

50 Amp Latching PCB Relay	PRELIMINARY	PC10
----------------------------------	--------------------	-------------



FEATURES

- Energy Saving **Latching Operation**
- 50 Amp Switching Capacity
- 5,000 Watt Lamp Load
- 5 HP Motor Load
- Max Inrush Current 500 Amp / 2 msec
- 4kV Dielectric Between Contacts and Coil
- Single or Dual Coil Latching
- Manual Topside Switch
- 39.0 x 25.0 x 15.0mm Package Dimensions, Narrowest in the Industry
- Lead Free and RoHS Compliant



UL/CSA Ratings at 25C (Pending)

PC10	Voltage	1 Form A (SPST-NO)
Load Type		
Resistive 6,000 Cycles	277 VAC	50 A
Incandescent Lamp 3,000 Cycles	240 VAC	5,000 W
Incandescent Lamp 3,000 Cycles	277 VAC	16 A
Electronic Ballast 6,000 Cycles	280 VAC	16 A
Motor Load 3,000 Cycles	277 VAC	5 HP

CONTACT DATA

Material	AgSnO2
Initial Contact Resistance	≤ 20mΩ initial
Maximum Switching Voltage	440VAC
Maximum Switching Current	50 A
Maximum Switching Power	12,500 VA

Service Life	
Electrical	See Contact Data
Mechanical	1 x 10 ⁶ Operations

COIL DATA—Dual Coil on Next Page

Single Coil		Resistance (Ohms ± 10%)	Must Operate Voltage Max (VDC)	Pulse Magnitude (msec)	Coil Power (Watts)	Operate Time (msec)	Reset Time (msec)
Rated	Maximum						
6	7	24	4.8	≥ 50	1.5	≤ 15	≤ 15
9	10.6	54	7.2				
12	14.4	96	9.6				
24	28.8	384	19.2				
48	56	1,536	38.4				

COIL DATA—Continued

Dual Coil		Resistance (Ohms ± 10%)	Must Operate Voltage Max (VDC)	Pulse Magnitude (msec)	Coil Power (Watts)	Operate Time (msec)	Reset Time (msec)
Coil Voltage							
Rated	Maximum						
6	7	12 + 12	4.8	≥ 50	2 x 3.0	≤ 15	≤ 15
9	10.6	27 + 27	7.2				
12	14.4	48 + 48	9.6				
24	28.8	192 + 192	19.2				
48	56	768 + 768	38.4				

CHARACTERISTICS

Operate Time	≤ 15 msec
Release Time	≤ 15 msec
Insulation Resistance	1,000 MΩ min @ 500VDC
Dielectric Strength	
Between Contact and Coil	50 Hz 4,000V 1 minute
Between Contacts	50 Hz 1,500V 1 minute
Creepage Distance	8 mm
Shock Resistance	
Functional	98 m/s ² 11 msec
Survival	980 m/s ² 11 msec
Vibration Resistance	10-55 Hz Double Amplitude 1.5mm
Terminal Strength	10 N
Solderability	235°C ± 2°C 3 sec ± 0.5 sec
Operating Temperature	-40°C to +70°C
Storage Temperature	-40°C to +125°C
Relative Humidity	85% at 40°C
Weight	32 grams

ORDERING INFORMATION

Example:	PC10L	-1A	-12	D	-X
Model:	PC10L				
Contact Form:	1A				
Coil Voltage:	3, 9, 12, 24, 48				
Enclosure:	Nil: Dust Cover				
Coil:	Nil: Single Coil 1.5W, D: Double Coil 2x3.0 W				
Polarity:	Nil: Standard, R: Reverse Polarity				
RoHS Compliant:	-X				



3220 Commander Drive, Suite 102 Carrollton, TX 75006

Sales: (972) 713-6272 (888) 997-3933

Fax: (972)735-0964

www.PickerComponents.com

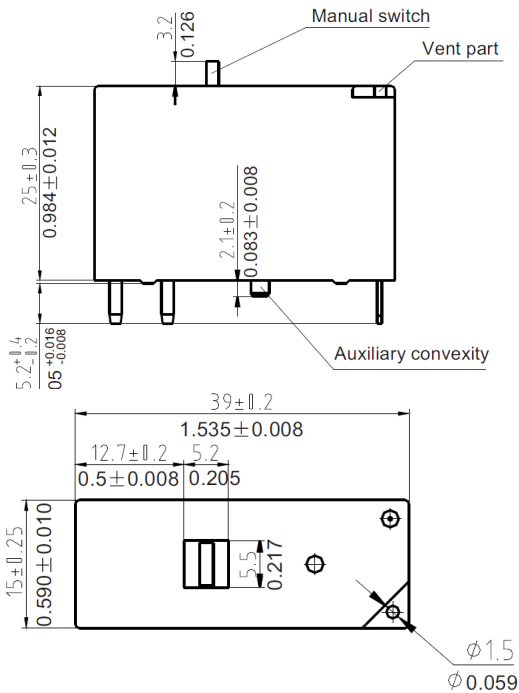
e-mail: sales@pickercomponents.com

PCTxL Rev A 7/30/14

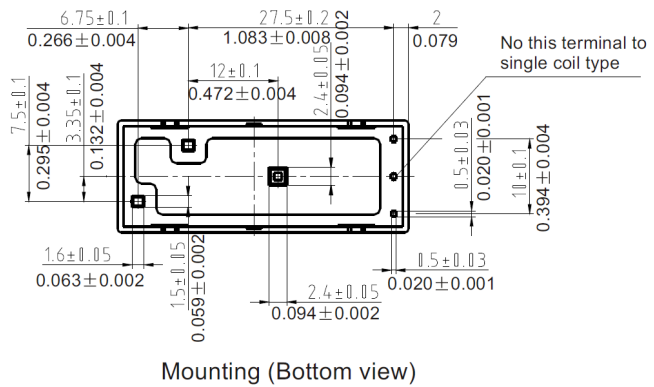
Dimensions are listed for reference purposes only.

Specifications and Availability subject to change without notice.

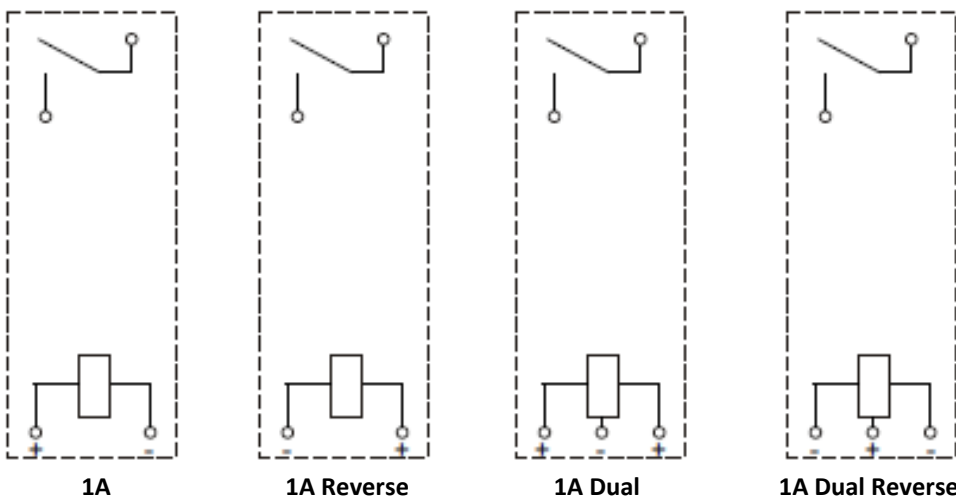
DIMENSIONS (mm / inches)



PIN LAYOUT (mm / inches)



SCHEMATIC



NOTES:

With the Dual Coil Version, the Latch and Reset Coils should not be pulsed at the same time for it is possible to set the relay into a magnetically neutral position. Coils should not be pulsed with less than the rated coil voltage and the pulse width should be a minimum of three times the specified operate time. If not, it is possible for the relay to settle in a magnetically neutral position.

Must Operate Voltage is listed for test purposes only and is not to be used as design criteria.

