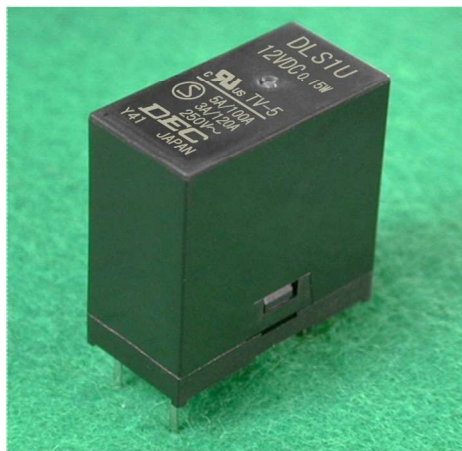


**DLS**  
series

Power relay series pursuing reliability and safety



DLS1U

■ Currently it is used for such purposes

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- Ideal for TV power supply and audio system
  - 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
- 

DEC is a professional manufacturer of relays

# DLS series

## ■ Features

- General purpose miniature power relay boasting high reliability and achievement.
- PCB type, compact size, easy to use 1a relay.
- We have 0.15W, 0.25W and 0.53W coil which are compatible with low power consumption for TV power supply and audio power supply.
- Conforms to the various safety standards.

## ■ Model numbering system



Rated coil voltage: Numeric part indication

DC (V): 5, 9, 12, 24

Coil type D: DC

Number of contact poles 1: 1 pole

Shape indication O: PCB terminal

Contact configuration (M): Make contact

Notes 0.15W, 0.25W, 0.53W

: There are 3 varieties of coil power consumption including high sensitivity products.

## ■ Safety standards

	Contact rating
UL/cUL	5A 250V AC 5A 30V DC TV-5 120V AC 0.15W TV-8 120V AC 0.25W TV-10 120V AC 0.53W
SEMKO	8/60A, 5/100A, 3/120A, 250V AC 0.15W / 0.25W 8/135A, 10/80A 250V AC 0.53W
Electrical Appliances and Materials Safety Act	Conformable

## ■ Coil ratings

Item	Voltage	Power consumption High sensitivity 0.15W		Power consumption High sensitivity 0.25W		Power consumption Standard 0.53W		Operate voltage (V)	Release voltage (V)	Maximum voltage (V)
		Rated current (mA)	Coil resistance (Ω)	Rated current (mA)	Coil resistance (Ω)	Rated current (mA)	Coil resistance (Ω)			
DC	5	30	167	50	100	106	47	80% max.	5% min.	110%
	9	16.7	540	27.7	325	60	150			
	12	12.5	960	20.8	576	44	275			
	24	6.25	3840	10.4	2300	22	1100			

- 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.

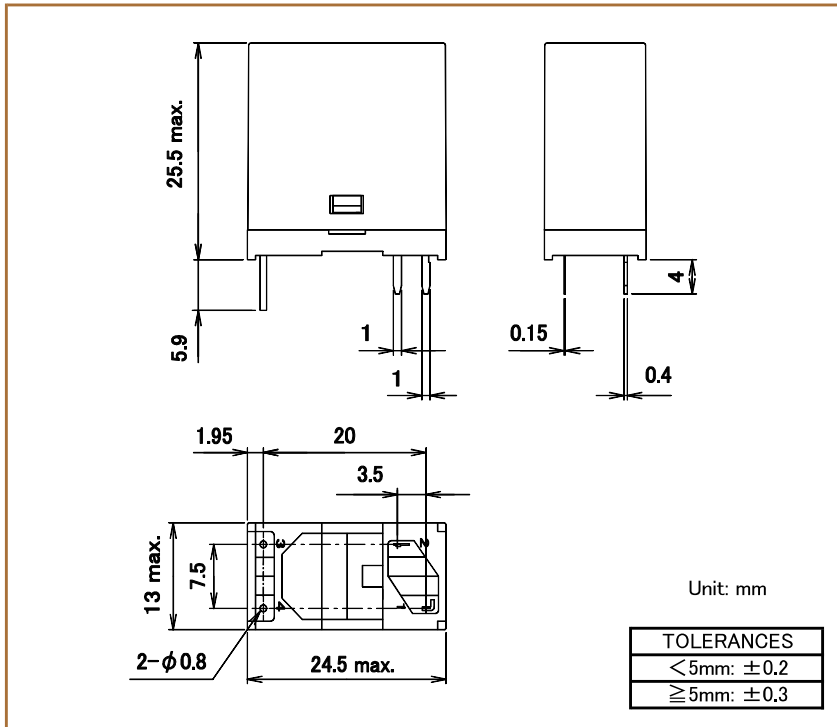
# DLS series

## ■ Ratings • Performance

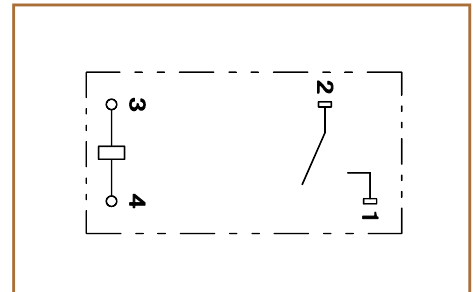
Specifications	Item	Performance	
		High sensitivity type Power consumption 0.15W/0.25W	Standard type Power consumption 0.53W
Contact specification	Contact configuration	1a	
	Contact resistance	50mΩ max. (at DC6V 1A)	
	Contact material	Ag alloy	
Ratings	Rated load (resistive load)	AC250V 5A	
	Max. switching capacity (resistive load)	1250VA	
	Max. switching voltage	AC250V	
	Max. switching current	5A, TV-5/TV-8	TV-10
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)	15ms 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	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 20 times/min)	50 000 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. 15g	

● Notes: The above is the initial value.

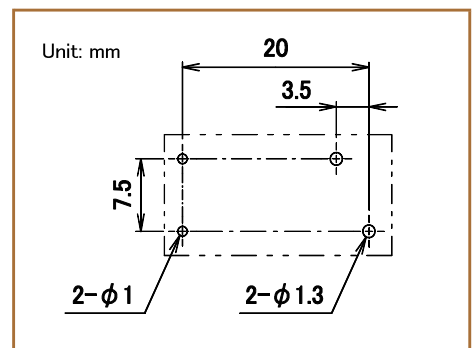
## ■ Dimensions



## ■ Schematics



## ■ PCB mounting holes (tolerances ±0.1)

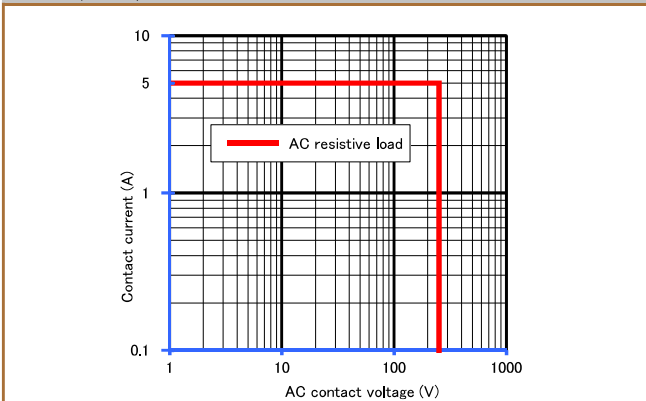


# DLS series

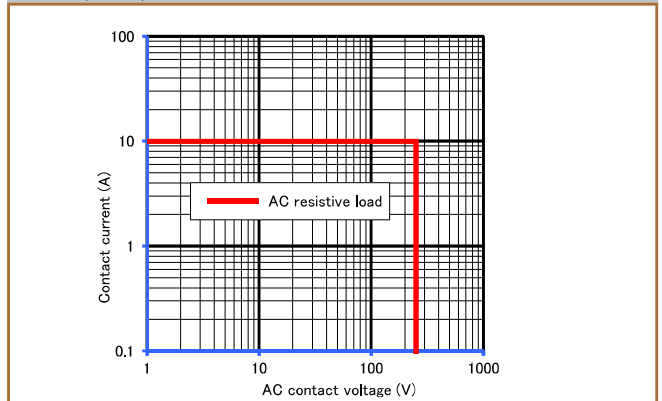
## Reference data

### ■ Maximum switching capacity

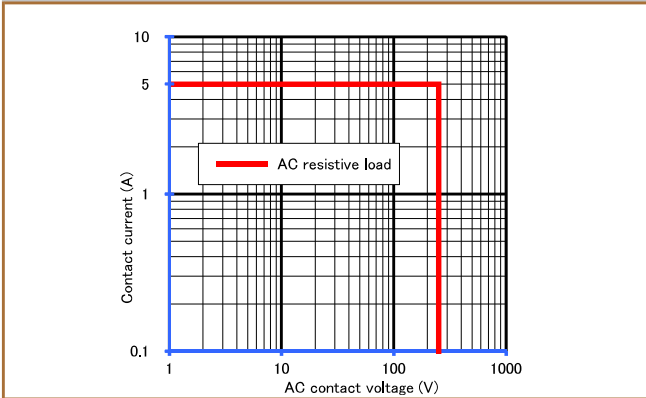
DLS1U (0.15W)



DLS1U (0.53W)

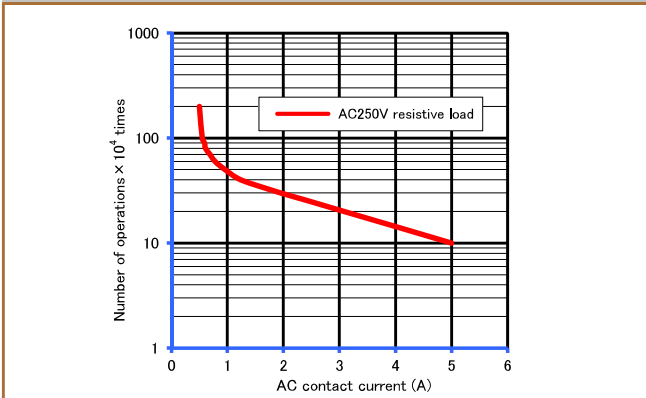


DLS1U (0.25W)

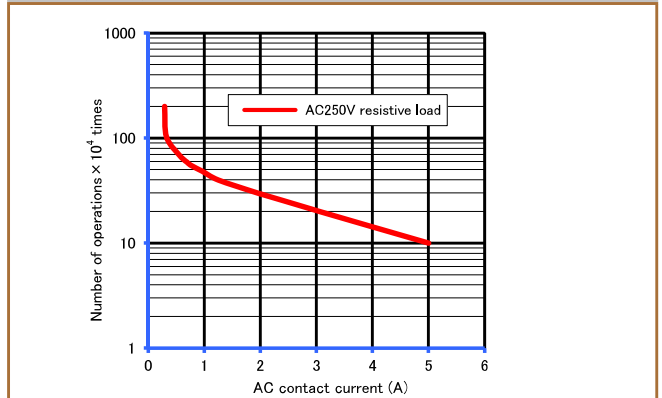


### ■ Durability curve

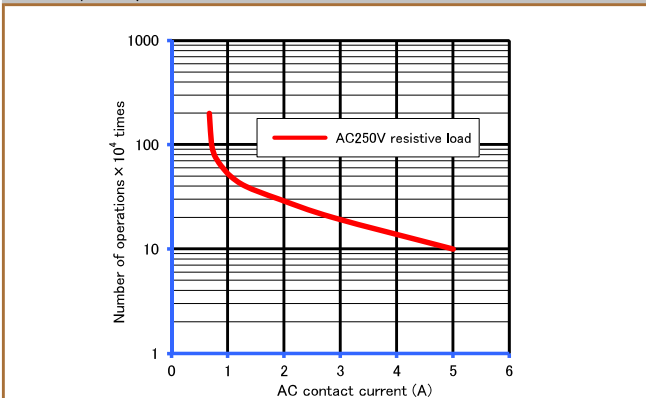
DLS1U (0.15W)



DLS1U (0.53W)



DLS1U (0.25W)



● 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