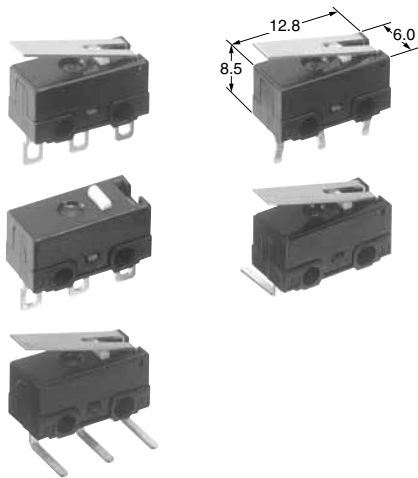




RoHS compliant

### FEATURES

- Integrally molded terminal block—prevents soldering flux from entering into housing
- Compact size —minimizes size of equipment
- Flat terminal shape—makes soldering easy
- Low-level circuit type available
- Self-standing PC board terminal type available

### TYPICAL APPLICATIONS

- Computer mouse
- Charger unit for mobile phone
- Detection of key position for automobiles

## ORDERING INFORMATION

Ex. AH 1 4 8 0 61 9

| Product Name | Terminal                                                                                                                                                                                                                                  | Operating force by pin plunger (max.)                | Actuator                                                      | Contact                                       | Agency standard |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------|-----------------|
| FJ           | 4: 2.0 mm Self-standing PC board terminal with stand off<br>5: Straight PC board terminal with stand off<br>6: 2.0 mm solder terminal with stand off<br>7: 2.0 mm PC board right angle terminal<br>8: 2.0 mm PC board left angle terminal | 6: 1.47 N with stand off<br>8: 0.74 N with stand off | 0: Pin plunger<br>2: Hinge lever<br>4: Simulated roller lever | Nil: AgNi alloy<br>61: AgNi alloy + Gold-clad | 9: UL/CSA       |

Remark: 2.0 mm PC board terminal straight type is available. For details, please consult us.

## PRODUCT TYPES

The color of:

| Type \ Color      | Body  | Cap   | Plunger |
|-------------------|-------|-------|---------|
| Standard          | Black | Black | White   |
| Low-level circuit | Black | Black | Red     |

### 1. Self-standing PC board terminal

| Actuators              | Operating force, Max. | Standard (AgNi alloy contact) | Low-level circuit (AgNi alloy + Gold-clad contact) |
|------------------------|-----------------------|-------------------------------|----------------------------------------------------|
|                        |                       | SPDT                          | SPDT                                               |
| Pin plunger            | 0.74 N                | AH14809                       | AH1480619                                          |
|                        | 1.47 N                | AH14609                       | AH1460619                                          |
| Hinge lever            | 0.25 N                | AH14829                       | AH1482619                                          |
|                        | 0.49 N                | AH14629                       | AH1462619                                          |
| Simulated roller lever | 0.26 N                | AH14849                       | AH1484619                                          |
|                        | 0.54 N                | AH14649                       | AH1464619                                          |

AH1

2. Solder terminal

| Actuators              | Operating force,<br>Max. | Standard<br>(AgNi alloy contact) | Low-level circuit<br>(AgNi alloy + Gold-clad contact) |
|------------------------|--------------------------|----------------------------------|-------------------------------------------------------|
|                        |                          | SPDT                             | SPDT                                                  |
| Pin plunger            | 0.74 N                   | AH16809                          | AH1680619                                             |
|                        | 1.47 N                   | AH16609                          | AH1660619                                             |
| Hinge lever            | 0.25 N                   | AH16829                          | AH1682619                                             |
|                        | 0.49 N                   | AH16629                          | AH1662619                                             |
| Simulated roller lever | 0.26 N                   | AH16849                          | AH1684619                                             |
|                        | 0.54 N                   | AH16649                          | AH1664619                                             |

3. Straight PC board terminal

| Actuators              | Operating force,<br>Max. | Standard<br>(AgNi alloy contact) | Low-level circuit<br>(AgNi alloy + Gold-clad contact) |
|------------------------|--------------------------|----------------------------------|-------------------------------------------------------|
|                        |                          | SPDT                             | SPDT                                                  |
| Pin plunger            | 0.74 N                   | AH15809                          | AH1580619                                             |
| Pin plunger            | 1.47 N                   | AH15609                          | AH1560619                                             |
| Hinge lever            | 0.25 N                   | AH15829                          | AH1582619                                             |
| Hinge lever            | 0.49 N                   | AH15629                          | AH1562619                                             |
| Simulated roller lever | 0.26 N                   | AH15849                          | AH1584619                                             |
| Simulated roller lever | 0.54 N                   | AH15649                          | AH1564619                                             |

4. PC board terminal right angle

| Actuators              | Operating force,<br>Max. | Standard<br>(AgNi alloy contact) | Low-level circuit<br>(AgNi alloy + Gold-clad contact) |
|------------------------|--------------------------|----------------------------------|-------------------------------------------------------|
|                        |                          | SPDT                             | SPDT                                                  |
| Pin plunger            | 0.74 N                   | AH17809                          | AH1780619                                             |
| Pin plunger            | 1.47 N                   | AH17609                          | AH1760619                                             |
| Hinge lever            | 0.25 N                   | AH17829                          | AH1782619                                             |
| Hinge lever            | 0.49 N                   | AH17629                          | AH1762619                                             |
| Simulated roller lever | 0.26 N                   | AH17849                          | AH1784619                                             |
| Simulated roller lever | 0.54 N                   | AH17649                          | AH1764619                                             |

5. PC board terminal left angle

| Actuators              | Operating force,<br>Max. | Standard<br>(AgNi alloy contact) | Low-level circuit<br>(AgNi alloy + Gold-clad contact) |
|------------------------|--------------------------|----------------------------------|-------------------------------------------------------|
|                        |                          | SPDT                             | SPDT                                                  |
| Pin plunger            | 0.74 N                   | AH18809                          | AH1880619                                             |
|                        | 1.47 N                   | AH18609                          | AH1860619                                             |
| Hinge lever            | 0.25 N                   | AH18829                          | AH1882619                                             |
|                        | 0.49 N                   | AH18629                          | AH1862619                                             |
| Simulated roller lever | 0.26 N                   | AH18849                          | AH1884619                                             |
|                        | 0.54 N                   | AH18649                          | AH1864619                                             |

Remarks: 1. The appearance of right and left angle types are as below.

Right angle



Left angle



- 2. Standard packing: 50 pcs./tube.
- 3. Please consult us for the delivery schedule of PC board terminal SPST-NO type.

APPLICABLE CURRENT RANGE

| Contact                                            | Applicable current range |       |     |     | Max. operating force for operation (at pin plunger) |        |
|----------------------------------------------------|--------------------------|-------|-----|-----|-----------------------------------------------------|--------|
|                                                    | 1 mA                     | 0.1 A | 1 A | 3 A | 0.74 N                                              | 1.47 N |
| Standard type<br>(AgNi alloy)                      |                          |       |     |     | ●                                                   |        |
|                                                    |                          |       |     |     |                                                     | ●      |
| Low level circuit type<br>(AgNi alloy + Gold-clad) |                          |       |     |     | ●                                                   |        |
|                                                    |                          |       |     |     |                                                     | ●      |

## SPECIFICATIONS

### 1. Contact rating (resistive load)

|                        |            | Standard rating           | Minimum rating                    |
|------------------------|------------|---------------------------|-----------------------------------|
| Standard type          | O.F. 0.74N | 1A 125V AC, 1A 30V DC     | —                                 |
|                        | O.F. 1.47N | 3A 125V AC, 2A 30V DC     | —                                 |
| Low-level circuit type |            | 0.1A 125V AC, 0.1A 30V DC | 5mA 6V DC, 2mA 12V DC, 1mA 24V DC |

### 2. Characteristics

| Contact arrangement                                                                                                             | Standard type                                                             | Low-level circuit type                            |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------|
| Expected life (Min. operations)<br>Electrical (at rated load, 20 cpm) (O.T.: Max.)                                              | $3 \times 10^4$                                                           | $10^5$                                            |
| Expected life (Min. operations)<br>Mechanical (at 60 cpm) (O.T.: Specified value)                                               | O.F. 0.74 N: $10^6$<br>O.F. 1.47 N: $5 \times 10^5$                       |                                                   |
| Dielectric strength (initial)<br>Between terminals<br>Between terminals and other exposed parts<br>Between terminals and ground | 600 Vrms for 1 min.<br>1,500 Vrms for 1 min.<br>1,500 Vrms for 1 min.     |                                                   |
| Insulation resistance (Min. at 500V DC)                                                                                         | 100 MΩ                                                                    |                                                   |
| Initial contact resistance                                                                                                      | Max. 30 mΩ<br>(by voltage drop, 1A 6 to 8V DC)                            | Max. 100 mΩ<br>(by voltage drop, 0.1A 6 to 8V DC) |
| Allowable operating speed (No load)                                                                                             | 1 to 500 mm/sec.                                                          |                                                   |
| Max. operating cycle rate (No load)                                                                                             | 120 cpm                                                                   |                                                   |
| Ambient temperature                                                                                                             | -25 to +85°C (Not freezing below 0°C)                                     |                                                   |
| Shock resistance (Pin plunger type)                                                                                             | Min. 294 m/s <sup>2</sup> (Contact opening: Max. 1 msec.)                 |                                                   |
| Vibration resistance (Pin plunger type)                                                                                         | 10 to 55 Hz at single amplitude of 0.75mm (Contact opening: Max. 1 msec.) |                                                   |

### 3. Operating characteristics

#### 1) Pin plunger

| 3th digit of Part No. | Operating force, Max. | Release force, Min. | Pretravel, Max. mm | Movement differential, Max. mm | Overtravel, Min. mm | Operating position mm                                                          |
|-----------------------|-----------------------|---------------------|--------------------|--------------------------------|---------------------|--------------------------------------------------------------------------------|
| 6                     | 0.47 N                | 0.20 N              | 0.5                | 0.12                           | 0.25                | 7±0.3<br>(Distance from stand off)<br>5.5±0.2<br>(Distance from mounting hole) |
| 8                     | 0.74 N                | 0.098 N             |                    |                                |                     | 7±0.3<br>(Distance from stand off)<br>5.5±0.2<br>(Distance from mounting hole) |

#### 2) Hinge lever

| 3th digit of Part No. | Operating force, Max. | Release force, Min. | Pretravel, Max. mm | Movement differential, Max. mm | Overtravel, Min. mm | Operating position mm                                                            |
|-----------------------|-----------------------|---------------------|--------------------|--------------------------------|---------------------|----------------------------------------------------------------------------------|
| 6                     | 0.49 N                | 0.049 N             | 2.1                | 0.5                            | 0.55                | 8.3±1.2<br>(Distance from stand off)<br>6.8±1.0<br>(Distance from mounting hole) |
| 8                     | 0.25 N                | 0.025 N             |                    |                                |                     | 8.3±1.2<br>(Distance from stand off)<br>6.8±1.0<br>(Distance from mounting hole) |

#### 3) Simulated roller lever

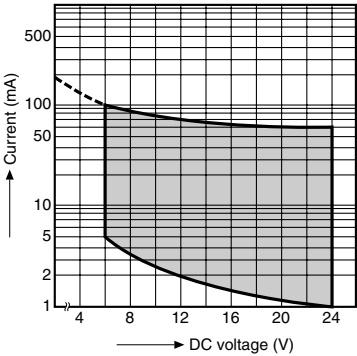
| 3th digit of Part No. | Operating force, Max. | Release force, Min. | Pretravel, Max. mm | Movement differential, Max. mm | Overtravel, Min. mm | Operating position mm                                                             |
|-----------------------|-----------------------|---------------------|--------------------|--------------------------------|---------------------|-----------------------------------------------------------------------------------|
| 6                     | 0.54 N                | 0.039 N             | 2.1                | 0.5                            | 0.5                 | 11.0±1.2<br>(Distance from stand off)<br>9.5±1.0<br>(Distance from mounting hole) |
| 8                     | 0.26 N                | 0.020 N             |                    |                                |                     | 11.0±1.2<br>(Distance from stand off)<br>9.5±1.0<br>(Distance from mounting hole) |

AH1

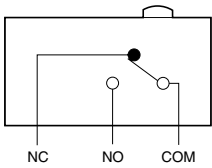
DATA

Gold-clad type

Range of low-level current voltage



CONTACT ARRANGEMENT



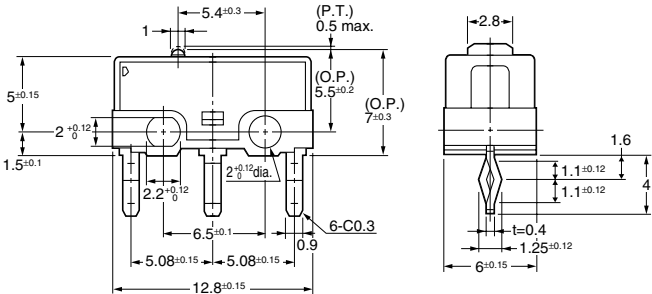
DIMENSIONS

The CAD data of the products with a **CAD Data** mark can be downloaded from: <http://industrial.panasonic.com/ac/e>

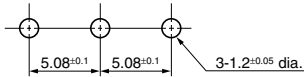
1. Self-standing PC board terminal (Standard type)

Pin plunger

**CAD Data**



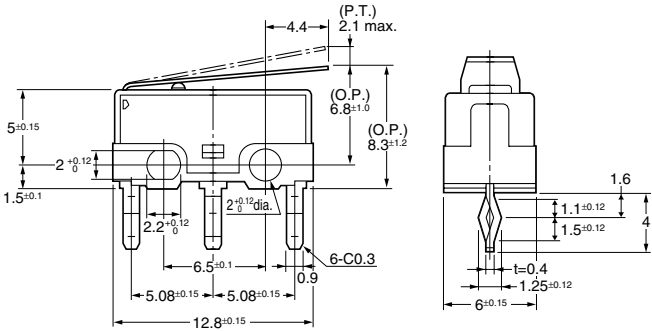
PC board pattern



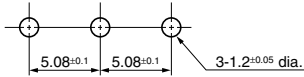
|                                |                                 |         |
|--------------------------------|---------------------------------|---------|
| Pretravel, Max. mm             |                                 | 0.5     |
| Movement differential, Max. mm |                                 | 0.12    |
| Overtravel, Min. mm            |                                 | 0.25    |
| Operating position             | Distance from mounting hole, mm | 5.5±0.2 |
|                                | Distance from standoff, mm      | 7±0.3   |

Hinge lever

**CAD Data**



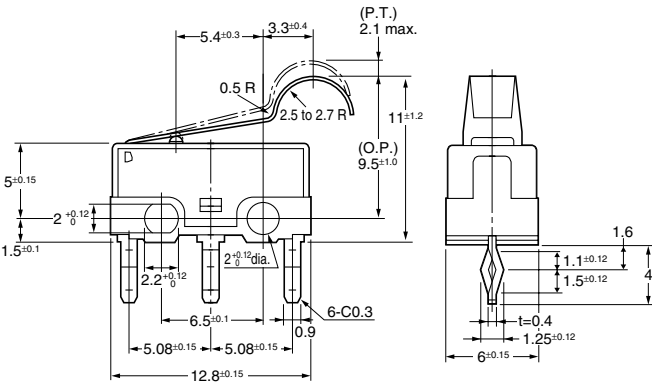
PC board pattern



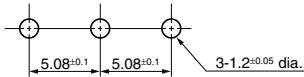
|                                |                                 |         |
|--------------------------------|---------------------------------|---------|
| Pretravel, Max. mm             |                                 | 2.1     |
| Movement differential, Max. mm |                                 | 0.5     |
| Overtravel, Min. mm            |                                 | 0.5     |
| Operating position             | Distance from mounting hole, mm | 6.8±1.0 |
|                                | Distance from standoff, mm      | 8.3±1.2 |

Simulated roller lever

**CAD Data**

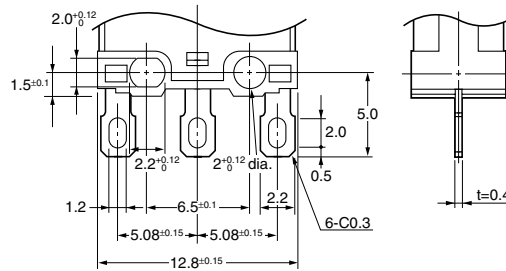


PC board pattern

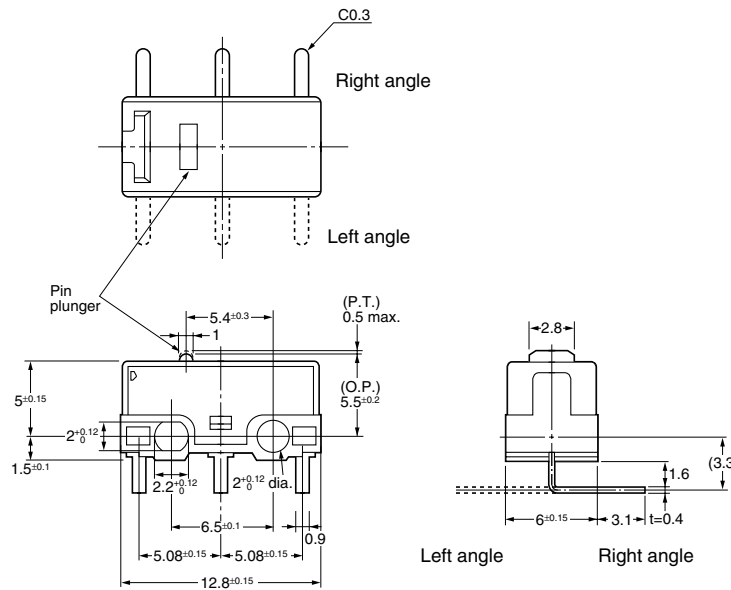


|                                |                                 |          |
|--------------------------------|---------------------------------|----------|
| Pretravel, Max. mm             |                                 | 2.1      |
| Movement differential, Max. mm |                                 | 0.5      |
| Overtravel, Min. mm            |                                 | 0.5      |
| Operating position             | Distance from mounting hole, mm | 9.5±1.0  |
|                                | Distance from standoff, mm      | 11.0±1.2 |

**CAD Data**



**CAD Data**



Technical drawing of a mechanical part showing dimensions and tolerances. The drawing includes a top view and a side view. The top view shows a rectangular plate with three circular holes. The side view shows the profile of the plate with a central slot. Dimensions and tolerances are indicated as follows:

- Top view dimensions:
  - Overall width:  $10.16 \pm 0.15$
  - Distance from left edge to first hole center:  $2.93$
  - Distance between hole centers:  $5.08 \pm 0.1$
  - Distance from last hole center to right edge:  $2.93$
  - Hole diameter:  $3.12 \pm 0.05$  dia.
- Side view dimensions:
  - Overall height:  $10.16 \pm 0.15$
  - Distance from bottom edge to top of plate:  $5.08 \pm 0.1$

**Panasonic Corporation** Automation Controls Business Unit [industrial.panasonic.com/ac/e](http://industrial.panasonic.com/ac/e)

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
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- Тестирование поставляемой продукции.
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- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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