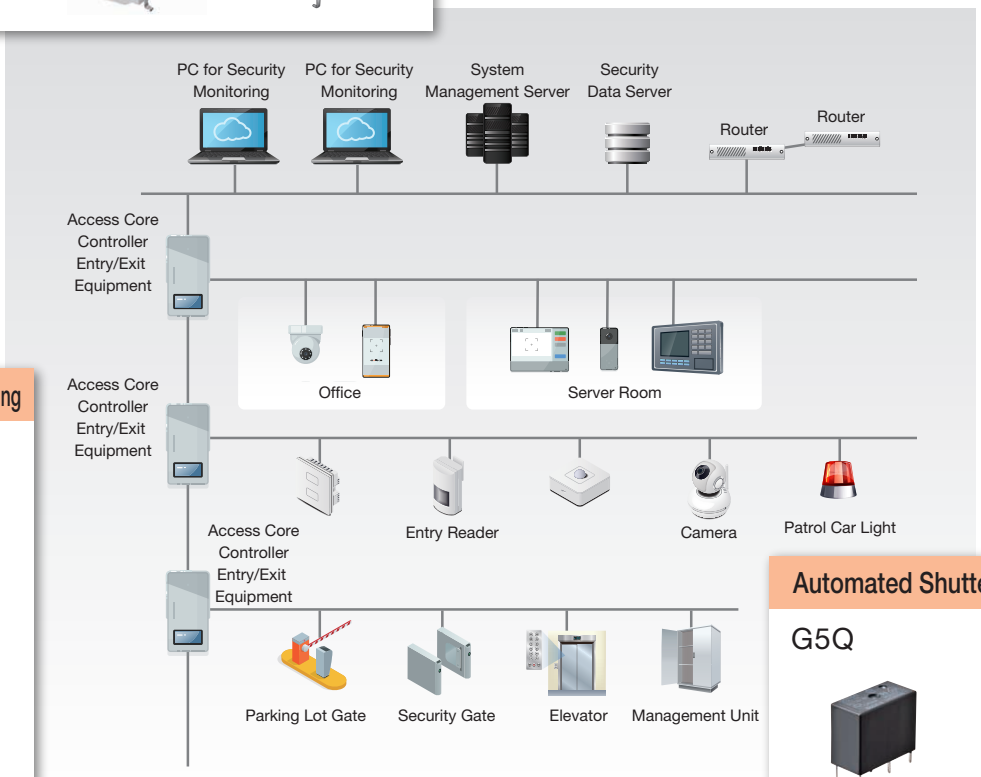

Access Signal Control, Abnormality Alarm Output

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


Factory Automation

Industrial Robotics

Robot Controller

Programmable Controller

Machine Tool

General Equipment

High Voltage DC Power Supply

Semiconductor Manufacturing Device

Control Panel

Servo Inverter

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

G6DN

G5NB(-EL)

Robot Controller

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

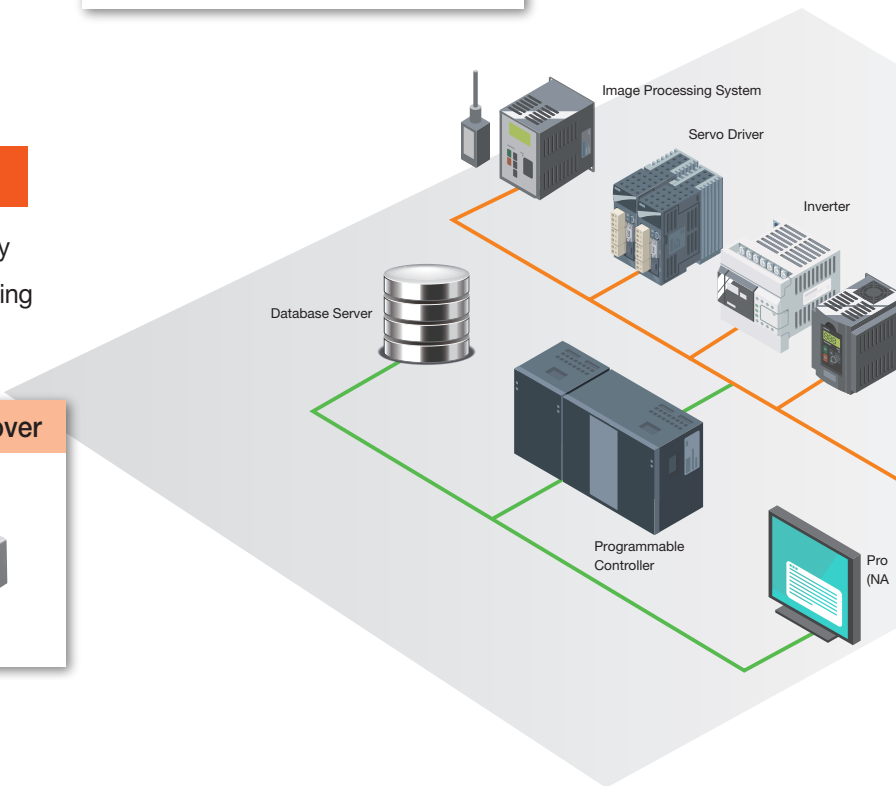
Power Supply Circuit

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

Semiconductor Inspection Device

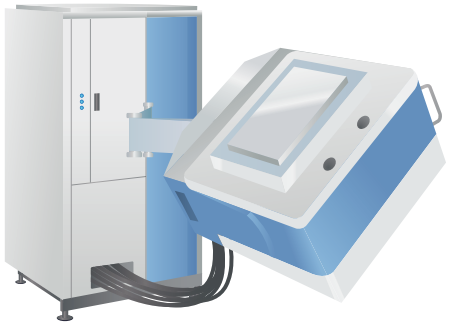
OMRON's comprehensive range of subminiature high-density mounting type signal relays and high frequency relays with superior characteristics will support the ever advancing semiconductor manufacturing and inspection processes with high reliability.

Test Signal Changeover

G6K

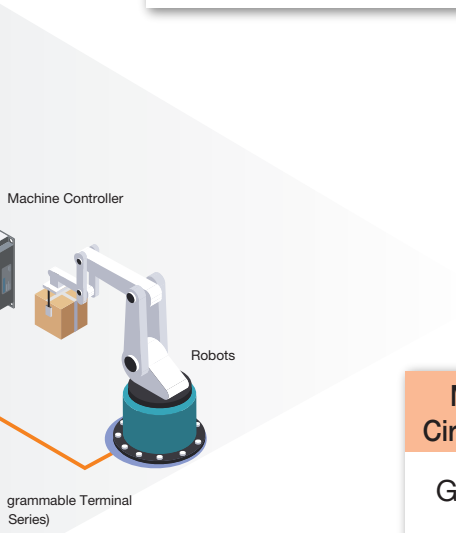
G6J-Y

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

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