

50 Amp Power PCB Relay

PTRE-T


FEATURES

- Most Popular Power PCB Relay Footprint - T90
- 50 Amp 240 VAC General Purpose UL Rating
- 2 HP 250 VAC Rating
- UL Class F Insulation Standard
- Meets UL 508 and UL 873 Spacing
- Epoxy Sealed, Immersion Cleanable
- RoHS Compliant

UL E160644 at 40°C

FACTORY RATINGS

Load Type	Voltage	1 Form A (SPST-NO)	1 Form B (SPST-NC)	1 Form C	
				NO	NC
Resistive 6,000 Cycles	240 VAC 30 VDC	50 A	40 A	50 A	40 A
Lamp 3,000 Cycles	240 VAC	TV-5	—	TV-5	—
Electric Ballast 6,000 Cycles	280 VAC	5 A	—	5 A	—
Motor Load 3,000 Cycles	250 VAC	2 HP	1.5 HP	2 HP	1.5 HP

Load Type	Cycles	Voltage	1 Form C (SPDT)	
			NO	NC
General Purpose (Resistive)	10,000 50,000	240 VAC/30 VDC 240 VAC/30 VDC	50 A 40 A	35 A 30 A

Meets UL 508 and UL 873 Spacing - 3.18 mm Through Air, 6.36 mm Over Surface.

CONTACT DATA

Material	AgSnO ₂	
Initial Contact Resistance	30 mΩ Max. @ 1 A, 6 VDC	
Maximum Switching Voltage	110 VDC, 300 VAC	
Maximum Switching Current	50 A	
Maximum Switching Power	1,500 W, 12,000 VA	
Service Life	Mechanical	1 X 10 ⁷ Operations
	Electrical	5 X 10 ⁴ Operations

Solderability	235 °C for 3 secs
Operating Temperature Range	-55°C to 100°C
Storage Temperature Range	-40°C to 155°C
Relative Humidity	85% (at 40°C)
Weight	33 gr
Material Compliant To:	EU RoHS V2, EU Reach V3

CHARACTERISTIC

Operate Time	15 ms Max.
Release Time	15 ms Max
Insulation Resistance	1,000 MΩ min, at 500 VDC
Dielectric Strength	50 Hz 2,500 V 1 Min Between Coil and Contacts
	50 Hz 1,500 V 1 min. Between Contacts
Shock Resistance	200 m/s ² , 11 ms
Vibration Resistance	10 - 55 Hz Double Amplitude
Terminal Strength	10N
Power Consumption	1.5 W

ORDERING INFORMATION

Example:	PTRE	-1C	-12	S	T	-T5	-X
Model:	PTRE-T						
Contact Form:	1A, 1B, or 1C						
Coil Voltage:	3, 5, 6, 9, 12, 15, 18, 24, 48, 110						
Configuration:	Nil: Open Frame; C: Dust Cover; E: Epoxy Sealed, Not Water Washable						
Contact Material:	Nil: AgCdO; T: AgSnOInO						
Insulation Material:	F: UL Class F						
Mounting Type:	T2: Form 1A or 1B PCB&QC, T3: Form 1C PCB&QC, OT4: 1A or 1B Panel all QC with Mounting Fins, OT5: 1C Panel all QC with Mounting Fins						
RoHS Compliant:	-X						
Pinout:	A: Alternate Quick Connect Pinout						

COIL DATA

Coil Voltage		Resistance (Ohms $\pm 10\%$)	Must Operate Voltage Max (VDC)	Must Release Voltage Min. (VDC)	Coil Power (W)
Rated	Max				
3	3.9	6.0	2.25	0.3	1.5
5	6.5	16.7	3.75	0.5	
6	7.8	24.0	4.50	0.6	
9	11.7	54.0	6.75	0.9	
12	15.6	96.0	9.00	1.2	
15	19.5	150	10.25	1.5	
18	23.4	216	13.50	1.8	
24	31.2	384	18.00	2.4	
48	62.4	1,536	36.00	4.8	
110	143	8,067	82.50	11.0	

NOTES:

The use of any coil voltage less than the rated voltage will compromise the operation of the relays. Must Operate Voltage is listed for test purposes only and is not to be used as design criteria. Pickup and release voltages are for test purposes only and are not to be used as design criteria.

Dimensions are in mm, Inches are listed for reference only.

DIMENSIONS (mm/inches)

Knock off, on top corner, nib for ventilation after soldering and water wash.

