

**DX**  
series

Power relay series pursuing reliability and safety



DX1U

■ Currently it is used for such purposes

- Ideal for inverter power supply for air conditioners
- Control panel, Power supply equipment, Molding equipment, Machine tools, Welding machines, Machinery for agriculture
- Vending machines, Telecommunications equipment, Disaster prevention equipment, Copiers
- Commercial equipment, Measuring instruments, Medical devices
- Various household appliances

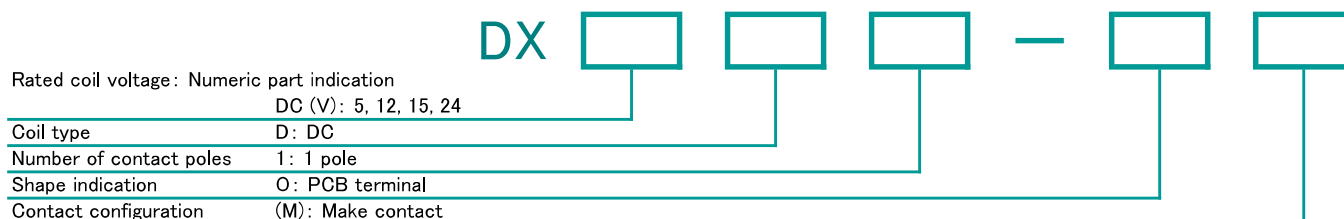
DEC is a professional manufacturer of relays

# DX series

## ■ Features

- General purpose power relay boasting high reliability and achievement.
- PCB type, easy to use 1 pole type relay.
- Ideal for inverter air conditioners.
- Ideal for air conditioners and general commercial equipment using inverter power supply.
- Conforms to the various safety standards.

## ■ Model numbering system



## ■ Safety standards

	Contact rating
UL/cUL	20A 277V AC
VDE	20A(cos φ=1) 250V AC 15A(cos φ=0.4) 250V AC
CQC	20A(cos φ=1) 250V AC 15A(cos φ=0.4) 250V AC
Electrical Appliances and Materials Safety Act	Conformable

## ■ Coil ratings

AC/DC	Voltage	Item	Rated current (mA)	Coil resistance (Ω)	Operate voltage (V)	Release voltage (V)	Maximum voltage (V)	Power consumption (W)
					Ratio to rated voltage			
DC	5		140	36	80% max.	10% min.	110%	0.7
	12		58	206				
	15		46	322				
	24		29	823				

- 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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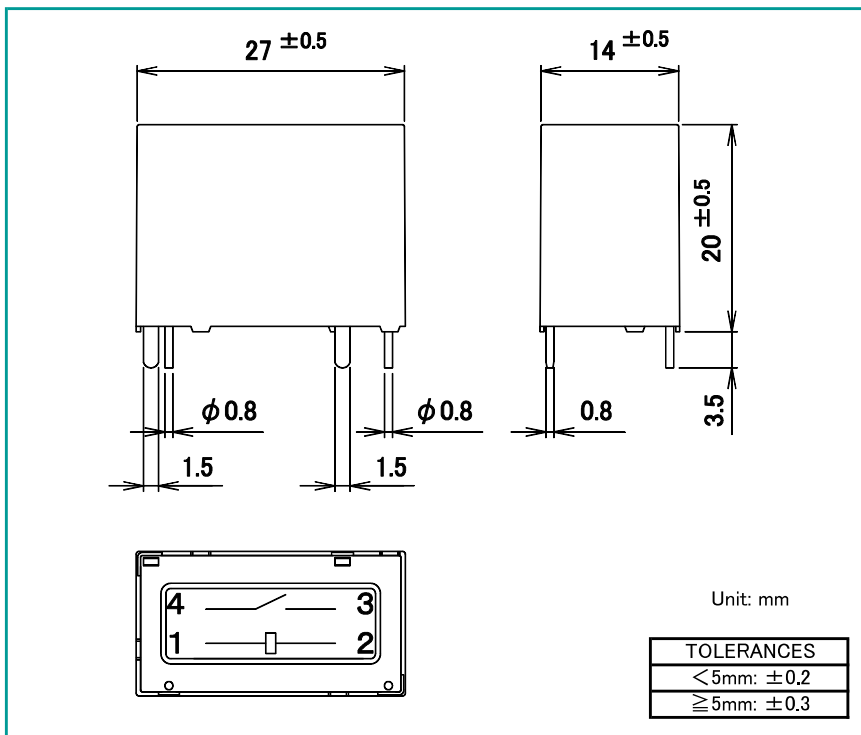
# DX series

## ■ Ratings • Performance

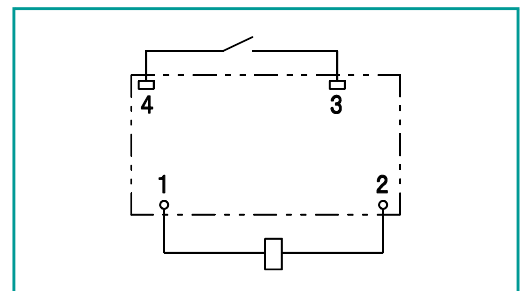
Specifications	Item	Performance	
Contact specification	Contact configuration	1a	
	Contact resistance	30mΩ max. (at DC6V 1A)	
	Contact material	Ag alloy	
Ratings	Rated load (inverter load)	AC250V 20A	
	Max. switching capacity (inverter load)	5000VA	
	Max. switching voltage	AC250V	
	Max. switching current	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)	10 000V min. (1.2 × 50 μs)	
	Operate time (at rated voltage on, at 20°C)	20ms max. (excluding contact bounce time)	
Release time (at rated voltage off, at 20°C)	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	200m/s <sup>2</sup>
		Destruction	1000m/s <sup>2</sup>
Life	Mechanical endurance (at 180 times/min)	1 000 000 times min.	
	Electrical endurance (at 12 times/min)	50 000 times min. (inverter load)	
Conditions for operation	Ambient temperature	-20°C to +60°C (no freezing and condensing at low temperature)	
	Ambient humidity	5% to 85%RH	
Mass		approx. 15g	

● Notes: The above is the initial value.

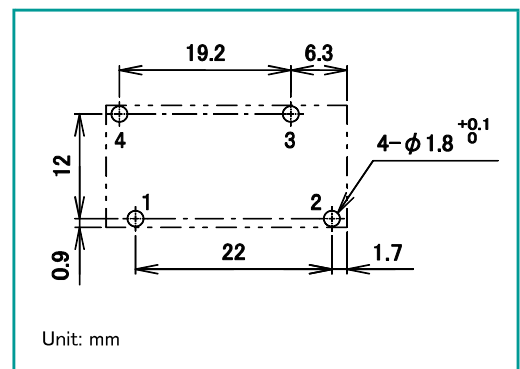
## ■ Dimensions



## ■ Schematics



## ■ PCB mounting holes (tolerances ± 0.1)



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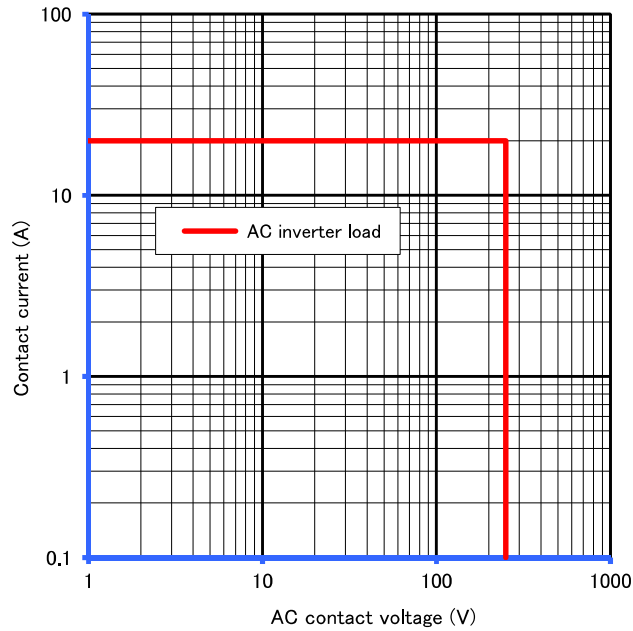
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# DX series

## Reference data

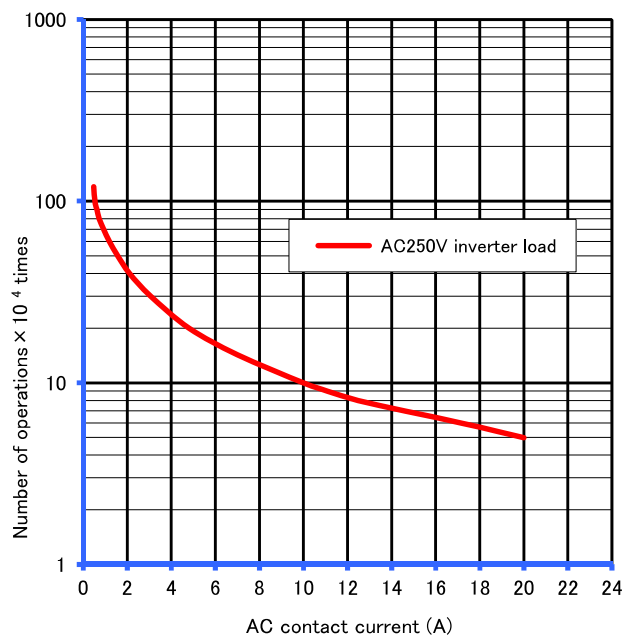
### ■ Maximum switching capacity

DX1U



### ■ Durability curve

DX1U



● 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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