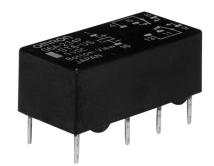
Low Signal Relay

- High sensitivity -- can be driven by digital circuits.
- Low-profile design allows use in 12.70 mm (0.50 in) PC board rack.
- Surge withstand voltage meets FCC Part 68 regulation.
- Units can be mounted side by side due to low magnetic leakage.
- Special models available for ultrasonic cleaning and low thermoelectromotive force.
- Unique moving loop (permanent magnet) armature reduces relay size, magnetic interference, and contact bounce time.
- Single or dual coil winding types available.





Ordering Information

To Order: Select the part number and add the desired coil voltage rating, (e.g., G6A-274P-ST-US-DC12).

■ Non-latching

Туре	Contact form	Model				
		AgPd (Au clad)	Ag (Au clad)			
Standard	DPDT	G6A-234P-ST-US	G6A-274P-ST-US			
	4PDT	G6A-434P-ST-US	G6A-474P-ST-US			
High-sensitivity	DPDT	G6A-234P-ST15-US	G6A-274P-ST15-US			
	4PDT	G6A-434P-ST20-US	G6A-474P-ST20-US			
Low-sensitivity	DPDT	G6A-234P-ST40-US	G6A-274P-ST40-US			
	4PDT	G6A-434P-ST40-US	G6A-474P-ST40-US			

■ Latching

Single Coil

Туре	Contact form	Model		
		AgPd (Au clad)	Ag (Au clad)	
Standard	DPDT	G6AU-234P-ST-US	G6AU-274P-ST-US	
	4PDT	G6AU-434P-ST-US	G6AU-474P-ST-US	

Dual Coil

Туре	Contact form		Model
		AgPd (Au clad)	Ag (Au clad)
Standard	DPDT	G6AK-234P-ST-US	G6AK-274P-ST-US
	4PDT	G6AK-434P-ST-US	G6AK-474P-ST-US
Low-sensitivity	DPDT	G6AK-234P-ST40-US	G6AK-274P-ST40-US
	4PDT	G6AK-434P-ST40-US	G6AK-474P-ST40-US

Note: Other options available for ST10 ultra high reliability, high temperature 85°C (185°F), ST1 reverse coil polarity, BS British standard. Contact your OMRON sales representative for details.

Specifications

■ Contact Data

Туре	G6AK-234P-ST(40)-US	, G6A-434P-ST(20,40)-US , G6AK-434P-ST(40)-US , G6AU-434P-ST-US	-ST(40)-US G6AK-274P-ST(40)-US, G6AK-474P-ST(4 -ST-US G6AU-274P-ST-US, G6AU-474P-ST-U		
Load	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)	
Rated load	0.30 A at 125 VAC, 1 A at 30 VDC	0.20 A at 125 VAC, 0.50 A at 30 VDC	0.50 A at 125 VAC, 2 A at 30 VDC	0.25 A at 125 VAC, 1 A at 30 VDC	
Contact material	AgPd (Au clad)	AgPd (Au clad)	Ag (Au clad)	Ag (Au clad)	
Carry current	3 A	3 A	3 A	3 A	
Max. operating voltage	250 VAC, 220 VDC	250 VAC, 220 VDC	250 VAC, 220 VDC	250 VAC, 220 VDC	
Max. operating current	2 A	1 A	2 A	1 A	
Max. switching capacity	125 VA, 60 W	62.50 VA, 30 W	125 VA, 60 W	62.50 VA, 30 W	
Min. permissible load	10 μA, 10 mVDC	10 μA, 10 mVDC	10 μA, 10 mVDC	10 μA, 10 mVDC	

■ Coil Data

Standard Non-latching DPDT (G6A-234P-ST-US, G6A-274P-ST-US)

Rated voltage	Rated current	current resistance		luctance llue) (H)	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption
(VDC) (mA)		(Ω)	Armature OFF	Armature ON	c	(mW)		
3	66.70	45	0.07	0.07	70% max.	10% min.	200%	Approx. 200
5	40	125	0.20	0.18			at 23°C	
6	33.30	180	0.29	0.26			(73°F)	
9	22.20	405	0.63	0.57			150%	
12	16.70	720	1.10	1.06			at 70°C (158°F)	
24	8.30	2,880	4.50	4.10				
48	4.90	9,750	13.70	12.50				Approx. 235

High-sensitivity Non-latching DPDT (G6A-234P-ST15-US, G6A-274P-ST15-US)

Rated voltage	Rated current	Coil resistance	Coil inductance (ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption	
(VDČ)	(mA)	(Ω)	Armature OFF	Armature ON			ge	(mW)	
1.50	100	15	0.02	0.02	80% max.	10% min.	200%	Approx. 150	
3	50	60	0.09	0.08	1				
4.50	33.30	135	0.22	0.20	1				
5	30	167	0.25	0.21					
6	25	240	0.35	0.31					
9	16.70	540	0.80	0.70					
12	12.50	960	1.35	1.25					
24	6.30	3,840	5.60	5.10					
48	3.20	15,000	22.50	20.00					

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.

Low-sensitivity Non-latching DPDT (G6A-234P-ST40-US, G6A-274P-ST40-US)

Rated voltage	oltage current resistance		Coil inductance (ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption
(VDC) (mA)		(Ω)	Armature OFF	Armature ON	9/	је	(mW)	
3	133.30	22.50	0.03	0.02	70% max.	10% min.	150%	Approx. 400
5	80	62.50	0.08	0.07			at 23°C (73°F)	
6	66.70	90	0.11	0.10				
9	44.30	203	0.27	0.23				
12	33.30	360	0.52	0.43			110%	
24	16.70	1,440	2.10	1.80		at 70°C		
48	8.30	5,760	7.50	6.40	-		(158°F)	

Standard Non-latching 4PDT (G6A-434P-ST-US, G6A-474P-ST-US)

Rated voltage	Rated current	Coil resistance	Coil inductance (ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
(VDC) (mA)		(Ω)	Armature OFF	Armature ON	%	% of rated voltage		
3	120	25	0.05	0.05	70% max.	10% min.	150%	Approx. 360
5	72.50	69	0.14	0.12			at 23°C (73°F)	
6	60	100	0.20	0.17				
9	40	225	0.45	0.38				
12	30	400	0.80	0.68				
24	15	1,600	3.20	2.70			110% at 70°C	
48	7.50	6,400	12.80	10.90]		(158°F)	

High-sensitivity Non-latching 4PDT (G6A-434P-ST20-US, G6A-474P-ST20-US)

Rated voltage	Rated current	Coil resistance		uctance lue) (H)	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)	
(VDC)	(VDC) (mA) (Ω)		Armature OFF	Armature ON	9/	% of rated voltage			
3	66.70	45			70% max.	10% min.	200%	Approx. 200	
5	40	125					at 50°C (122°F)		
6	33.30	180					(12217)		
9	22.20	405							
12	16.70	720							
24	8.30	2,880]				
48	4.20	11,520							

Low-sensitivity Non-latching 4PDT (G6A-434P-ST40-US, G6A-474P-ST40-US)

Rated voltage (VDC)	Rated current (mA)	Coil resistance		luctance llue) (H)	Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption
		(Ω)	Armature OFF	Armature ON	% of rated voltage (mW			
3	133.30	22.50	0.04	0.02	70% max.	10% min.	150% at 23°C (73°F) 110% at 70°C (158°F)	Approx. 400
5	80	62.50	0.12	0.09				
6	66.70	90	0.17	0.13				
9	44.30	203	0.42	0.30				
12	33.30	360	0.70	0.52				
24	16.70	1,440	2.80	2.20				
48	8.30	5,760	10.20	8.60				

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of $\pm 10\%$.

Standard Single Coil Latching DPDT (G6AU-234P-ST-US, G6AU-274P-ST-US)

Rated voltage	Rated current	Coil resistance		luctance lue) (H)	Set pick-up voltage	Reset pick-up voltage	Maximum voltage	Power consumption
(VDC) (mA)		(Ω)	Armature OFF	Armature ON	9/	of rated voltag	je	(mW)
3	33.70	89	0.15	0.11	70% max.	70% min.	200%	Approx. 100
5	20	250	0.44	0.35			at 23°C (73°F)	
6	16.70	360	0.64	0.48				
9	11.10	810	1.38	1.07				
12	8.30	1,440	2.50	2			150% at 70°C (158°F)	
24	4.20	5,760	9.20	7.20	1			
48	2.50	19,000	28.50	22	1			Approx. 120

Standard Dual Coil Latching (G6AK-234P-ST-US, G6AK-274P-ST-US)

Rated voltage	voltage current re		Coil inductance (ref. value) (H)				Set pick-up	Reset pick-up	Maximum voltage	Power consumption
(VDC)	(mA)	(Ω)	Set	coil	Rese	t coil	voltage	voltage		(mW)
			Armature OFF	Armature ON	Armature OFF	Armature ON	9	6 of rated voltag	je	
3	66.70	45	0.04	0.03	0.03	0.04	70% max.	70% min.	200%	Approx. 200
5	36	139	0.11	0.08	0.08	0.11			at 23°C (73°F)	Approx. 180
6	30	200	0.16	0.12	0.12	0.16			(73 F)	
9	20	450	0.38	0.28	0.28	0.38				
12	15	800	0.60	0.45	0.45	0.60		at	150%	
24	7.50	3,200	2.10	1.50	1.50	2.10			at 70°C	
48	4.20	11,520	8.50	6.30	6.30	8.50			(158°F)	Approx. 200

Dual Coil Latching Low-sensitivity DPDT (G6AK-234P-ST40-US, G6AK-274P-ST40-US)

Rated voltage	Rated current	Coil resistance (Ω)	Coil inductance (ref. value) (H)				Set pick-up	Reset pick-up	Maximum voltage	Power consumption
(VDC)	(mA)		Set coil		Reset coil		voltage	voltage		(mW)
			Armature OFF	Armature ON	Armature OFF	Armature ON	9	6 of rated voltage	ge	1
3	120	25	0.02	0.01	0.01	0.02	70% max.	70% min.	150% at 23°C (73°F) 110% at 70°C (158°F)	Approx. 360
5	72.50	69	0.05	0.04	0.04	0.05				
6	60	100	0.07	0.05	0.05	0.07				
9	40	225	0.16	0.12	0.12	0.16				
12	30	400	0.28	0.20	0.20	0.28				
24	15	1,600	1.10	0.75	0.75	1.10				
48	7.50	6,400	4	2.90	2.9	4				

Standard Single Coil Latching 4PDT (G6AU-434P-ST-US, G6AU-474P-ST-US)

Rated voltage	Rated current	Coil resistance	resistance (ref. value) (H				Maximum voltage	Power consumption	
(VDC)	(mA)	(Ω)	Armature OFF	Armature ON	% of rated voltage			(mW)	
3	106.80	28.10	0.03	0.02	70% max.	70% min.	150%	Approx. 320	
5	64	78.10	0.08	0.06			at 23°C		
6	53.30	112.50	0.11	0.08			(73°F)		
9	35.60	253	0.25	0.18					
12	26.70	450	0.45	0.32			110%		
24	13.30	1,800	1.80	1.30	1		at 70°C		
48	6.70	7,200	7.00	5.20	1		(158°F)		

Standard Dual Coil Latching 4PDT (G6AK-434P-ST-US, G6AK-474P-ST-US

Rated voltage	Rated current	Coil resistance	Coil inductance (ref. value) (H)				Set pick-up	Reset pick-up	Maximum voltage	Power consumption
(VDC)	(mA)	(Ω)	Set	coil	Rese	t coil	voltage	voltage		(mW)
			Armature OFF	Armature ON	Armature OFF	Armature ON	9/	of rated voltag	je	
3	106.80	28.10	0.03	0.02	0.02	0.03	70% max.	70% min.	150%	Approx. 320
5	64	78.10	0.08	0.06	0.06	0.08			at 23°C (73°F)	
6	53.30	112.50	0.11	0.08	0.08	0.11				
9	35.60	253	0.25	0.18	0.18	0.25]			
12	26.70	450	0.45	0.32	0.32	0.45			110% at 70°C (158°F)	
24	13.30	1,800	1.80	1.30	1.30	1.80				
48	6.70	7,200	7.00	5.20	5.20	7.00				

Dual Coil Latching Low-sensitivity 4PDT (G6AK-434P-ST40-US, G6AK-474P-ST40-US)

Rated voltage	Rated current	Coil resistance	Coil inductance (ref. value) (H)				Set pick-up	Reset pick-up	Maximum voltage	Power consumption
(VDC)	(mA)	(Ω)	Set	coil	Rese	t coil	voltage	voltage		(mW)
			Armature OFF	Armature ON	Armature OFF	Armature ON	9	% of rated voltag	je	
3	120	25	0.02	0.02	0.02	0.02	70% max.	70% min.	150% at 23°C (73°F) 110% at 70°C	Approx. 360
5	72.50	69	0.07	0.05	0.05	0.07				
6	60	100	0.09	0.08	0.08	0.09				
9	40	225	0.18	0.14	0.14	0.18				
12	30	400	0.30	0.23	0.23	0.30				
24	15	1,600	1.20	0.82	0.82	1.20				
48	7.50	6,400	4.40	3.20	3.20	4.40			(158°F)	

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.

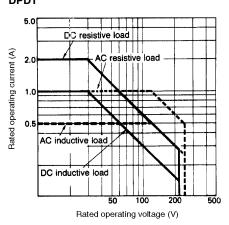
■ Characteristics

Туре		Non-latching Latching						
Contact resistance		50 mΩ max.						
Operate (set) time	DPDT	5 ms max. (mean value approx. 3 ms)	5 ms max. (mean value approx. 2.50 ms)					
	4PDT	7 ms max. (mean value approx 3.80 ms)	7 ms max. (mean value approx. 3.30 ms)					
Release (reset) time	DPDT	3 ms max. (mean value approx. 1.20 ms)	5 ms max. (mean value approx. 2.50 ms)					
	4PDT	5 ms max. (mean value approx. 1.30 ms)	7 ms max. (mean value approx. 2.70 ms)					
Bounce time	Operate	Actual value approx. 0.50 ms						
	Release	Actual value approx. 0.50 ms						
Operating frequency	Mechanical	36,000 operations/hour						
	Electrical	1,800 operations/hour (under rated load)						
Insulation resistance		1,000 MΩ min. (at 500 VDC)						
Dielectric strength		1,000 VAC, 50/60 Hz for 1 minute between coil and contacts						
		1,000 VAC, 50/60 Hz for 1 minute between contacts of different poles						
		1,000 VAC, 50/60 Hz for 1 minute between contacts of same pole						
		250 VAC, 50/60 Hz for 1 minute between set and reset coils						
Surge withstand voltage)	1,500 V 10 x 16 μs (conforms to FCC Part 68)						
Vibration	Mechanical durability	10 to 55 Hz; 5 mm (0.20 in) double amplitude						
	Malfunction durability	10 to 55 Hz; 3.3 mm (0.13 in) double amplitude						
Shock	Mechanical durability	1,000 m/s ² (Approx. 100G						
	Malfunction durability	DPDT: 500 m/s ² (Approx. 50 G); 4PDT: 300 m/s ² (Approx. 30 G)						
Ambient temperature	1	-40° to 70°C (-40° to 158°F)						
Humidity		45% to 85% RH						
Service life	Mechanical	100 million operations min. (at 36,000 operations/hour)						
	Electrical	See "Characteristic Data"						
Weight	DPDT	Approx. 3.5 g (0.12 oz)						
	4PDT	Approx. 6.0 g (0.21 oz)						

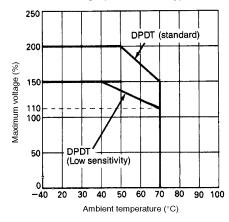
Note: Data shown are of initial value.

■ Characteristic Data

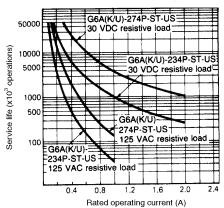
Maximum Switching Capacity DPDT



Ambient Temperature vs. Maximum Voltage (reference only)



Electrical Service Life DPDT

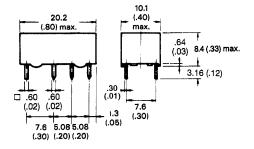


Dimensions

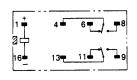
Unit: mm (inch)

■ Non-latching

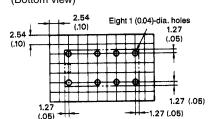
G6A-234P-ST(15,40)-US, G6A-274P-ST(15,40)-US



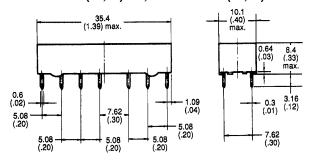
Terminal arrangement/ Internal connections (Bottom view)



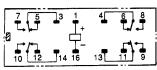
Mounting holes (Bottom view)



G6A-434P-ST(20,40)-US, G6A-474P-ST(20,40)-US

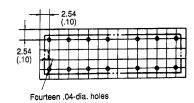


Terminal arrangement/ Internal connections (Bottom view)



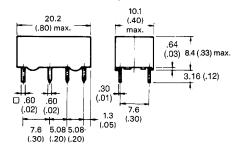
Mounting holes

(Bottom view)

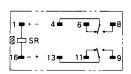


■ Latching

G6AU-234P-ST-US, G6AU-274P-ST-US

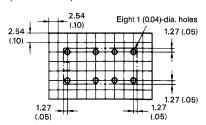


Terminal arrangement/ Internal connections (Bottom view)

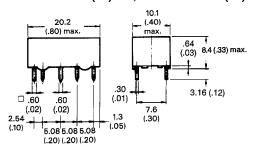


Mounting holes

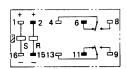
(Bottom view)



G6AK-234P-ST(40)-US, G6AK-274P-ST(40)-US

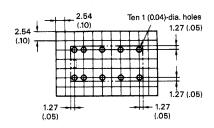


Terminal arrangement/ Internal connections (Bottom view)

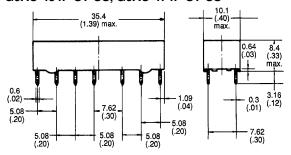


Mounting holes

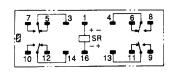
(Bottom view)



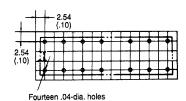
G6AU-434P-ST-US, G6AU-474P-ST-US



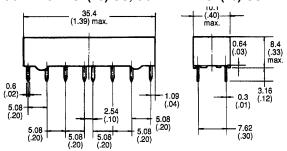
Terminal arrangement/ Internal connections (Bottom view)



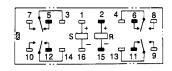
Mounting holes (Bottom view)



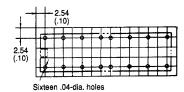
G6AK-434P-ST(40)-US, G6AK-474P-ST(40)-US



Terminal arrangement/ Internal connections (Bottom view)



Mounting holes (Bottom view)



Note: and [_] indicate mounting orientation marks.

■ Approvals

UL (File No. E41515)/CSA (File No. LR24825)

Туре	Contact form	Coil rating	Contact ratings
G6A-234P-ST-US	DPDT	1 to 48 VDC	0.60 A, 125 VAC
G6A-234P-ST40-US			1 A, 30 VDC
G6A-234P-ST15-US			0.60 A, 110 V+DC
G6A-274P-ST-US			0.60 A, 125 VAC
G6A-274P-ST40-US			2 A, 30 VDC
G6A-274P-ST15-US			0.60 A, 110 V
G6A-434P-ST-US	4PDT	1 to 48 VDC	0.60 A, 125 VAC
G6A-434P-ST20-US			1 A, 30 VDC
G6A-434P-ST40-US			0.60 A, 110 V
G6A-474P-ST-US			0.60 A, 125 VAC
G6A-474P-ST20-US			2 A, 30 VDC
G6A-474P-ST40-US			0.60 A, 110 V
G6AK-234P-ST(40)-US	DPDT	1 to 48 VDC	0.60 A, 125 VAC
G6AU-234P-ST-US			1 A, 30 VDC
			0.60 A, 110 V
G6AK-274P-ST(40)-US			0.60 A, 125 VAC
G6AU-274P-ST-US			2 A, 30 VDC
			0.60 A, 110 V
G6AK-434P-ST(40)-US	4PDT	1 to 48 VDC	0.60 A, 125 VAC
G6AU-434P-ST(40)-US			1 A, 30 VDC
			0.60 A, 110 V
G6AK-474P-ST(40)-US			0.60 A, 125 VAC
G6AU-474P-ST(40)-US			2 A, 30 VDC
			0.60 A, 110 V

Note: 1. The rated values approved by each of the safety standards (e.g., UL and CSA) may be different from the performance characteristics individually defined in this catalog.

- 2. In the general interest of product improvement, specifications are subject to change.
- 3. UL1950 recognition.

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