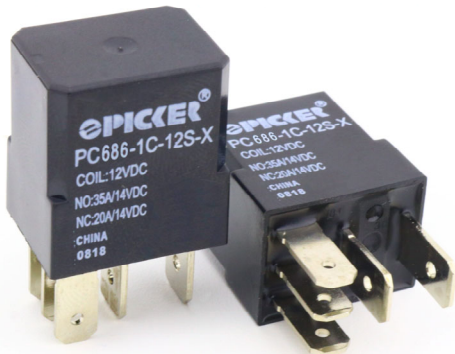# 40/30 Amp Micro ISO Automotive Plug In / PCB Relay   PC686

FEATURES

- 40 Amp/14 VDC Continuous Carry Current at 25°C
- Micro Size ISO Plug-In Design
- Max Switching Current of 80 Amps
- Copper Terminals for Efficient Heat Dissipation
- -40°C to 125°C Operating Temperature
- PC Board Version Available
- Internal Diodes or Resistors Available
- Compatible with Socket SC782
- RoHS Compliant

CONTACT RATINGS 14 VDC at 25°C

Contact Form	1 Form A	1 Form C	
		Normally Open	Normally Closed
Max. Inrush Current	Make 80 A[1]	Make 80 A[1]	Make 30 A[1]
	Break 30 A	Break 30 A	Break 30 A
Contact Rating (Resistive)	40 A	40 A	30 A
Max. Switching Voltage	28 VDC		
Max. Switching Power	560 W		
Max. Switching Current	40 A		
Minimum Load	0.1A @ 12 VDC		

[1] With current load applied for a maximum of .5 seconds at a maximum duty cycle of 10%.

CONTACT RATINGS 28 VDC at 25°C

Contact Form	1 Form A	1 Form C	
		Normally Open	Normally Closed
Max. Inrush Current	Make 40 A[1]	Make 40 A[1]	Make 15 A[1]
	Break 15 A	Break 15 A	Break 15 A
Contact Rating (Resistive)	20 A	20 A	15 A
Max. Switching Voltage	28 VDC		
Max. Switching Power	560 W		
Max. Switching Current	20 A		
Minimum Load	0.1A @ 12 VDC		

CHARACTERISTICS

Operate Time	7 ms approx.
Release Time	5 ms approx.
Insulation Resistance	100 MΩ Min at 500 VDC
Dielectric Strength	500 V, 50 Hz Between Contacts 750 V, 50 Hz Between Contact and Coil
Shock Resistance	Functional: 100 m/s^2, 11ms Survival: 1,000 m/s^2, 11ms
Vibration Resistance	10 Hz - 55 Hz Double Amplitude 1.5 mm
Terminal Strength	Push & Pull 100N
Power Consumption	1.5 W for 12 VDC Coil, 1.8 W for 24 VDC Coil
Solderability	260°C for 5 Seconds

* Sealed with 12 or 24 VDC, 1.5 and 1.8 Watt Coil Versions.

CONTACT DATA

Material		AgSnO$_2$
Initial Contact Resistance		50 mΩ Max
Service Life	Electrical	1.5 x 10^5 Operations
	Mechanical	1 x 10^6 Operations

CHARACTERISTICS Continued

Operating Temperature Range	- 40 to 125°C
Storage Temperature Range	- 40 to 155°C
Relative Humidity	35% ~ 85% (@ 40°C)
Weight	24 g

See SC782 for Available Sockets

ORDERING INFORMATION

PC686 -1C -12 S -R -N -X

Model:	**PC686**
Contact Form:	**1A**: 1A SPST-NO, **1B**: 1B SPST-NC, **1C**: 1C SPDT
Mounting Version:	**Nil**: Plug In, **P**: PCB Pins
Coil:	**12**: 12 VDC, **24**: 24 VDC
Enclosure:	**C**: Dust Cover IP54 Rated, **S**: Sealed
Coil Power:	**Nil**: 1.5 W for 12 VDC Coil, 1.8 Watts for 24 VDC Coil
Snubber Components:	**Nil**: None, **R**: Resistor, **D**: Diode, **D2**: Double Diode
Terminal Plating:	**Nil**: PC Pin Version, **N**: Nickel Plated Terminals Standard on all Plug in Models
RoHS Compliant:	**X**: RoHS Compliant

Box Quantity: ??; Inner Box: ??

Coil Options
Resistor Values
12V - 680 ohms
24V - 2,700 ohms
Diode: 1N4005

Orientation of Optional Diode

Anode   (-) 85

Cathode (+) 86
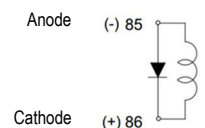
*Contact Picker if you require the opposite polarity or a dual diode

Dimensions are listed for reference purposes only.

Specifications and Availability subject to change without notice.

COIL DATA

Coil Voltage (VDC)[2]		Must Operate Voltage Max (VDC)[3]	Must Release Voltage Min (VDC)[3]	Resistor Values (Ohms ± 10%)	Coil Resistance (Ohms ± 10%)		Rated Current (mA)		Coil Power (W)	
Rated	Max				Without Resistor	With Resistor	Without Resistor	With Resistor	Without Resistor	With Resistor
12	16	7.8	1.5	680	90	79	133	151	1.6	1.8
24	32	15.6	3	2,700	360	318	67	76		

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)

Dimensions are listed for reference purposes only.   Specifications and Availability subject to change without notice.