

# 70 Amp Automotive Plug-In / PCB Maxi ISO Relay

**PC793#**



## FEATURES

- Popular Automotive Relay
- 1A Contact Form
- Contact Switching Capacity up to 210 Amps
- 70 Amps @ 14VDC Continuous Carrying Current
- Plain Case, Bracket or PCB Options
- Compatible with Socket SC795
- Lead Free and RoHS Compliant

## CONTACT RATINGS 14 VDC at 25°C

Contact Form	1 Form A Normally Open
Max Switching Current	Make 210 A Break 70 A
Max Continuous Current	70 A @ 25°C 50 A @ 85°C
Max Switching Power	980 W
Max Switching Voltage	120 VDC
Minimum Load	0.5A @ 12VDC

## CONTACT RATINGS 28 VDC at 25°C

Contact Form	1 Form A Normally Open
Max Switching Current	Make 90 A Break 30 A
Max Continuous Current	30 A @ 25°C 20 A @ 85°C
Max Switching Power	840 W
Max Switching Voltage	120 VDC
Minimum Load	0.5A @ 12VDC

## CHARACTERISTICS

Operate Time	10 msec Typical
Release Time	10 msec Typical
Insulation Resistance	100 MΩ min @ 500VDC
Dielectric Strength	50/60 Hz 500V <sub>RMS</sub> 1 min. Between Contact and Coil 50/60 Hz 500V <sub>RMS</sub> 1 min. Between Contacts
Shock Resistance	294 m/s <sup>2</sup>
Vibration Resistance	10 - 22.3 Hz Double Amplitude, 10mm 22.3 - 500 Hz 98m/s <sup>2</sup>
Terminal Strength	10 N, 100 N (Push and Pull)
Solderability	260°C for 5 seconds
Power Consumption	1.6 W
Relative Humidity	85% at 40°C

## CROSS REFERENCES

<b>TE: F7 &amp; F7A</b>
Example: V23136-J004-X103 crosses to PC793-1A-12C-R-X
Example: V23136-J0053-D642 crosses to PC793-1A-24C-X
<b>Song Chuan: 897</b>
Example: 897-1AH-S-12VDC crosses to PC793-1A-12S-X
Example: 897-1AH-S-R1-001-24VDC crosses to PC793-1A-24S-DR-X
Example: 897P-1AH-C-R1-12VDC crosses to PC793-1A-24S1-R-X

## CHARACTERISTICS CONTINUED

Operating Temperature	-40°C to +125°C
Storage Temperature	-40°C to +155°C
Weight	38 grams

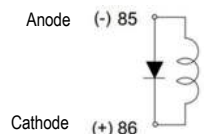
## ORDERING INFORMATION

Example:	PC793	-1C	-C	-12	S	-D	-X	See SC795 for available sockets
Model:	<b>PC793</b>							
Contact Form:	<b>1A</b>							
Case Style:	<b>C:</b> Plug-In; <b>C1:</b> Plastic Bracket; <b>C2:</b> Metal Bracket; <b>C3</b> <sup>(2)</sup> : Weatherproof Shrouded Cover w/ Metal Bracket; <b>P:</b> PCB							
Coil Voltage:	<b>6, 12, 24</b>							
Enclosure:	<b>C:</b> Dust Cover, <b>S:</b> Sealed, <b>S1:</b> Flux Tight <sup>(3)</sup>							
Coil Power:	<b>Nil:</b> 1.6W							
Parallel Component:	<b>Nil:</b> None; <b>D:</b> Diode; <b>R:</b> Resistor; <b>2D:</b> Two Diodes; <b>DR:</b> Diode and Resistor							
Terminal Plating	<b>N:</b> Tin Plated Terminals Standard on all Plug in Models; <b>Nil:</b> PC Pin Version							
RoHS Compliant:	<b>-X</b>							

### Coil Options

Resistor Values:  
12V - 680 ohm  
24V - 2,700 ohm  
Diode: 1N4005

### Orientation of Optional Diode



<sup>(2)</sup> Weatherproof shrouded cover in development. Projected for 4Q 2020.

<sup>(3)</sup> 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

Box Quantity: 400; Inner Box: 100

**COIL DATA**

Coil Voltage (VDC)		Must Operate Voltage Max (VDC)	Must Release Voltage Min (VDC)	Resistor Values (Ohms ± 10%)	Coil Resistance Without Resistor (Ohms ± 10%)	Coil Resistance With Resistor (Ohms ± 10%)	Rated Current Without Resistor @ 12 VDC (mA)	Rated Current With Resistor @ 12 VDC (mA)
Rated	Max				1.6 W	1.8 W	1.6 W	1.8 W
12	15.6	7.8	1.2	680	90	80	133	150
24	31.2	15.6	2.4	2700	360	320	67	75

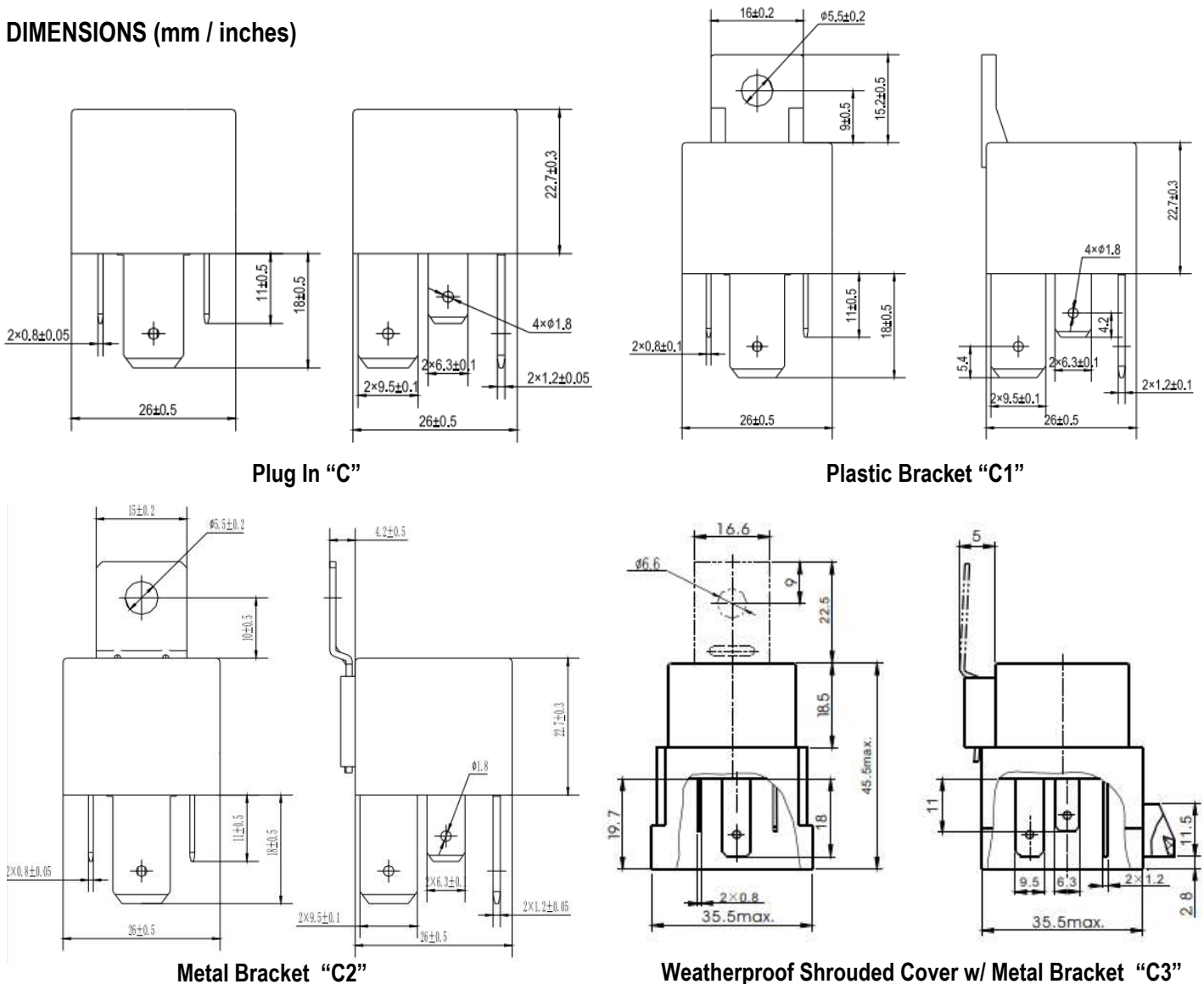
**NOTES:**

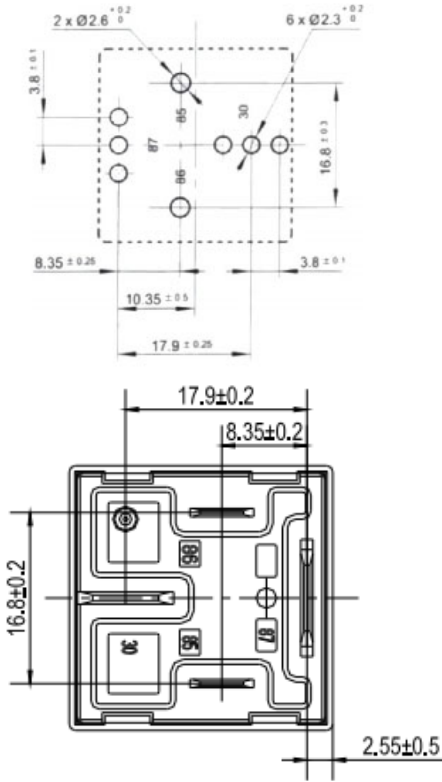
- The use of any coil voltage less than the rated voltage will compromise the operation of the relays.

**CONTACT DATA**

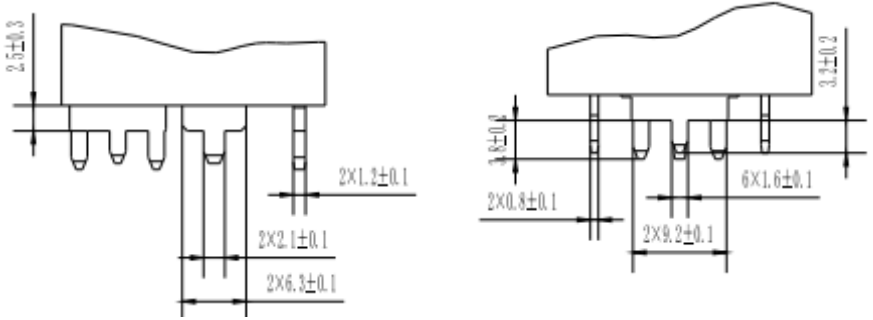
Material		AgSnO Alloy
Initial Contact Resistance		≤ 30mΩ initial
Max Contact Voltage Drop		≤ 50 mV at 10A
Service Life	Electrical	1 x 10 <sup>6</sup> Operations
	Mechanical	1 x 10 <sup>7</sup> Operations

**DIMENSIONS (mm / inches)**



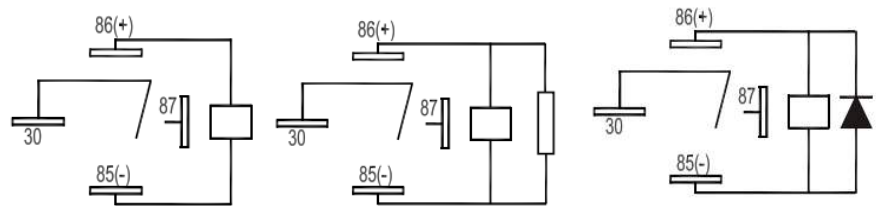


Bottom View



PC Pins "P"

Wiring Diagrams

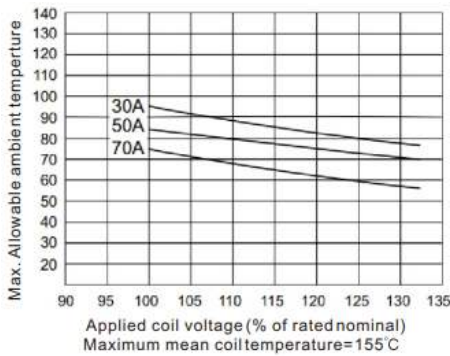


Without Resistor

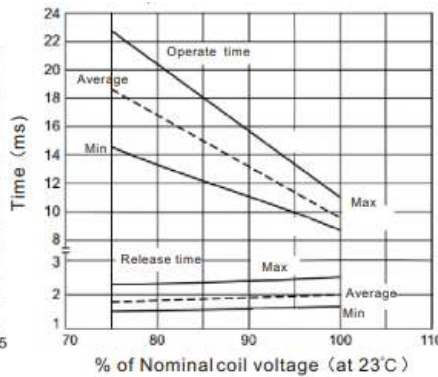
With Resistor

With Diode

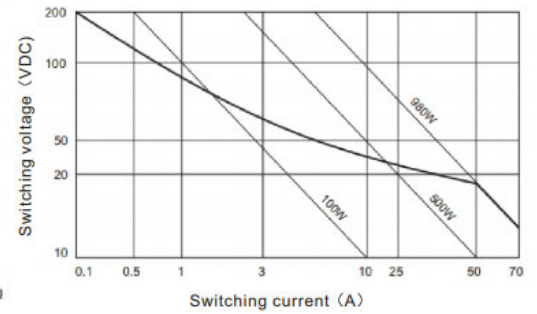
Coil Temperature Rise



Operate/Release Time



Max Value for Switching Capacity



Life Expectancy

