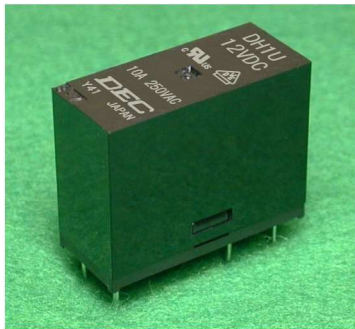


DH
series

Power relay series pursuing reliability and safety



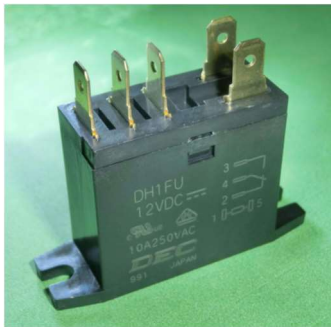
DH1U-10A
(1 pole, standard type)



DH1U-16A
(High-capacity, 1 pole, 16A type)



DH1U-II
(1 pole, seal type)



DH1FU
(1 pole, tab terminal type)



DH2U
(2 poles, standard type)



DH2TU
(2 poles, crossbar twin contacts)

■ Currently it is used for such purposes

- Control panel, Power supply equipment, Molding equipment, Machine tools, Welding machines, Machinery for agriculture
- Commercial equipment, Vending machines, Telecommunications equipment, Disaster prevention equipment, Copiers, Measuring instruments, Medical devices
- Various household appliances
- DH2TU is ideal for audio system protection

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DH series

■ Features

- It is a general purpose power relay of 1-pole 10A, 16A, 2-poles 5A boasting high reliability and achievement.
- PCB type and tab terminal type are prepared.
- Small size, easy to use 1-pole and 2-poles relay.
- DH2TU is ideal for audio speaker protection etc.

■ Model numbering system



| | |
|---|---|
| Rated coil voltage: Numeric part indication | DC (V): 5, 12, 24 |
| Coil type | D: DC |
| Number of contact poles | 1: 1 pole 2: 2 poles |
| Shape indication | O: PCB terminals F: Flange-mounting type (#187 tab terminal) |
| Contact configuration | (M): Make contacts T(M): Crossbar twin contacts (GS alloy) Nil: Transfer contacts |
| Notes | II: Seal type 16A: High-capacity, 1-pole, 16A type |

■ Safety standards

| | Contact rating (1-pole) | | | Contact rating (2-poles) | | |
|--------|--|---|-------------|--------------------------|--|-------------------------|
| | DH1U | DH1U-II | DH1U-16A | DH1FU | DH2U | DH2TU |
| UL/cUL | 10A 250V AC 8A 265V AC 10A 30V DC 1/3hp 265V AC TV-8/120VAC | 16A 250V AC 8A 265V AC 1/3hp 265V AC | 16A 250V AC | 10A 277V AC | 5A 265V AC 5A 250V AC 3A 30V DC 1/12hp 265V AC TV-3/120VAC | 3A 120V AC 3A 30V DC |
| VDE | 10A (cos φ=1) 7.5A (cos φ=0.4) 250V AC | 16A (cos φ=1) 12A (cos φ=0.4) 250V AC | | 10A (cos φ=1) 250V AC | | |
| SEMKO | | | | | 5A/60A 250V AC | |
| TUV | 5A (cos φ=1) 250V AC 3A (cos φ=0.4) 250V AC 5A (L/R=0ms) 30V DC 5A (L/R=7ms) 30V DC | | 16A 250V AC | | | |
| CQC | | 16A 250V AC | | | | |

Electrical Appliances and Materials Safety Act

Conformable

■ Coil ratings

| AC/DC | Item Voltage | Rated current (mA) | Coil resistance (Ω) | Operate voltage (V) | Release voltage (V) | Maximum voltage (V) | Power consumption (W) |
|-------|-----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|
| | | | | Ratio to rated voltage | | | |
| DC | 5 | 106 | 47 | 80% max. | 10% min. | 110% | 0.53 |
| | 12 | 44 | 275 | | | | |
| | 24 | 22 | 1100 | | | | |

- Notes: 1. Rated current and coil resistance are values at coil temperature of 20°C, tolerance is ±10%.
- 2. Operate voltage and release voltage are values at coil temperature of 20°C.
- 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°C.

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DH series

Ratings・Performance

| Specifications | Item | Performance (1-pole type) | | | |
|--------------------------|---|--|---|-------------|--------------|
| | | DH1U | DH1U-16A | DH1U-II | DH1FU |
| | Features | 1 pole, standard type | Two terminals on PCB side | Seal type | Tab terminal |
| Contact specification | Contact configuration | 1a/1c | 1a | 1a | 1a/1c |
| | Contact resistance | 50mΩ max. (at DC6V 1A) | | | |
| | Contact material | Ag alloy | | | |
| Ratings | Rated load (resistive load) | AC250V 10A | AC250V 16A | AC250V 16A | AC250V 10A |
| | Max. switching capacity (resistive load) | 2500VA | 4000VA | 4000VA | 2500VA |
| | Max. switching voltage | AC250V | | | |
| | Max. switching current | 10A, TV-8 | 16A | 16A | 10A |
| Electrical capability | Insulation resistance | 100MΩ min. (at DC500V) | | | |
| | Dielectric strength | Between coil and contact | AC4000V 1 min | | |
| | | Between open contact | AC1000V 1 min | | |
| | Impulse withstand voltage (between coil and contact) | 10 000V min. (1.2 × 50 μs) | | | |
| | Operate time (at rated voltage on, at 20°C) | 15ms max. (excluding contact bounce time) | | | |
| Mechanical capability | Vibration resistance | Malfunction | 1a: 5ms max. (excluding contact bounce time) | | |
| | | Destruction | 1c: 15ms max. (excluding contact bounce time) | | |
| | Shock resistance | Malfunction | 1a: 10 to 55 to 10Hz (double amplitude 1.5mm) | | |
| Destruction | | 1c: 10 to 55 to 10Hz (double amplitude 1.0mm) | | | |
| Life | Mechanical endurance (at 180 times/min) | 1 000 000 times min. | | | |
| | Electrical endurance (resistive load) (at 20 times/min) | 100 000 times min. (at rated load) | | | |
| Conditions for operation | Ambient temperature | -15°C to +60°C (no freezing and condensing at low temperature) | | | |
| | Ambient humidity | 5% to 85%RH | | | |
| Mass | | approx. 17g | approx. 19g | approx. 17g | approx. 20g |

| Specifications | Item | Performance (2-poles type) | |
|---|---|--|---|
| | | DH2U | DH2TU |
| | Features | 2 poles, standard type | High contact reliability |
| Contact specification | Contact configuration | 2a/2c | 2a (cross bar twin contact) |
| | Contact resistance | 50mΩ max. (at DC6V 1A) | 30mΩ max. |
| | Contact material | Ag alloy | Ag-GS clad |
| Ratings | Rated load (resistive load) | AC250V/DC30V 5A | AC120V/DC30V 3A |
| | Max. switching capacity (resistive load) | 1250VA | 360VA |
| | Max. switching voltage | AC250V | AC120V |
| | Max. switching current | 5A | 3A |
| Electrical capability | Insulation resistance | 100MΩ min. (at DC500V) | |
| | Dielectric strength | Between coil and contacts | AC4000V 1 min |
| | | Between open contacts | AC1000V 1 min |
| | | Between opposite polarity contacts | AC1000V 1 min |
| | Impulse withstand voltage (between coil and contacts) | 10 000V min. (1.2 × 50 μs) | |
| Operate time (at rated voltage on, at 20°C) | 20ms max. (excluding contact bounce time) | | |
| Mechanical capability | Vibration resistance | 2a: 10ms max. (excluding contact bounce time) | 2c: 20ms max. (excluding contact bounce time) |
| | | 2a: 10 to 55 to 10Hz (double amplitude 1.5mm) | 2c: 10 to 55 to 10Hz (double amplitude 1.0mm) |
| | Shock resistance | Malfunction | 100m/s ² |
| Destruction | | 1000m/s ² | |
| Life | Mechanical endurance (at 180 times/min) | 1 000 000 times min. | |
| | Electrical endurance (resistive load) (at 20 times/min) | 100 000 times min. (at rated load) | 10 000 times min. (at rated load) |
| Conditions for operation | Ambient temperature | -15°C to +60°C (no freezing and condensing at low temperature) | |
| | Ambient humidity | 5% to 85%RH | |
| Mass | | approx. 18g | |

● Notes: The above is the initial value.

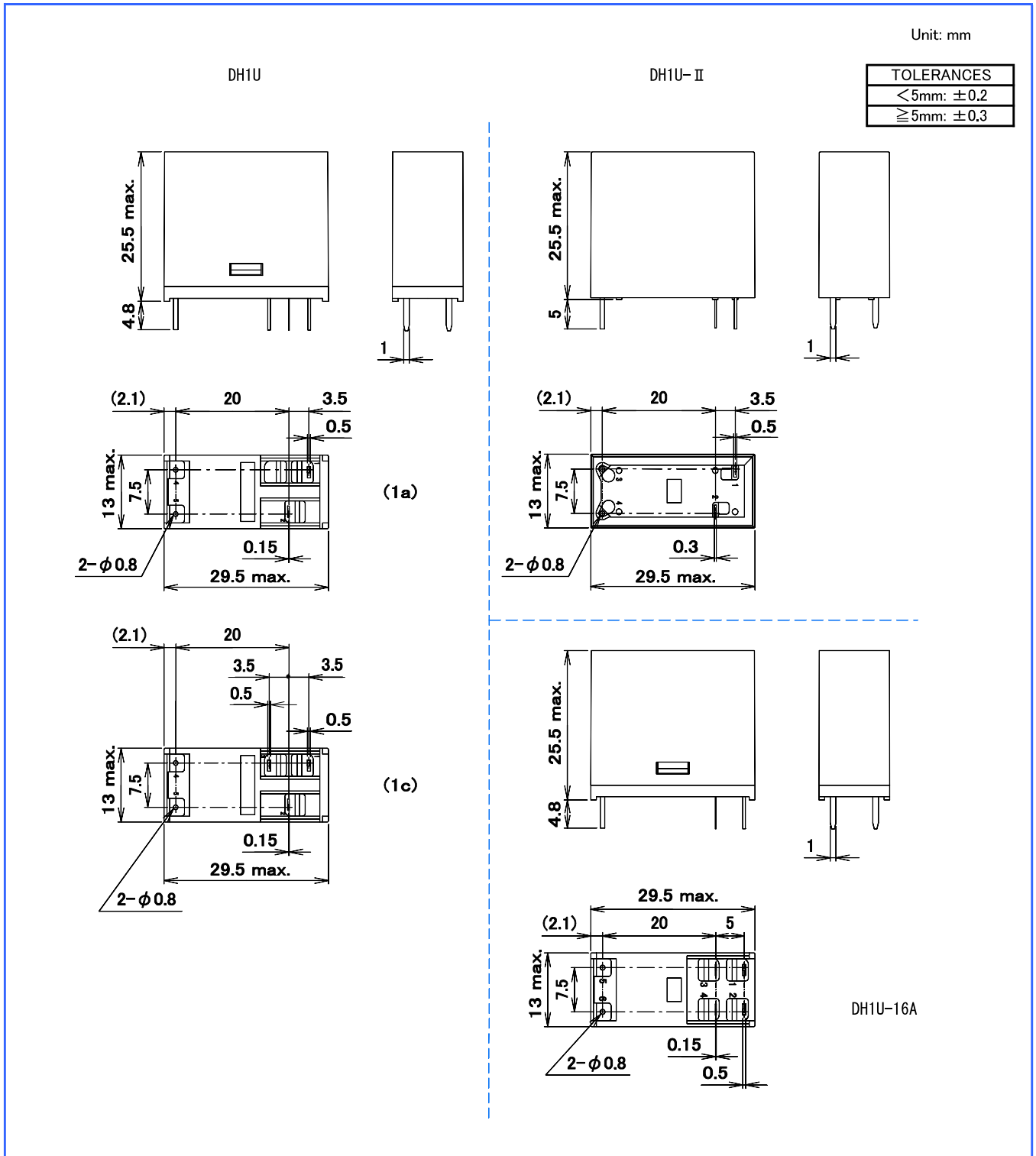
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DH series

■ Dimensions

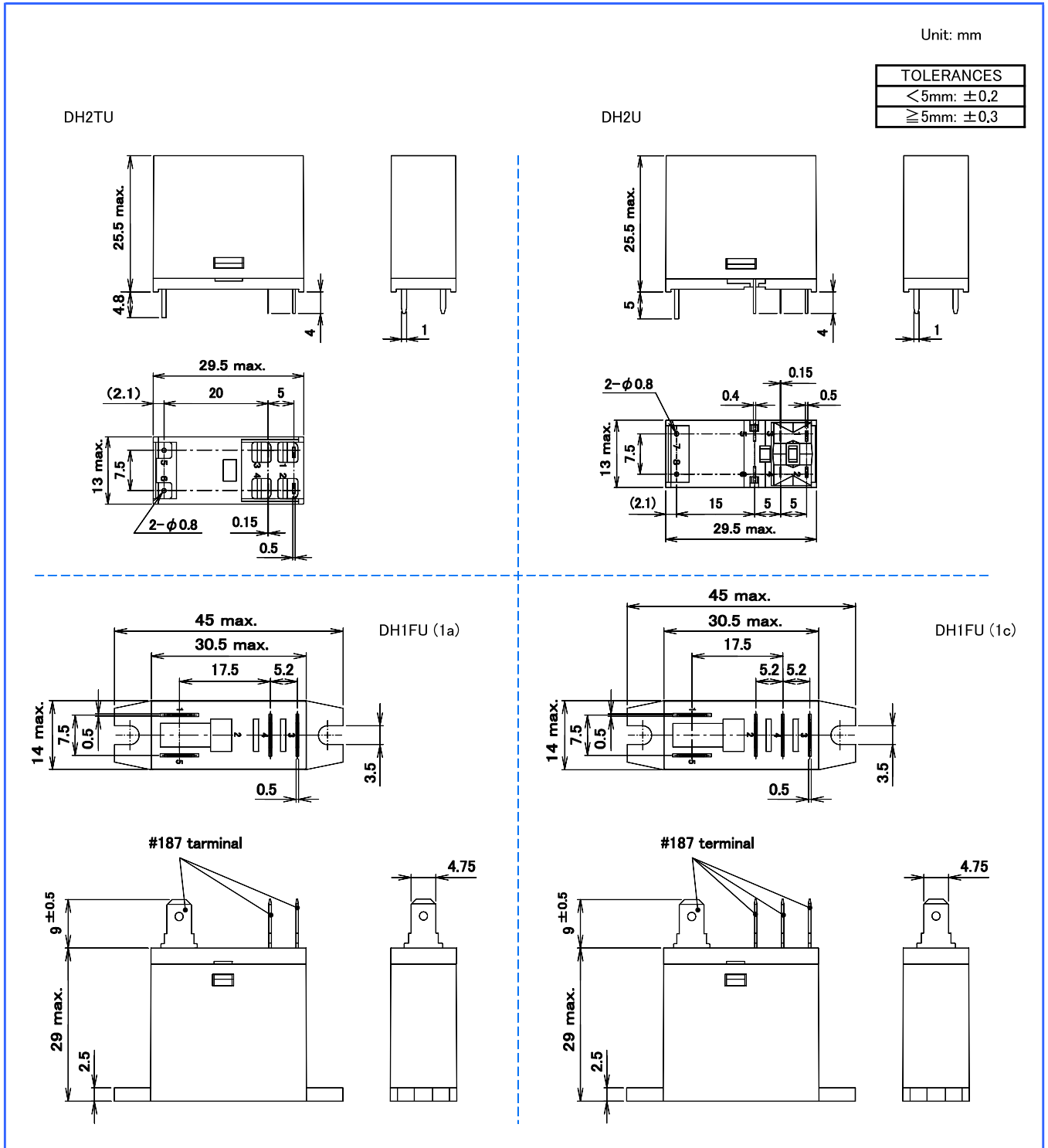


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DH series

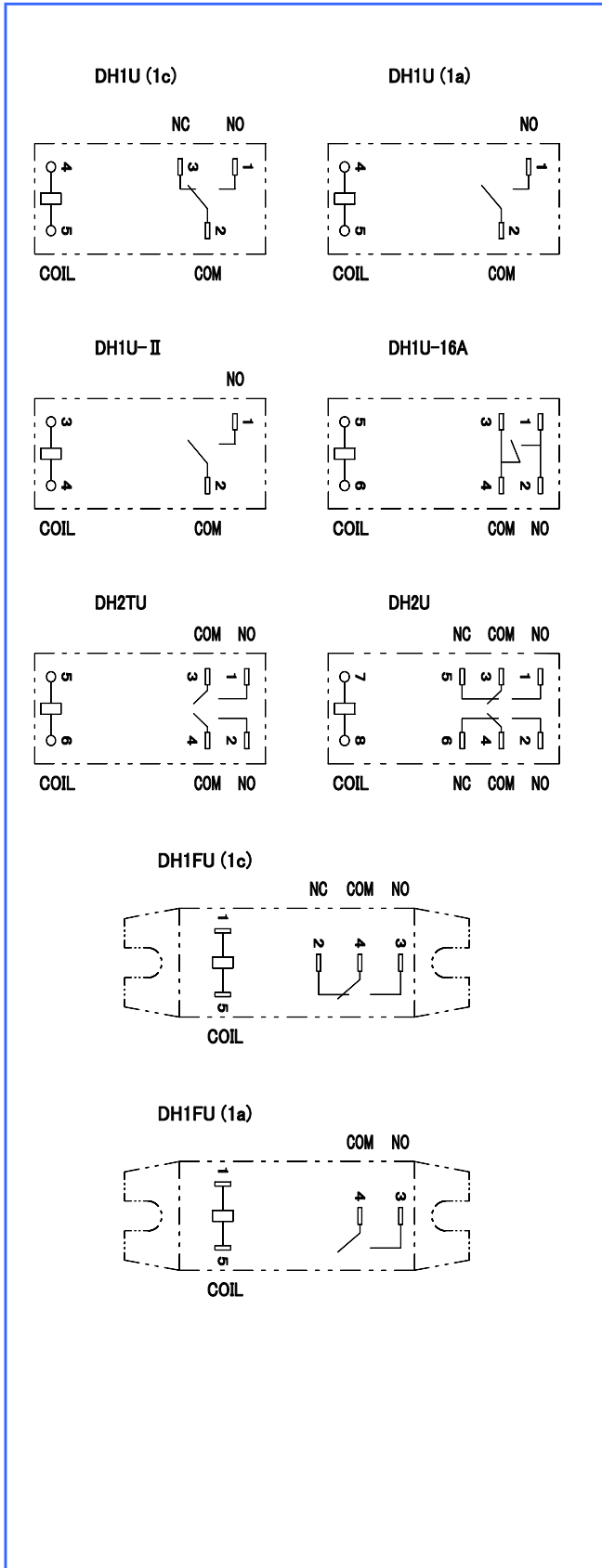
■ Dimensions



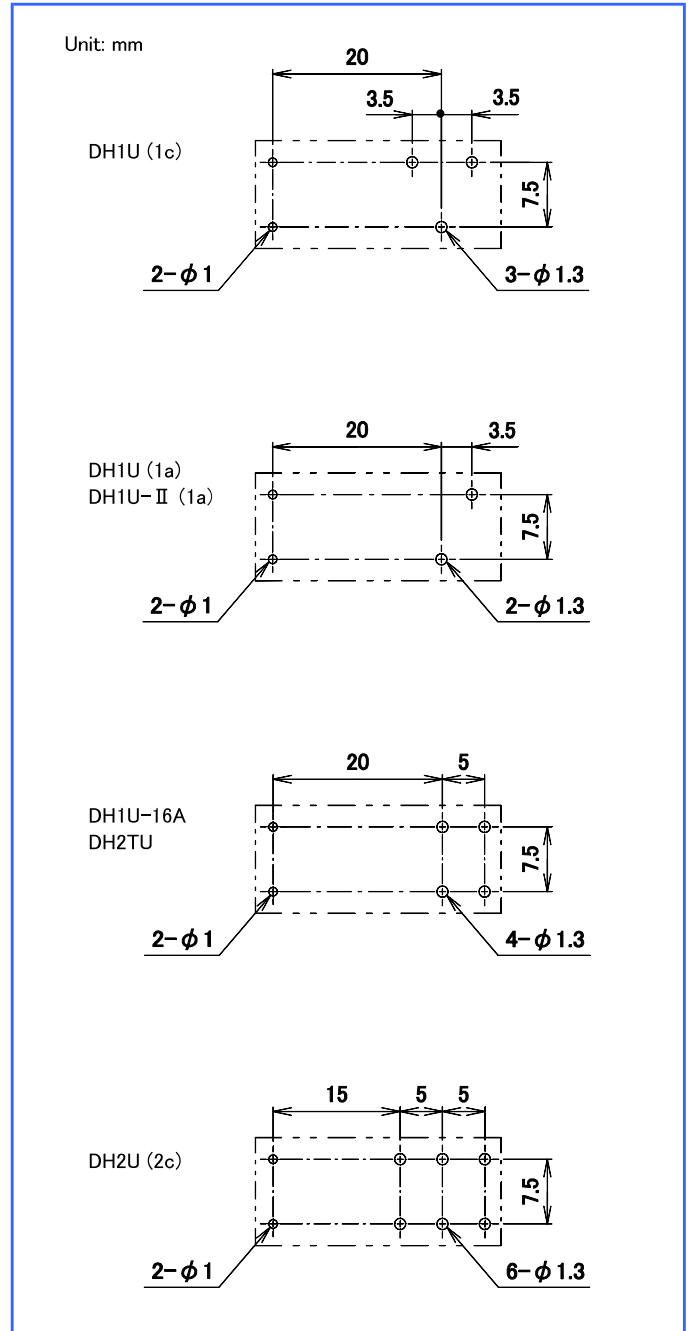
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DH series

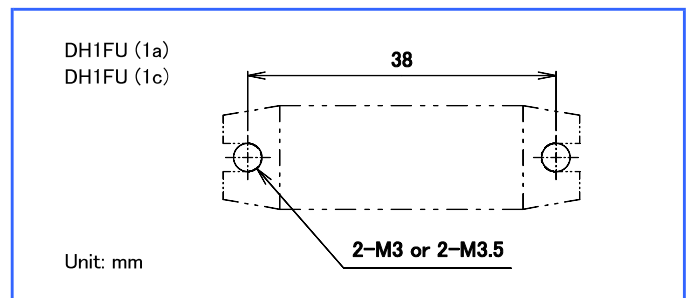
Schematics



PCB mounting holes (tolerances ±0.1)



Mounting holes (tolerances ±0.1)



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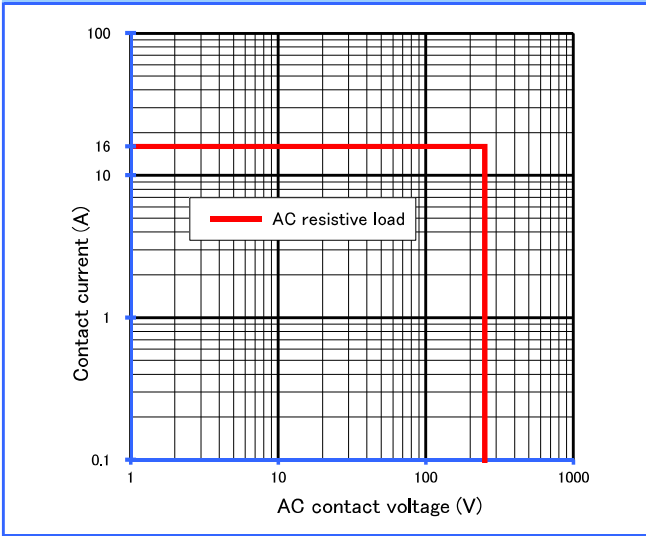
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DH series

Reference data

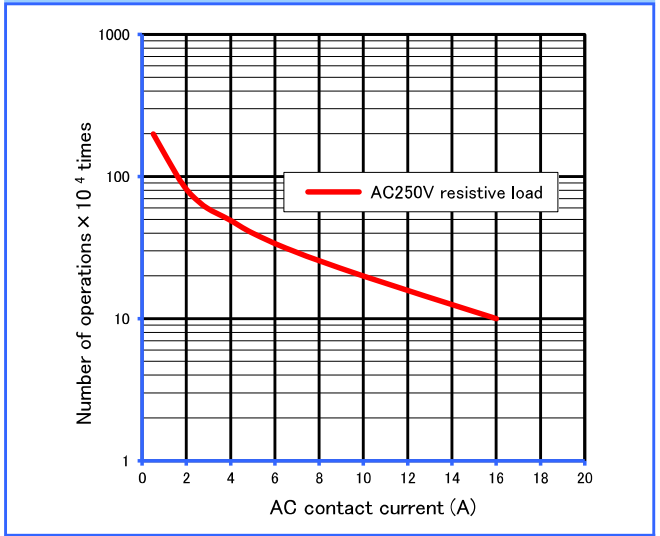
■ Maximum switching capacity

DH1U-16A

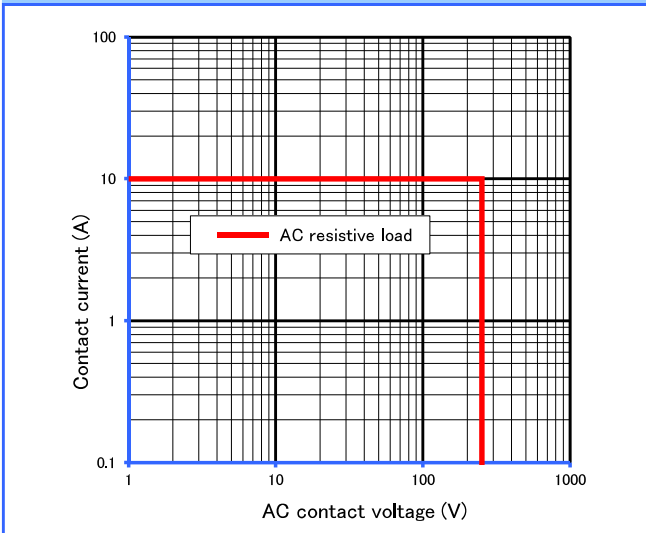


■ Durability curve

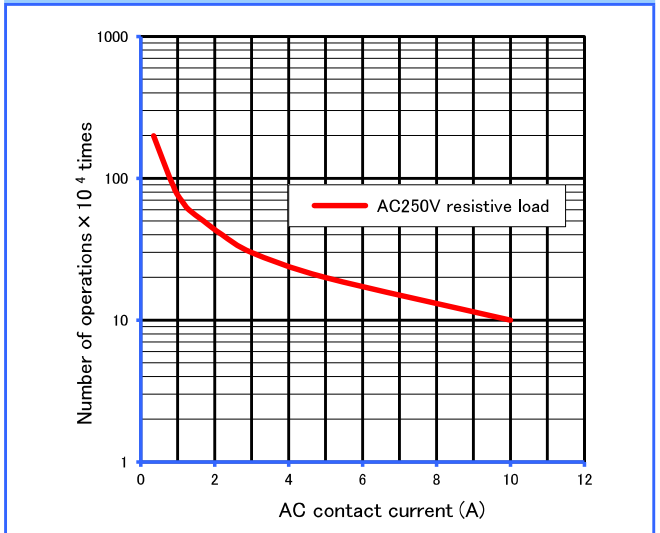
DH1U-16A



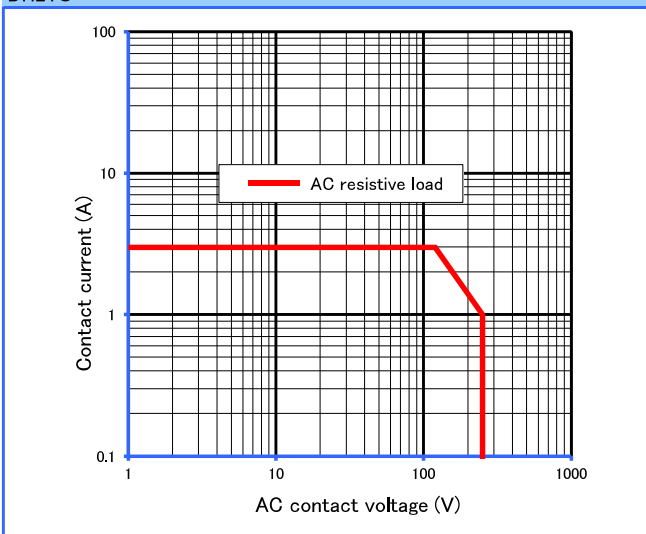
DH1FU



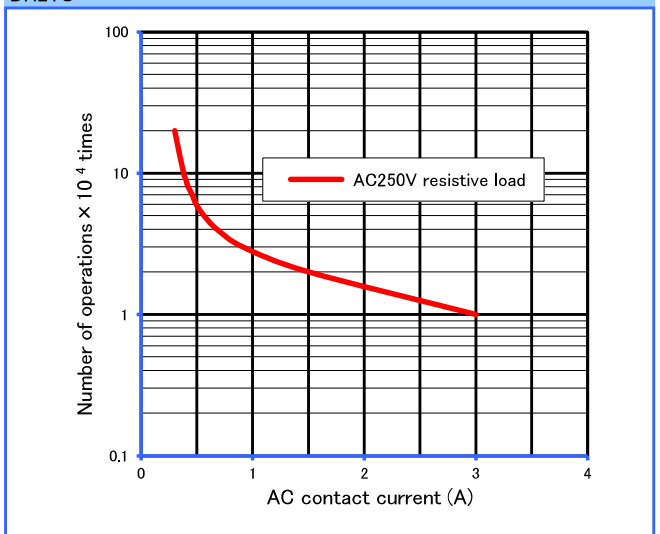
DH1FU



DH2TU



DH2TU



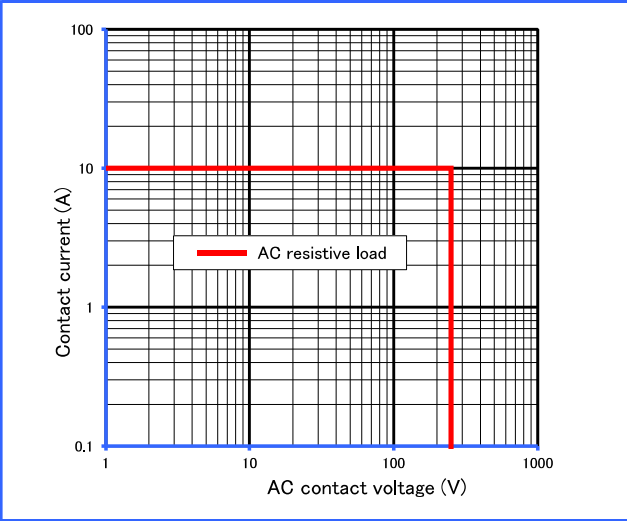
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DH series

Reference data

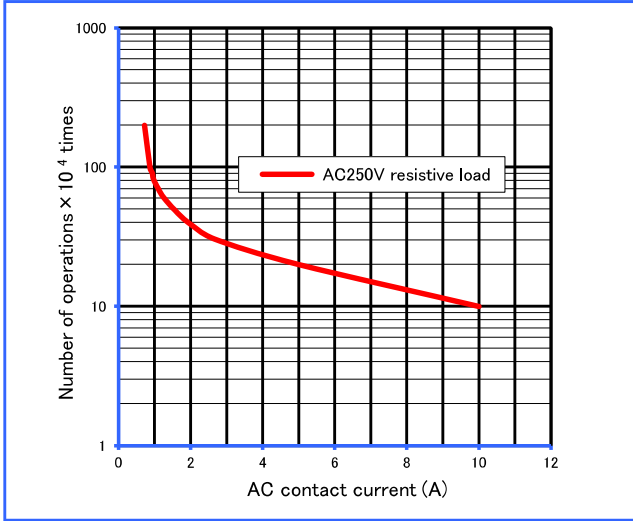
Maximum switching capacity

DH1U

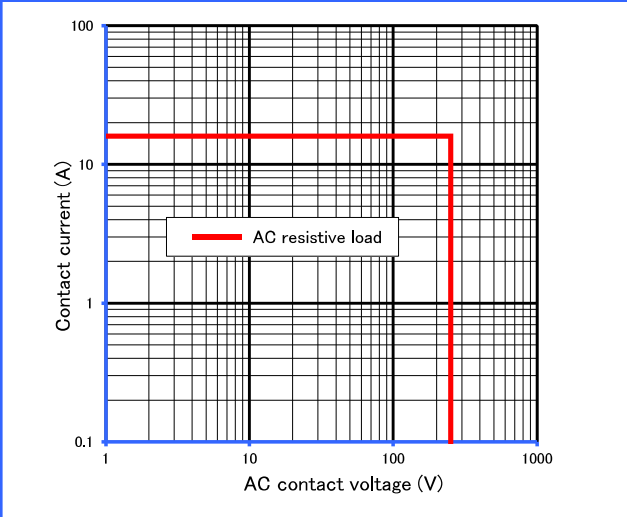


Durability curve

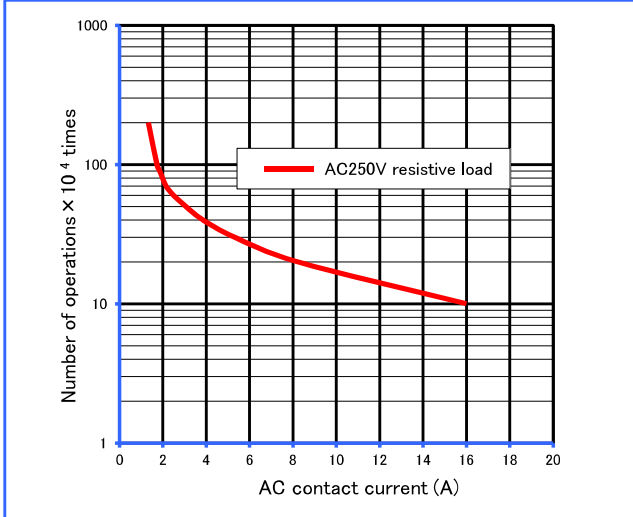
DH1U



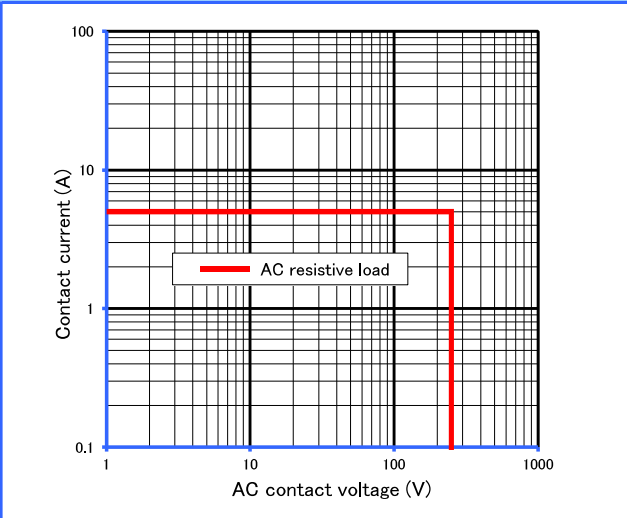
DH1U-II



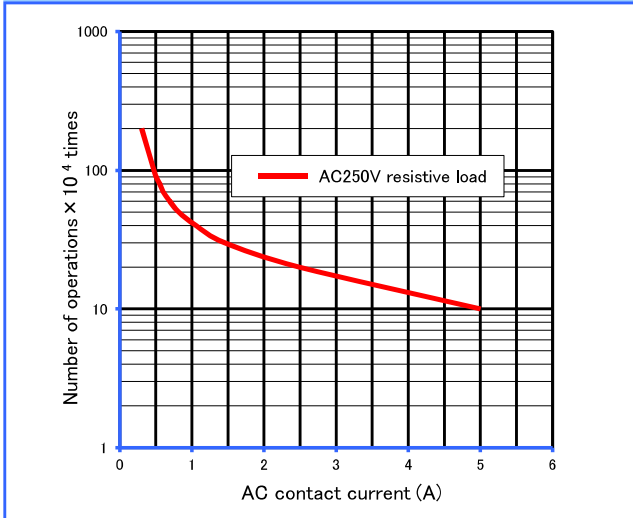
DH1U-II



DH2U



DH2U



● Please understand that specifications may be changed without notice due to product improvement etc. ● Dimensions and specifications indicate only major points. Please contact our sales representatives for details.

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