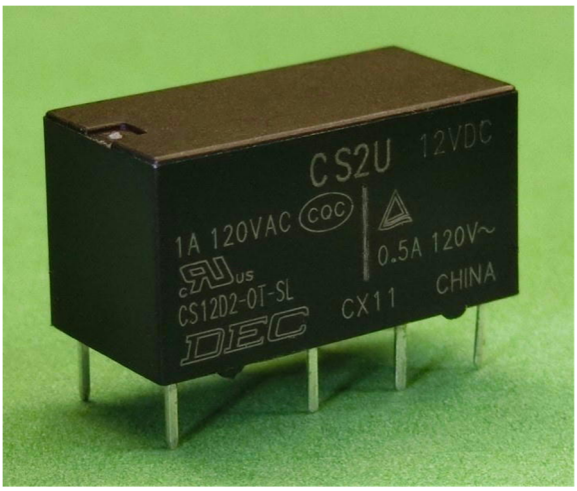
General purpose miniature power relay

RoHS compliant

# CS series

Power relay series pursuing reliability and safety




CS2U

## ■ Currently it is used for such purposes

- Measuring instruments, Telecommunications equipment, Control panel, Power supply equipment, Copiers, Medical devices
- Air conditioners, Washing machines, Washers dryers
- Various household appliances

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General purpose miniature power relay that can be used for a wide range of applications from control to power.

# CS series

## ■ Features

○ General purpose miniature power relay boasting high reliability.
○ PCB type, compact size, easy to use 2c relay.

## ■ Model numbering system

CS □ □ □ - □ □ - □

| | |
|---|---|
| Rated coil voltage: Numeric part indication | DC (V): 3, 12, 24 |
| Coil type | D: DC |
| Number of contact poles | 2: 2 poles |
| Shape indication | O: PCB terminal |
| Contact configuration | T: Crossbar twin contacts |
| Sealing structure | SL: Sealed type (hermetically sealed type) |

## ■ Safety standards

| | Contact rating |
|---|---|
| UL<br>(C-UL) | 1A 120V AC |
| TUV | 0.5A 120V AC |
| CQC | 1A 120V AC |

## ■ Coil ratings

| Item / AC/DC / Voltage | | Rated current (mA) | Coil resistance (Ω) | Operate voltage (V) | Release voltage (V) | Maximum voltage (V) | Power consumption (W) |
|---|---|---|---|---|---|---|---|
| | | | | Ratio to rated voltage | | | |
| DC | 3 | 120 | 25 | 80% max. | 5% min. | 110% | 0.36 |
| | 12 | 30 | 400 | | | | |
| | 24 | 15 | 1600 | | | | |

● Notes: 1. Rated current and coil resistance are values at coil temperature of 20℃, tolerance is ±10%.
2. Operate voltage and release voltage are values at coil temperature of 20℃.
3. Maximum voltage is the maximum value of the allowable voltage fluctuation range of the relay coil operating power supply with the ambient temperature at 20℃.

General purpose miniature power relay that can be used for a wide range of applications from control to power.

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## ■ Ratings・Performance

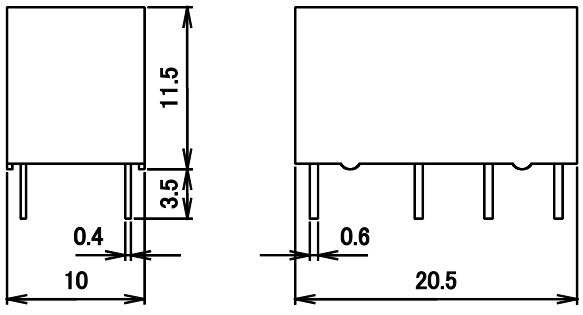
| Specifications | Item | | Performance |
|---|---|---|---|
| Contact specification | Contact configuration | | 2c |
| | Contact resistance | | 100mΩ max. (at DC6V 1A) |
| | Contact material | | Ag alloy |
| Ratings | Rated load (resistive load) | | AC120V 0.5A |
| | Max. switching capacity (resistive load) | | 60VA |
| | Max. switching voltage | | AC120V |
| | Max. switching current | | 1A |
| Electrical capability | Insulation resistance | | 100MΩ min. (at DC500V) |
| | Dielectric strength | Between coil and contacts | AC1000V 1 min |
| | | Between open contacts | AC500V 1 min |
| | | Between opposite polarity contacts | AC500V 1 min |
| | Impulse withstand voltage (between coil and contacts) | | 1500V min. (1.2×50μs) |
| | Operate time (at rated voltage on, at 20℃) | | 8ms max. (excluding contact bounce time) |
| | Release time (at rated voltage off, at 20℃) | | 4ms max. (excluding contact bounce time) |
| Mechanical capability | Vibration resistance | Malfunction | 10 to 55 to 10Hz (double amplitude 1.5mm) |
| | | Destruction | 10 to 55 to 10Hz (double amplitude 1.5mm) |
| | Shock resistance | Malfunction | 100m/s$^2$ |
| | | Destruction | 500m/s$^2$ |
| Life | Mechanical endurance (at 180 times/min) | | 1 000 000 times min. |
| | Electrical endurance (resistive load) (at 12 times/min) | | 100 000 times min. (at rated load) |
| Conditions for operation | Ambient temperature | | −25℃ to +65℃ (no freezing and condensing at low temperature) |
| | Ambient humidity | | 5% to 85%RH |
| Mass | | | approx. 5g |

● Notes: The above is the initial value.

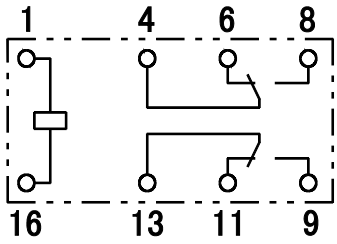
## ■ Dimensions

Unit: mm

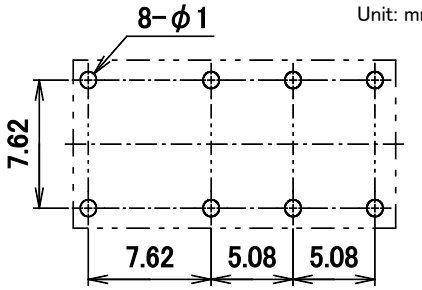
| TOLERANCES |
|---|
| <1 mm: ±0.2 |
| 1 to 5 mm: ±0.3 |
| >5 mm: ±0.4 |




## ■ Schematics




## ■ PCB mounting holes (tolerances±0.1)

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## Reference data

### ■ Maximum switching capacity

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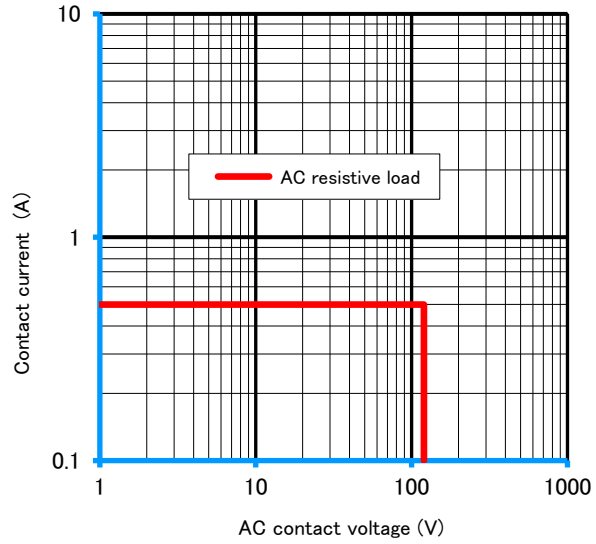


### ■ Durability curve

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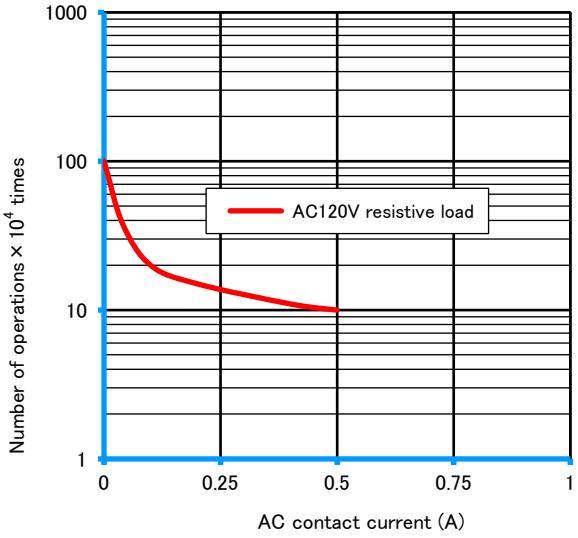




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