

DI series

Power relay series pursuing reliability and safety



DI1U (tab terminal type)



DI1U (PCB terminal type)

■ Currently it is used for such purposes

- Industrial equipment, Solar water heater, Factory automation equipment, Automation equipment
- 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
- Ideal for air conditioners

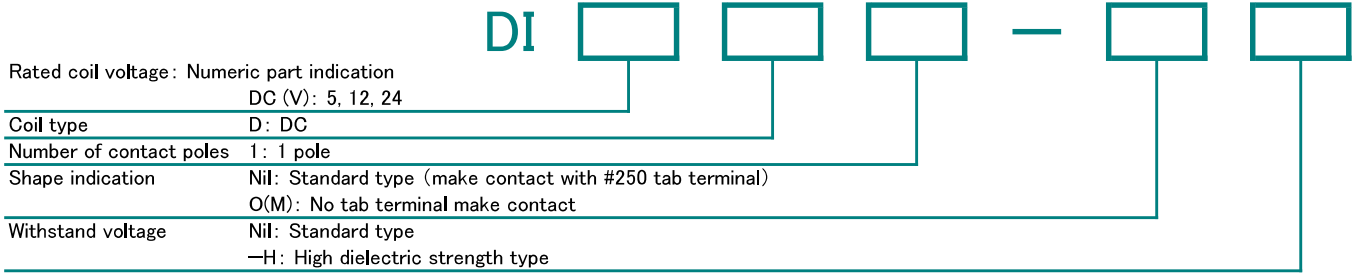
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■ Features

- Boasting high reliability and achievements, with an input current of 80A, carry and cut-off current of 20A, it is suitable for motor load of compressor of air conditioners.
- 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 (input current 200A peak, cut off 20A).
- Insulation structure with high noise resistance.

■ Model numbering system



■ Safety standards

	Contact rating
UL/cUL	23A 277V AC 2hp 240V AC
TUV	20A(cos φ=1), 15A(cos φ=0.4) 250V AC
CQC	23A 277V AC, 20A 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	80% max.	10% min.	110%	0.9
	12	75	160				
	24	38	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
			D11U / D11U-H
Contact specification	Contact configuration		1a
	Contact resistance		30mΩ 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		23A
Electrical capability	Insulation resistance		100MΩ min. (at DC500V)
	Dielectric strength	Between coil and contact	Standard type: AC2000V 1 min -H type: AC4000V 1 min
		Between open contact	AC1000V 1 min
	Impulse withstand voltage (between coil and contact)		10 000V min. (-H type) (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)		20ms 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 180 times/min)		1 000 000 times min.
	Electrical endurance (at 20 times/min)		Motor load 100 000 times min. (AC: 250V 80/20A) Inverter load 30 000 times min. (AC: 100V 200/20A)
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. 27g

● Notes: The above is the initial value.

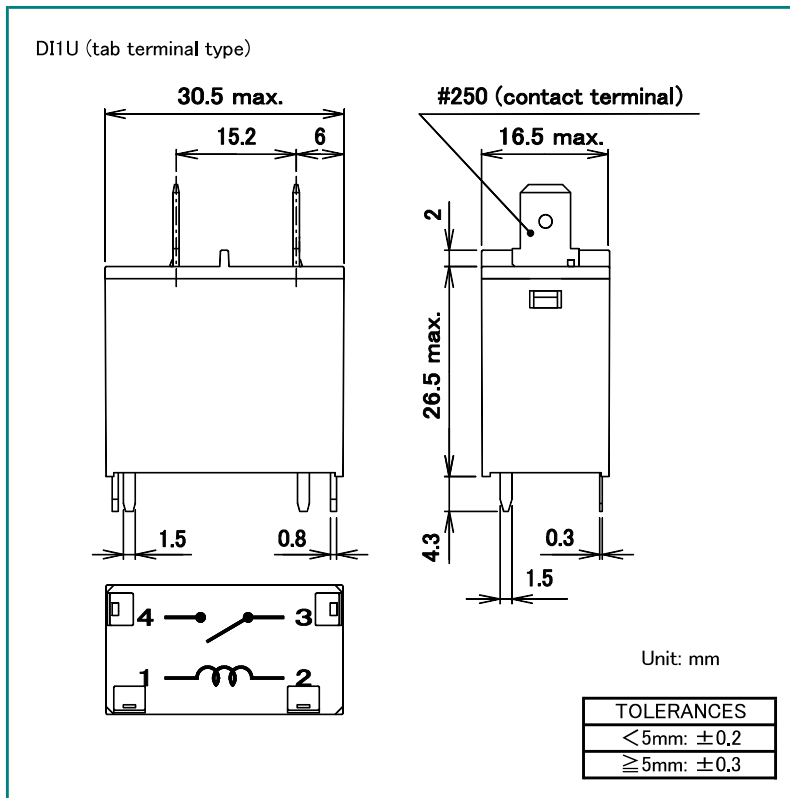
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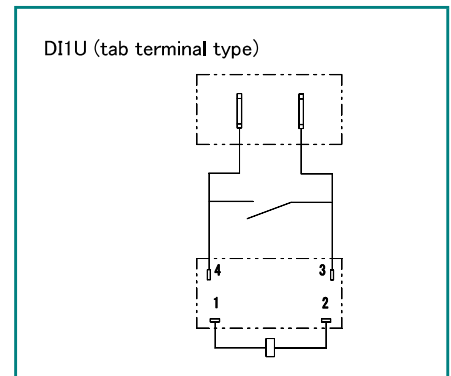
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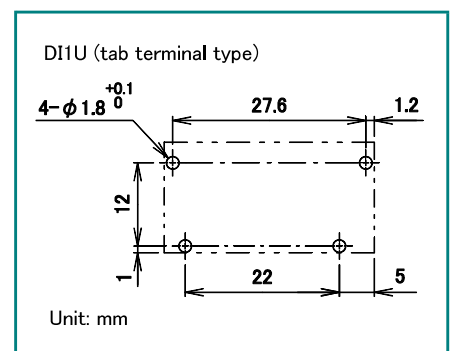
■ Dimensions



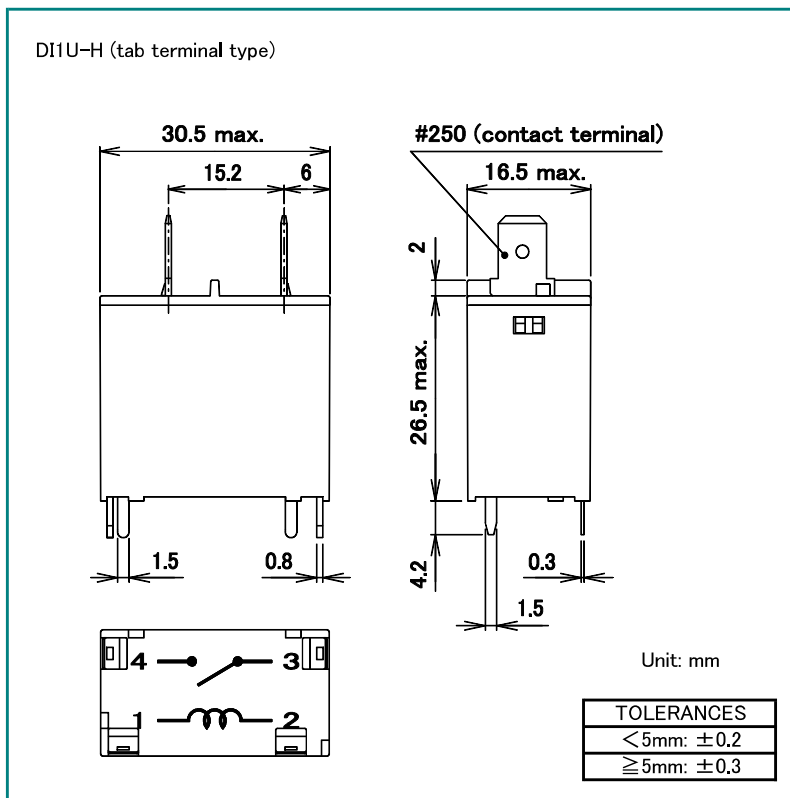
■ Schematics



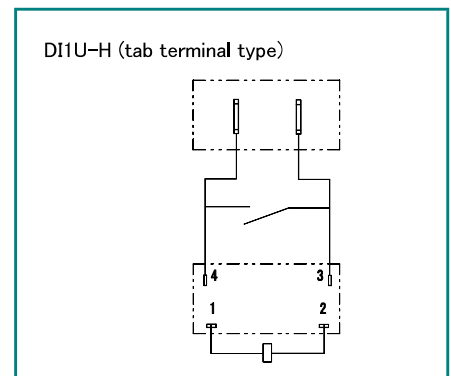
■ PCB mounting holes (tolerances ±0.1)



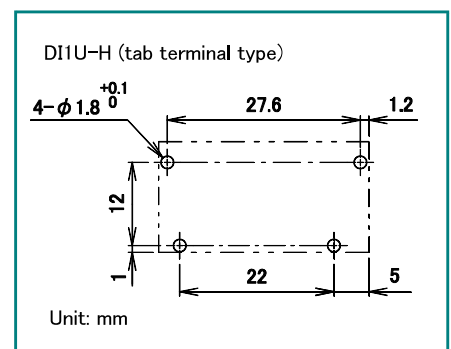
■ Dimensions



■ Schematics



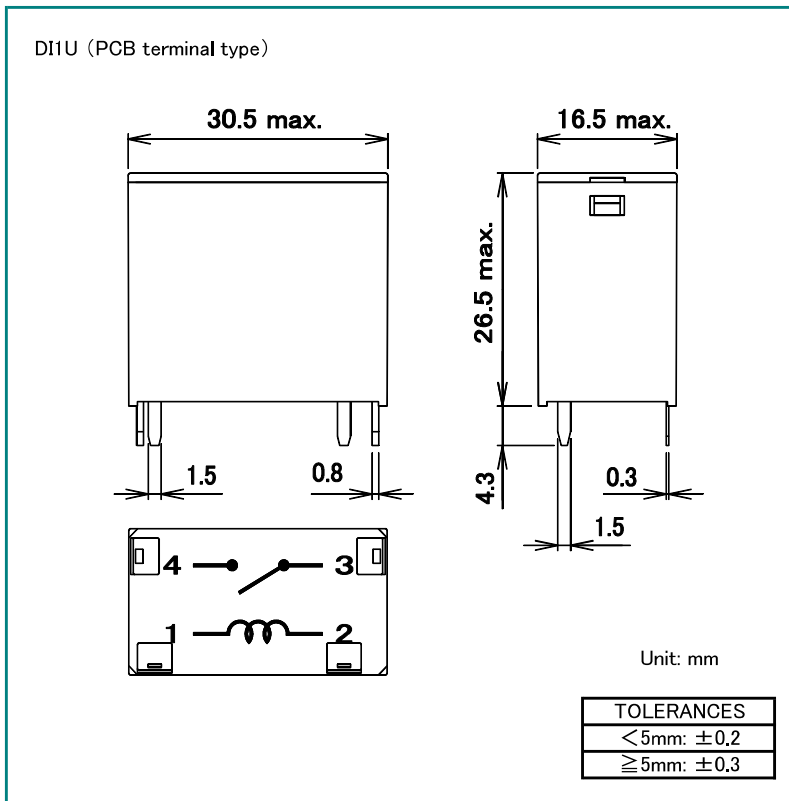
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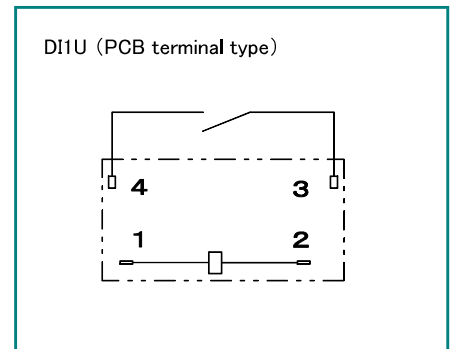
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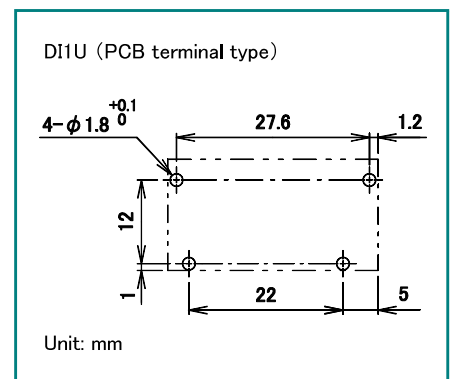
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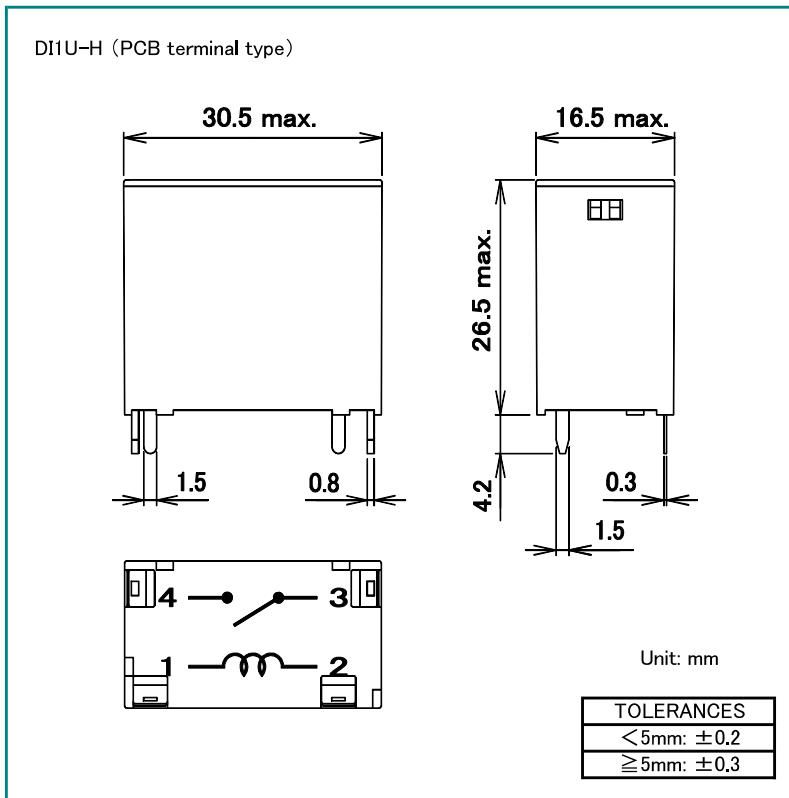
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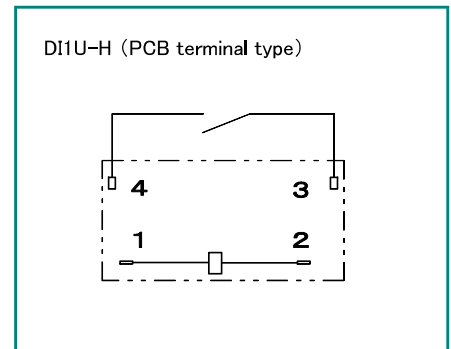
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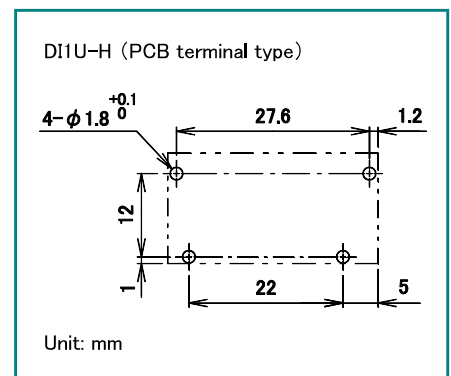
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■ PCB mounting holes (tolerances ±0.1)



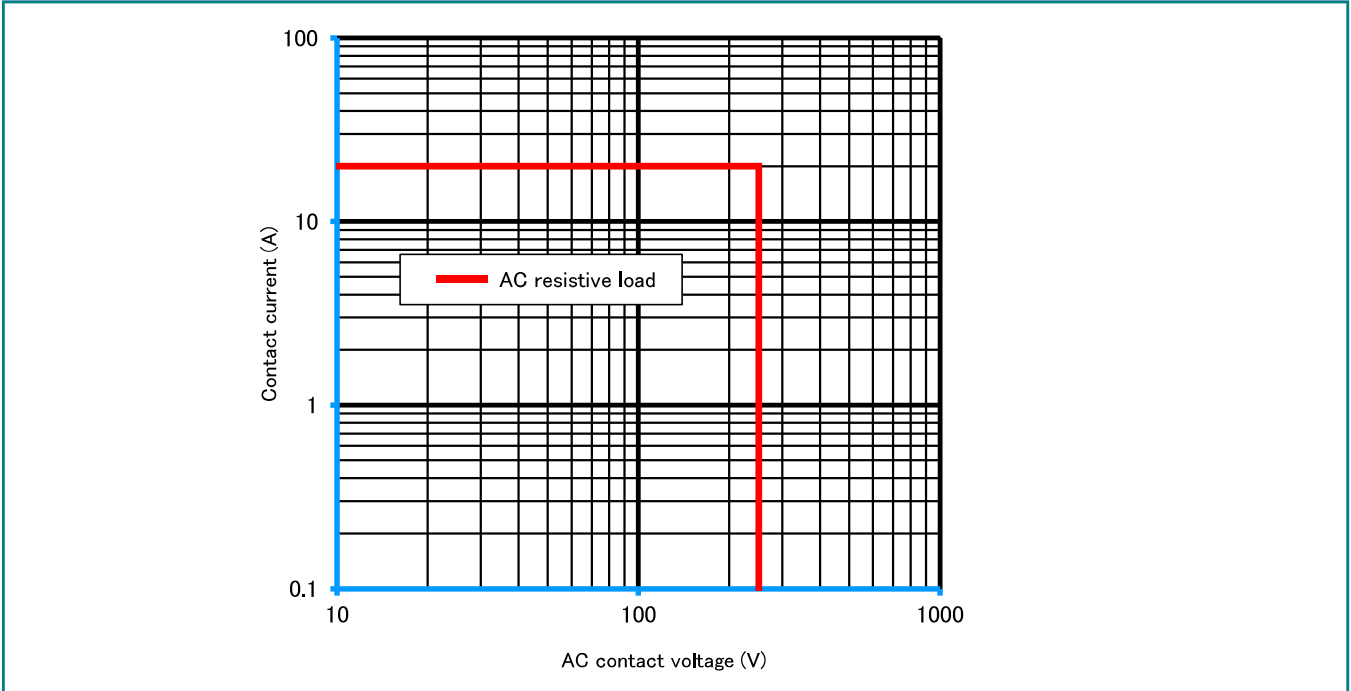
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Reference data

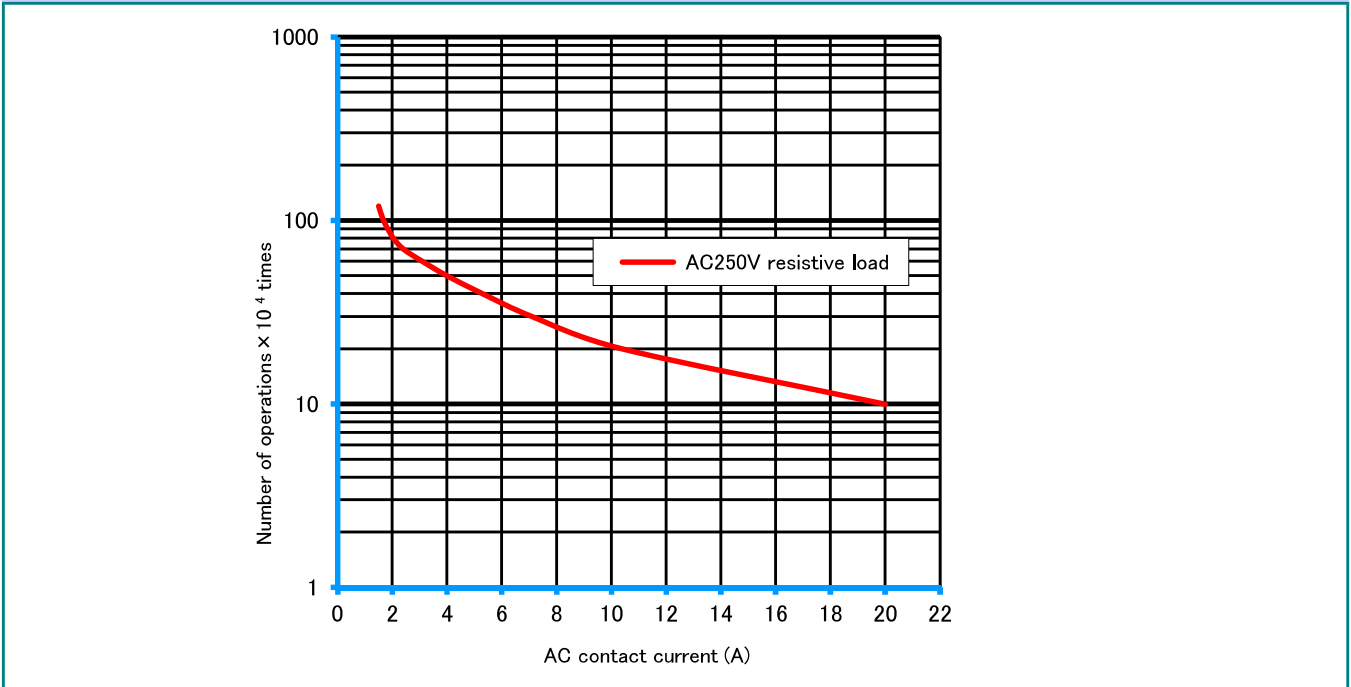
Maximum switching capacity

DI1U/DI1U-H



Durability curve

DI1U/DI1U-H



● 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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