

# 80/60 Amp Automotive Plug-In / PCB Maxi ISO Relay

**PC796**



## FEATURES

- Designed for H Bridge Motor Drive Applications Utilizing the NC Contact for Dynamic Braking
- Contact Material, Coil Power and Contact Gaps Optimized
- NC Contact Bounce Significantly Reduced
- Contact Switching Capacity up to 240 Amps
- 80 Amps @ 14VDC Continuous Carrying Current
- Plain Case, Bracket or PCB Options
- Compatible with Socket SC795
- RoHS Compliant

## CONTACT RATINGS 14 VDC at 25°C

Contact Form	1 Form C	
	Normally Open	Normally Closed
Max Switching Current	Make 240 A <sup>(1)</sup>	Make 180 A <sup>(1)</sup>
	Break 80 A	Break 60 A
Max Switching Power	1,120 W	
Max Switching Voltage	75 VDC	
Max Continuous Current	80 A @ 25°C	60 A @ 25°C
	60 A @ 85°C	45 A @ 85°C
Minimum Load	0.5A @ 12VDC	

## CONTACT RATINGS 28 VDC at 25°C

Contact Form	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 Switching Power	1,120 W	
Max Switching Voltage	75 VDC	
Max Continuous Current	40 A @ 25°C	30 A @ 25°C
	30 A @ 85°C	22.5 A @ 85°C
Minimum Load	0.5A @ 12VDC	

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

## CHARACTERISTICS

Operate Time	7 msec Typical
Release Time	2 msec Typical
Insulation Resistance	100 MΩ min @ 500VDC
Dielectric Strength	50 Hz 500 V <sub>RMS</sub> 1 min. Between Contact and Coil
	50 Hz 500 V <sub>RMS</sub> 1 min. Between Contacts
Shock Resistance	147 m/s <sup>2</sup> 11 msec
Vibration Resistance	10-40 Hz Double Amplitude 1.5mm
Terminal Strength	8 N, 4N (PC Type)
Solderability	260°C for 5 seconds
Power Consumption	2.3 W

## CONTACT DATA

Material	AgSnO <sub>2</sub> , AgSnO <sub>2</sub> (HV=125) <sup>(2)</sup>	
Initial Contact Resistance	≤ 30mΩ initial	
Service Life	Electrical	1 x 10 <sup>5</sup> Operations
	Mechanical	1 x 10 <sup>7</sup> Operations

<sup>(2)</sup>Standard AgSnO<sub>2</sub> contacts have a hardness value (HV) of 95-100

## CHARACTERISTICS Continued

Operating Temperature	-40°C to +125°C
Storage Temperature	-40°C to +155°C
Relative Humidity	85% at 40°C
Weight	47 grams

## ORDERING INFORMATION

Example:	PC796	-1C	-C	-12	S	-D	N	-X
Model:	<b>PC796</b>							
Contact Form:	<b>1C</b>							
Case Style:	<b>C:</b> Plug-In; <b>C1:</b> Plastic Bracket; <b>C2:</b> Metal Bracket <b>P:</b> PCB; <b>P1:</b> PCB w/Plastic Bracket; <b>P2:</b> PCB w/Metal Bracket							
Coil Voltage:	<b>6, 12, 24</b>							
Contact Material:	<b>Nil:</b> AgSnO <sub>2</sub> ; <b>H:</b> AgSnO <sub>2</sub> (HV=125)*							
Enclosure:	<b>C:</b> Dust Cover; <b>S:</b> Sealed							
Parallel Component:	<b>Nil:</b> None; <b>D:</b> Diode; <b>R:</b> Resistor							
Terminal Plating:	<b>N:</b> Nickel Plated Terminals Standard on all Plug In Models; <b>Nil:</b> PC Version							
RoHS Compliant:	<b>-X</b>							

\*Standard AgSnO<sub>2</sub> contacts have a hardness value (HV) of 95-100

See SC795 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

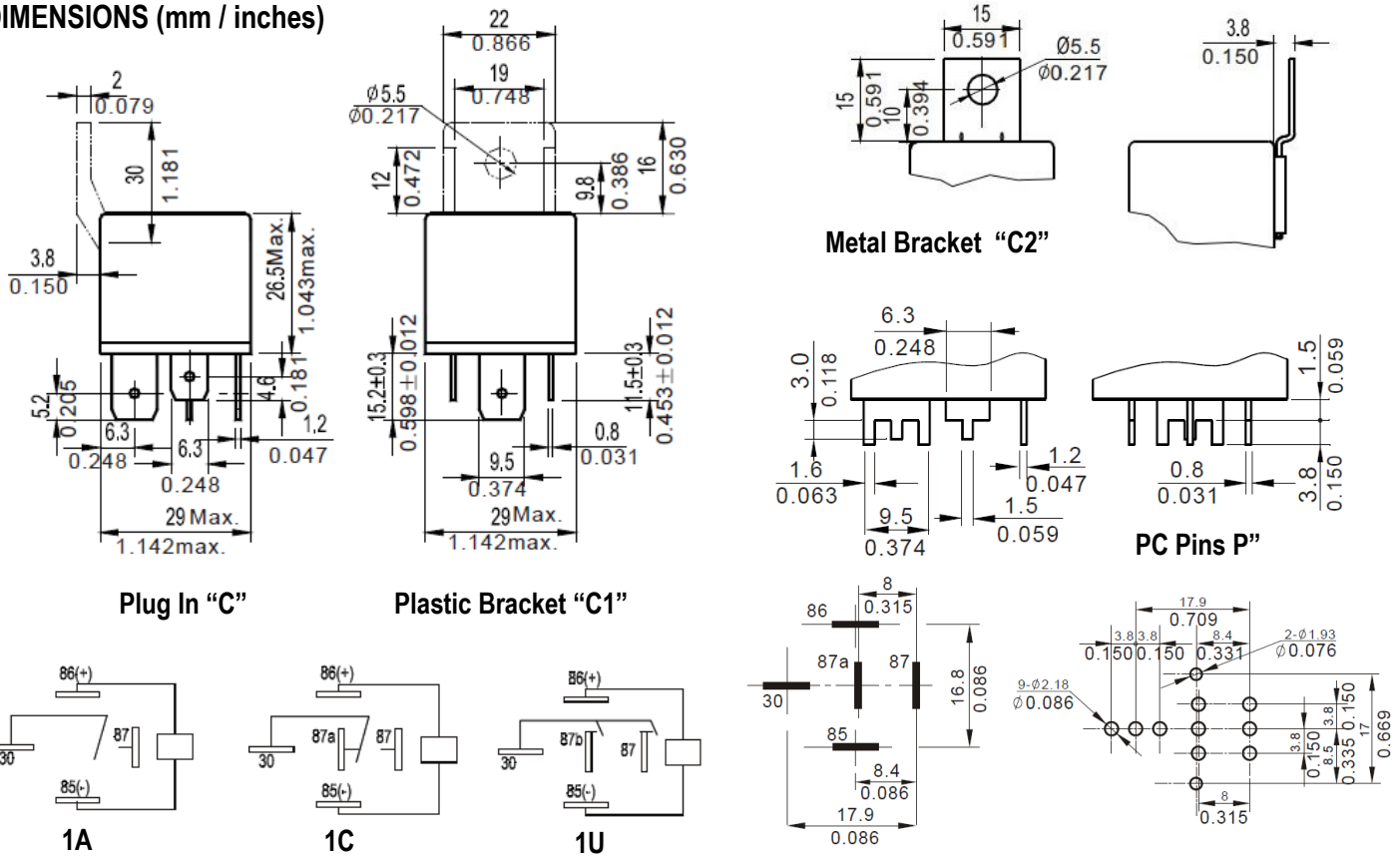
**COIL DATA**

Coil Voltage (VDC)		Resistance (Ohms ± 10%)	Must Operate Voltage Max (VDC)	Must Release Voltage Min. (VDC)	Power Consumption (W)
Rated	Max				
6	7.8	15.6	3.9	0.6	2.3
12	15.6	62.6	7.8	1.2	
24	31.2	250.4	15.6	2.4	

**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 are in mm, Inches are listed for reference only.

**DIMENSIONS (mm / inches)**



**Plug In "C"**

**Plastic Bracket "C1"**

**Metal Bracket "C2"**

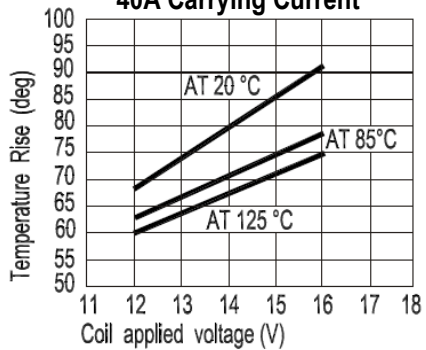
**PC Pins "P"**

**1A**

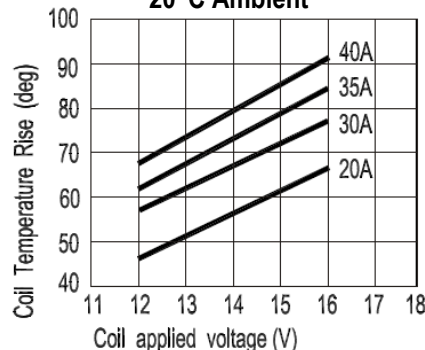
**1C**

**1U**

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



**Coil Temperature Rise 20°C Ambient**



**Max Value for Switching Capacity**

