

# 40/30 Amp Automotive Plug-In / PCB Mini ISO Relay

**PC792A**



## FEATURES

- Most Popular Automotive Relay Footprint
- Contact Switching Capacity up to 120 Amps
- 40 Amps Continuous Carrying Current
- 125°C Operating Temperature
- Internal Diodes or Resistors Available
- Sockets Available
- Lead Free and RoHS Compliant

## CONTACT RATINGS 14 VDC at 25°C

Contact Form	1 Form A, 1 Form AA or 1 Form C	
	Normally Open	Normally Closed
Max Switching Current	Make 120 A <sup>(1)</sup>	Make 90 A <sup>(1)</sup>
	Break 40 A	Break 30 A
Max Continuous Current	40 A @ 25°C	30 A @ 25°C
	30 A @ 85°C	22.5 A @ 85°C
Max Continuous Current 1 Form U and 1 Form AA	2 X 20 Amps (at 85°C)	
Max Switching Voltage	75 VDC	
Max. Switching Power	630 W	
Minimum Load	0.1A @ 12 VDC	

## CONTACT RATINGS 28 VDC at 25°C

Contact Form	1 Form A, 1 Form AA or 1 Form C	
	Normally Open	Normally Closed
Max Switching Current	Make 60 A <sup>(1)</sup>	Make 45 A <sup>(1)</sup>
	Break 20 A	Break 15 A
Max Continuous Current	20 A @ 25°C	15 A @ 20°C
	15 A @ 85°C	11.25 @ 20°C
Max Continuous Current 1 Form U and 1 Form AA	2 X 15 Amps (at 85°C)	
Max Switching Voltage	75 VDC	
Max Switching Power	630 W	
Minimum Load	0.1A @ 24 VDC	

## CHARACTERISTICS

Operate Time	7 msec Typical
Release Time	2 msec Typical
Insulation Resistance	100 MΩ Min at 500VDC, 50% RH
Dielectric Strength	500 Hz 500 V Between Contacts 500 Hz 750 V Between Coil and Contact
Shock Resistance	147 m/s <sup>2</sup> 11ms
Vibration Resistance	10 Hz—40 Hz Double Amplitude 1.5 mm
Terminal Strength	8N 4N (PC type)
Power Consumption	1.6 W, 1.9 W, 2.3 W, 2.6 W

## CONTACT DATA

Material	AgSnO <sub>2</sub>	
Initial Contact Resistance	100 MΩ Max @ 0.1 A 6 VDC	
Service Life	Electrical	1 x 10 <sup>6</sup> Operations
	Mechanical	1 x 10 <sup>7</sup> Operations

## CHARACTERISTICS Continued

Solderability	235°C ± 2°C 3 s ± 0.5 s
Operating Temperature Range	- 40 to 125°C
Storage Temperature Range	- 40 to 155°C
Weight	31 grams

<sup>(1)</sup>With current load applied for a maximum of 3 seconds at a maximum duty cycle of 10%.

## ORDERING INFORMATION

Example:	PC792A	-1C	-C	-12	S		N	-X
Model:	<b>PC792A</b>							
Contact Form:	1A, 1AA (1 Form with 2 #87 Terminals) 1C, 1U (2 X 1A, 87 & 87b Isolated)							
Case Style:	C: Plug-In; C1: Plastic Bracket; C2: Metal Bracket C3: (S only) Weatherproof Case with Metal Brackets; P: PC Pins							
Coil Voltage:	6, 12, 24, 48							
Enclosure:	C: Dust Cover; S: Sealed							
Coil Power:	Nil: 1.6 W*; 1.9: 1.9 W; 2.3: 2.3 W; 2.6: 2.6 W							
Parallel Component:	Nil: None; D: Diode; R: Resistor							
Terminal Plating:	Nil: PC Pin Version; N: Nickel Plated Terminals Standard on all Plug In Models							
RoHS Compliant:	<b>-X</b>							

Resistor Values (1/4 Watt):  
6V -180 ohm  
12V - 680 ohm  
24V - 2,700 ohm  
Diode: 1N4005

\*1.6 Industry Standard Coil

Box Quantity: 400; Inner Box: 100

**COIL DATA**

Coil Voltage (VDC)		Coil Resistance Ohms ± 10%				Must Operate Voltage Max (VDC)	Must Release Voltage Min. (VDC)
Rated	Max	1.6 W*	1.9 W	2.3 W	2.6 W		
6	7.8	22.5	19.0	15.6	13.8	3.9	0.6
9	11.7	50.6	NA	NA	NA	5.9	0.9
12	15.6	90.0	75.8	62.6	55.4	7.8	1.8
24	31.2	360.0	303.2	250.4	221.5	15.6	2.4
48	62.4	1440.0	NA	NA	NA	31.2	4.8

\*1.6 W Industry Standard Coil

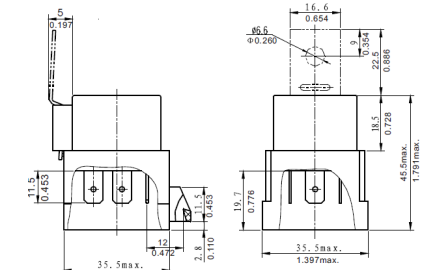
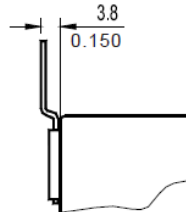
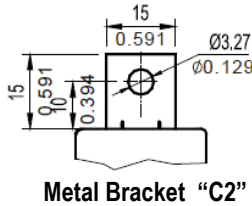
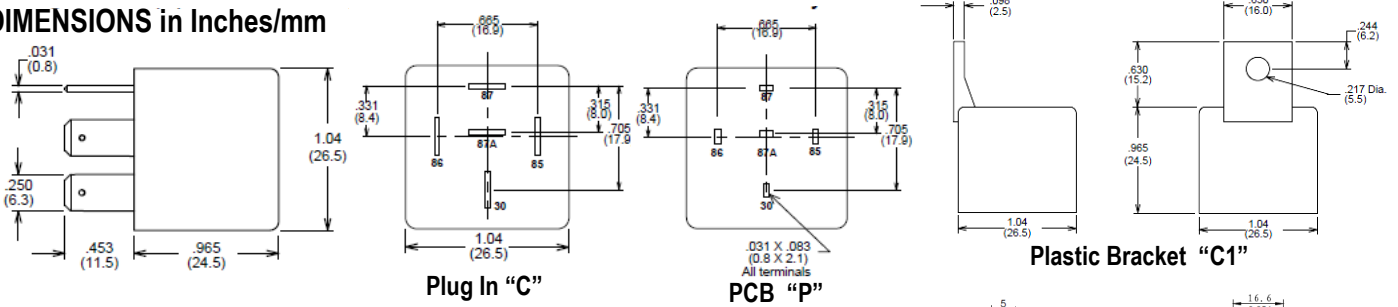
**NOTES:**

The use of any coil voltage less than the rated voltage will compromise the operation of the relays.

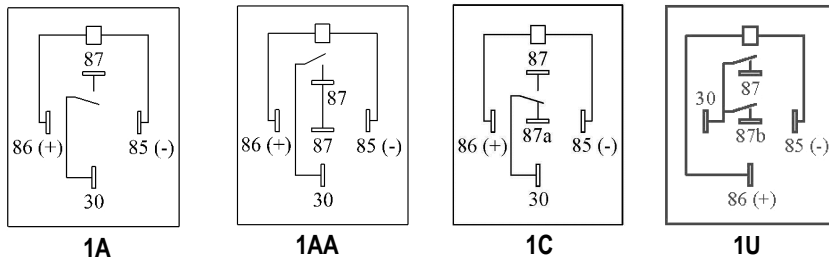
Must Operate Voltage is listed for test purposes only and is not to be used as design criteria.

Pickup and release voltages are for test purposes only and are not to be used as design criteria.

**DIMENSIONS in Inches/mm**



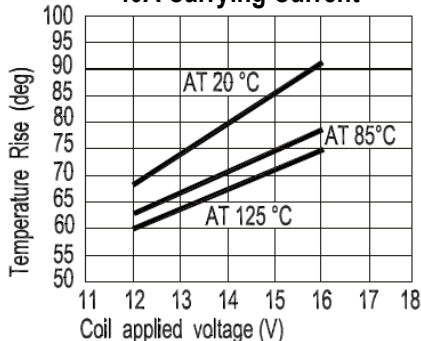
**Weatherproof Case "C3"**



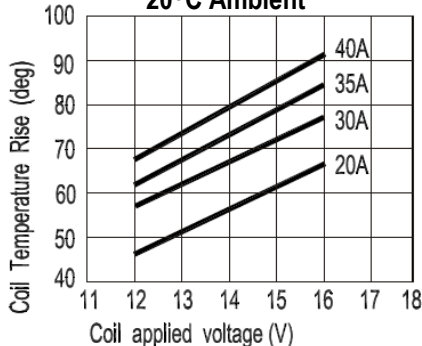
**Wiring Diagrams**

Notes:  
 Contact Forms 1A, 1AA, 1C & 1U shown  
 On Contact Form A Pin 87a is Omitted  
 Tolerances ± .010 unless otherwise noted

**Coil Temperature Rise @ 40A Carrying Current**



**Coil Temperature Rise 20°C Ambient**



**Max Value for Switching Capacity**

