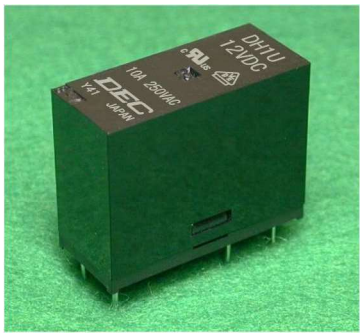
General purpose miniature power relay

RoHS compliant

DH series

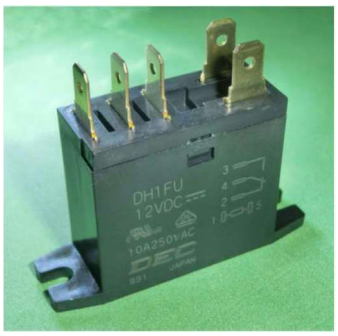
Power relay series pursuing reliability and safety



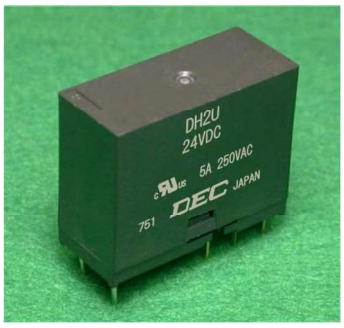
DH1U-10A
(1 pole, standard type)

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

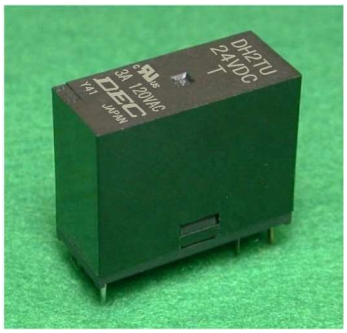
DH1U-Ⅱ
(1 pole, seal type)



DH1FU
(1 pole, tab terminal type)



DH2TU
(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

DEC is a professional manufacturer of relays

DEC Daiichi Electric Co., Ltd.

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

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

DH □ □ □ - □ □ - □

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 ($\cos\phi$=1) 7.5A ($\cos\phi$=0.4) 250V AC	16A ($\cos\phi$=1) 12A ($\cos\phi$=0.4) 250V AC		10A ($\cos\phi$=1) 250V AC		
TUV	5A ($\cos\phi$=1) 250V AC 3A ($\cos\phi$=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	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℃, tolerance is ±10%.
2. Operate voltage and release voltage are values at coil temperature of 20℃.
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℃.

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

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. (1.2×50μs)			
	Operate time (at rated voltage on, at 20℃)		15ms max. (excluding contact bounce time)			
	Release time (at rated voltage off, at 20℃)		1a: 5ms max. (excluding contact bounce time) 1c: 15ms max. (excluding contact bounce time)			
Mechanical capability	Vibration resistance	Malfunction	1a: 10 to 55 to 10Hz (double amplitude 1.5mm) 1c: 10 to 55 to 10Hz (double amplitude 1.0mm)			
		Destruction				
	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)			
Conditions for operation	Ambient temperature		-15℃ to +60℃ (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. (1.2×50μs)	
	Operate time (at rated voltage on, at 20℃)		20ms max. (excluding contact bounce time)	
	Release time (at rated voltage off, at 20℃)		2a: 10ms max. (excluding contact bounce time) 2c: 20ms max. (excluding contact bounce time)	
Mechanical capability	Vibration resistance	Malfunction	2a: 10 to 55 to 10Hz (double amplitude 1.5mm) 2c: 10 to 55 to 10Hz (double amplitude 1.0mm)	
		Destruction		
	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℃ to +60℃ (no freezing and condensing at low temperature)	
	Ambient humidity		5% to 85%RH	
Mass			approx. 18g	

● Notes: The above is the initial value.

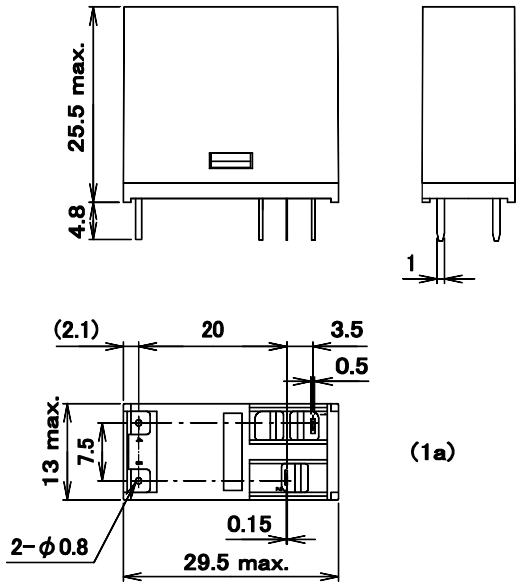
DH series

Dimensions

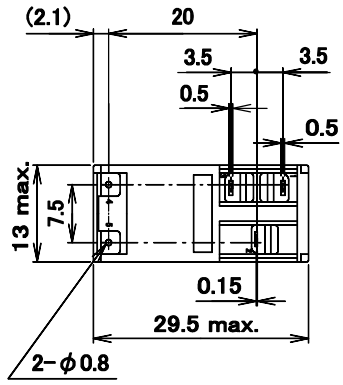
Unit: mm

TOLERANCES
＜5mm: ±0.2
≧5mm: ±0.3

DH1U

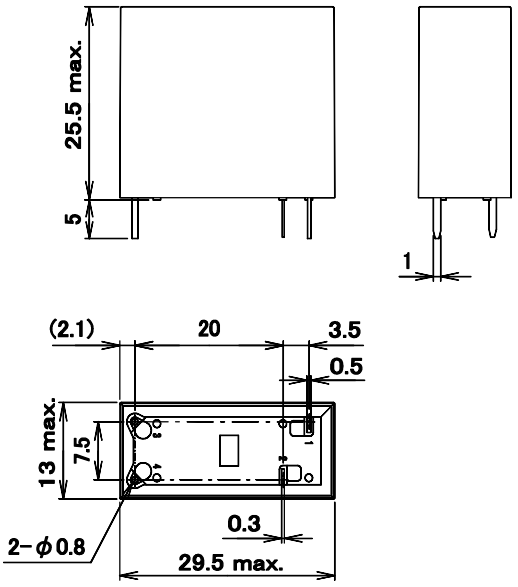


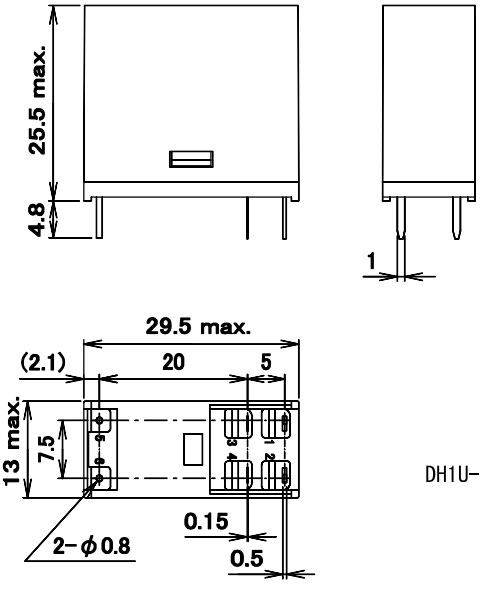
(1a)



(1c)

DH1U-Ⅱ





DH1U-16A

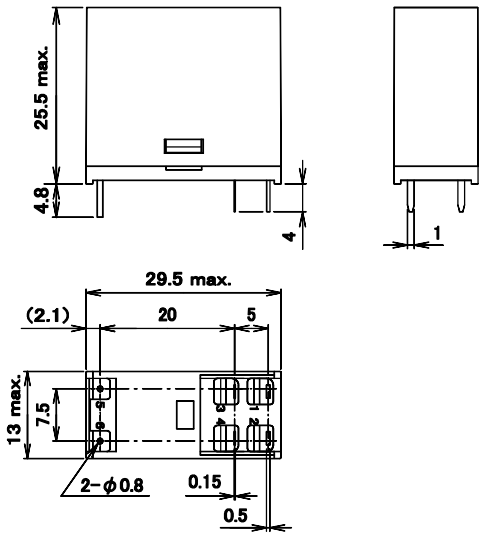
DH series

Dimensions

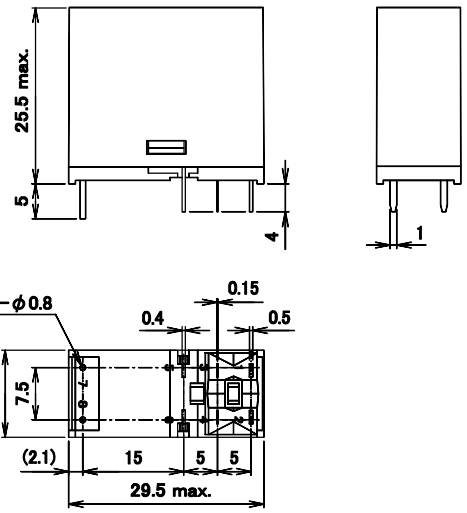
Unit: mm

TOLERANCES
＜5mm: ±0.2
≧5mm: ±0.3

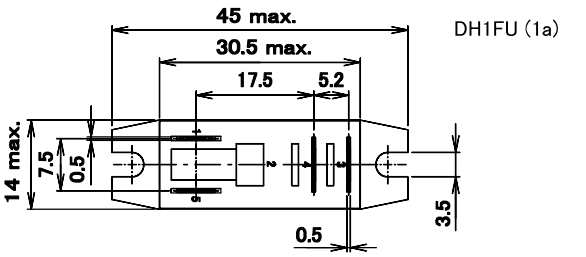
DH2TU



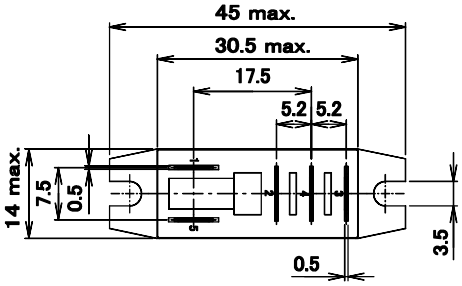
DH2U

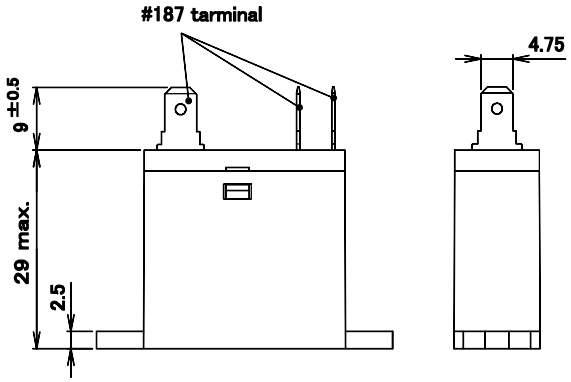


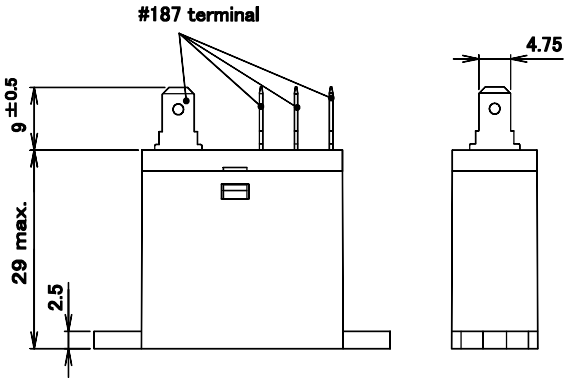
DH1FU (1a)



DH1FU (1c)





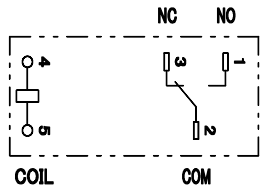


General purpose miniature power relay that can be used for a wide range of applications from control to power.

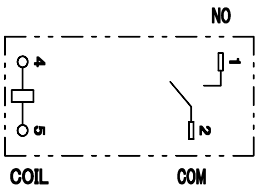
DH series

■ Schematics

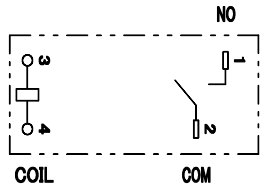
DH1U (1c)



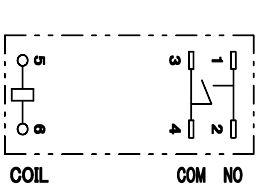
DH1U (1a)



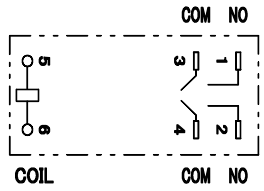
DH1U-Ⅱ



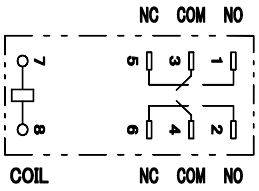
DH1U-16A



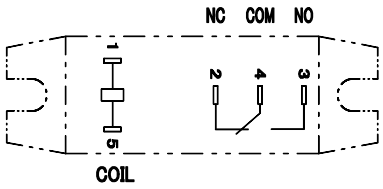
DH2TU



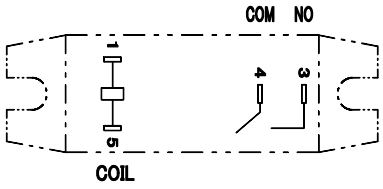
DH2U



DH1FU (1c)



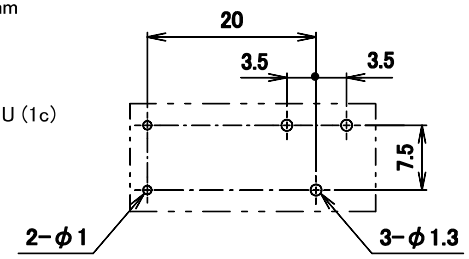
DH1FU (1a)



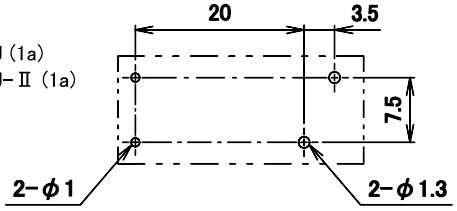
■ PCB mounting holes (tolerances±0.1)

Unit: mm

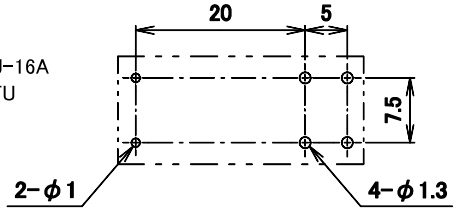
DH1U (1c)



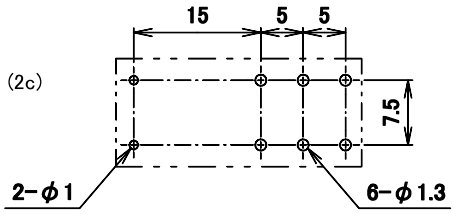
DH1U (1a)
DH1U-Ⅱ (1a)



DH1U-16A
DH2TU

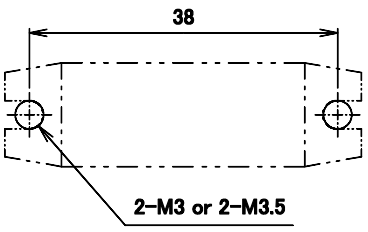


DH2U (2c)



■ Mounting holes (tolerances±0.1)

DH1FU (1a)
DH1FU (1c)



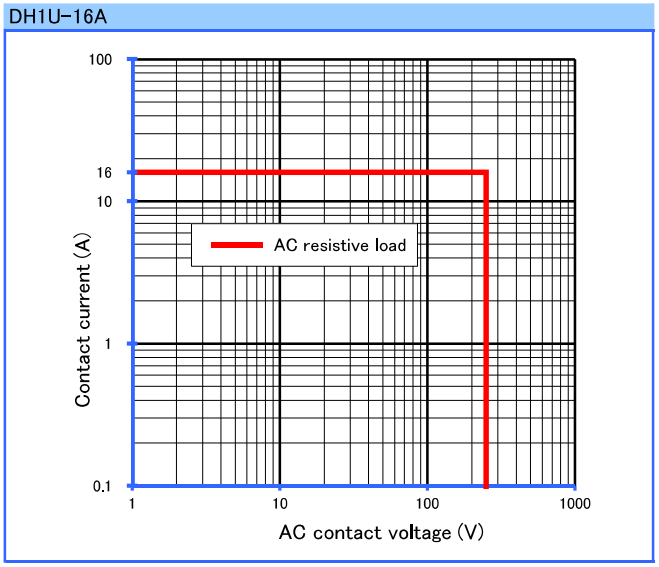
Unit: mm

DH series

Reference data

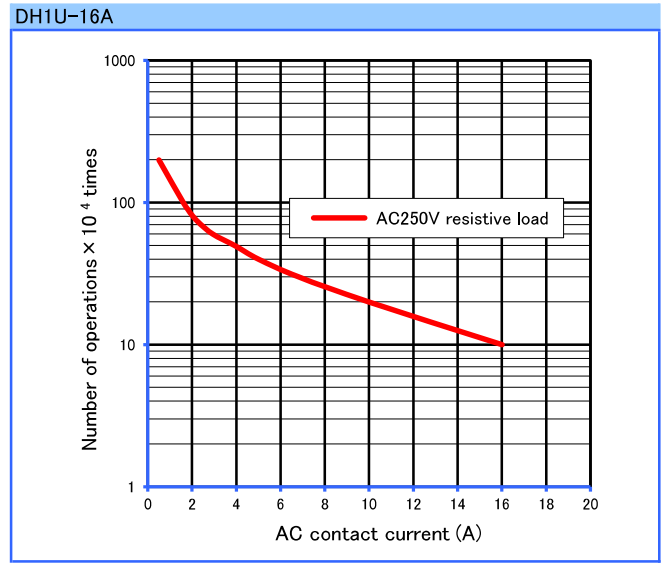
Maximum switching capacity

DH1U-16A

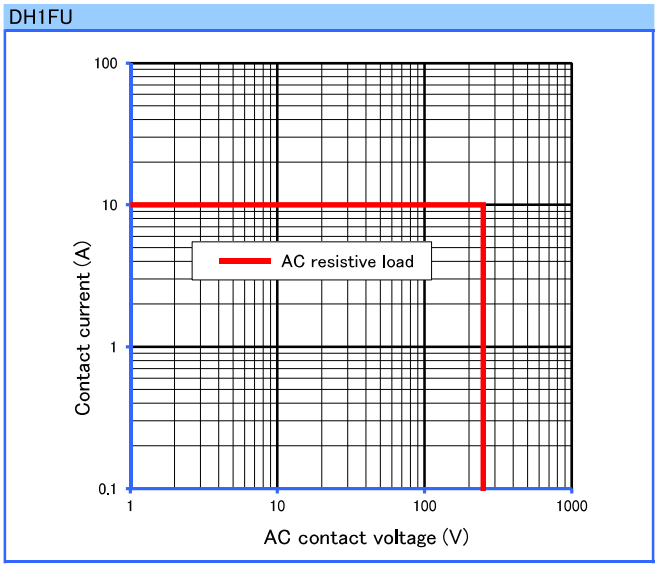


Durability curve

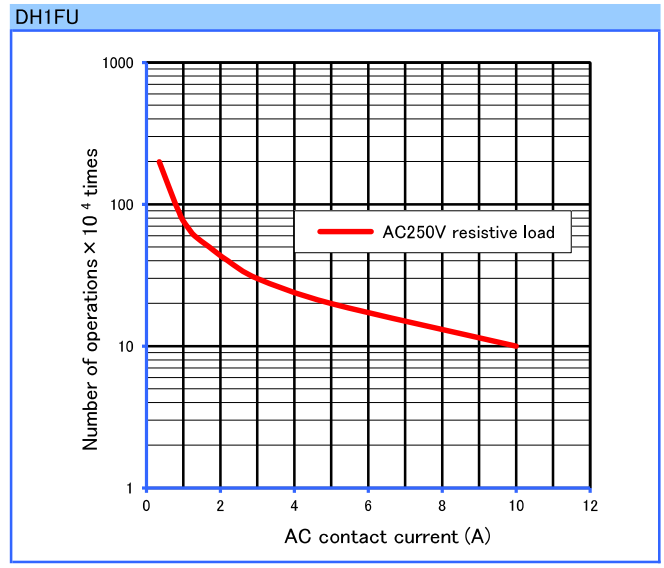
DH1U-16A



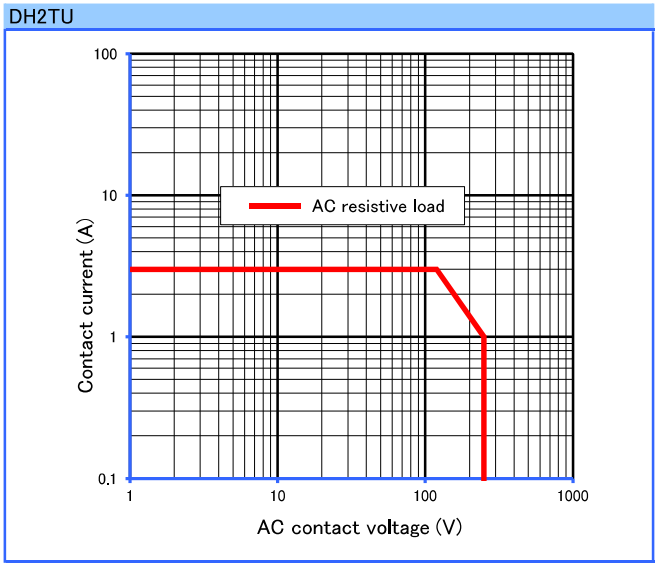
DH1FU



DH1FU



DH2TU



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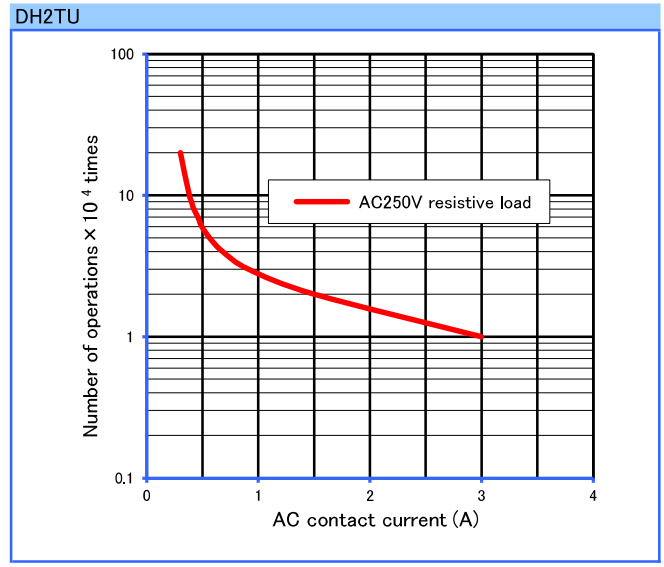


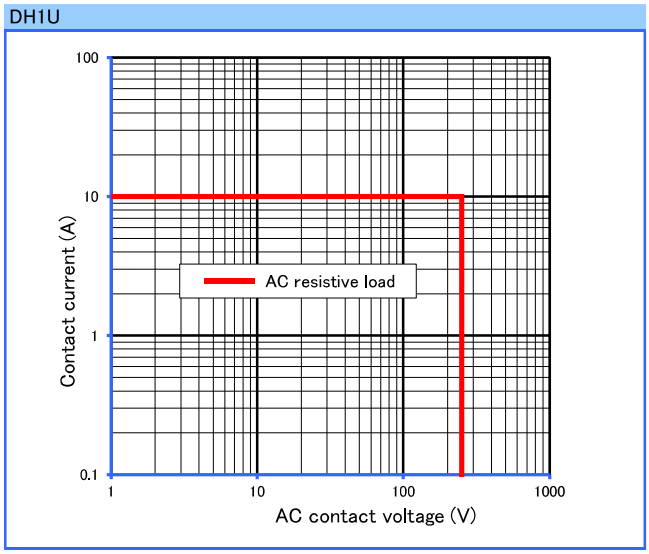
General purpose miniature power relay that can be used for a wide range of applications from control to power.

DH series

Reference data

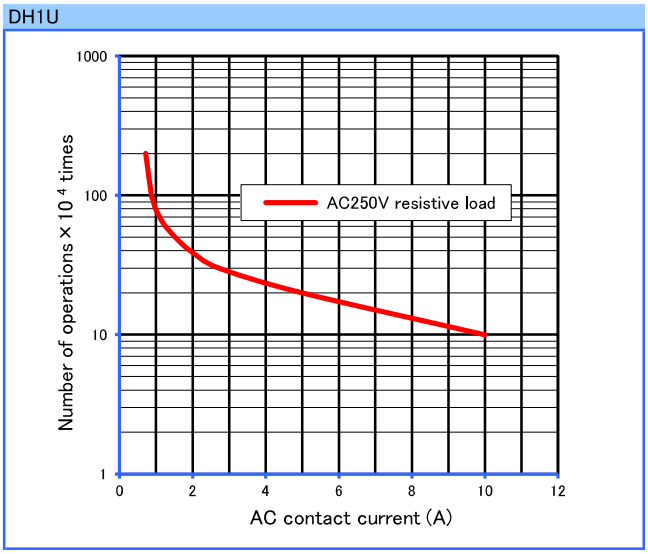
■ Maximum switching capacity

DH1U

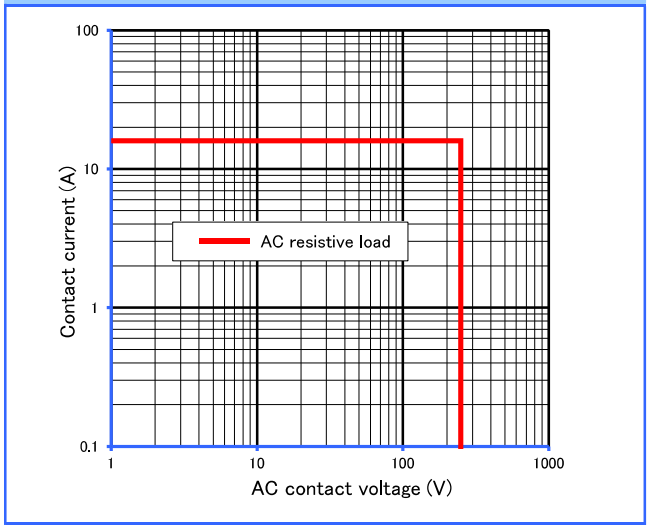


■ Durability curve

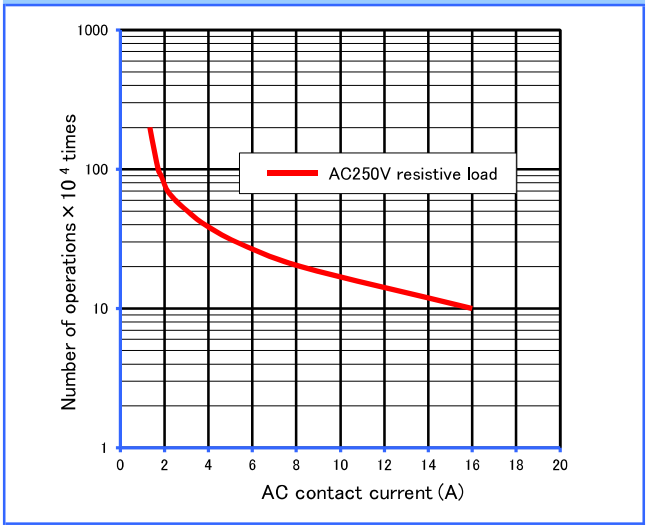
DH1U



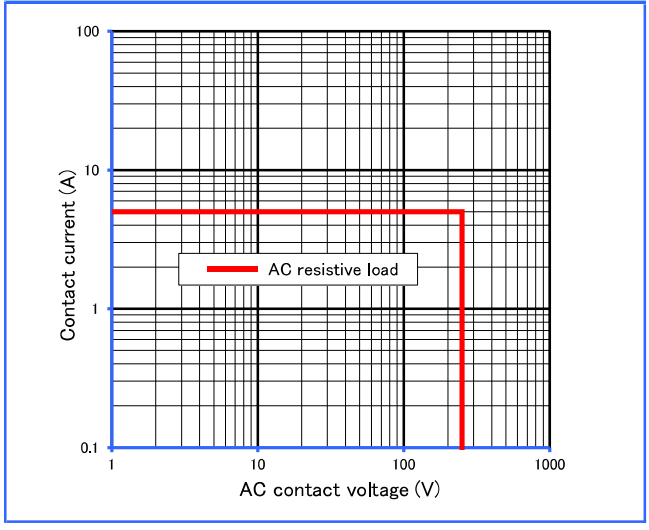
DH1U-Ⅱ



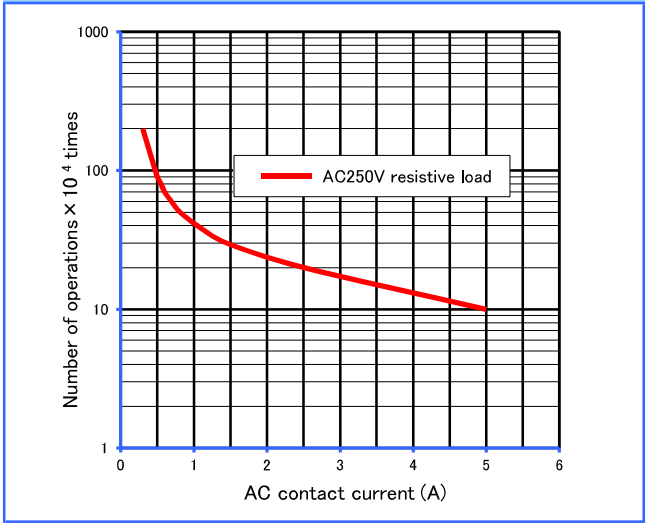
DH1U-Ⅱ



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.

DEC is a professional manufacturer of relays

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Agency

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