■for reference
□for recognition

Spec.No. OMZ-PE-G6B2-041125-074

CUSTOMER _____

PRODUCT SPECIFICATION
FOR

NAME OF PRODUCT : MINI RELAY

MODEL : G6B-2114P-1-US

SPECIFICATION : DC 5、6、12、24 V

Revision	Contents	By/Date

ATTN : _____

Date of Issue : 2004-11-25

Issued by _____

Checked by Taira Minamizaki

Approved by Taira Minamizaki

OMRON Corporation
OMRON Electronic Components (ShenZhen)Ltd.

1.Classification Single stable relay

2.Construction

2.1 Outline dimensions Drawing No.2483281-8

2.2 Structure drawing Drawing No.－－－－－

2.3 Contact configuration SPST-NO+SPST-NC(1a1b contact)

2.4 Contact structure Single contact

2.5 Contact material Face material －－－－
Base material Ag Alloy

2.6 Protective construction Plastic sealed

3. Standards

3.1 Approved by standard(s) UL File No. :E41643
CSA Certificate No. :LR31928

3.2 Others －－－－－

4. Ratings

4.1 Coil ratings See table 1

4.2 Contact ratings

(1) Rated load Resistive load 250VAC 5A
30VDC 5A
Inductive load 250VAC 1.5A
(p.f. = 0.4)
30VDC 1.5A
(L／R=7ms)

(2) Rated carry current 5A

(3) Maximum rated voltage 380VAC 125VDC

(4) Maximum rated current
Resistive load AC5A DC5A
Inductive load AC5A
(p.f. = 0.4)
DC5A
(L／R=7ms)

(5) Maximum switching capacity
Resistive load AC1250VA DC150 W
Inductive load AC375VA
(p.f. = 0.4)
DC80 W
(L／R=7ms)

(6) Failure rate (reference value)
DC5V 10mA
(P level) (λ_{60} =0.1×10^{-6} ／ops.)

5.Characteristics (initial value)

5.1 Contact resistance 30 mΩ max.
Measured by the voltage drop method with
DC5V 1A applied

5.2 Must operate voltage (or set voltage) See table 1

5.3 Must release voltage (or reset voltage) See table 1

5.4 Operate time （or set time） １０ms max.（at rated voltage）

5.5 Release time （or reset time） １０ms max.（at rated voltage）

5.6 Minimum input pulse width ―― ms min.
(Applicable to latching relay only, at rated voltage)

5.7 Insulation resistance 500VDC
(1)Between coil terminals and contact terminals
１０００ MΩ min.
(2)Between non-continuous current-carrying contact terminals
１０００ MΩ min.
(3)Between contact terminals of the same polarity
１０００ MΩ min.
(4)Between set coil and reset coil ―― MΩ min.
(5)Between current-carrying terminal and exposed non-current currying metal part. ―― MΩ min.

5.8 Dielectric strength（leakage current 3mA 50/60Hz for a minute）
(1)Between coil terminals and contact terminals
AC ３０００ V
(2)Between non-continuous current-carrying terminals
AC 2 ０００ V
(3)Between contact terminals of the same polarity
AC 1 ０００ V
(4)Between set coil and reset coil AC ―― V
(5)Between current-carrying terminal and exposed non-current carrying metal part. AC ―― V

5.9 Temperature rise
(1) Coil 50℃ max.
(by the coil resistance method) at. ―℃
Applied voltage of coil：１００％
of rated voltage―Hz
Carry current of contact ５A

(2) Contact ６５℃ max.
(by the thermometer method) at. ―℃
Applied voltage of coil：１００％
of rated voltage ―Hz
Carry current of contact ５A

5.10 Vibration
(1) Mechanical durability Must be free from any abnormality in both the construction and characteristics after the relay is subjected to a variable vibration of 0.75 mm single amplitude(1.5 mm double amplitude) at a vibration frequency of 10～55～10 Hz in each direction for 2 hours.

(2) Malfunction durability
(When energized) or set status
Contacts must not open for 1 ms or longer after the relay is subjected to a variable vibration of 0.75 mm single amplitude (1.5 mm double amplitude) at a vibration frequency of 10～55～10 Hz in each direction for 1 cycle.

(When not energized) or reset status
Contacts must not open for 1 ms or longer after the relay is subjected to a variable vibration of 0.75 mm single amplitude (1.5 mm double amplitude) at a vibration frequency of 10~55~10 Hz in each direction for 1 cycle.

5.11 Shock

(1)Mechanical durability — Must be free from any abnormality in both the construction and characteristics after the relay is subjected to a shock of １０００ m/s^2 in each direction ３ times.

(2)Malfunction durability

(When energized) or set status — Contacts must not open for 1 ms or longer after the relay is subjected to a shock of 100 m/s^2 in each direction 3 times.

(When not energized) or reset status — Contacts must not open for 1 ms or longer after the relay is subjected to a shock of 100 m/s^2 in each direction 3 times.

5.12 Terminal strength — Must be free from any abnormality after a tensile stress of ９．８ N is applied to the terminal in any direction vertical to the terminal tip for １０ seconds. Any deformation of the terminal by the load shall not be regard as a mechanical damage.

5.13 Temperature resistance

(1) Heat resistance — Must be free from any abnormality in both the construction and characteristics after the relay is left in a temperature of ８５±２ ℃ for １６ hours and then in room temperature and humidity for ２ hours.

(2) Cold resistance — Must be free from any abnormality in both the construction and characteristics after the relay is left in a temperature of -５５±３ ℃ for ７２ ours and then in room temperature and humidity for ２ hours.

5.14 Moisture resistance — Must be free from any abnormality in both the construction and characteristics after the relay is 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.

5.15 Soldering heat resistance — Must be free from any abnormality in both the construction and characteristics after the terminals are dipped into molten solder at ２６０±５ ℃ for １０±１ seconds and then left in room temperature and humidity for ２ hours.

5.16 Endurance

(1)Mechanical endurance — 50,000,000 operations min. (under no load at operating frequency of 18000 operations／hour)

(2)Electrical endurance — 100,000 operations min. (under rated load, at operating frequency of 1800 operations／hour)

※Unless otherwise specified, the above mentioned item ４ (Ratings) and ５ (Characteristics) values are under the standard conditions of Ambient temperature ２３℃ and Humidity ６５%RH.

6. Storage conditions

(1) Store in locations in normal temperature, humidity and atmosphere pressure.

(2) Environments

- Store in locations where the product or container is not exposed to corrosive gas such as hydrogen sulfide gas or salty air.
- Store in locations where no visible dust exists.
- Store in locations where the product is not exposed to the direct ray of the sun, rain and snow.
  Also please do not apply the force to product which may result in the deformation or a change in quality of the product.

7. Operating conditions　Use the product under the following conditions.

7.1 Ambient temperature　－25 to ＋70℃
（without freezing or condensation）

7.2 Relative humidity　5 to 85 %RH

7.3 Mounting direction　Free

7.4 Environments

(1) Use in locations where the product is not exposed to corrosive gas such as hydrogen sulfide gas or salty air.

(2) Use in locations where no visible dust exists.

(3) Store in locations where the product is not exposed to the direct ray of the sun, rain and snow.
Also please do not apply the force to product which may result in the deformation or a change in quality of the product.

8. Other

8.1 Please avoid ultra-sonic cleaning and terminal cutting amounting relays on board to prevent possible coil breakage.

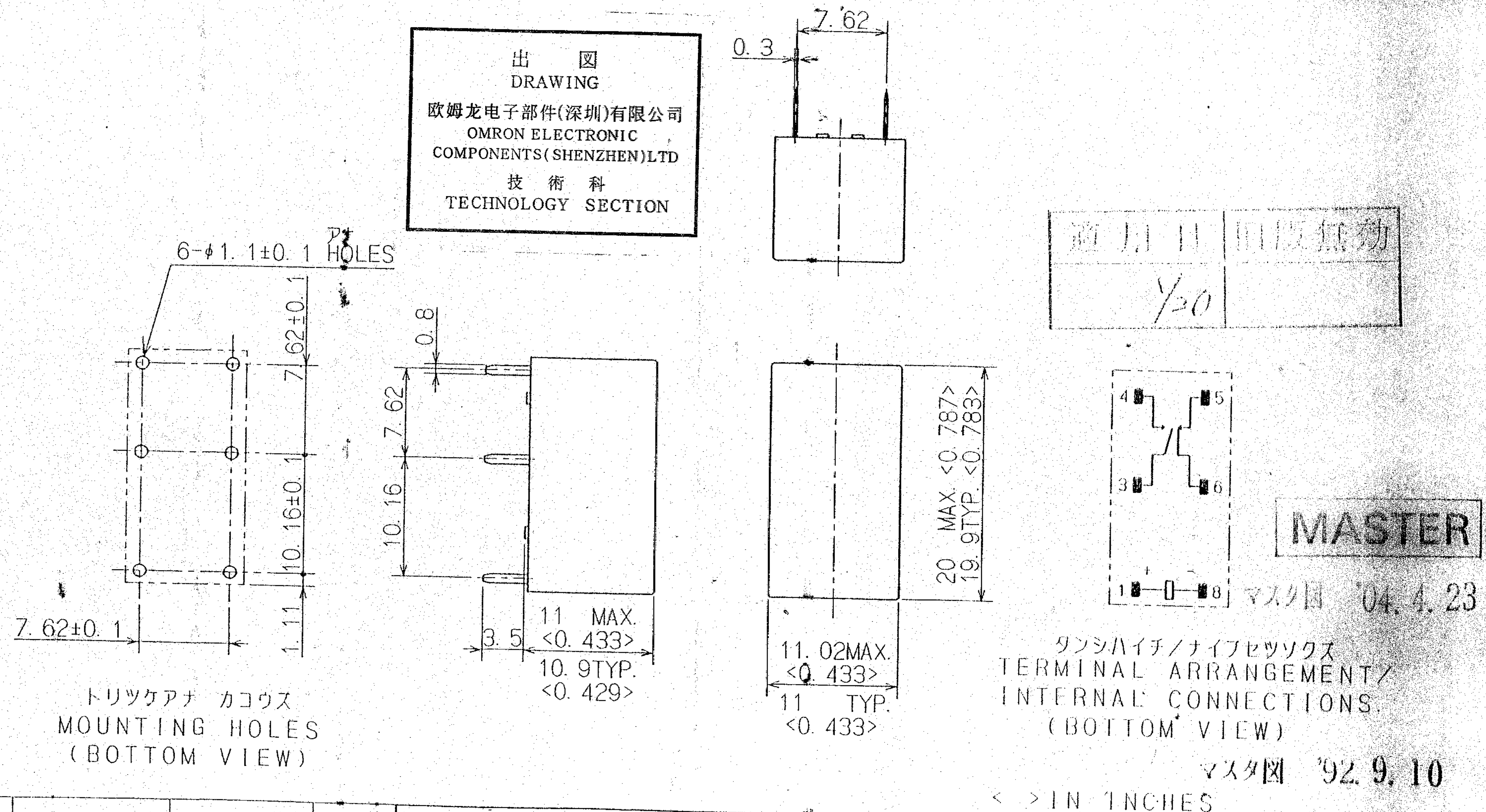
8.2 The”-1” of this G6B part number stands for the opposite polarity of coil terminals compared with G6B standard type.

9. Coil ratings（table 1）

Rated voltage （V）	Rated current （mA）	Coil resistance （Ω）	Must operate voltage	Must release voltage	Rated power consumption （W）	Permissible voltage range
DC 5	60.0	83.3	80%max. of rated Voltage.	10%min of rated Voltage.	Approx. 0.3	90~110% of rated Voltage.
DC 6	50.0	120				
DC12	25.0	480				
DC24	12.5	1920				

The value of above list is measured at ambient temperature 23℃ with the tolerance of current and coil resistance ± 10%.

10. Contact material of the relay will be changed to Cd free material type in April 2005 for abolishing hazardous substance.



< > IN INCHES

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

MATERIAL

FINISH

TOLERANCES UNLESS SPECIFIED	DESIGNED	CHECKED	APPROVED
IT15	92/09/01		
	商品技術 コタニ	商品技術課長 コガ	商品技術課課長 コガ

SCALE 2:1

3RD ANGLE

SHEET 1/1

ミニ・リレー ガイケイズ

MINI RELAY. OUTL. DRAWG.

DRWG NO. 2483281-8 B

DESIGNED FOR G6B-2114P-1-US

OMRON