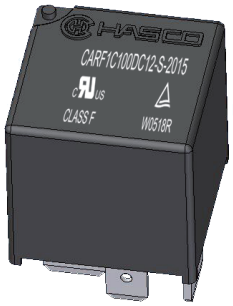
CAR100 SERIES

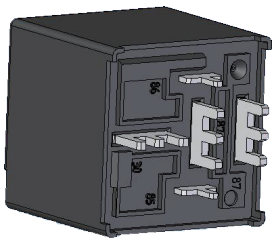
AUTOMOTIVE RELAY

File No.:E75887 *

File No.:R 50304236

RoHS Compliant





CONTACT RATINGS

Contact Arrangement	1A, 1C
Contact Resistance	≤50mΩ (1A 24VDC)
Contact Material	AgSnO
Contact Rating(Resistive)	N.O.:100A/14VDC N.C.:100A/14VDC
Max. Switching Voltage	75VDC
Max. Switching Current	100A
Max. Switching Power	1400W
Mechanical Life	1×10^6 operations
Electrical Life	See more details at "safety approval ratings"

CHARACTERISTICS

Insulation Resistance		100MΩ (at 500VDC)
Dielectric Strength	Between coil & contacts	500VAC 1min
	Between open contacts	500VAC 1min
Operate time (at nomi. volt.)		≤12ms
Release time (at nomi. volt.)		≤5ms
Humidity		85% RH
Operation temperature		-40°C~+85°C
UL Class F		Insulation System Class F
Shock Resistance		294m/s^2
Vibration resistance		10Hz ~ 55Hz 1.27mm DA
Unit weight		Approx. 46g
Construction		Sealed Type, Dust Cover Type, Flux Tight Type

Notes: The data shown above are initial values.

COIL

Coil Power	1800mW

ORDERING INFORMATION

CAR F 1C P 100 DC12 - S - 680R - D - 2015 - XXXX

Model

F:Class F
Blank:Class B

1A=1 Form A
1C=1 Form C

P:PC Pin
Blank:Quick Connect

100:100A

Coil Voltage

S:Sealed Type Blank:Dust Cover Type
E:Flux Tight Type

Resistor 680Ω 12V Coil & 2700Ω 24V Coil
Blank:No Resistor

D:Diode Blank:No Diode

2015:Special Type Blank:Standard Type

Customer Code

Notes:
1. PC board assembled with dust cover type and flux tight type relays can not be washed and/or coated.
2. Dust cover type and flux tight type relays can not be used in the environment with dust, or H_2S, SO_2, NO_2 or similar gaseous environment etc.
3. -2015=UL RECOGNIZED
4. It is recommended when switching maximum load the vent hole be opened by removing the protrusion for removing inside gasses created by heat.

COIL DATA at 25°C

Nominal Voltage VDC	Operate Voltage (Max.) VDC	Release Voltage (Min.) VDC	*Max. Allowable Voltage VDC	Coil Resistance Ω±10%
6	4.2	0.6	7.8	20
12	8.4	1.2	15.6	80
24	16.8	2.4	31.2	320

Note:"*Max Allowable Voltage": The relay coil can endure max allowable voltage for a short period time only.

SAFETY APPROVAL RATINGS

UL&CUL	N.O.:100A 14VDC, 50°C, 6×10^3 OPS N.O.:70A 14VDC, 50°C, 6×10^3 OPS(CARF1AP100DCXX-S-2015-5352)
TüV	N.O./N.C.:100A/14VDC, 1×10^5 OPS CARFIAP100DC24-S-2015-5352:70A/14VDC, 85°C, 2×10^4 OPS

NOTES: 1. All values without specified temperature are at 25°C.
2. The above lists the typical loads only. Other loads may be available upon request.

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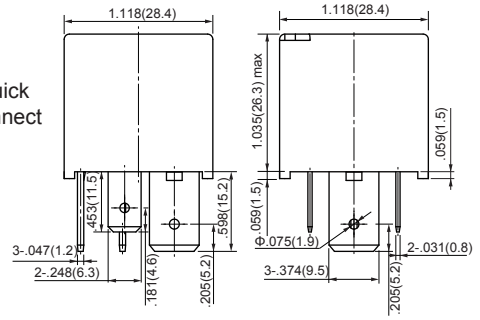
OUTLINE DIMENSIONS, WIRING DIAGRAM AND LAYOUT.

Unit: inch(mm)

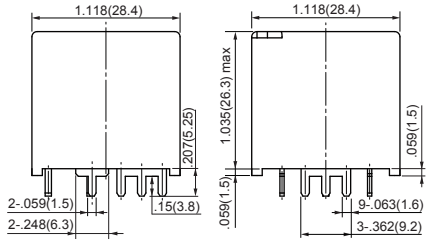
Outline Dimensions

Standard Type

Quick Connect

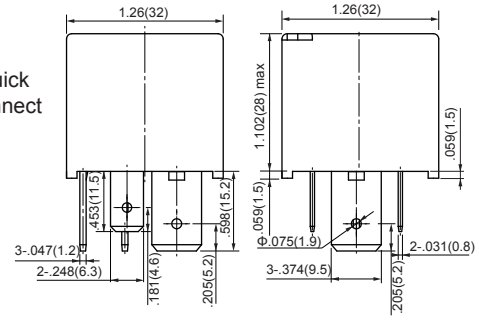


PC Pin



Special Type

Quick Connect



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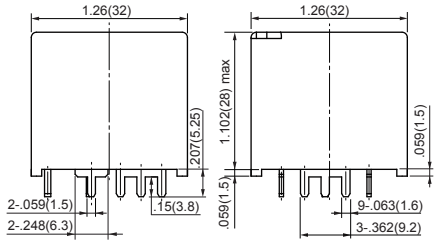
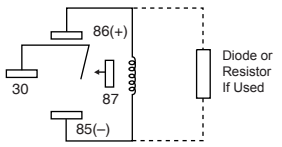
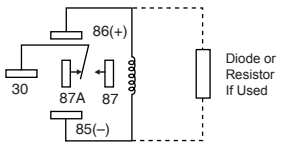


Wiring Diagram (Bottom view)



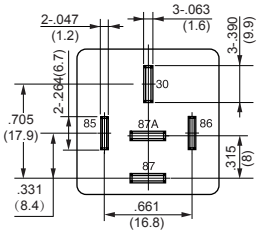
1A



1C

Layout (Bottom view)

Quick Connect



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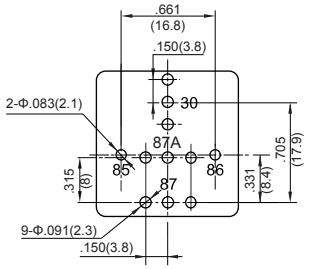

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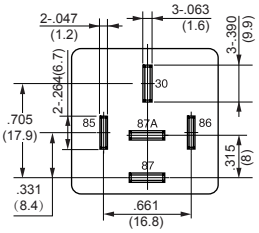

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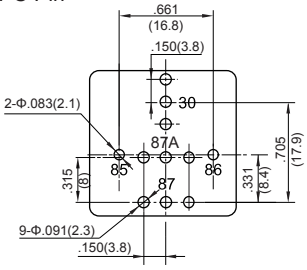

Unless otherwise specified tolerances are:		
≤1mm	＞1mm and ≤5mm	＞5mm
±0.2mm	±0.3mm	±0.4mm

* The tolerance without indicating for PCB layout is always ±0.1mm.

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CAR100 SERIES

AUTOMOTIVE RELAY

PACKAGING SPECIFICATION

BLISTER BOX	INNER CARTON	OUTER CARTON	OUTER CARTON SIZE
20PCS	100PCS	400PCS	L375mm*W280mm*H400mm

APPLICATION GUIDELINES

Automatic Wave Soldering

* Wave solder is the optimum method for soldering.
* Adjust the level of solder so that it does not overflow onto the top of the PC board.
* Unless otherwise specified, solder under the following conditions depending on the type of relay.

Preheat time 20°C-100°C	Rising slope 20°C-120°C	Decreasing slope Peak-150°C	Slodering temperature 255°C-265°C
90±5 seconds	＜3°C/s	＜4°C/s	3~5s

Hand Soldering

* Keep the tip of the soldering iron clean.

Solder Iron	30W or 60W
Iron Tip Temperature	Approx. 350°C 662°F
Solder Time	Within approx. 3 seconds

* Immediate air cooling is recommended to prevent deterioration of the relay and surrounding parts due to soldering heat.
* Although the sealed type relay can be cleaned, avoid immersing the relay into cold liquid (such as washing solvent) immediately after soldering. Doing so may deteriorate the sealing performance.

Discard the dropped product