

# 4133

AUTOMOTIVE RELAY

## Features

- Miniature heavy duty general purpose automotive relay  
Dimensions: 20.4×15.1×22.0(mm)
- Switching capacity 35A
- 1 Form A and C contact configurations
- Operating ambient temperature: 125°C
- Applications: air compressor, heater, fan motor, blower fan, defogger, etc

## Relay Picture



## ORDERING INFORMATION

4133 H - S - DC12V - A - R

Model	Coil Sensitivity	Enclosure	Coil Voltage	Contact Form	Parallel Electronic Component
	H-High Sensitivity Blank-Standard (Refer to "COIL DATA")	S - Plastic Sealed Type	DC12V DC24V	A - 1 Form A C - 1 Form C	Blank - Standard R- With Resistor (12V-680Ω,24V-2700Ω) D- With Diode

## SPECIFICATION

### CONTACT DATA

Contact Form	1 Form A, 1 Form C	
Contact Material	Ag Alloy	
Contact Rating	Refer to table 1	
Contact Resistance	Max. 50mΩ ( 6VDC 1A)	
Load	Max. Switching Voltage	28VDC
	Max. Switching Current	35A
	Max. Make Current	NO: 90A NC: 20A
	Max. Switching Power	490W (12VDC) 420W (24VDC)
Life	Electrical	100,000 operations
	Mechanical	1,000,000 operations

### COIL DATA

Nominal Coil Power	1.5W(12V), 1.8W(24V)
Nominal Coil Power(With Resistor)	1.7W(12V), 2.0W(24V)
Nominal Coil Power(High Sensitivity)	1.1W(12V)
Nominal Coil Power(High Sensitivity) (With Resistor)	1.3W(12V)

Table 1 (Contact Rating)

Type		Coil Voltage 12VDC	Coil Voltage 24VDC
Rating (Resistive Load)	Contact Rating	NO: 35A 14VDC NC: 20A 14VDC	NO: 15A 28VDC NC: 8A 28VDC
	125°C Switching Current	NO: 20A(14VDC) NC: 10A(14VDC)	NO: 15A(28VDC) NC: 8A(28VDC)

### GENERAL DATA

Insulation Resistance	Min. 100MΩ 500VDC	
Dielectric Strength	Between open contacts	550VAC, 1min
	Between coil and contacts	550VAC, 1min
Operate Time	Max. 10ms	
Release Time	Max. 10ms	
Operating Temperature	-40°C to +125°C	
Humidity	35~95%RH, +40°C	
Shock Resistance	Endurance	1,000m/s <sup>2</sup>
	Misoperation	100m/s <sup>2</sup>
Vibration Resistance	Endurance	10~55Hz, 1.5mm double amplitude
	Misoperation	10~55Hz, 1.5mm double amplitude
Weight	Approximately 18.0g	

Note:Data shown are of initial value

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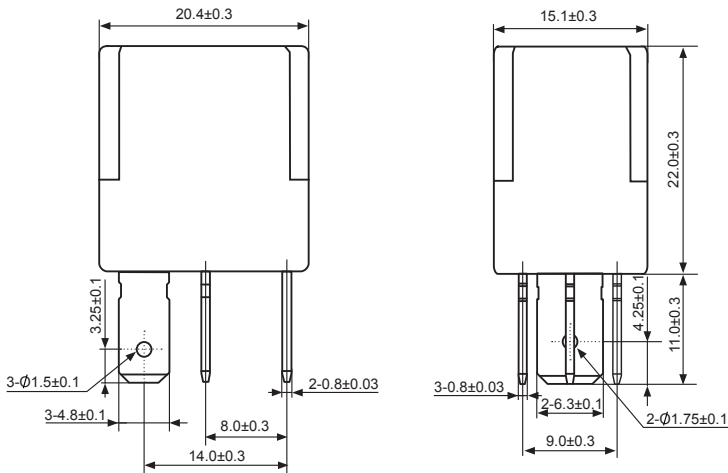
## COIL DATA

Ambient Temperature: 23°C

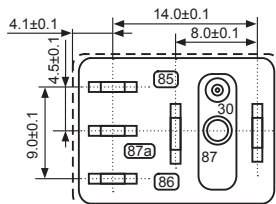
Model	Nominal Voltage VDC	Coil Resistance $\Omega$ +/-10%	Parallel Resistance $\Omega$ +/-5%	Equivalent Resistance $\Omega$ +/-10%	Operate Voltage $\leq$ VDC	Release Voltage $\geq$ VDC	Coil Power W
4133-S-DC12V	12	96	-	-	7.2	1.2	1.5
4133-S-DC24V	24	320	-	-	14.4	2.4	1.8
4133-S-DC12V(R)	12	96	680	84.1	7.2	1.2	1.7
4133-S-DC24V(R)	24	320	2700	286	14.4	2.4	2.0
4133H-S-DC12V	12	130	-	-	7.2	1.2	1.1
4133H-S-DC12V(R)	12	130	680	109	7.2	1.2	1.3

## OUTLINE, WIRING DIAGRAM, MOUNTING HOLE LAYOUT (UNIT: mm)

### Outline



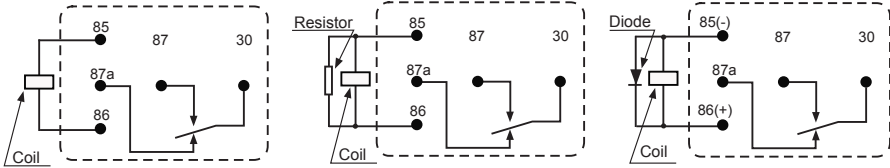
### Mounting Hole Layout (Bottom View)



Remark: Form A: Without 87a terminal  
Form C: With all terminals

## OUTLINE, WIRING DIAGRAM, MOUNTING HOLE LAYOUT (UNIT: mm)

Wiring Diagram  
(Bottom View)



Remark: Form A: Without 87a terminal  
Form C: With all terminals

## REFERENCE DATA

### Coil Temperature Rise

