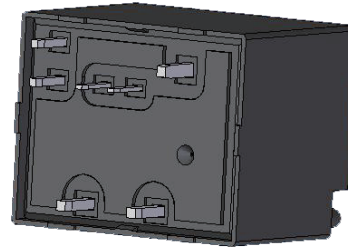


CARB SERIES

AUTOMOTIVE RELAY



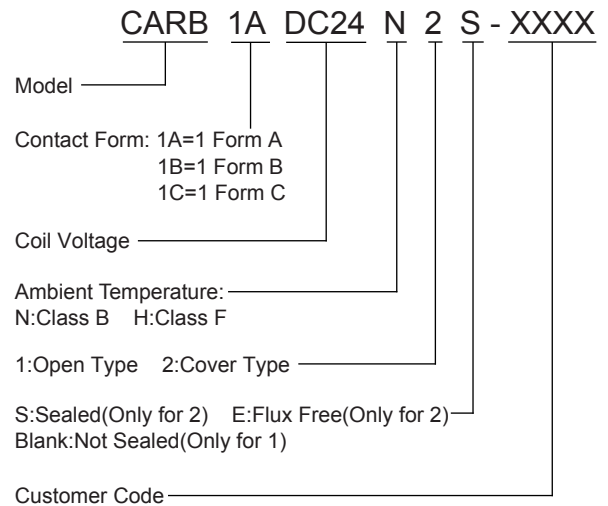
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CONTACT RATINGS

Contact Arrangement	1A, 1B, 1C
Contact Resistance	≤50mΩ (1A 24VDC)
Contact Material	AgSnO
Contact Rating(Resistive)	N.O.:30A/240VAC, 20A/28VDC N.C.:15A/240VAC, 15A/28VDC
Max. Switching Voltage	380VAC/75VDC
Max. Switching Current	30A
Max. Switching Power	7200VA/560W
Mechanical Life	1×10 ⁷ operations
Electrical Life	See more details at "safety approval ratings"

ORDERING INFORMATION



CHARACTERISTICS

Insulation Resistance	100MΩ (at 500VDC)	
Dielectric Strength	Between coil & contacts	1500VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)	≤15ms	
Release time (at nomi. volt.)	≤10ms	
Operation temperature	-40°C~+85°C	
UL Class B/F	Insulation System Class B/F	
Shock Resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance	10Hz ~ 40Hz 1.27mm DA	
Unit weight	Open:Approx.16g Sealed:Approx.20g	
Construction	Sealed Type, Open Type, Flux Tight Type	

Notes:1) The data shown above are initial values.
2) Please find coil temperature curve in the characteristic curves.

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 H₂S, SO₂, NO₂ or similar gaseous environment etc.

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	7.2	19
9	6.3	0.9	10.8	50
12	8.4	1.2	14.4	90
24	16.8	2.4	28.8	380
48	33.6	4.8	57.6	2300

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

This datasheet is for customers' reference. All the specifications are subject to change without notice.



* SINCE 1976 *

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RELAYS

CARB SERIES

AUTOMOTIVE RELAY

COIL

Coil Power	6V:1900mW
	9~12V:1600mW
	24V:1500mW
	48V:1000mW

SAFETY APPROVAL RATINGS

UL&CUL	N.O.:30A/240VAC, Resistive, 6×10 ³ OPS
	N.O.:20A/28VDC, Resistive, 6×10 ³ OPS
	N.O.:10A/240VAC, AC Electrical Discharge Lamps(Ballast)
	N.C.:15A/240VAC, Resistive, 6×10 ³ OPS
	N.C.:15A/28VDC, Resistive, 6×10 ³ OPS
	N.C.:7.5A/240VAC, AC Electrical Discharge Lamps(Ballast)

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.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT.

Unit: inch(mm)

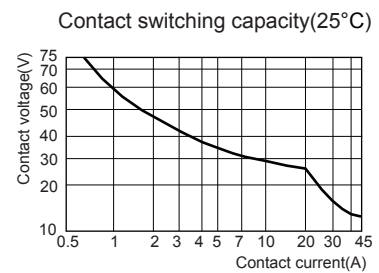
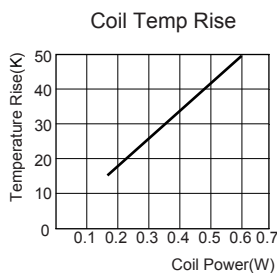
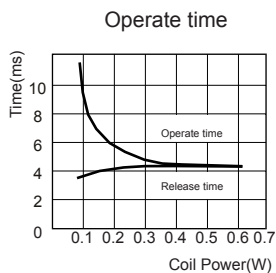
Outline Dimensions

Wiring Diagram (Bottom view)

PCB Layout (Bottom view)

Open Type			
Unless otherwise specified tolerances are:			
≤1mm	> 1mm and ≤5mm	> 5mm	* The tolerance without indicating for PCB layout is always ±0.1mm.
±0.2mm	±0.3mm	±0.4mm	

CHARACTERISTIC CURVES



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RELAYS

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PACKAGING SPECIFICATION

BLISTER BOX	OUTER CARTON	OUTER CARTON SIZE
20PCS	600PCS	L615mm*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

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