

Part Number	Description
E3PT48D12	12A, 520 Vac
E3PT48A12	12A, 520 Vac
E3PT48D50	50A*, 520 Vac
E3PT48A50	50A*, 520 Vac
E3PT48D50H	50A*, 520 Vac
E3PT48A50H	50A*, 520 Vac

E3PT **48** **D** **50** **H**
 Series Line Voltage¹ Switch Type² Output Current - Amps High Surge³

NOTES

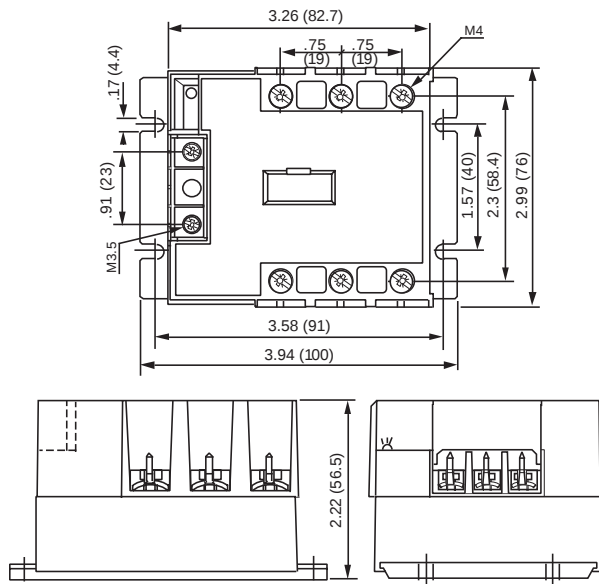
1) Line Voltage (nominal): 48 = 480 Vac

2) Switch Type: D = Zero-cross turn-on
A = AC control, 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

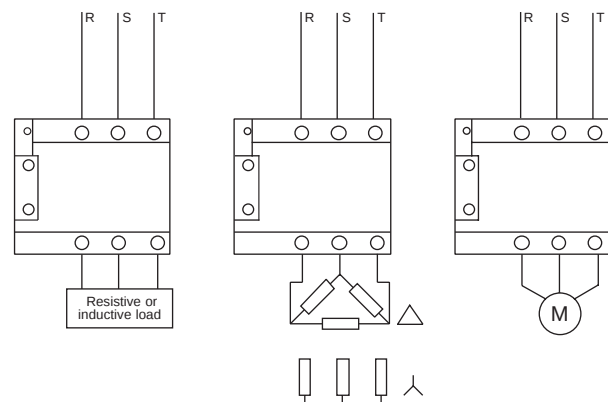


Figure 2 — E3PT typical application

INPUT (CONTROL) SPECIFICATION

	Input Type	Min	Max	Units
Control Range				
E3PT48	D	8.5	30	Vdc
E3PT48	A	90	240	Vac
Input Current Range				
E3PT48	D	10	45	mA
E3PT48	A	4	11	mA
Must Turn-off Voltage				
E3PT48	D		4	Vdc
E3PT48	A		15	Vac
Input Resistance (Typical)				
E3PT48	D		620	Ohms
E3PT48	A		21	KOhms
Reverse Voltage Protection				
E3PT48	D		30	V

CONTROL CHARACTERISTIC

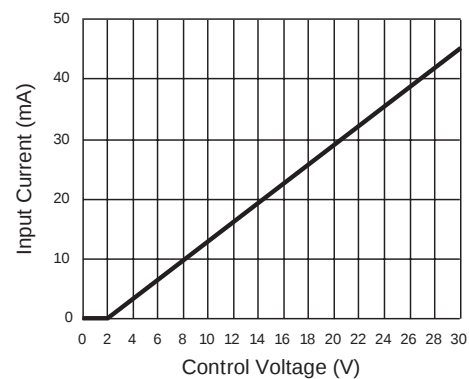


Figure 4a — E3PT48D

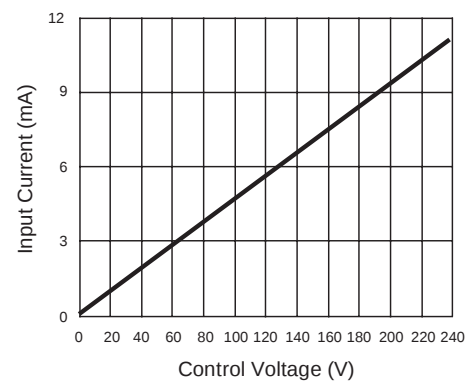


Figure 4b — E3PT48A

EQUIVALENT CIRCUIT

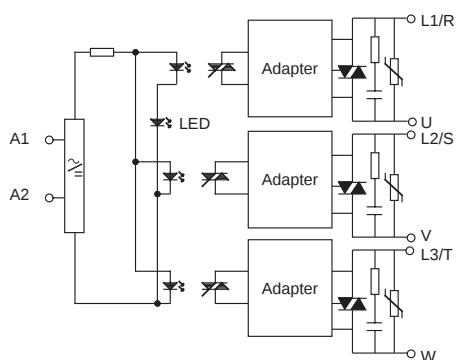


Figure 3a — E3PT48A

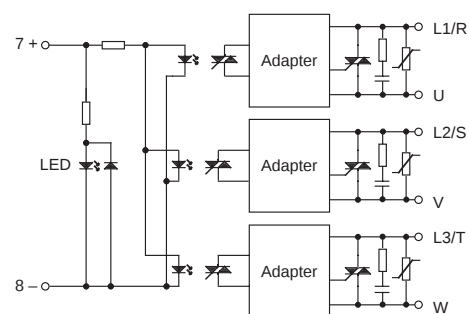


Figure 3b — E3PT48D

OUTPUT (LOAD) SPECIFICATION

	Min	Max	Unit
Operating Range			
All relays	24	520	Vrms
Peak Voltage			
All relays		1200	Vpeak
Load Current Range (See Note 1)			
E3PT48D12	.005	12	A
E3PT48A12	.005	12	A
E3PT48D50	.005	50*	A
E3PT48A50	.005	50*	A
E3PT48D50H	.005	50*	A
E3PT48A50H	.005	50*	A
Maximum Surge Current Rating (Non-Repetitive)			
E3PT48X12		120	A
E3PT48X50		1000	A
E3PT48X50H		2000	A
On-State Voltage Drop			
All relays		1.4	V
Zero-Cross Window (Typical)			
All relays		±12	V
Off-State Leakage Current (60Hz)			
All relays		5	mA
Turn-On Time			
E3PT48	D	8.3	ms
E3PT48	A	25	ms
Turn-Off Time			
E3PT48	D	8.3	ms
E3PT48	A	25	ms
Off-State dv/dt			
All relays		500	V/μs
Maximum di/dt (Non-Repetitive)			
All relays		50	A/μs

OUTPUT (LOAD) SPECIFICATION (Continued)

	Min	Max	Unit
Operating Frequency			
All relays	10	440	Hz
I²t for Match Fusing (<8.3ms)			
E3PT48X12		72	A ² s
E3PT48X50		5000	A ² s
E3PT48X50H		20,000	A ² s

ENVIRONMENTAL SPECIFICATION

	Min	Max	Unit
Operating Temperature			
All relays	-40	100	°C
Storage Temperature			
All relays	-40	100	°C
Input-Output Isolation			
All relays	4000		Vrms
Output-Case Isolation			
E3PT48X12	2500		Vrms
All other relays	3300		Vrms

NOTES:

- *Current limited to 50A due to terminals.
- Electrical specifications at 25°C unless otherwise specified.

THERMAL CHARACTERISTICS

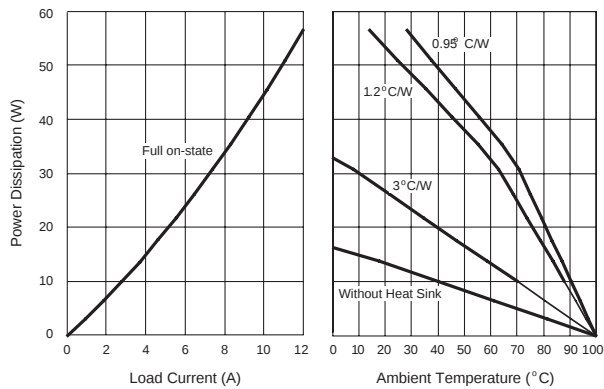


Figure 5a — E3PT48X12

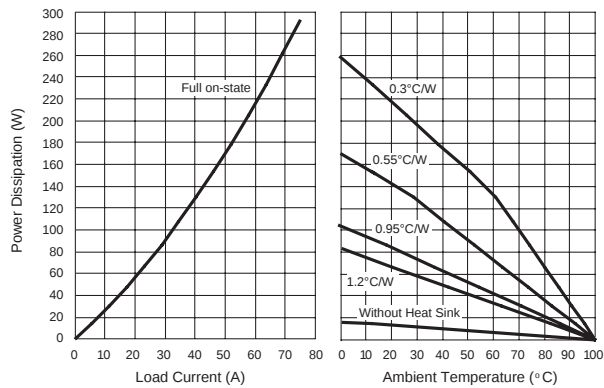


Figure 5b — E3PT48X50

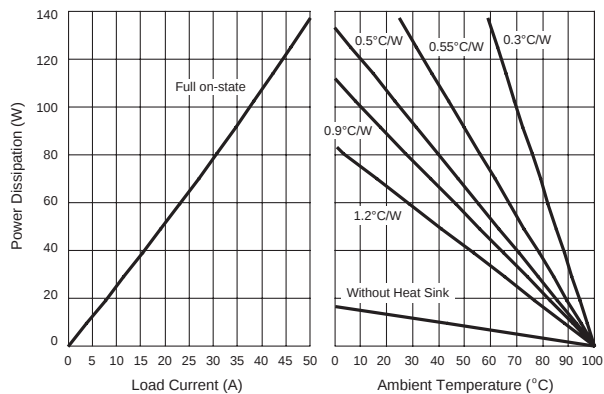


Figure 5c — E3PT48X50H

SURGE CURRENTS

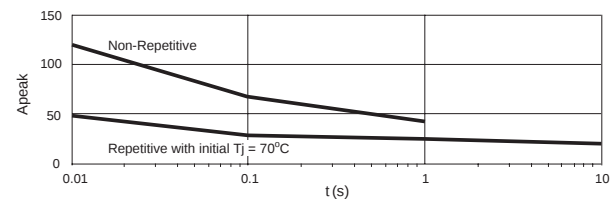


Figure 6a — E3PT48X12

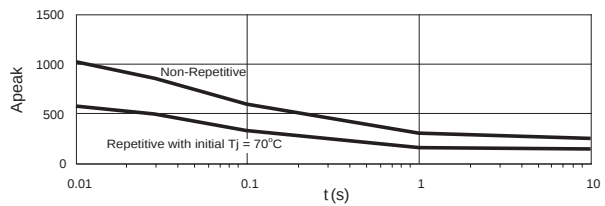


Figure 6b — E3PT48X50

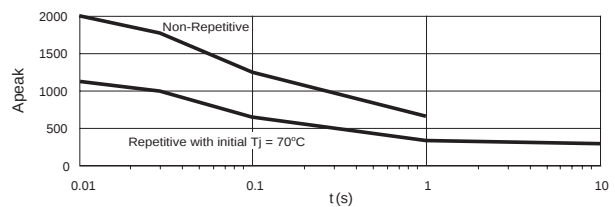


Figure 6c — E3PT48X50H