

# CAR&CART30/40 SERIES

# Automotive Relay 30,40 Amp



File No.:E75887



## FEATURES

- High contact rating 40A
- High temperature design
- 1 Form A and 1 Form C arrangements
- Quick connect and P.C.Board terminals
- Mounting Tab option

## CONTACT RATINGS

Contact Arrangement	1A, 1C
Contact Resistance	50mΩ (1A 24VDC)
Contact Material	Silver Alloy
Contact Rating(Resistive)	NO:30/40A 14VDC NC:20/30A 14VDC
Max. Switching Voltage	75VDC
Max. Switching Current	40A
Max. Switching Power	560W
Mechanical Life	1×10 <sup>6</sup> operations
Electrical Life	1×10 <sup>5</sup> operations

## ORDERING INFORMATION

CAR T 1C P 40 DC12-S-SH-680R-D-M-XXXX

Model

T:Mounting Tab

Nil:No Mounting Tab

1A=1 Form A

1C=1 Form C

P:PC Pin

Nil:Quick Connect

40:40A 30:30A

Coil Voltage

S:Sealed Type Nil:Dust Cover Type

E:Flux Free Type

SH:Shrouded cover W:Weatherproof cover

Resistor 680Ω 12V Coil & 2700Ω 24V Coil

D:Diode

M:Metal tab Nil:Plastic tab

Customer code

## CHARACTERISTICS

Insulation Resistance	100MΩ (at 500VDC)	
Dielectric Strength	Between coil & contacts	500VAC 1min
	Between open contacts	500VAC 1min
Operate time (at nomi. volt.)	≤10ms	
Release time (at nomi. volt.)	≤10ms	
Ambient temperature	-40°C ~ +85°C	
Shock Resistance	147m/s <sup>2</sup>	
Vibration resistance	10Hz ~ 40Hz 1.27mm DA	
Unit weight	Approx. 30g	
Construction	Sealed Type, Dust Cover Type, Flux Free Type	

Notes:1) The data shown above are initial values.

2) Please find coil temperature curve in the characteristic curved below.

## SAFETY APPROVAL RATINGS

UL&CUL	NO:40A/14VDC, 15A/24VDC NC:30A/14VDC, 15A/24VDC
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## COIL DATA

at 20°C

Nominal Voltage VDC	Pick-up Voltage (Max.) VDC	Drop-out 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
48	33.6	4.8	62.4	1280

## COIL

Coil Power	1800mW
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This datasheet is for customers' reference. All the specifications are subject to change without notice.



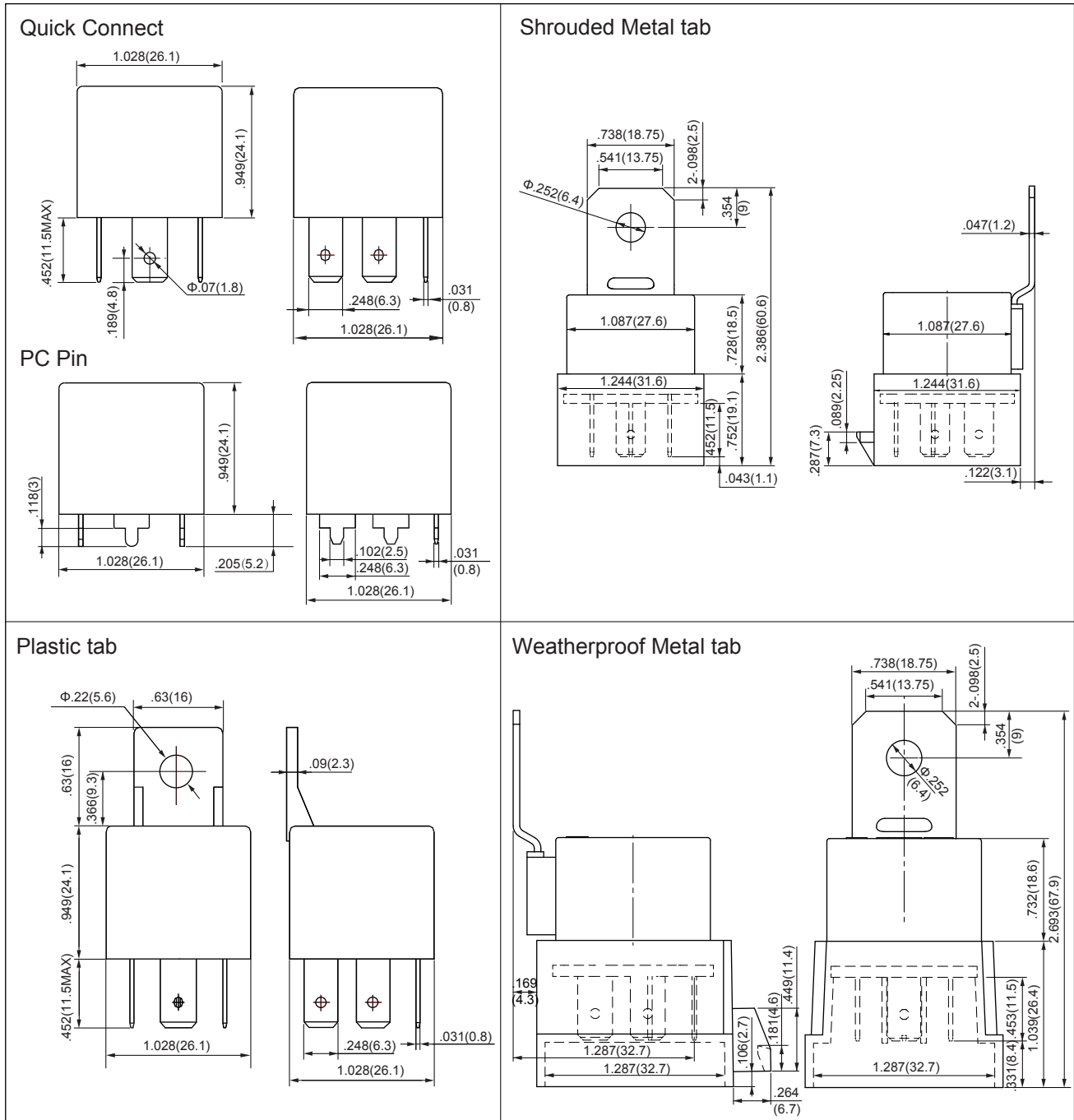
# RELAYS

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## OUTLINE DIMENSIONS

Unit: inch(mm)



Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ .

2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

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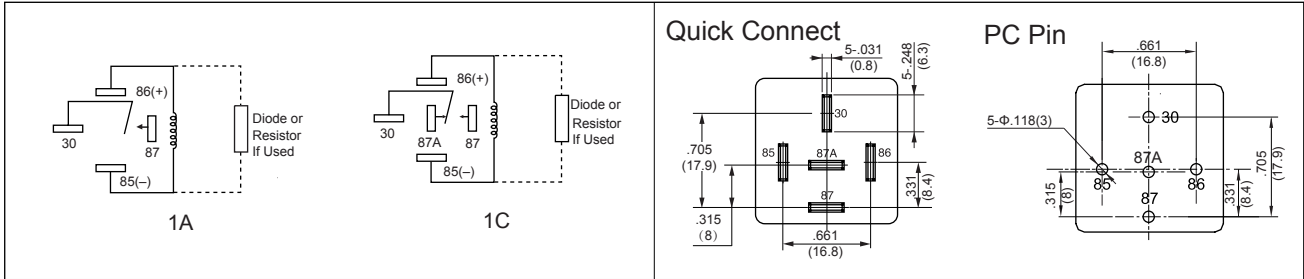
# Automotive Relay 30,40 Amp

## WIRING DIAGRAM AND PCB BOARD LAYOUT.

Unit: inch(mm)

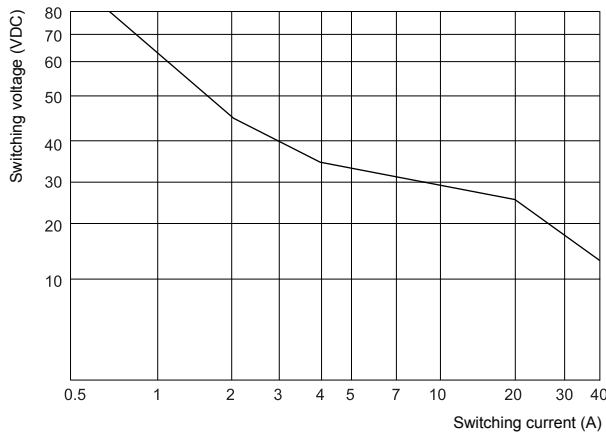
Wiring Diagram  
(Bottom view)

PCB Layout  
(Bottom view)



## CHARACTERISTIC CURVES

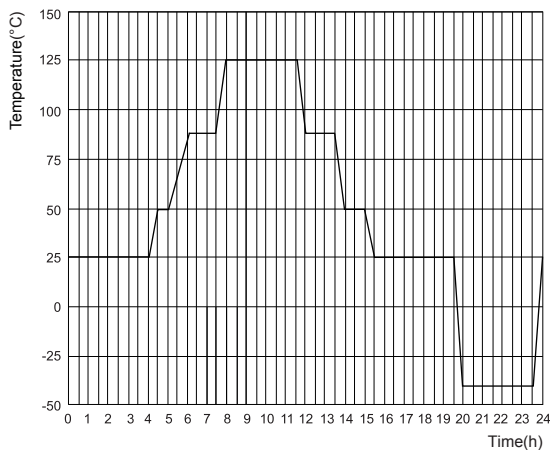
1. Load limit curve(at 23°C)



- (1) This chart takes NO contact, resistive load as example.
- (2) The load and electrical endurance tests are made according to "CONTACT DATA" parameters' table. If actual load voltage, current, or operate frequency is different from "CONTACT DATA" table, please arrange corresponding tests for confirmation.

2. Ambient temperature curve of the electrical endurance test

Ambient temp. curve (one cycle)



- (1) The minimum temperature is -40°C.
- (2) The maximum temperature is 125°C.

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