For Reference

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OMRON Corporation
OMRON Relay & Devices Corporation

Prepared by	Checked by	Authorized by
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PRODUCT SPECIFICATIONS

Name: POWER RELAY

Model:G6C-2117P-US

Item: DC8V

Registration part number for Customer
Type name : Type number :

Receipt Stamp(For receipt purpose only)
Please accept handling of this specification sheet as for reference use if no reply received.

Handled by

Distribution

	Copy
Customer	
Sales( )	

Revision Record

Mark	Date	Contents

OMRON

DP-720101-2C

1．Classification　Single stable relay

2．Construction
2.1 Outline dimensions　Drawing No.１４６８５２５－６
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　Flux protection

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

3.2 Others　－－－－－

4． Ratings
4.1 Coil ratings　See table１

4.2 Contact ratings
(1) Rated load　Resistive load　２５０ＶＡＣ　８Ａ
３０ＶＤＣ　８Ａ
Inductive load　－－－ＶＡＣ　－－－Ａ
（p．f．=－－－）
－－－ＶＤＣ　－－－Ａ
（Ｌ／Ｒ=－－－ms）
(2) Rated carry current　８Ａ
(3) Maximum rated voltage　３８０ ＶＡＣ　１２５ＶＤＣ
(4) Maximum rated current
Resistive load　ＡＣ８Ａ ＤＣ８Ａ
Inductive load　ＡＣ－－－Ａ
（p．f．=－－－）
ＤＣ－－－Ａ
（Ｌ／Ｒ=－－－ms）
(5) Maximum switching capacity
Resistive load　ＡＣ２０００ＶＡ ＤＣ２４０Ｗ
Inductive load　ＡＣ－－－ＶＡ
（p．f．=－－－）
ＤＣ－－－Ｗ
（Ｌ／Ｒ=－－－ms）
(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)　１０ ms MAX. (at rated voltage)
5.5 Release time (or reset time)　１０ ms 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 current３mA 50/60Hz for a minute)

(1) Between coil terminals and contact terminals
ＡＣ２０００ Ｖ

(2) Between non-continuous current-carrying terminals
ＡＣ２０００ Ｖ

(3) Between contact terminals of the same polarity
ＡＣ１０００ 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 contact８Ａ

(2) Contact

６５℃ MAX.
(by the thermometer method) at.－－－℃
Applied voltage of coil：１００％
of rated voltage －－－Hz
Carry current of contact８Ａ

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 0.75mm single amplitude(1.5mm 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 1ms or longer after the relay is subjected to a variable vibration of 0.75mm single amplitude (1.5mm 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 1ms or longer after the relay is subjected to a variable vibration of 0.75mm single amplitude (1.5mm 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 １０００m/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 １００m/s^2 in each direction 3 times.
5.12 Terminal strength	Must be free from any abnormality after a tensile stress of ９.８N 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 hours 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 18,000 operations／hour)
(2)Electrical endurance	100,000 operations MIN. (under rated load, at operating frequency of 1,800 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 and rain, 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 Enviroments

(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) Use in locations where the product is not exposed to the direct ray of the sun and rain, 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. Others

8.1 5.15 Soldering heat resistance
In case hand-soldering,max.3sec.at 280℃.

9. Other Conditions

Thank you for using OMRON products.

This Product Specifications, including following provisions (hereinafter called the “Specifications”) is applied to all transaction or sales regarding to the OMRON electronic components described in the Specifications (hereinafter called “OMRON Product”).

9.1 Warranty

①Warranty Period

The warranty period for the OMRON Product is one year from either the date of purchase or the date on which the OMRON Product is delivered to the specified location.

②Extent of Warranty

If an OMRON Product is subject to a failure for which OMRON is responsible during the warranty period, either a replacement product will be provided or the defective product will be repaired free of charge at the place of purchase. This warranty, however, will not cover problems that occur as a result of any of the following.

a) Using the OMRON Product under conditions or in an environment not described in catalogs or in the specifications, or not operating the OMRON Product according to the instructions contained in catalogs or in the specifications.
b) Problem caused by something other than the OMRON Product.
c) Modifications or repairs performed by a party other than OMRON.
d) Using the OMRON Product for other than its designed purpose.
e) Problems that could not have been foreseen with the level of science and technology that existed at the time the OMRON Product was shipped.
f) Problems caused by an Act of God or other circumstances for which OMRON is not responsible.

This warranty covers only the OMRON Product itself. It does not cover any other damages that may occur directly or indirectly as a result of a problem with the OMRON Product.

9.2 Limitations of Liability

OMRON shall not be responsible for special, indirect, or consequential damages originating in an OMRON Product.

9.3 Applicable Conditions

①When using OMRON Products in combination with other products, it is the user’s responsibility to confirm compliance with all applicable standards and regulations. It is also the user’s responsibility to confirm the suitability of the OMRON Products for the system, devices, and equipment that are being used. OMRON accepts no responsibility for the suitability of OMRON Products used in combination with other products.

②When using OMRON Products in any of the following applications, consult an OMRON representative and check specifications to allow sufficient leeway in ratings and performance, and to implement suitable safety measures, such as safety circuits, to minimize danger in the event of an accident.

a) Outdoor applications, applications with potential for chemical contamination or electrical interference, or application under conditions or environments not described in catalogs.
b) Nuclear control systems, railroad systems, aviation systems, combustion systems, medical equipment, amusement machines, or equipment regulated by government or industrial standards.
c) Other systems, machines, and equipment that may have a serious influence on human life and property.
d) Equipment requiring a high level of reliability, such as gas, water, or electrical supply systems, and systems that operate 24 hours a day.
e) Other applications requiring a high level of safety, corresponding to points a) to d), above.

③When OMRON Products are used in an application that could pose significant risk to human life or property, the overall system must be designed so that the required safety can be ensured by providing notice of the danger and incorporating redundancy into the design. Make sure that OMRON Products are appropriately wired and mounted to serve their intended purpose in the overall system.
④Application examples provided in catalogs are for reference only. Confirm functionality and safety before actually using the devices and equipment.
⑤To prevent unexpected problems from arising due to the OMRON Product being used incorrectly by the customer or any other party, make sure that you understand and carefully observe all of the relevant prohibitions and precautions.
⑥Each rating and performance value given in catalogs etc.is the value in an independent examination, and does not guarantee simultaneously the compound conditions of each rating and performance value.
⑦Do not use the OMRON Product for automotive applications(including two-wheeled motorvehicle.)

9.4 Changes to Specifications
Specifications and accessories to the products in catalogs may be changed as needed to improve the products or for any other reason. Check with your OMRON representative for the actual specifications for OMRON Products at the time of purchase.

9.5 Treatment of the specifications for reference
When these specifications are issued for reference, please consult with your OMRON representative before actually using the specifications and confirm the latest specifications for the OMRON Product.

9.6 Extent of Service
The price of an OMRON Product does not include service costs, such as dispatching technical staff. If you wish for service, please consult with your OMRON representative.

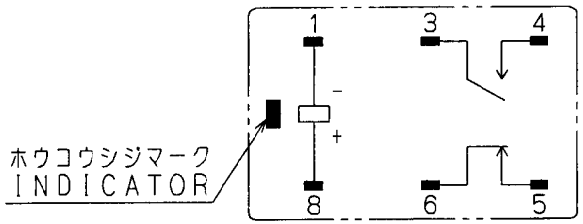
9.7 Effective term
If this Specifications sheet is not returned with receipt stamp or no order is made within one year from the date of issue of the Specifications,the specifications might be modified or the production might be discontinued without notice.
When you return this Specifications sheet or make an order after one year from the date of issue, please refer to the latest version of the specifications.

１０．Coil rating （table １）

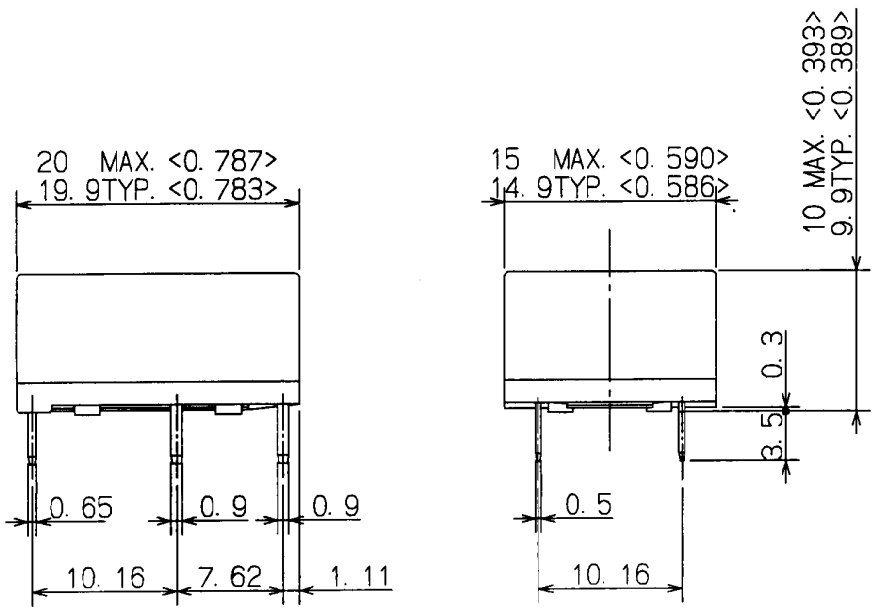
Rated voltage （V）	Rated current (m A)	Coil resistance （Ω）	Must operate voltage	Must release voltage	Rated power consumption （W）	Permissible voltage range
ＤＣ　8	２５.０	３２０	70%max of rated voltage	10%min of rated voltage	Approx. 0.2	90～130% of rated voltage

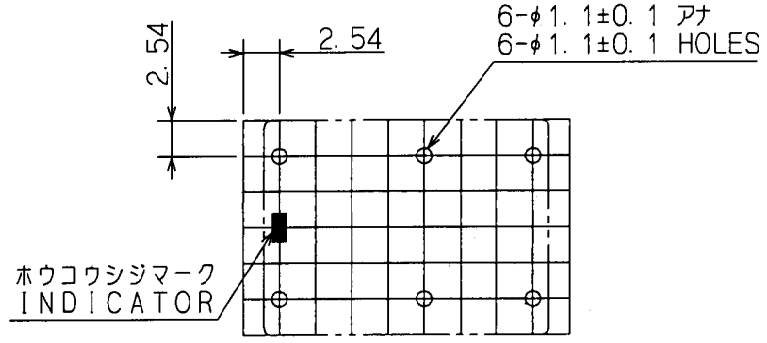
The value of above list is measured at ambient temperature 23℃ with the tolerance of current and coil resistance ±10%.

出 図
DRAWING
オムロンリレーアンドデバイス株式会社
OMRON Relay & Devices Corporation



タンシハイチ／ナイブセツゾクズ
TERMINAL ARRANGEMENT/
INTERNAL CONNECTIONS
(BOTTOM VIEW)





プリントキバンカコウズ
MOUNTING HOLES
(BOTTOM VIEW)

< >IN INCHES

SYM	DATE	E/C CONTENTS	E/C NO.	SIGN
E	931130	形状変更	#L6060029	ハシモト
D2	940527	誤記	#L6940143	ミナミザキ
D1	931130	認可印追加	#L6930219	ミナミザキ

MATERIAL
FINISH
TOLERANCES UNLESS SPECIFIED IT15
DESIGNED 92/09/01 商品技術課 ウトウ
CHECKED CER PW商技部 '06.4.27 浅尾
APPROVED CER PW商技部長 '06.4.28 葛川

SCALE 2:1
3RD ANGLE
SHEET 1/1

パワーリレー ガイケイズ
POWER. RELAY OUTL. DRWG
DRWG NO. 1468525-6 E
DESIGNED FOR G6C-2117P