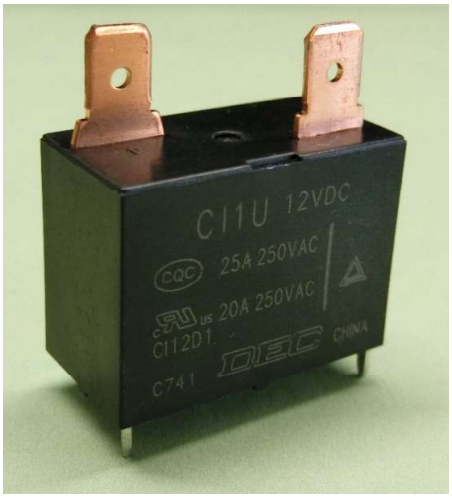
General purpose miniature power relay

RoHS compliant

CI series

Power relay series pursuing reliability and safety



CI1U (tab terminal type)

CI1U (PCB terminal type)

Currently it is used for such purposes

- Industrial equipment, Solar water heater, Factory automation equipment, Automation equipment, Commercial equipment
- Various household appliances
- Ideal for air conditioners

DEC is a professional manufacturer of relays

Daiichi Electric Co., Ltd.
https://www.j-dec.co.jp

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

CI series

■ Features

○ Boasting high reliability and achievement, suitable for motor load of air conditioners compressor.
○ PCB type and TMP type (with tab terminal for contact and PCB terminal for coil and contact signal) are prepared.
○ Small size, easy to use 1-pole type, ideal for inverter power supply for air conditioners.

■ Model numbering system

CI □ □ □ — □

Rated coil voltage: Numeric part indication	DC (V): 5, 12, 24
Coil type	D: DC
Number of contact poles	1: 1 pole
Shape indication	Nil: Standard type (make contact with #250 tab terminal) O(M): No tab terminal make contact

■ Safety standards

Contact rating	Contact rating
UL/cUL	20A 250V AC
TUV	Making: 80A(cos ϕ=0.7 300ms) Breaking: 25A(cos ϕ=0.9) 250V AC
CQC	25A 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	180	27.8	75% max.	5% min.	110%	0.9
DC 12	75	160				
DC 24	37.5	640				

● 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
Contact specification	Contact configuration		1a
	Contact resistance		100mΩ max. (at DC6V 1A)
	Contact material		Ag alloy
Ratings	Rated load (resistive load)		AC250V 20A
	Max. switching capacity (resistive load)		5000VA
	Max. switching voltage		AC250V
	Max. switching current		20A
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)		8500V min. (1.2×50μs)
	Operate time (at rated voltage on, at 20℃)		20ms max. (excluding contact bounce time)
	Release time (at rated voltage off, at 20℃)		10ms 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	1000m/s^2
Life	Mechanical endurance (at 60 times/min)		1 000 000 times min.
	Electrical endurance (resistive load) (at 6 times/min)		100 000 times min. (at rated load)
Conditions for operation	Ambient temperature		−20℃ to +60℃ (no freezing and condensing at low temperature)
	Ambient humidity		5% to 85%RH
Mass			approx. 23g

● Notes: The above is the initial value.

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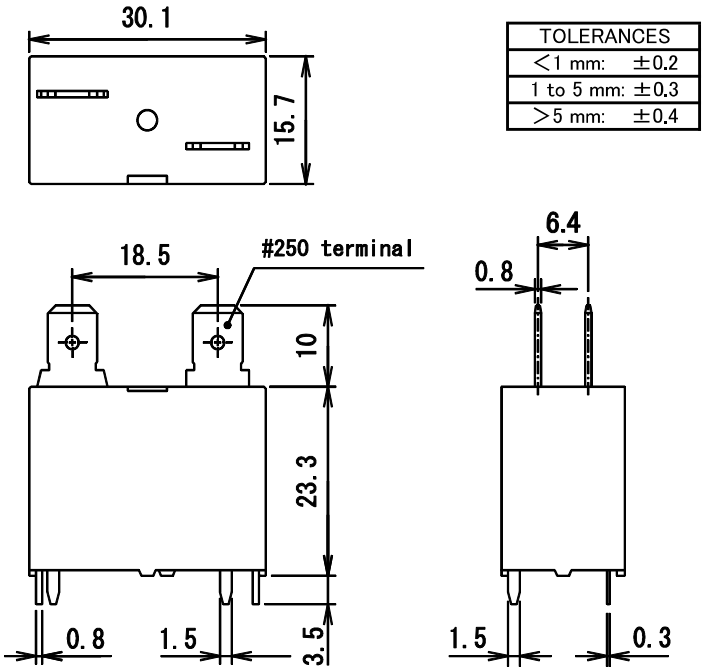
Dimensions

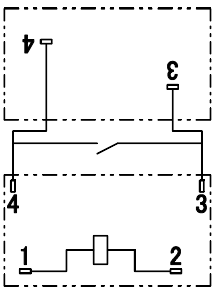
CI1U (tab terminal type)

Unit: mm

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

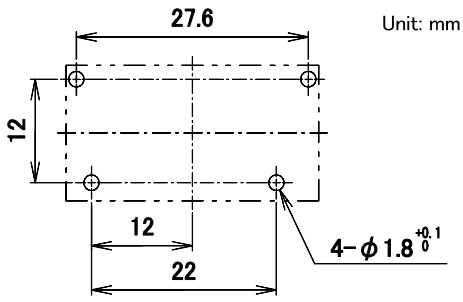


Schematics



PCB mounting holes (tolerances±0.1)

Unit: mm



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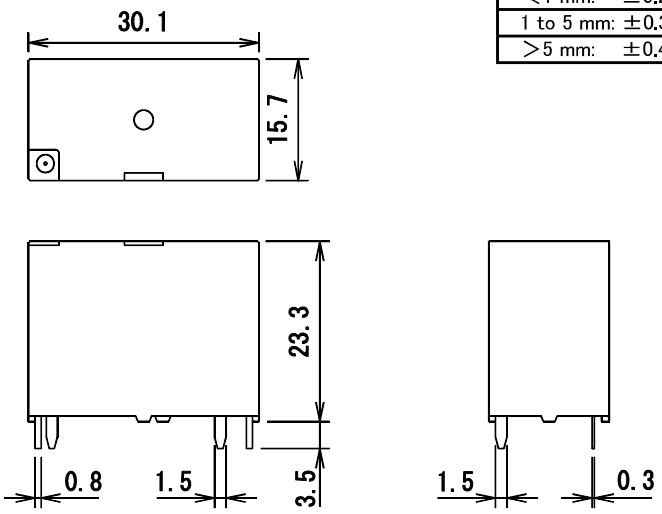

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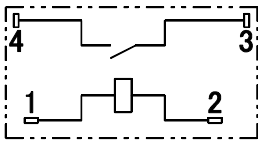

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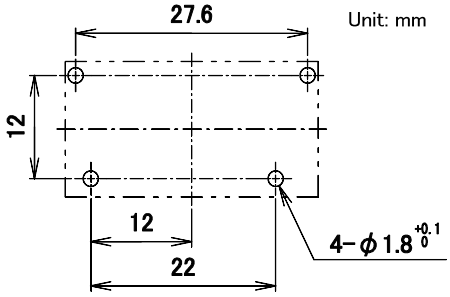
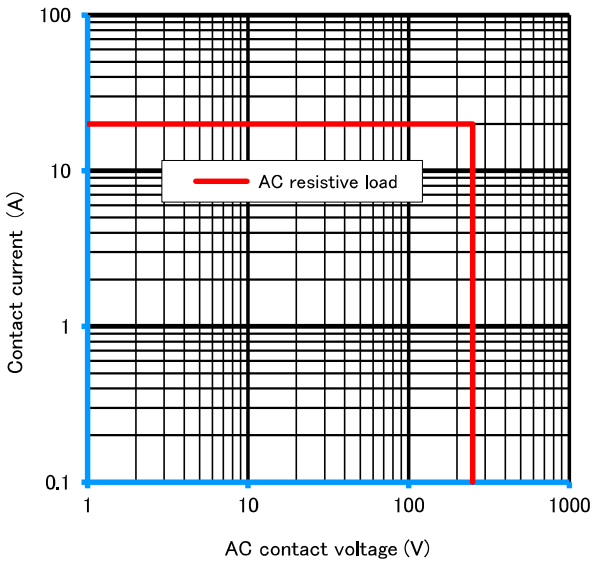


CI series

Reference data

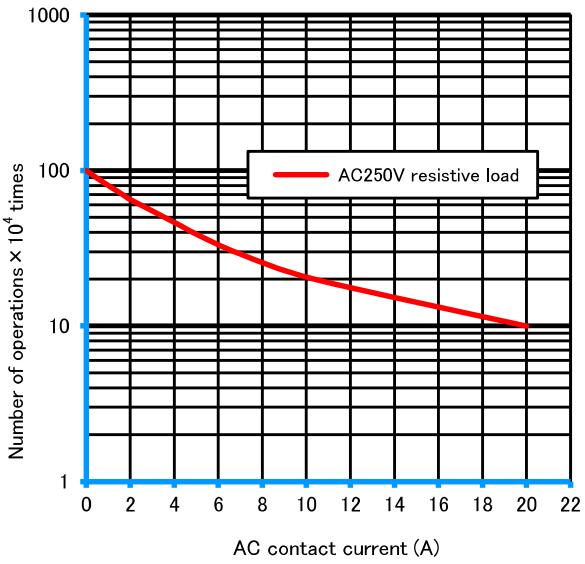
Maximum switching capacity

CI1U



Durability curve

CI1U



DEC is a professional manufacturer of relays

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Agency

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