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 : 1.5 W (12 V)

Contact Data

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

Contact Rating

7	12 V dc Coil Voltage		
Detine (Decistive Load)	Contact Rating	N O : 35 A 14 V dc N C : 20 A 14 V dc	
Rating (Resistive Load)	85°C Switching Current	N O : 20 A (14 V dc) N C : 10 A (14 V dc)	

 $\begin{array}{ll} \mbox{Maximum Switching Power} & : 490 \ \mbox{W (12 V coil voltage)} \\ \mbox{Maximum Contact Resistance} & : 50 \ \mbox{m}\Omega \ \mbox{(6 V dc 1 A)} \end{array}$

Life

Electrical : 1,00,000 operations
Mechanical : 1,000,000 operations

General Data

Minimum Insulation Resistance : 20 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

Shock Resistance

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

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General Data

Vibration Resistance

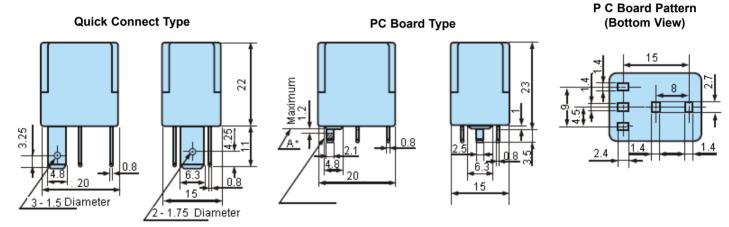
Endurance : 10-55 Hz, double amplitude 1.5 mm Misoperation : 10-55 Hz, double amplitude 1.5 mm

Weight : Approximately 18 g

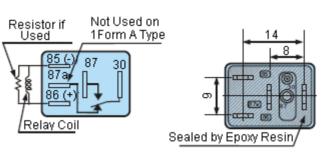
Coil Data Chart 20°C

Coil Voltage V dc	Coil Resistance Ω ±10%	Shunt-wound Resistance (Ω)	Operate Voltage ≤ V dc	Release Voltage ≥ V dc	Coil Power mW
12	96	680	7.2	1.2	1,500

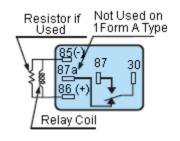
Dimensions



Schematic (Bottom View)



Schematic (Bottom View)



Dimensions : Millimetres

Dimension	General Tolerance		
Maximum 1 mm	±0.1		
1 to 3 mm	±0.2		
Minimum 3 mm	±0.3		



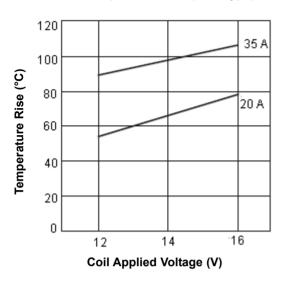
Sealed by Epoxy Resin

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Characteristic Data

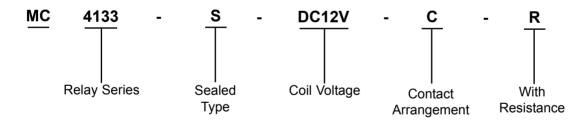
Coil Temperature Rise (12 V Type)



Part Number Table

Description	Part Number		
Relay, Auto, SPDT, 12 V dc,1.5 W	MC4133-S-DC12V-C		
Relay, Auto, SPDT, 12 V dc, 1.5 W, 680 Ohm	MC4133-S-DC12V-C-R		

Part Number Explanation:



Contact Arrangement : C = C-1 Form CWith Resistance : $R = 12 \text{ V} - 680 \Omega$

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