

## 阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

## Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

SPECIFICATIONS  
FOR

PRODUCT NAME : Automatically small horizontal Vibration detection switch

TYPE NAME : D 7 A - 1

ISSUED : S. Iwada April 21, 1999

CHECKED : S. Mori April 21, 1999

APPROVED : R. Yamada Apr. 22, '99

OMRON Corporation

## 1. Mechanism parameter

## (1) Dimensions

DRWG. No. 6421444-0

## (2) Structure

The contact of the built-in switch is mechanically opened and close by the vibration of the earthquake wave and it is the mechanism which takes out the signal.

## (3) Protection structure

The switch is assumed to be IP40.

## (4) Set sensitivity

90-170  $\text{cm/s}^2$ (Gal) (Depend on the horizontal, continuous excitation method of 0.3, 0.5, and 0.7 cycle seconds).

The above-mentioned sensitivity is a value by which it is set to operate by the earth quake waves (80-250  $\text{cm/s}^2$ ) in the seismic intensity aiming.

## (5) Return mechanism

Automatic return type

## (6) Installation level allowance value

The installation level allowance value of the device which builds in this item while installed normal is assumed  $\pm 5$  degrees or less.

## (7) Point of contact form

Excite horizontally and turn ON in the range of set sensitivity.

## (8) The horizontal return time

Time from the fixation of the device which builds in this item in the installation level allowance value to the normal return of the switch circuit is made within 20 seconds.

(However, 10°C or more)

## (9) Circuit return time

Time until the switch circuit returns original after the vibration stops is made within one minute.

## (10) Installation method

Please install this item on the PCB( $t=1.6\text{mm}$ ).

(See right picture).

## (11) Soldering

Dip soldering: temperature 270°C 4sec MAX.

Soldering iron: temperature 350 $\pm$ 10°C 3sec MAX.

## 2. Electric specification

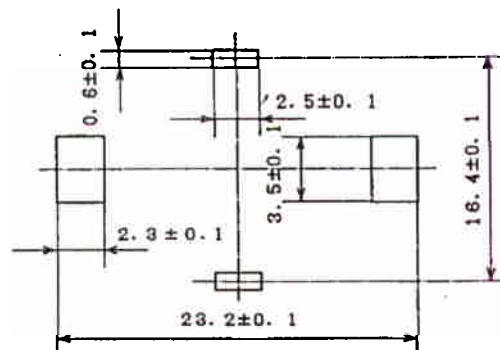
## (1) Electric ratings

DC3V, 5  $\mu$  A ~ DC3V, 1mA

## (2) Insulation resistance

100M $\Omega$  or more (DC250VM).

Between each terminal and earth terminal,  
between the same pole terminals.



- (3) Voltage  
AC250V, 50/60Hz 1 minute (between each terminal and earth between the same pole terminals).
- (4) Contact resistance  
Below initial 1Ω (terminal)
3. Mechanical specification
- (1) Transportation vibration  
Satisfy an initial value after exciting in half amplitude 2.5mm, the vibration frequency 10Hz, and the direction of three axes for 20 minutes or more.
- (2) Endurance impact  
▲ Do not provide the obstacle as a function after impressing the acceleration of 980m/s<sup>2</sup> in the direction of three axes continuousness three times.
- (3) Transportation impact  
Satisfy an initial value after 1 corner, 3 arrises, 3 surfaces and 7 times in total are dropped from the height of 60cm to a concrete side freely while packed.
- (4) Terminal strength  
Satisfy an initial value after impressing the load of 9.8N in the direction of compression for one minute.
4. Environmental performance
- (1) Use surroundings temperatures -30-70°C (However, there must be neither be dewy nor freezing)
- (2) Use surroundings humidity. 25~95%RH.
- (3) Preservation surroundings temperatures -40-70°C (However, there must be neither be dewy nor freezing)
- (4) Preservation surroundings humidity. 25~95%RH.
5. Business-proof Business
- (1) Salt-fog test  
Do not generate rust on corrosion and externals remarkable depending on the salt-fog test which builds in and provides for the meter of the gas to JIS Z 2371 after testing for 100 hours.  
Insulation resistance: 5MΩ or more.  
Dielectric strength: AC250V 1 minute (50/60Hz).  
However, measures under the dry state after the examination ends.
- (2) Wetproofing  
Do not provide the obstacle as a function after leaving for continuousness 96 hour in atmosphere of 40±2°C and 90-98%RH.  
Insulation resistance 10MΩ or more.  
However, measures under the dry state after the examination ends.
- (3) Heat-humidity cycle  
Do not provide the obstacle as a function by 10 cycles at each heat-humidity of showing in Figure 2 of regulations of the check of the meter of the gas  
Insulation resistance 10MΩ or more.  
Moreover, do not bleach the final cycle in the state of the low temperature.  
However, measures under the dry state after the examination ends.

- (4) High temperature leaving  
Do not provide the obstacle as a function after leaving in the constant temperature tank of  $70 \pm 2^\circ\text{C}$  for 96 hours.
- (5) Heatproof impact  
Do not provide the obstacle as a function after leaving for 10 cycles. (one cycle:  $-30^\circ\text{C}$ , 30 minutes  $\rightarrow$   $70^\circ\text{C}$ , 30 minutes).
- (6) Electrical service life  
Do not provide the obstacle as a function after 10,000 operations under the rated load of 3VDC, 1mA at a frequency of 10 to 20 operations per minute.  
Insulation resistance :  $10\text{M}\Omega$  or more.
- (7) Corroded gas  
 $\text{H}_2\text{S} \pm 1\text{ppm}$ ,  $40^\circ\text{C}$  and 65%RH and leaving for 96 hours.  
The contact resistance after examining is assumed to be  $1\text{k}\Omega$  or less.

Note 1. Among the judgment standards, the meaning of 'satisfy an initial value' is as follows.

- ① Operation characteristic operates by  $90-170 \text{ cm/s}^2$  (0.3, 0.5 and 0.7 cycle seconds).
- ② Contact resistance Below  $1\Omega$ .
- ③ Insulation resistance  $100\text{M}\Omega$  or more.
- ④ Voltage AC250V 50/60Hz 1 minute.

Moreover, the meaning of 'Do not provide the obstacle as function' is as follows.

- ① Operation characteristic Operate by  $80-250 \text{ cm/s}^2$  (0.3, 0.5, and 0.7 cycle seconds).
- ② Contact resistance Below  $100\Omega$ .
- ③ Insulation resistance  $100\text{M}\Omega$  or more.
- ④ Dielectric strength AC250V 50/60Hz 1 minute.

Note 2. Guaranteed term and range of guarantee

(1) Guaranteed term

It will be assumed one year after the commodity is delivered.

(2) Range of guarantee

Only when the breakdown is caused during the above-mentioned guaranteed term by the responsibility of our company, the breakdown part of this commodity is exchanged or is repaired.

The guarantee is a guarantee of the delivery goods units and pardon expenditure (work pay and damage amends, etc.) because of the exchange work, please.

Note 3. The terms of validity of this specifications

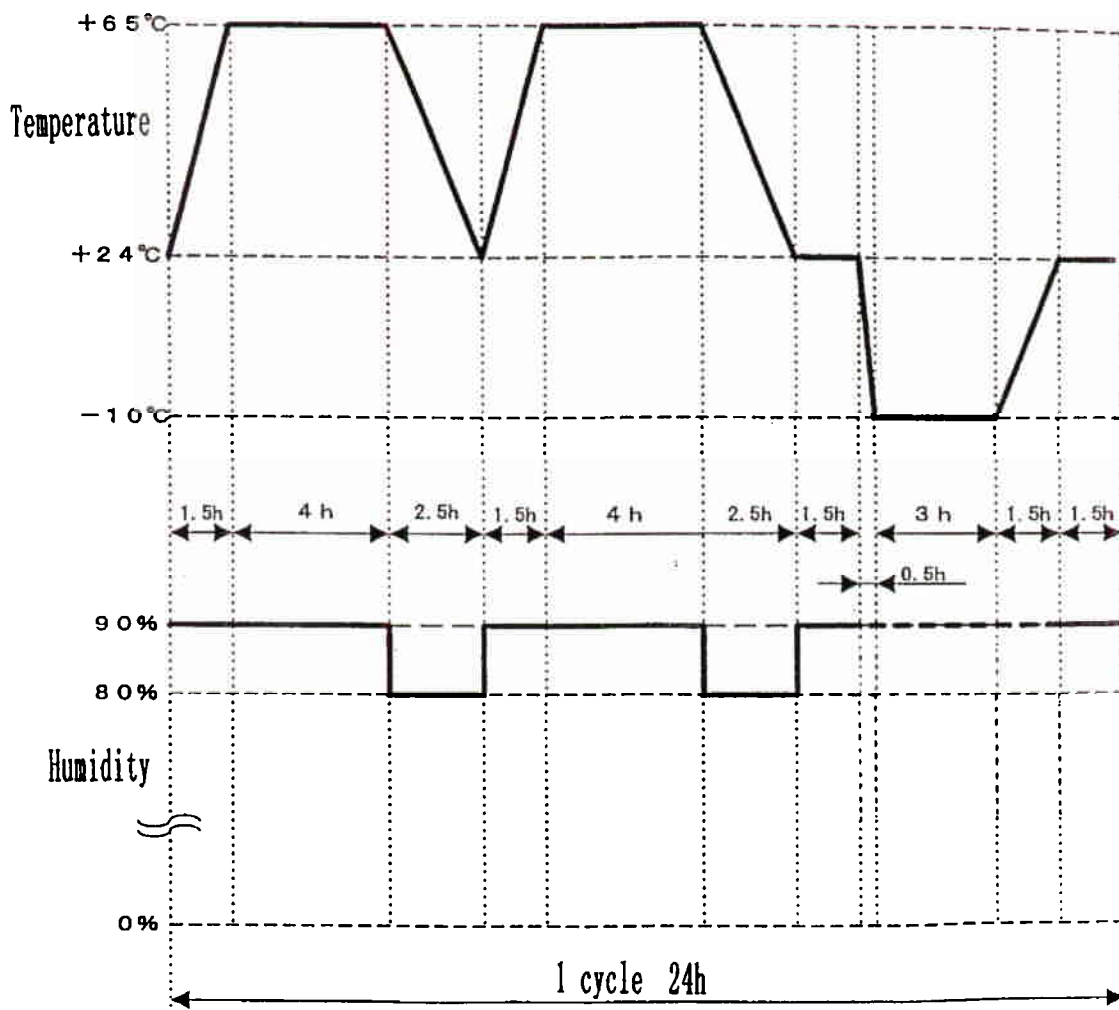
One year after the day of issue.

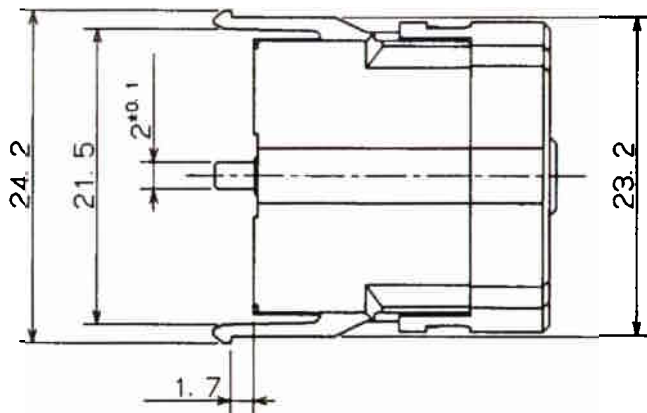
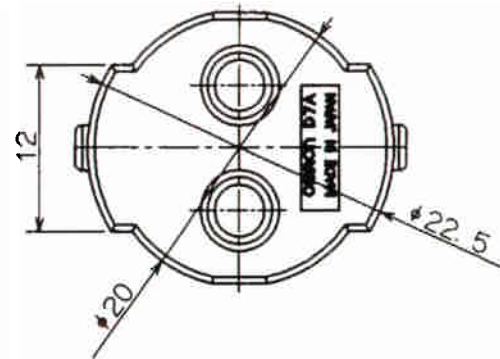
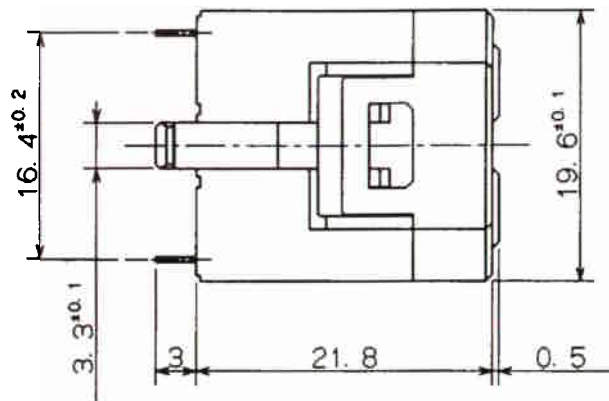
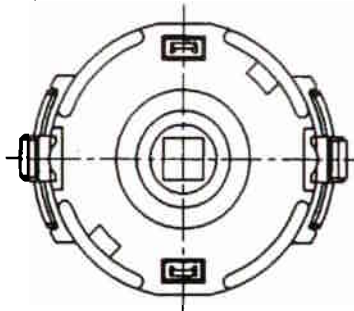
If we have not had any orders for one year, we will make this specifications invalid.

SYM	DATE	E/C CONTENTS	SIGN	SYM	DATE	E/C CONTENTS	SIGN
A 1	990421	changed to SI d'Unites	<i>E. Rando</i>				

Inspecting regulations for microcomputer

Figure 2





					MATERIAL	SCALE		TYPE D7A-1	
					FINISH	2:1			OUTLINE DRAWING
					TOLERANCES UNLESS SPECIFIED	DESIGNED July 15 '98	CHECKED July 15 '98	APPROVED July 15 '98	DRWG NO. 6421444-0 A
					± 0.4	<i>R. Kanda</i>	<i>S. Mori</i>	<i>N. Asakura</i>	
SYM	DATE	E/C. CONTENTS	E/C NO.	SIGN				SHEET	DESIGNED FOR

© OMRON Corporation  
All Rights Reserved

OMRON

1/1/98