

# 30 Amp Micro ISO Automotive Plug In / PCB - Ignition Protected PC782



### FEATURES

- Ignition Protected\* | SAE J1171 | UL 1500 | ISO 8846
- Micro Size Plug-in Design
- 1A (SPST-NO) and 1C (SPDT) Contact Forms Available
- Contact Switching Capacity up to 35 Amps
- -40°C to 125°C Operating Temperature
- PC Board Version Available
- See SC782 for Available Sockets
- Internal Diodes or Resistors Available
- RoHS Compliant
- Fully Automated Assembly

### CONTACT RATINGS 14 VDC at 25°C

Contact Form	1 Form A (SPST-NO)		1 Form C (SPDT)	
	Normally Open	Normally Open	Normally Open	Normally Closed
Max Switching Current	Make 90 A <sup>(1)</sup>	Make 90 A <sup>(1)</sup>	Make 20 A <sup>(1)</sup>	
	Break 30 A	Break 30 A	Break 15 A	
Max Continuous Current	35 A @ 25°C	30 A @ 25°C	20 A @ 25°C	
	25 A @ 85°C	22.5 A @ 85°C	15 A @ 85°C	
Max Switching Voltage	75 VDC			
Max. Switching Power	490 W	420 W		
Minimum Load	0.1A @ 12 VDC			

### CONTACT RATINGS 28 VDC at 25°C

Contact Form	1 Form A (SPST-NO)		1 Form C (SPDT)	
	Normally Open	Normally Open	Normally Open	Normally Closed
Max Switching Current	Make 45 A <sup>(1)</sup>	Make 45 A <sup>(1)</sup>	Make 10 A <sup>(1)</sup>	
	Break 15 A	Break 15 A	Break 7.5 A	
Max Continuous Current	17.5 A @ 25°C	15 A @ 25°C	10 A @ 25°C	
	12.5 A @ 85°C	11 A @ 85°C	7.5 A @ 85°C	
Max Switching Voltage	75 VDC			
Max. Switching Power	490 W	420 W		
Minimum Load	0.1A @ 24 VDC			

### CHARACTERISTICS

Operate Time	10 msec max.
Release Time	7 msec max
Insulation Resistance	100 MΩ Min at 500VDC
Dielectric Strength	500 V, 50 Hz Between Contacts
	1,000 V, 50 Hz Between Contact and Coils
Shock Resistance	100 m/s <sup>2</sup> 11ms
Vibration Resistance	10 Hz - 40 Hz Double Amplitude 2.7 mm
Terminal Strength	8N (Plug-In type), 4N (PCB type)
Coil Power Consumption	1.2 W (1A SPST-NO), 1.5 W (1C SPDT)

### CONTACT DATA

Material	AgSnO <sub>2</sub>	
Initial Contact Resistance	50 mΩ Max	
Service Life	Electrical	1 x 10 <sup>6</sup> Operations
	Mechanical	1 x 10 <sup>7</sup> Operations

### CHARACTERISTICS Continued

Solderability	260°C for 5 seconds
Operating Temperature Range	-40 to 125°C
Storage Temperature Range	-40 to 155°C
Weight	18.5 grams
Flammability	UL-94-VO Meets FMVSS 302

### ORDERING INFORMATION

Example:	PC782	-1C	-P	-12	S	-R	-X
Model:	<b>PC782</b>						
Contact Form:	<b>1A:</b> 1 Form A (SPST-NO) <b>1C:</b> 1 Form C (SPDT)						
Mounting Version:	<b>Nil:</b> Plug-In; <b>P:</b> PCB						
Coil Voltage:	<b>6:</b> 6 VDC; <b>12:</b> 12 VDC; <b>24:</b> 24 VDC; <b>48:</b> 48 VDC						
Enclosure:	<b>C:</b> Dust Cover, <b>S:</b> Sealed*, <b>S1:</b> Flux Tight <sup>(2)</sup>						
Parallel Component:	<b>Nil:</b> None; <b>D:</b> Diode, <b>:R</b> Resistor						
RoHS Compliant:	<b>-X</b>						

<sup>(2)</sup> Flux Tight relays are constructed such that Flux will not enter the relay in an automated process, they are NOT suitable for water wash cleaning

Box Quantity: 1,000; Inner Box: 500

\*Sealed "S" enclosures with 6,12 or 24 VDC, 1.2 or 1.5 Watt Coil Versions are Ignition Protected

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

See SC782 for Available Sockets

#### Coil Options

Resistor Values (1/4 Watt):

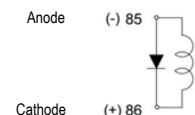
6V - 180 ohm

12V - 680 ohm

24V - 2,700 ohm

Diode: 1N4005

Orientation of Optional Diode



\*Contact Picker if You Require the Opposite Polarity or a Dual Diode

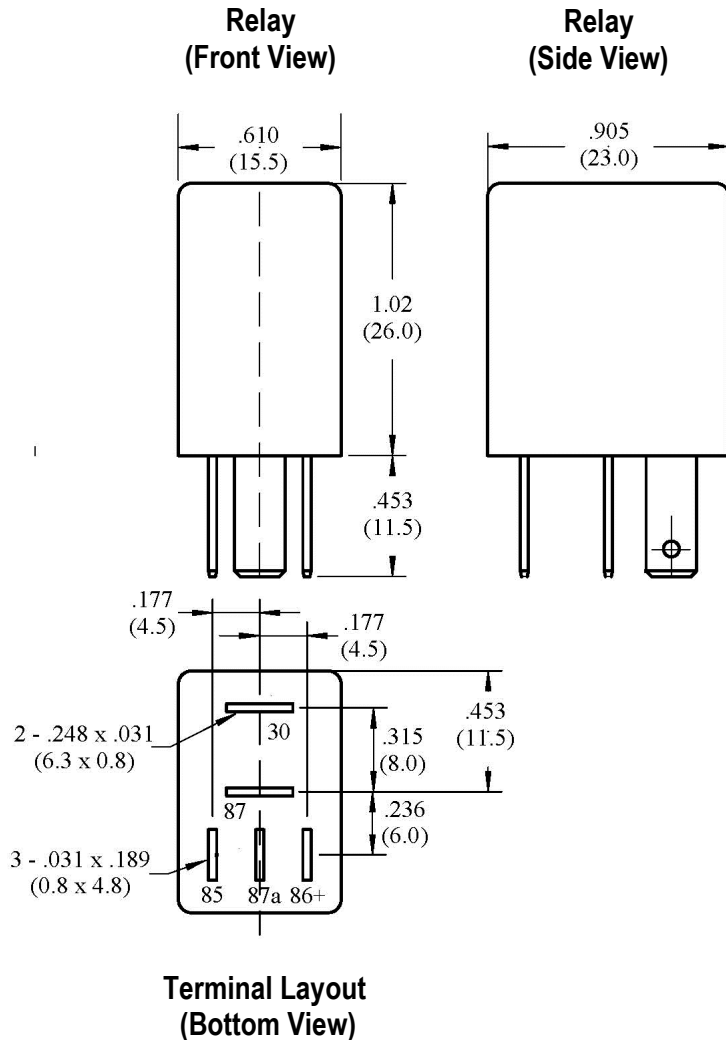
**COIL DATA**

Coil Voltage (VDC) <sup>(2)</sup>		Must Operate Voltage Max (VDC) <sup>(3)</sup>	Must Release Voltage Min. (VDC) <sup>(3)</sup>	Resistor Values (Ohms ± 10%)	Coil Resistance (Ohms ± 10%)				Rated Current (mA)			
					Without Resistor		With Resistor		Without Resistor		With Resistor	
Rated	Max				1.2 W 1A	1.5 W 1C	1.2 W 1A	1.5 W 1C	1.2 W 1A	1.5 W 1C	1.2 W 1A	1.5 W 1C
					(SPST - NO)	(SPDT)	(SPST - NO)	(SPDT)	(SPST - NO)	(SPDT)	(SPST - NO)	(SPDT)
6	7.8	4.2	0.6	180	30	24	26	21	200	250	231	286
12	15.6	8.4	1.2	680	120	96	102	84	100	125	118	143
24	31.2	16.8	2.4	2700	480	384	408	336	50	63	59	71
48	62.4	33.6	4.8	10000	1,920	1,536	1611	1331	25	31	30	36

**NOTES:**

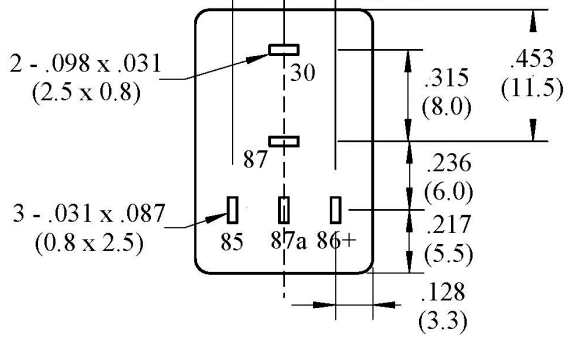
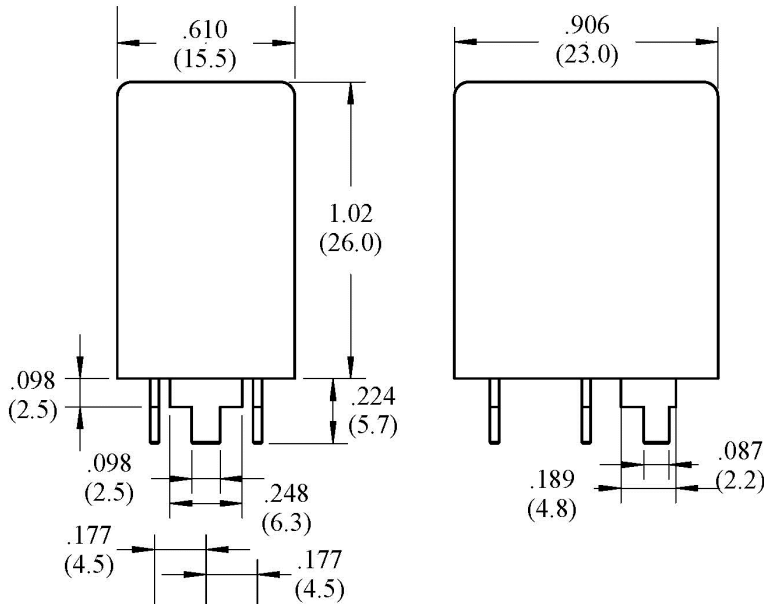
- (2)The use of any coil voltage less than the rated voltage will compromise the operation of the relays.
- (3)Must Operate Voltage and Must Release Voltages are for test purposes only and are not to be used as design criteria.

**DIMENSIONS (mm/inches)**

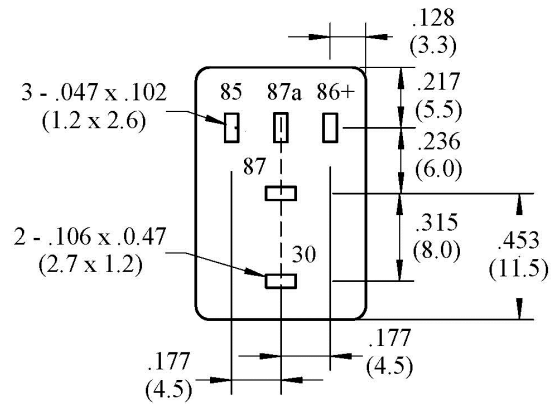


**Relay  
(Front View)**

**Relay  
(Side View)**



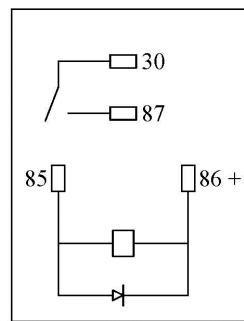
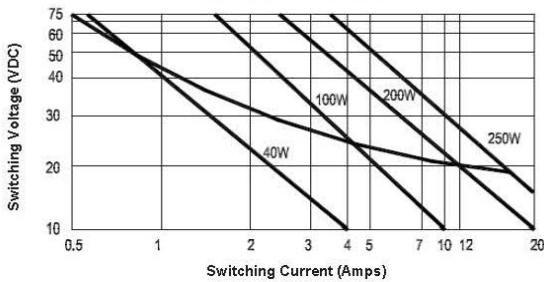
**Terminal Layout  
(Bottom View)**



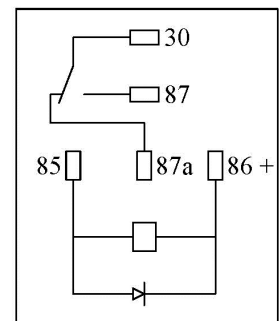
**PC Board Layout  
(Top View)**

**Reference Data**

Contact Switching Capacity



**1A (SPST-NO)**



**1C (SPDT)**

**Wiring Diagrams**

Internal Diode Shown for Example Only