

30, 40 or 50 Amp Latching PCB Relay

PCT90xL



UL/CSA Ratings at 25C

FEATURES

- Energy Saving Latching Operation
- Most Popular Power PCB Relay
- 30, 40 or 50 Amp Switching Capacity
- Single Coil Latching
- UL Class F Insulation Standard
- Epoxy Sealed, Immersion Cleanable
- Lead Free and RoHS Compliant



PCT90EL 50 Amp Version	Voltage	1 Form A	1 Form B	1 Form C (SPDT)		
Load Type	Voltage	(SPST-NO)	(SPST-NC)	NO	NC	
Resistive 6,000 Cycles	277 VAC	50 A	50 A	40 A	40 A	
Incandescent Lamp 3,000 Cycles	240 VAC	5,000 W	5,000 W			
Electronic Ballast 6,000 Cycles	280 VAC	16 A	16 A			
Motor Load 3,000 Cycles	277 VAC	5 HP	5 HP			

PCT90D 40 Amp Version	Voltage	1 Form A	1 Form B	1 Form C (SPDT)	
Load Type	Voltage	(SPST-NO)	(SPST-NC)	NO	NC
Resistive 6,000 Cycles	277 VAC, 28VDC	40 A	40 A	30 A	30 A
Incandescent Lamp 3,000 Cycles	240 VAC	5,000 W	5,000 W		
Electronic Ballast 6,000 Cycles	280 VAC	5 A	5 A		
Motor Load 3,000 Cycles	277 VAC	2 HP	2 HP		

PCT90C 30 Amp Version	Voltage	1 Form A	1 Form B	1 Form C (SPDT)	
Load Type	Voltage	(SPST-NO)	(SPST-NC)	NO	NC
Resistive 6,000 Cycles	277 VAC, 28VDC	30 A	30 A	25 A	25 A
Incandescent Lamp 3,000 Cycles	240 VAC	5,000 W	5,000 W		
Electronic Ballast 6,000 Cycles	280 VAC	5 A	5 A		
Motor Load 3,000 Cycles	277 VAC	2 HP	2 HP		

CONTACT DATA

Material	AgSnO2	Service Life		
Initial Contact Resistance	≤ 20mΩ initial		Electrical	See Contact Data
Maximum Switching Voltage	110VDC 300VAC		Mechanical	1 x 10 ⁶ Operations
	50 A		40 A	30 A
Maximum Switching Power	13,850 VA 1,500 W	11	,080 VA 1,200 W	8,310 VA 1,200 W
Maximum Switching Current 50 A			40 A	30 A



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PCTxL Rev A 7/30/14

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Specifications and Availability subject to change without notice.

PCT90xL PCT90xL

CHARACTERISTICS

Operate Time	≤ 15 msec
Release Time	≤ 15 msec
Insulation Resistance	1,000 MΩ min @ 500VDC
Dielectric Strength	
Between Contact and Coil	50 Hz 2,500V 1 minute
Between Contacts	50 Hz 1,500V 1 minute
Shock Resistance	200m/s ² 11msec
Vibration Resistance	10-55 Hz Double Amplitude 1.5mm
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +155°C
Weight	28 grams

ORDERING INFORMATION

Example: PCT90EL	-1C	-12	S		-X
Model: PCT90EL (50 Amp)					
PCT90DL (40 Amp)					
PCT90CL (30 Amp)					
Contact Form: 1A (SPST-NO)					
1B (SPST-NC)					
1C (SPDT BBM)					
Coil Voltage: 5, 12, 24, 48					
Enclosure: S: Sealed, E: Covered					
Coil Sensitivity: Nil: PCT90EL (50 Amp) 1.5	Watt			-	

Nil: PCT90DL (40 Amp) 0.9 Watt Nil: PCT90CL (30 Amp) 0.9 Watt

Coil:

Nil: Single Coil Latching, Double Coil not available at this time

RoHS Compliant: -X

COIL DATA

PCT90E (50 Amp)		Must Operate		Pulse	Coil	Operate	Reset
Coil Voltage		Resistance (Ohms ± 10%)	Voltage Max	Magnitude	Power	Time	Time
Rated	Maximum	(OIIIIIS ± 10%)	(VDC)	(msec)	(msec)	(msec)	(msec)
5	6	16.7	4				
12	14.4	96	9.6	> 100	1 [Z 1F	∠ 1F
24	28.8	384	19.2	≥ 100	1.5	≤ 15	≤ 15
48	57.6	1,536	38.4				

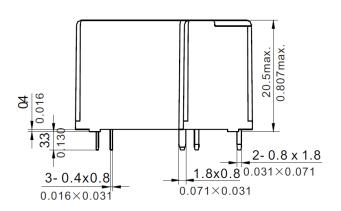
PCT90C/D (3	PCT90C/D (30/40 Amp)		Must Operate	Pulse	Coil	Operate	Reset
Coil Voltage		Resistance (Ohms ± 10%)	Voltage Max	Magnitude	Power	Time	Time
Rated	Maximum	(OIIIIS ± 10%)	(VDC)	(msec)	(msec)	(msec)	(msec)
5	6	28	4				
12	14.4	160	9.6	> 50	0.0	۷15	. 1F
24	28.8	960	19.2	≥ 50	0.9	≤ 15	≤ 15
48	57.6	2,560	38.4				

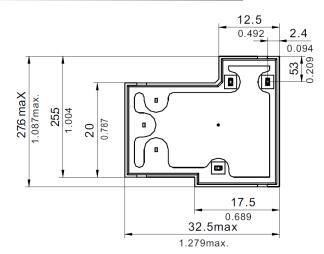


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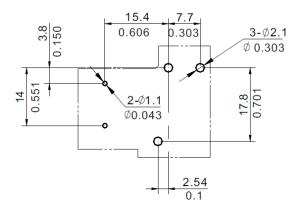
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DIMENSIONS (mm / inches)

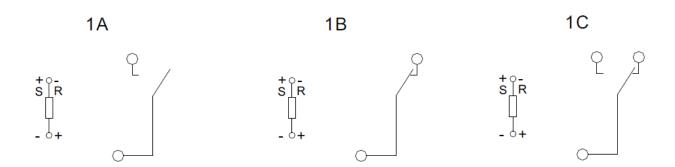




PIN LAYOUT (mm / inches)



SCHEMATIC



NOTES:

Coil 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.



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