Spec. No. G6A21- 94035A (1/7)

MESSRS. _____

PRODUCT SPECIFICATION
FOR

NAME OF PRODUCT : Mini Relay

MODEL : G6AK-274P-STLT-US

SPECIFICATION VDC

Revision	Contents	By/Date

SG-G6A2-052A

ATTN: T. HARMON / OEI

Date of Issue : July 19, 1994

Issued by Y. Kitagawa

Checked by

Approved by

OMRON Corporation
Kusatsu Relay Factory

1. Classification & Type — Double coil latching

2. Construction
2.1 Outline dimensions — Drawing No. 1491847-1C
2.2 Connection diagram — Drawing No.
2.3 Contact configuration

3. Standards
Approved by standard(s) — UL UL114, UL478 (E 41515)
CSA C22.2, No.2, No.14 (LR 24825)

4. Ratings
4.1 Coil ratings

Rated voltage V DC	Rated current mA	Set/Reset coil resistance Ω (±10%)	Must set voltage V DC	Must reset voltage V DC	Maximum voltage V DC (at50℃)	Power consumption mW
1.5	132.7	11.3	1.05	1.05	3	Approx. 200
3	66.7	45	2.1	2.1	6	
4.5	40.2	112	3.15	3.15	9	Approx. 180
5	36	139	3.5	3.5	10	
6	30	200	4.2	4.2	12	
9	20	450	6.3	6.3	18	
12	15	800	8.4	8.4	24	
24	7.5	3200	16.8	16.8	48	
48	4.2	11520	33.6	33.6	96	Approx. 200

(at 23 ℃)

4.2 Contact ratings
(1) Rated load

Resistive load: AC 125 V 0.5 A; DC 30 V 2 A
Inductive load: AC 125 V 0.3 A (p.f. = 0.4); DC 30 V 1 A (L/R= 7 ms)

(2) Rated carry current 3 A
(3) Maximum operating voltage
AC 250 V DC 220 V

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(4) Maximum operating current

Resistive load	AC	2	A	DC	2 A
Inductive load	AC	1	A	(p. f. = 0.4)	
	DC	1	A	(L/R= 7 ms	

(5) Maximum switching capacity

Resistive load	AC	125	VA	DC	60 W
Inductive load	AC	62.5	VA	(p. f. = 0.4)	
	DC	30	W	(L/R= 7 ms)	

(6) Minimum permissible load

(reference value) DC 10 mV 10 μA(P level

5. Characteristics

5.1 Contact resistance (initial): 50 mΩ max.
With DC 1 V 10 mA applied.

5.2 Set time: 5 ms max. (at rated voltage)

5.3 Reset time: 5 ms max. at rated voltage)

5.4 Insulation resistance (initial): 1000 MΩ min. (at 500V DC)
(between set and reset coils : 100 MΩ at 250V DC)

5.5 Dielectric strength (initial): 1000 VAC, at 50/60Hz for 1 minute between electric circuits of different and between open contacts.
250 VAC, at 50/60Hz for 1 minute between set and reset coils.

5.6 Surge withstand voltage (Conforms FCC part 68): 1500 V, at 10×160μS Between open contacts and between coil and contacts.

5.7 Temperature rise

(1) Coil

65 ℃ max. (by the coil resistance method)
Applied voltage of coil : 100 % of rated voltage
Carry current of contact : 3 A

(2) Contact

65 ℃ max. (by the thermometer method)
Applied voltage of coil : 100 % of rated voltage
Carry current of contact : 3 A

5.8 Vibration

(1) Mechanical durability

The product shall be free from any abnormality in both the construction and characteristics when subjected to a variable vibration of 5 mm double amplitude at a vibration frequency of 10 to 55 Hz in each direction for 2 hours.

(2) Malfunction durability

(Set state without energized) The product shall be free from a contact opening of 1 ms or longer when subjected to a variable vibration of 3.3 mm double amplitude at a vibration frequency of 10 to 55 Hz for 5 minutes.

(Reset state without energized) The product shall be free from a contact opening of 1 ms or longer when subjected to a variable vibration of 3.3 mm double amplitude at a vibration frequency of 10 to 55 Hz for 5 minutes.

5.9 Shock

(1) Mechanical durability

The product shall be free from any abnormality in both the construction and characteristics when subjected to a shock of 1000 m/s² (approx. 100 G) in each direction 3 times.

(2) Malfunction durability

(Set state without energized) The product shall be free from a contact opening of 1 ms or longer when subjected to a shock of 300 m/s² (approx. 30 G) in each direction 3 times.

(Reset state without energized) The product shall be free from a contact opening of 1 ms or longer when subjected to a shock of 300 m/s² (approx. 30 G) in each direction 3 times.

5.10 Terminal strength

The product shall be free from any abnormality after a TensiTe Stress of 0.5 kgf is applied to any of the terminal in the axial direction for 10 seconds. Any deformation of the terminal by the paid load shall not be regarded as a mechanical damage.

5.11 Temperature resistance

(1) Heat resistance

The product shall be free from any abnormality in both the construction and characteristics when left in a temperature of 85 ℃ for 16 hours and then in room temperature and humidity for 2 hours.

(2) Cold resistance

The product shall be free from any abnormality in both the construction and characteristics when left in a temperature of -55 ℃ for 72 hours and then in room temperature and humidity for 2 hours.

5.12 Moisture resistance

The product shall be free from any abnormality in both the construction and characteristics when left in a humidity of 90 to 95% RH for 48 hours at a temperature of 40 ±2 ℃, and then in room temperature and humidity for 2 hours.
Insulation resistance, however, must be 5 MΩ min.

5.13 Soldering heat resistance

The product shall be free from any abnormality in both the construction and characteristics after the terminals are dipped into molten solder at 260 ℃ for 10 seconds and then left in room temperature and humidity for 2 hours.

5.14 Service life

(1) Mechanical

100×10^6 operations min.

(under no load, at operating frequency of 36000 operations/hour)

(2) Electrical

500×10^3 operations min.

under rated load, at operating frequency of 1800 operations/hour)

(7/7)

6. Standard test conditions	Unless otherwise specified, the values described in this specification shall be obtained those under the following standard test conditions.
6.1 Temperature	23 ℃
6.2 Humidity	65% RH
7. Conditions	Operating/Storage
7.1 Temperature	-40 ℃ to + 70 ℃ (-40 ° F to +158 ° F) (without freezing or condensation)
7.2 Humidity	45 to 85% RH

7.3 Environments

(1) The product shall not be used and stored in locations subject to corrosive gas such as hydrogen sulfide gas or salty air.

(2) Locations where visible dust exists.

(3) Locations subject to direct sunlight.

In no event, any load shall be applied to the product which may result in the deformation or deterioration of the product.

7.4 Mounting direction	Free
8. Weight	Approx. 3.5 g
9. Sealing grade	Fluorocarbon liquid at 90℃ for 1 minute.
10. Thermoelectromotive force	5μV Max.

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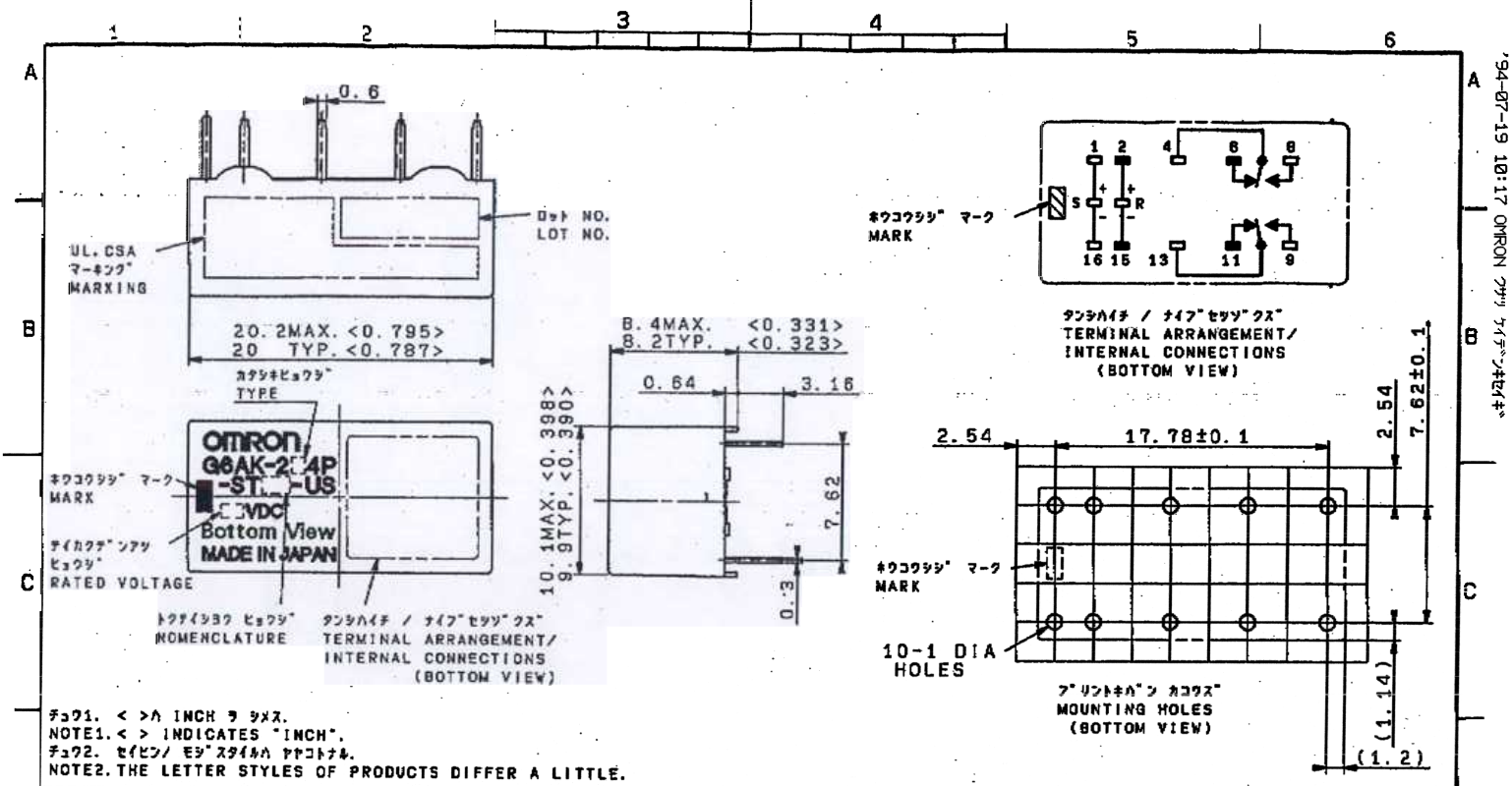

チュウ1. < >ハ INCH ヲ ラワス.
NOTE1. < > INDICATES "INCH".
チュウ2. セイヒン/ モシ゛スタイルハ ヤヤコトナル.
NOTE2. THE LETTER STYLES OF PRODUCTS DIFFER A LITTLE.

SYM	DATE	E/C CONTENTS	E/C NO.	SIGN

MATERIAL	FINISH	SCALE	G6AK-2□4P-ST□-US
TOLERANCES UNLESS SPECIFIED	DESIGNED 85/08/12 KUSATSU S.YAMASHITA / CHECKED KUSATSU T.TANAKA / APPROVED 30 JUN '89	3:1	ミニ リレー MINI RELAY
		3RD ANGLE	カ゛イケイズ OUTL. DRWG.
		SHEET 1/1	DRWG NO. 1491847-1C
			DESIGNED FOR G6AK-2□4P-ST□-US

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