Automotive Relays





Coil Data

Nominal Voltage : 12 V dc

Coil Resistance : Refer to coil data chart
Operate Voltage : Refer to coil data chart
Release Voltage : Refer to coil data chart

Coil Power : 1,600 mW

Contact Data

Contact Form : C-1 form C
Contact Material : Ag Alloy

Contact Rating : 30 A 14 V dc Resistive (1 Form C)

Maximum Switching Voltage : 75 V dc Maximum Switching Current : 40 A

Maximum Switching Power : 420 W (1 Form C)

Maximum Load Current : 14 V dc load voltage

Load	С		
Loau	NO	NC	
Contact Rating Current	40 A		
Maximum Make Current	100 A	30 A	
Maximum Break Current	40 A		

Contact Resistance : \leq 100 m Ω (6 V dc 1 A)

Life

Electrical : 100,000 operations
Mechanical : 10,000,000 operations

General Data

Minimum Insulation Resistance $\,$: 100 M Ω 500 V dc

Dielectric Strength : 500 V ac, 1 min between open contacts

: 500 V ac, 1 min between coil and contacts

Maximum Operate Time : 10 ms

Maximum Release Time : 10 ms

Operate Temperature : -40 to +85°C





Automotive Relays



General Data

Shock Resistance

 $\begin{array}{lll} \text{Endurance} & : 1,000 \text{ m/s}^2 \\ \text{Misoperation} & : 100 \text{ m/s}^2 \end{array}$

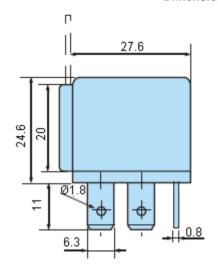
Vibration Resistance

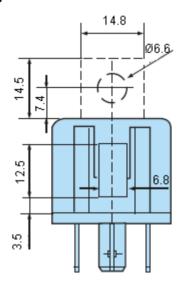
Endurance : 10-55 Hz, double amplitude 1.5 mm
Misoperation : 10-55 Hz, double amplitude 1.5 mm
Weight : Approximately 37 g (With Shoulder)
: Approximately 32 g (No Shoulder)

Coil Data Chart 20°C

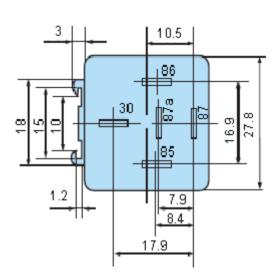
Nominal Voltage	Coil Resistance	Operate Voltage	Release Voltage	Coil Power
V dc	Ω ±10%	≤ V dc	≥ V dc	mW
12	90	8.4	1.2	

Dimensions

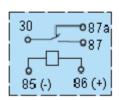




Mounting Hole Layout



Wiring Diagrams



Dimensions: Millimetres



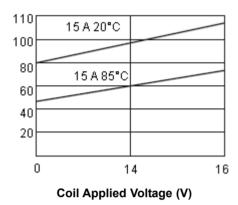
Automotive Relays



Characteristic Data

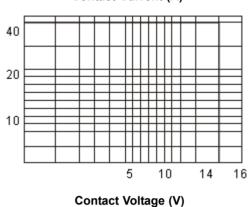
Temperature Rise

Temperature Rise (°C)



Maximum Switching Power

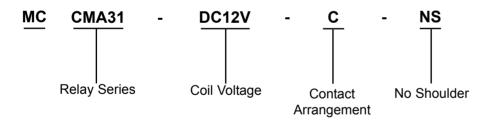




Part Number Table

Description	Part Number	
Relay, Auto, SPDT, 12 V dc, 1.6 W	MCCMA31-DC12V-C-NS	
Relay, Auto, SPDT, 12 V dc, 1.6 W, Shoulder	MCCMA31-DC12V-C	

Part Number Explanation:



Contact Arrangement : C = C-1 Form C

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