

Part Number	Description
E3PT48D50	50A*, 520 Vac

For RoHS Compliant Contact Factory

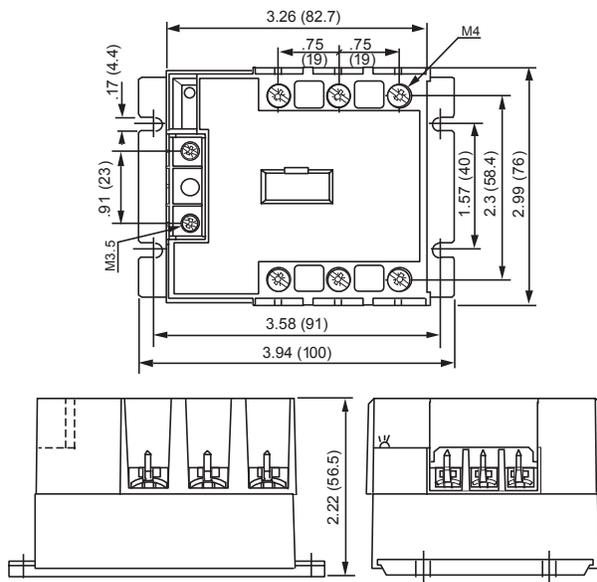
**Part Number Explanation**

E3PT	48	D	50	H
Series	Line Voltage <sup>1</sup>	Switch Type <sup>2</sup>	Output Current – Amps	High Surge <sup>3</sup>

**NOTES**

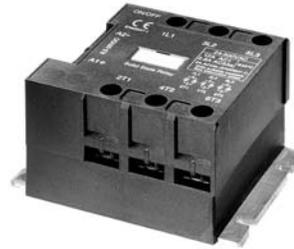
- 1) Line Voltage (nominal) 48 = 480 Vac
- 2) Switch Type: D = Zero-cross turn-on
- 3) H: High surge capability
- \*Current limited to 50A due to terminals

**MECHANICAL SPECIFICATION**



WEIGHT: 14.46 oz. (410g)

Figure 1 — E3PT relays; dimensions in inches (mm)



**FEATURES/BENEFITS**

- Designed for all types of loads
- Tight zero-cross window
- Control LED on all models
- Internal output transient protection
- Touch-proof

**DESCRIPTION**

The Series E3PT three-phase solid-state relays are designed for all types of loads. The E3PT relays include as a standard a control LED for visual status. The E3PT series is touch-proof for user safety. An internal MOV and snubber circuit protect the output thyristor. The E3PT relays are highly immune to large current surges. The tight zero-cross window provides a low EMI level. The E3PT relays are an excellent choice for three-phase applications.

**APPLICATIONS**

- Heating control
- Motor control
- Three-phase industrial and process control

**APPROVALS**

Series E3PT relays are pending UL recognition.

**TYPICAL APPLICATION**

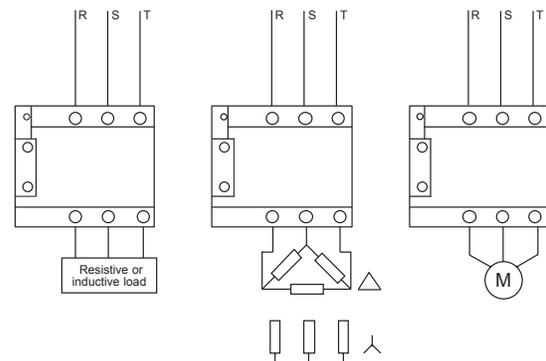


Figure 2 — E3PT typical application

**INPUT (CONTROL) SPECIFICATION**

Input Type	Min	Max	Units
Control Range	8.5	30	Vdc
Input Current Range	10	45	mA
Must Turn-Off Voltage		4	Vdc
Input Resistance (Typical)		620	Ohms
Reverse Voltage Protection		30	V

**OUTPUT (LOAD) SPECIFICATION**

	Min	Max	Units
Operating Range	24	520	Vrms
Peak Voltage		1200	Vpeak

Load Current Range (See Note 1)

E3PT48D50	.005	50*	A
E3PT48D50H	.005	50*	A

Maximum Surge Current Rating (Non-Repetitive)

E3PT48X50		1000	A
E3PT48X50H		2000	A

On-State Voltage Drop

Zero-Cross Window (Typical)

Off-State Leakage Current (60 Hz)

Turn-On Time

Turn-Off Time

Off-State dv/dt

Maximum di/dt (Non-Repetitive)

Operating Frequency

**OUTPUT (LOAD) SPECIFICATION (continued)**

	Min	Max	Units
I <sup>2</sup> T for Match Fusing (<8.3ms)			
E3PT48X50		5,000	A <sup>2</sup> s
E3PT48X50H		20,000	A <sup>2</sup> s

**Environmental Specification**

Operating Temperature	-40	100	°C
Storage Temperature	-40	100	°C
Input-Output Isolation	4000		Vrms
Output-Case Isolation	3300		Vrms

NOTES

- 1) \*Current limited to 50A due to terminals
- 2) Electrical Specifications at 25°C unless otherwise specified

**CONTROL CHARACTERISTIC**

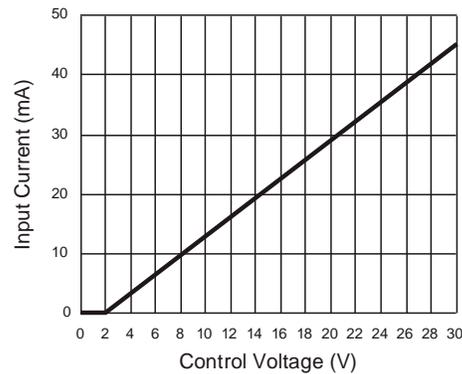


Figure 4a — E3PT48D

**EQUIVALENT CIRCUIT**

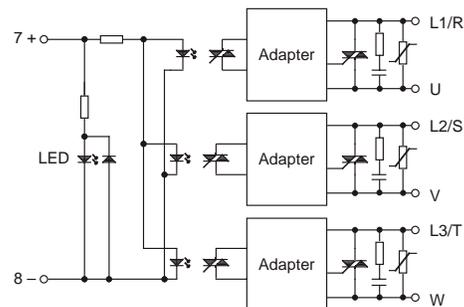


Figure 3b — E3PT48D

**THERMAL CHARACTERISTICS**

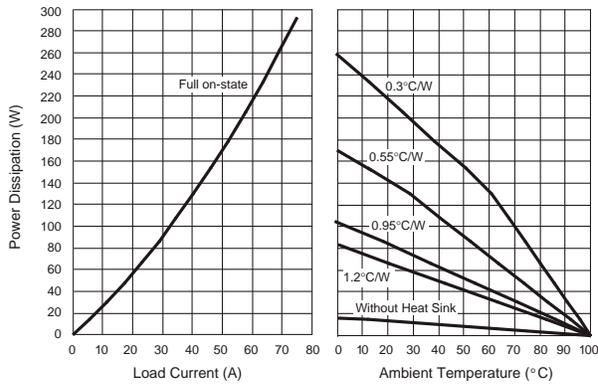


Figure 5b — E3PT48X50

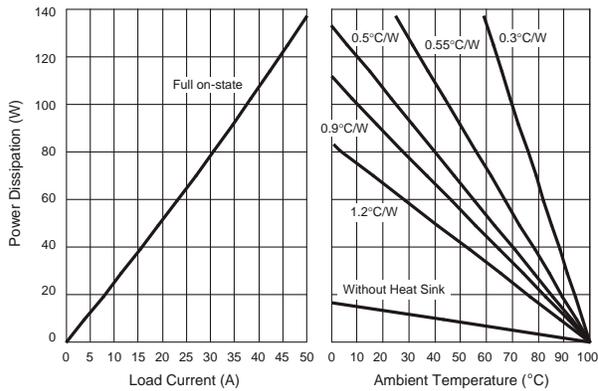


Figure 5c — E3PT48X50H

**SURGE CURRENTS**

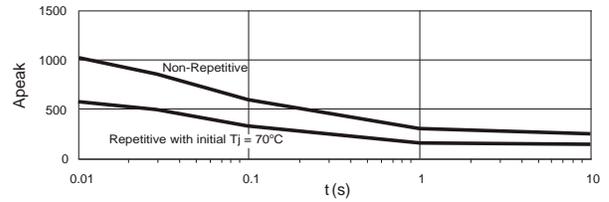


Figure 6b — E3PT48X50

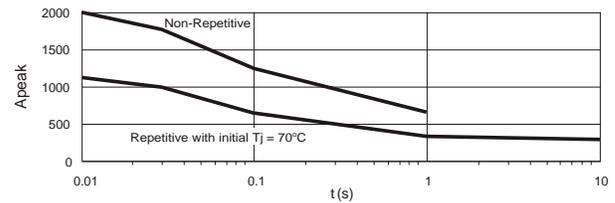


Figure 6c — E3PT48X50H