

DK series

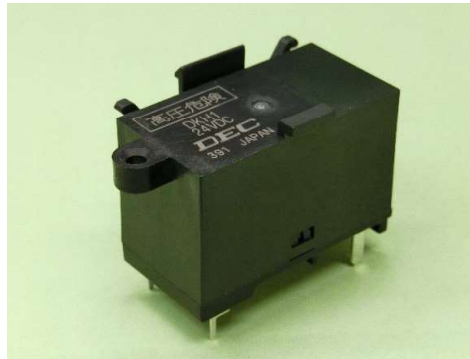
Power relay series pursuing reliability and safety



DK1
(for high voltage,
tab terminal type)



DK1 (PCB terminal type)



DKH1

■ It is currently suitable for use in such applications.

- Control panel, Power supply equipment
- Commercial equipment, Measuring instruments, Medical devices
- Various household appliances that handle high voltage
- Ideal for switching high voltage of microwave ovens

DEC is a professional manufacturer of relays

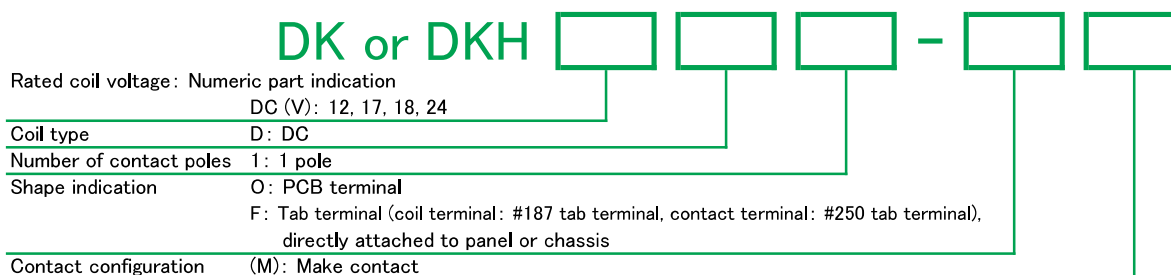
DEC Daiichi Electric Co., Ltd.
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DK series

■ Features

- Power relay specialized for controlling high-voltage equipment.
 - There are two types, direct mounting on case (panel or chassis) type and PCB mounting type.
 - For handling high-voltage, the contact circuit is equipped with a #250 tab terminal so that an insulated receptacle can be used.
 - Ideal for switching the capacity of high-voltage capacitors corresponding to 50Hz/60Hz power frequency of microwave ovens.
- DK for type ○ High insulation design
- DKH for type Between coil and contact: AC5000V 1min
Between open contact : AC5000V 1min

■ Model numbering system



■ Safety standards

Electrical Appliances and Materials Safety Act	Conformable
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■ Coil ratings

AC /DC Voltage		Item	Rated current (mA)	Coil resistance (Ω)	Operate voltage (V)	Release voltage (V)	Maximum voltage (V)	Hold voltage (V)	Power consumption (W)			
					Ratio to rated voltage							
DC	12	75	160	80% max.	10% min.	110%	※② 55% to 70% (DKH type only)	0.9 (Applied coil voltage 100%)				
	17	51.5	330	※① 150% to 250% (Applied time 0.3 to 1s)				0.27 (Applied coil voltage 55%, DKH type only)				
	18	50	360	DKH type only double voltage operation.								
	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.
 4. For the DKH type, be sure to use the holding voltage of ※② after double voltage operation of ※①.

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■ Ratings・Performance

Specifications	Item		Performance	
			DK	DKH
Contact specification	Contact configuration		1a	
	Contact resistance (at DC6V 1A)		50mΩ max.	
	Contact material		Ag alloy	
Ratings	Rated load	Resistive load	AC3400V 0.6A	—
		Inverter load	—	AC200V 30A
	Max. switching capacity	Resistive load	2040VA	—
		Inverter load	—	6000VA
	Max. switching voltage		AC4000V	AC200V
Electrical capability	Max. switching current		0.6A	30A
	Insulation resistance		100MΩ min. (at DC500V)	
	Dielectric strength	Between coil and contact	AC4000V 1 min	AC5000V 1 min
		Between open contact	AC4000V 1 min	AC5000V 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)		25ms max. (excluding contact bounce time)	
Mechanical capability	Release time (at rated voltage off, at 20°C)		25ms max. (excluding contact bounce time)	
	Vibration resistance	Malfunction	10 to 55 to 10Hz (double amplitude 1.5mm)	10 to 55 to 10Hz (double amplitude 1.0mm)
		Destruction	10 to 55 to 10Hz (double amplitude 1.5mm)	
	Shock resistance	Malfunction	100m/s ²	80m/s ²
Life	Destruction		500m/s ²	
	Mechanical endurance		500 000 times min. (at 180 times/min)	300 000 times min. (at 12 times/min)
Conditions for operation	Electrical endurance (at rated load)		10 000 times min. (at 20 times/min)	100 000 times min. (at 12 times/min)
	Ambient temperature		-20°C to +60°C (no freezing and condensing at low temperature)	
Mass	Ambient humidity		5% to 85%RH	45% to 85%RH
			approx. 34g	approx. 48g

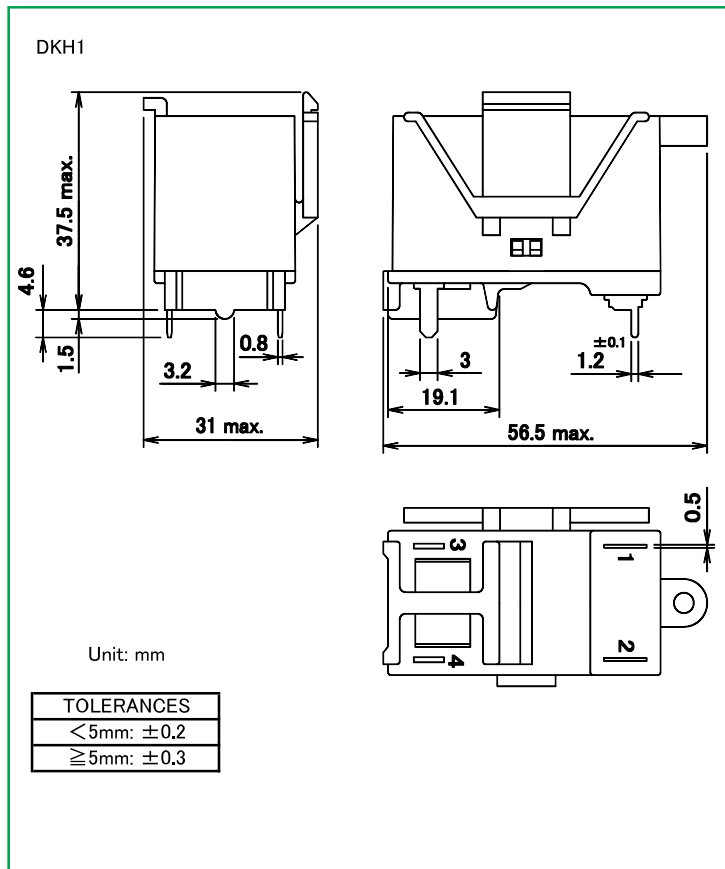
● Notes: The above is the initial value.

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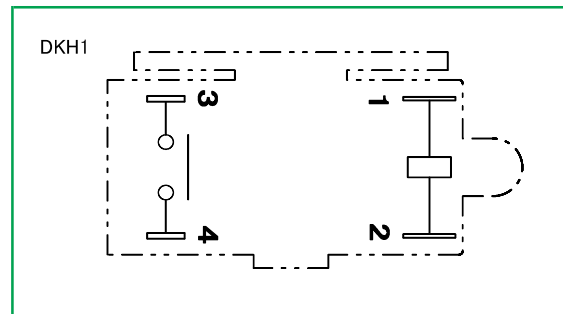
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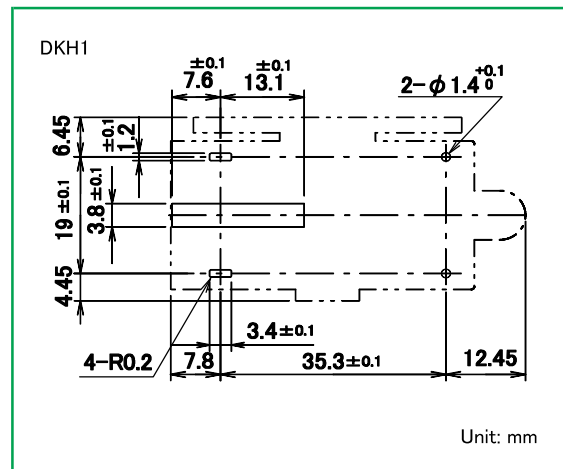
■ Dimensions



■ Schematics



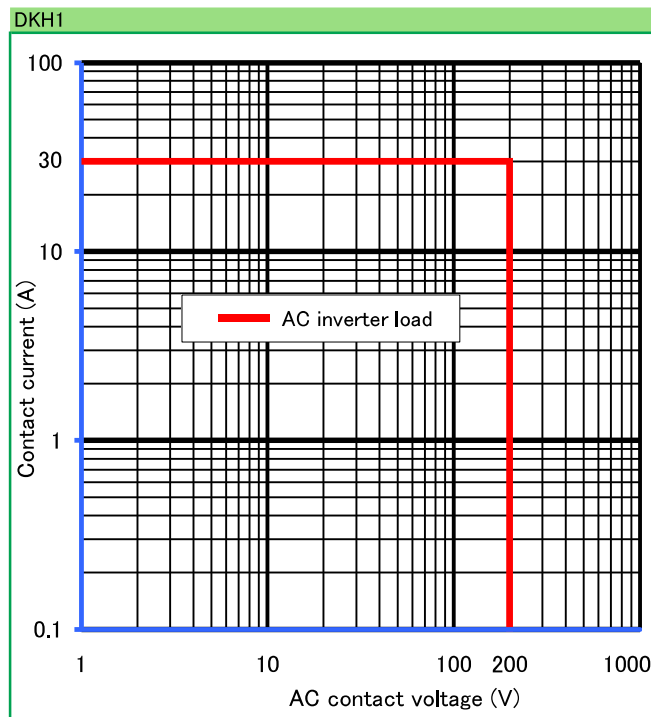
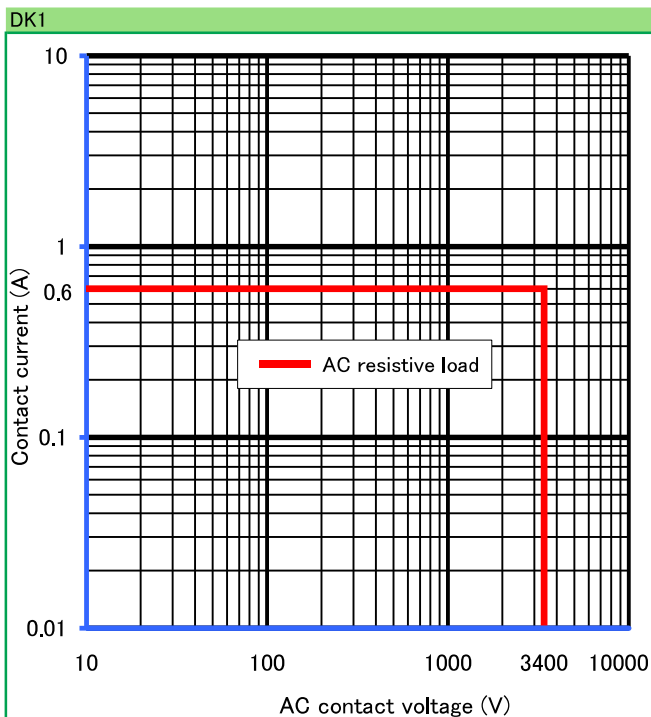
■ PCB mounting holes



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Reference data

■ Maximum switching capacity



● 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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