

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

# PC792B



## FEATURES

- Ignition Protected\* | SAE J1171 | UL 1500 | ISO 8846
- Copper Contact Leads for Enhanced Heat Dissipation
- 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 120 A <sup>(1)</sup>
	Break 40 A	Break 40 A
Max Continuous Current	40 A @ 25°C	40 A @ 25°C
	30 A @ 85°C	30 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	

## 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
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

\*Sealed with 6,9,12 or 24 VDC, 1.6 Watt Coil Versions

## ORDERING INFORMATION

Example: PC792B -1C -C -12 S N -X

Model: **PC792B**

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; **S1:** Flux Tight<sup>(2)</sup>

Coil Power: **Nil:** 1.6 W<sup>(3)</sup>; **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: **-X**

(2) Flux Tight relays are constructed such that Flux will not enter the relay in an automated soldering process, they are NOT Suitable for water wash cleaning

(3) 1.6 W Industry Standard Coil

## 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 60 A <sup>(1)</sup>
	Break 20 A	Break 20 A
Max Continuous Current	20 A @ 25°C	20 A @ 25°C
	15 A @ 85°C	15 A @ 85°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	

## 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>5</sup> Operations
	Mechanical	1 x 10 <sup>7</sup> Operations

## CHARACTERISTICS Continued

Solderability	260°C for 5 seconds
Operating Temperature Range	-40°C to 125°C
Storage Temperature Range	-40°C to 155°C
Weight	31 grams

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

See SC792 for available sockets

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

Box Quantity: 400; Inner Box: 100

**COIL DATA**

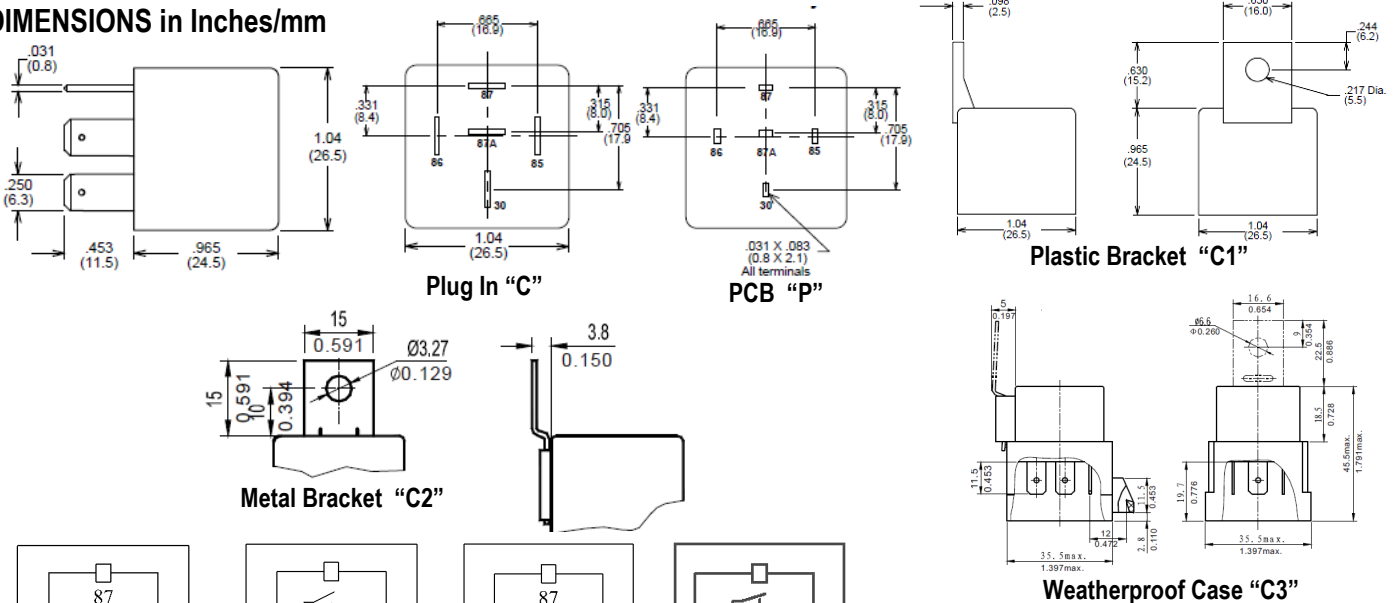
Coil Voltage (VDC)		Coil Resistance (Ohms ± 10%)				Must Operate Voltage Max (VDC)	Must Release Voltage Min. (VDC)
Rated	Max	1.6 W <sup>(2)</sup>	1.9 W	2.3 W	2.6 W		
6	7.8	22.5	19.0	15.6	13.8	3.9	0.6
9	11.7	50.6	NA	NA	NA	5.9	0.9
12	15.6	90.0	75.8	62.6	55.4	7.8	1.8
24	31.2	360.0	303.2	250.4	221.5	15.6	2.4
48	62.4	1,440.0	NA	NA	NA	31.2	4.8

(2) 1.6 W Industry Standard Coil

**NOTES:**

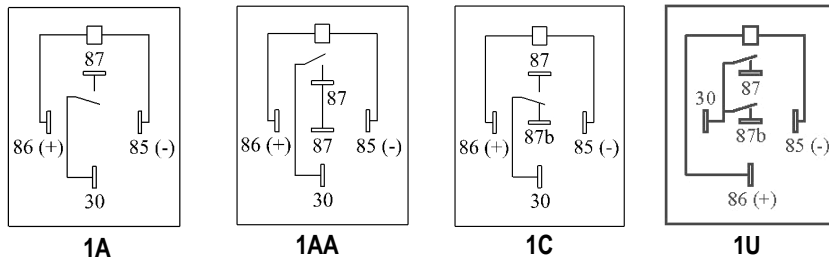
The use of any coil voltage less than the rated voltage will compromise the operation of the relays.  
 Must Operate Voltage is listed for test purposes only and is not to be used as design criteria.  
 Pickup and release voltages are for test purposes only and are not to be used as design criteria.

**DIMENSIONS in Inches/mm**

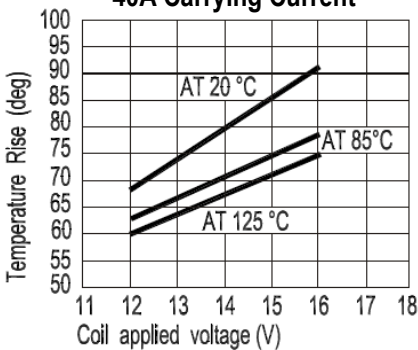


**Wiring Diagrams**

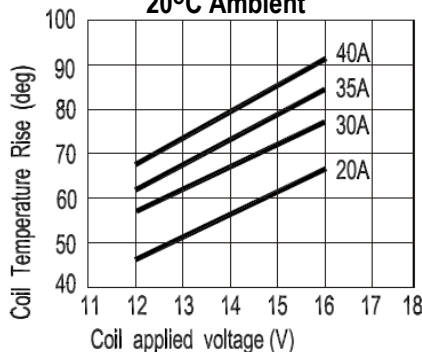
Notes:  
 Contact Forms 1A, 1AA, 1C & 1U shown  
 On Contact Form A Pin 87a is Omitted  
 Tolerances ± .010 unless otherwise noted



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



**Coil Temperature Rise 20°C Ambient**



**Max Value for Switching Capacity**

