

Part Number	Description
E3PT48D50	50A*, 520 Vac

For RoHS Compliant Contact Factory

Part Number Explanation

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

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

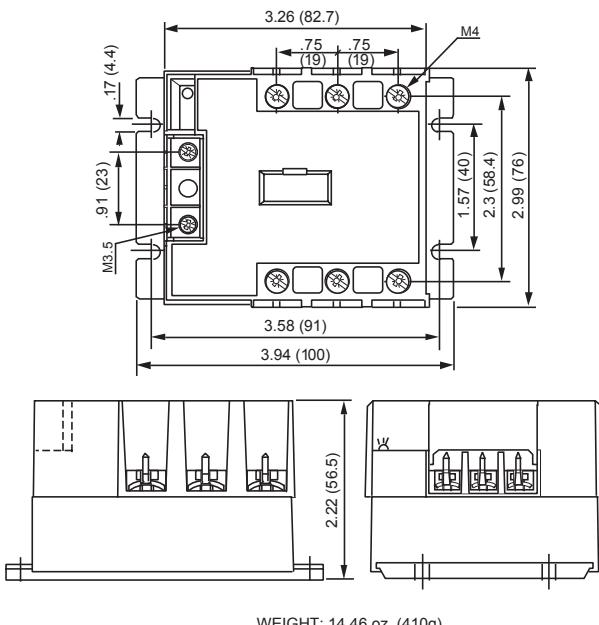


Figure 1 — E3PT relays; dimensions in inches (mm)



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

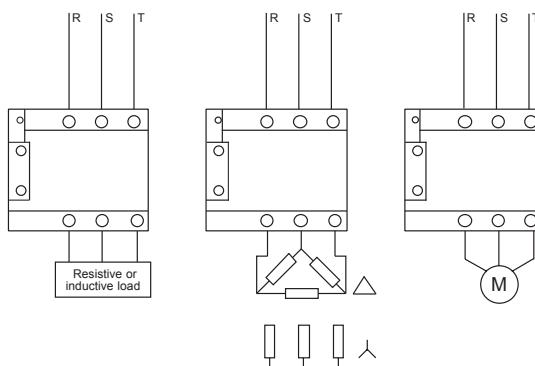


Figure 2 — E3PT typical application

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
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Input Resistance (Typical)	620	Ohms
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Reverse Voltage Protection	30	V
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OUTPUT (LOAD) SPECIFICATION

	Min	Max	Units
Operating Range	24	520	Vrms

Peak Voltage	1200	Vpeak
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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	1.4	V
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Zero-Cross Window (Typical)	± 12	V
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Off-State Leakage Current (60 Hz)	5	mA
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Turn-On Time	8.3	ms
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Turn-Off Time	8.3	ms
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Off-State dv/dt	500	V/μs
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Maximum di/dt (Non-Repetitive)	50	A/μs
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Operating Frequency	10	440	Hz
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OUTPUT (LOAD) SPECIFICATION (continued)

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

Environmental Specification

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

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

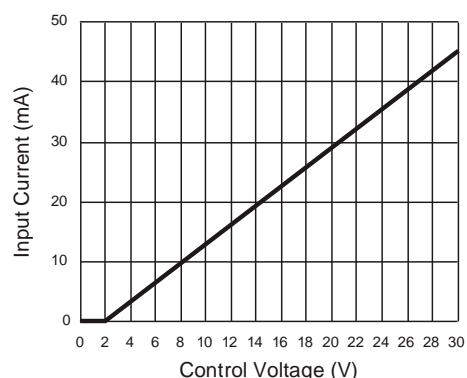
CONTROL CHARACTERISTIC


Figure 4a — E3PT48D

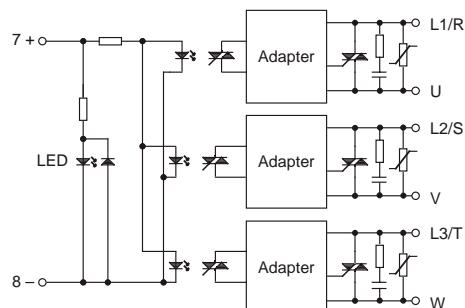
EQUIVALENT CIRCUIT


Figure 3b — E3PT48D

THERMAL CHARACTERISTICS

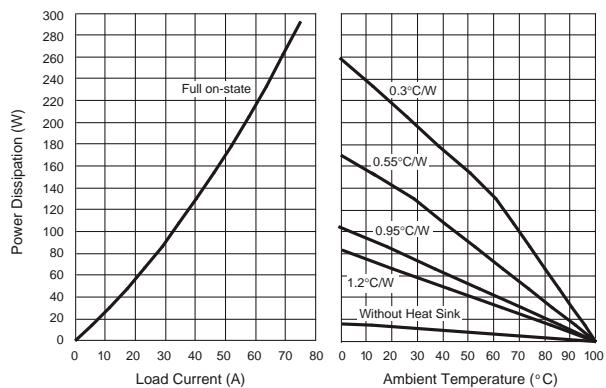


Figure 5b — E3PT48X50

SURGE CURRENTS

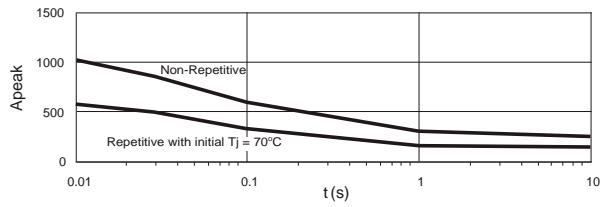


Figure 6b — E3PT48X50

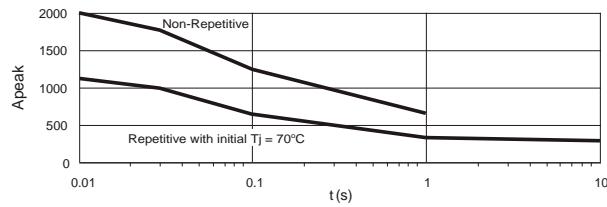


Figure 6c — E3PT48X50H

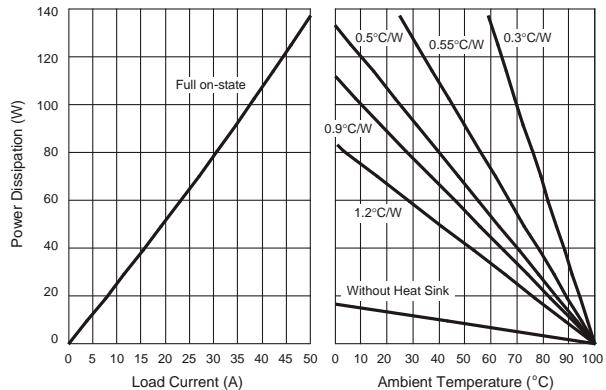


Figure 5c — E3PT48X50H

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