

**EQ**  
series

Power relay series pursuing reliability and safety



EQ1U

■ Currently it is used for such purposes

- Air conditioners, Refrigerator, Fan heater, Water heaters
- Control panel, Power supply equipment, Telecommunications equipment  
Copiers, Measuring instruments, Medical devices
- Various household appliances

DEC is a professional manufacturer of relays

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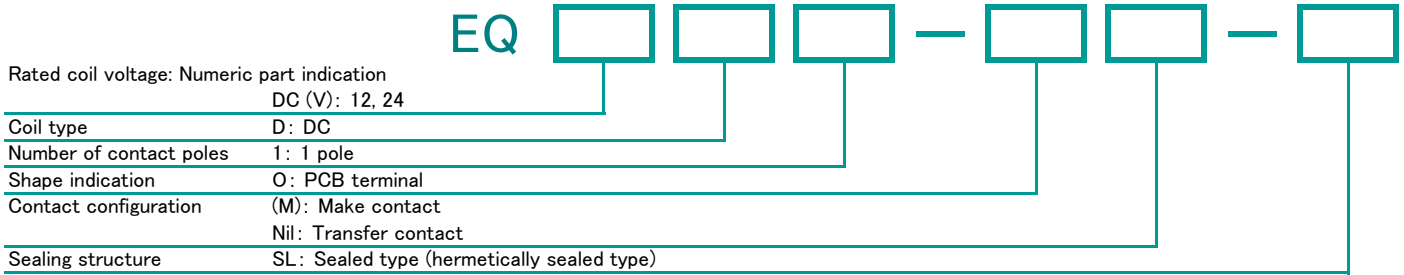
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# EQ series

## ■ Features

- General purpose miniature power relay boasting high reliability and achievement.
- PCB type, compact size, easy to use 1 pole type relay.

## ■ Model numbering system



## ■ Safety standards

	Contact rating	
	EQ1U 1a	EQ1U 1c
UL (C-UL)	1a: AC277V 5A	1c: AC277V 5A(NO)/ 3A(NC)
VDE	1a: AC277V 5A	1c: AC277V 5A(NO)/ 3A(NC)
CQC	1a: AC277V 5A	1c: AC250V 8A(NO)/ 5A(NC)
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)	
		1a	1c	1a	1c				Ratio to rated voltage	
DC	12	16.7	33.3	720	360	75% max.	5% min.	110%	0.2	0.4
	24	8.3	16.7	2880	1440					

- 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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## ■ Ratings・Performance

Specifications	Item	Performance	
		1a	1c
Contact specification	Contact configuration		
	Contact resistance	100mΩ max. (at DC6V 1A)	
	Contact material	Ag alloy	
Ratings	Rated load (resistive load)	AC250V 5A	AC250V 5A (NO) 3A (NC)
	Max. switching capacity (resistive load)	1250VA	1250VA (NO) 750VA (NC)
	Max. switching voltage	AC277V	
	Max. switching current	5A	
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)	8000V min. (1.2 × 50 μs)	
	Operate time (at rated voltage on, at 20°C)	10ms max. (excluding contact bounce time)	
	Release time (at rated voltage off, at 20°C)	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 <sup>2</sup>
		Destruction	1000m/s <sup>2</sup>
Life	Mechanical endurance (at 180 times/min)	1 000 000 times min.	
	Electrical endurance (resistive load) (at 12 times/min)	50 000 times min. (at rated load)	100 000 times min. (at rated load)
Conditions for operation	Ambient temperature	-40°C to +70°C (no freezing and condensing at low temperature)	
	Ambient humidity	5% to 85%RH	
Mass		approx. 6.5g	

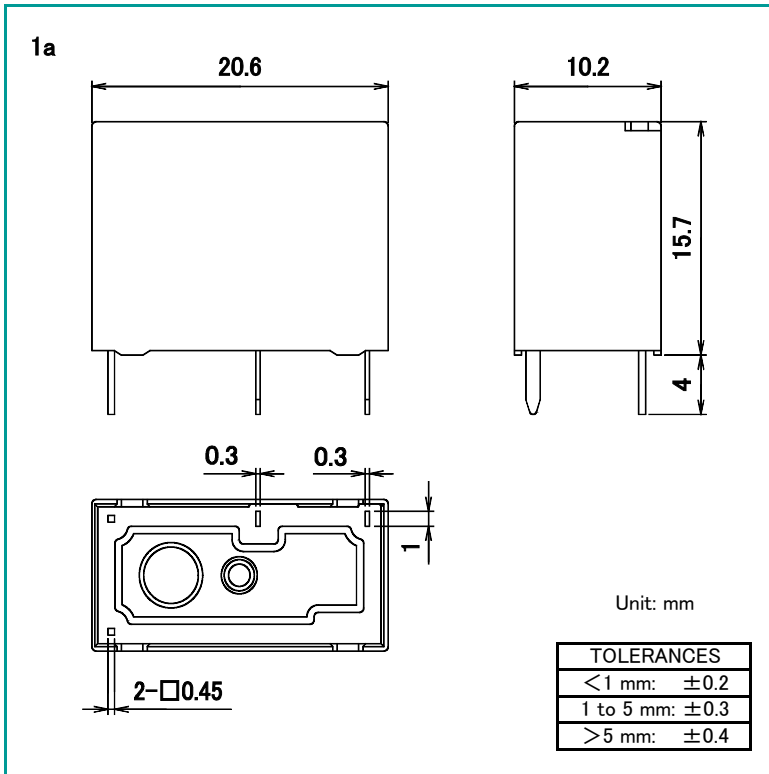
● Notes: The above is the initial value.

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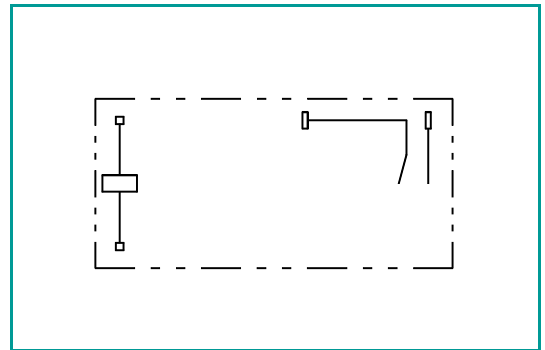
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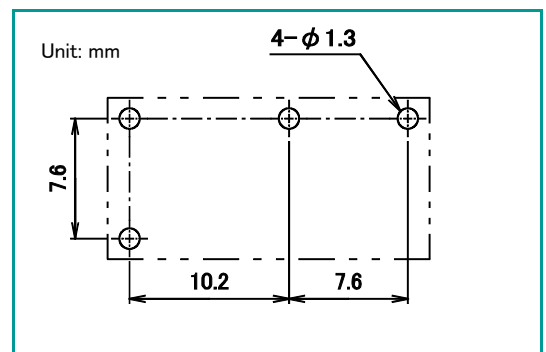
## ■ Dimensions



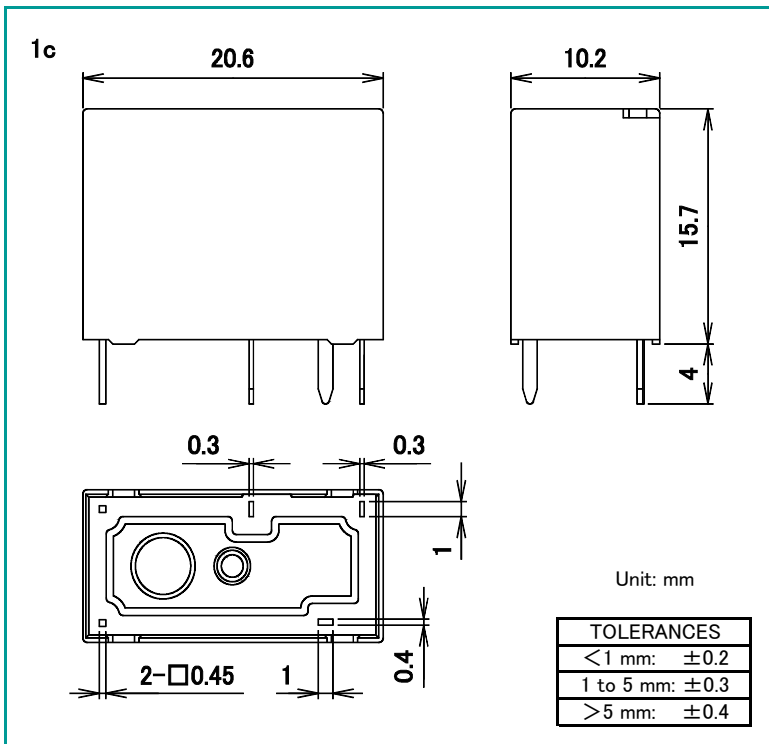
## ■ Schematics



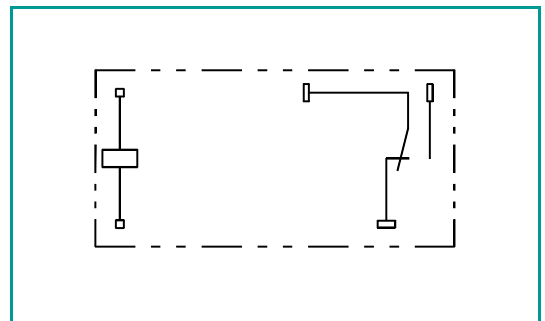
## ■ PCB mounting holes (tolerances ±0.1)



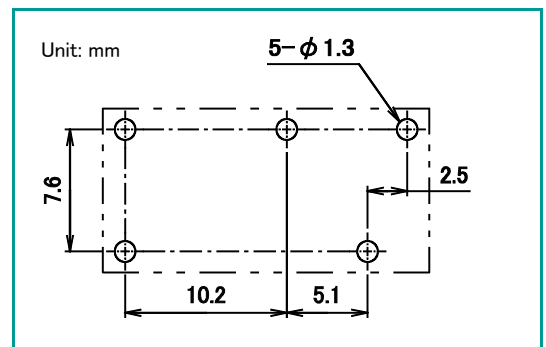
## ■ Dimensions



## ■ Schematics



## ■ PCB mounting holes (tolerances ±0.1)



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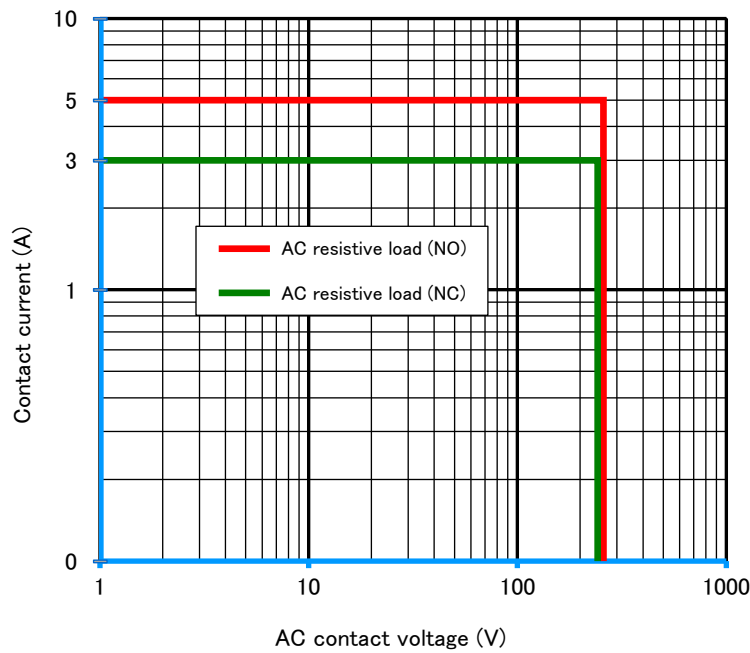
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# EQ series

## Reference data

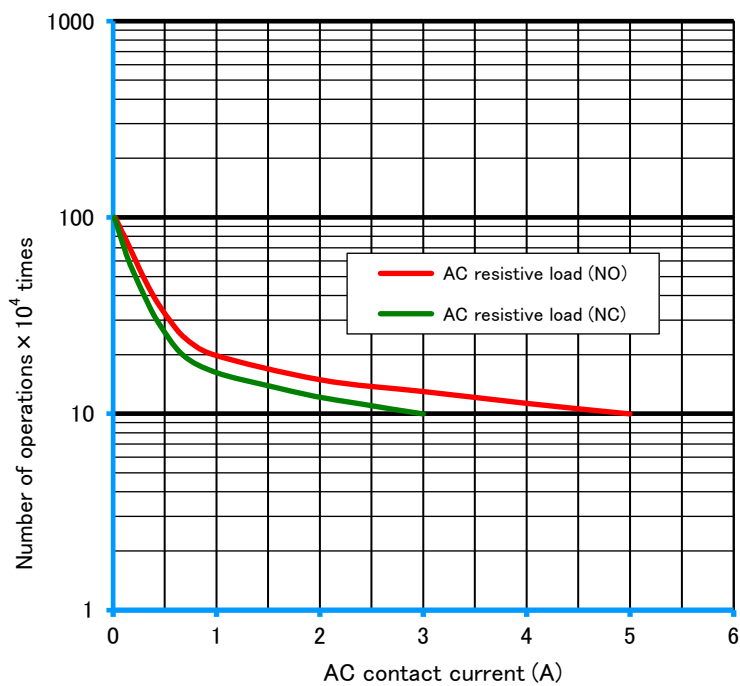
### Maximum switching capacity

EQ1U



### Durability curve

EQ1U



● 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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