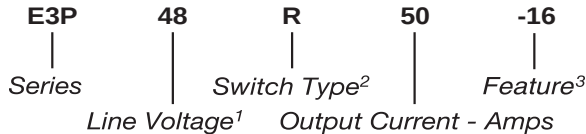


Part Number	Description
E3P48A50	50A, 600 Vac
E3P48A75	75A, 600 Vac
E3P48A75-22	75A, 600 Vac
E3P48D25	25A, 600 Vac
E3P48D50	50A, 600 Vac
E3P48D75	75A, 600 Vac
E3P48D75-16	75A, 520 Vac



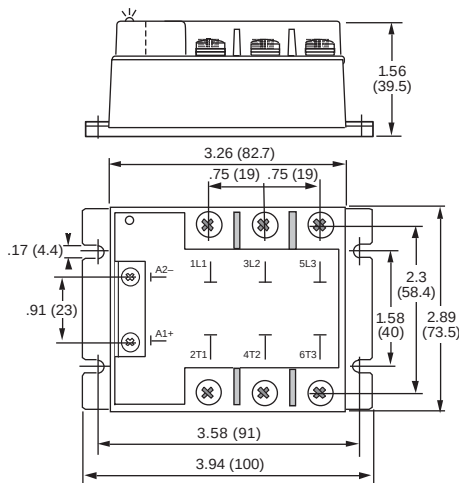
Part Number Explanation



NOTES

- 1) Line Voltage (nominal): 48 = 480 Vac
- 2) Switch Type: R = Random turn-on; D = Zero-cross turn-on;
A = AC control, Zero-cross turn-on
- 3) Features: -16 = MOV, -22 = 10-30Vac

MECHANICAL SPECIFICATION



WEIGHT: 13.05 oz. (370g)

Figure 1 — E3P relays; dimensions in inches (mm)

FEATURES/BENEFITS

- Three-phase output
- AC or DC control
- Internal output protection
- Control LED on all models
- Designed for all types of loads
- Excellent thermal performance
- Tight zero-cross window for low EMI
- High immunity to surges

DESCRIPTION

The Series E3P three-phase relays are designed for all types of loads. The design incorporates a thyristor output. Control status LED is a standard on all models. Output protection is provided internally on certain models. The Series E3P utilizes optical isolation to protect the control from load transients. High-current models are excellent for motor control.

APPLICATIONS

- Heating control
- Motor control
- Uninterruptible power supplies
- Light dimmers
- Three-phase industrial and process control
- On/Off controls of AC equipment

APPROVALS

All models are UL recognized.
UL File Number: E128555.

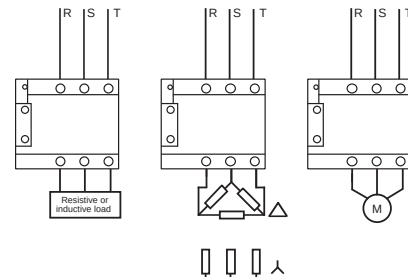


Figure 2 — E3P relays

INPUT (CONTROL) SPECIFICATION

	Input Type	Min	Max	Units
Control Range				
E3P	R/D	8.5	30	Vdc
E3P	A	90	240	Vac/Vdc
E3P	AXX-22	10	30	Vac

Input Current Range

E3P	R/D	10	45	mA
E3P	A	4	11	mA
E3P	AXX-22	11	55	mA

Must Turn-Off Voltage

All Relays		4	Vdc
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Input Resistance (Typical)

E3P	R/D	620	Ohms
E3P	A	21	KOhms
ESP	AXX-22	400	Ohms

Reverse Voltage Protection

E3P	R/D	30	V
E3P	A	N/A	

CONTROL CHARACTERISTIC

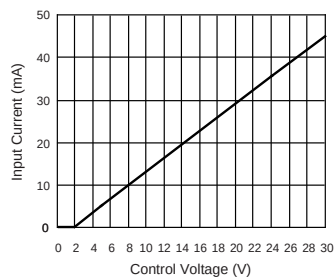


Figure 3a — All E3P relays except E3P48A50 and E3P48A75

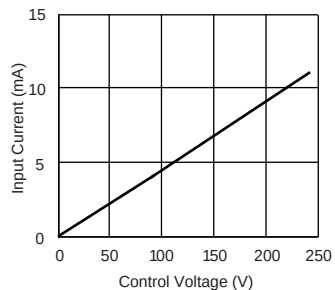


Figure 3b — E3P48A50 and E3P48A75

BLOCK DIAGRAM

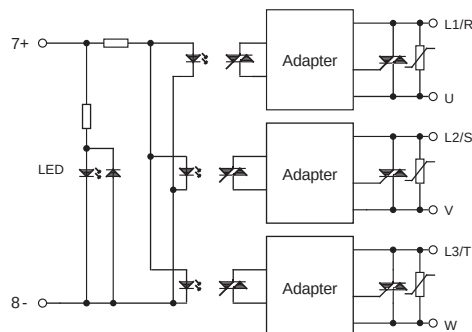


Figure 4a — E3P48R50-16

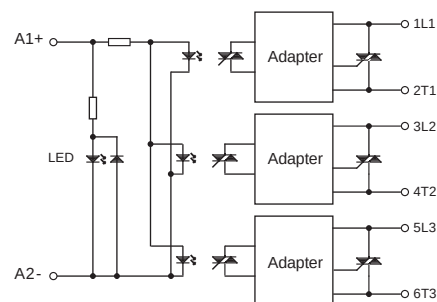


Figure 4b — E3P48D relays

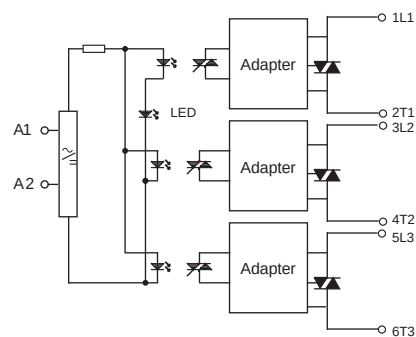


Figure 4c — E3P48A50 and E3P48A75

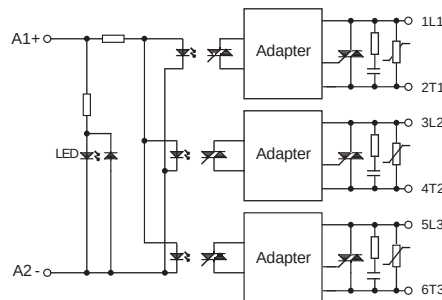


Figure 4d — E3P48DXX-16

OUTPUT (LOAD) SPECIFICATION				OUTPUT (LOAD) SPECIFICATION (Continued)			
	Min	Max	Units		Min	Max	Units
Operating Range				Turn-Off Time (60 Hz)			
E3P48XX-16	24	520	Vrms	All relays		8.3	ms
E3P48	24	600	Vrms				
Peak Voltage				Off-State dv/dt			
All Relays		1200	Vpeak	All relays		500	V/μs
Load Current Range				Maximum di/dt (Non-Repetitive)			
12A output current	.005	12	Arms	All relays		50	A/μs
25A output current	.005	25	Arms				
50A output current	.005	50	Arms	Operating Frequency Range			
75A output current	.005	75	Arms	E3P48D50	10	680	Hz
				All other relays	10	440	Hz
Inductive Load Current				I ² t for Match Fusing (<8.3 ms)			
E3P with -16 option 50A output		12	Arms	12A output		72	A²S
E3P with -16 option 75A output		16	Arms	25A output		265	A²S
Maximum Surge Current Rating (Non-Repetitive)				50A output		1500	A²S
12A output		120	A	75A output		5000	A²S
25A output		230	A				
50A output		550	A	ENVIRONMENTAL SPECIFICATION			
75A output		1000	A		Min	Max	Units
On-State Voltage Drop				Operating Temperature			
All relays output current		1.4	V	E3P48D50	-55	100	°C
				All other relays	-40	100	°C
Zero-Cross Window (Typical)				Storage Temperature			
E3P48DXX-16		12	V	E3P48D50	-55	100	°C
E3P48		24	V	All other relays	-40	100	°C
E3P48R		N/A		Input-Output Isolation			
Off-State Leakage Current (60 Hz)					4000		Vrms
E3P48DXX-16		5	mA	Output-Case Isolation			
All other relays		1	mA	E3P48D50	2500		Vrms
				E3P48D50	2500		Vrms
Turn-On Time (60 Hz)				All other relays	3300		Vrms
E3P48R		0.1	ms				
All relays		8.3	ms				

THERMAL CHARACTERISTICS

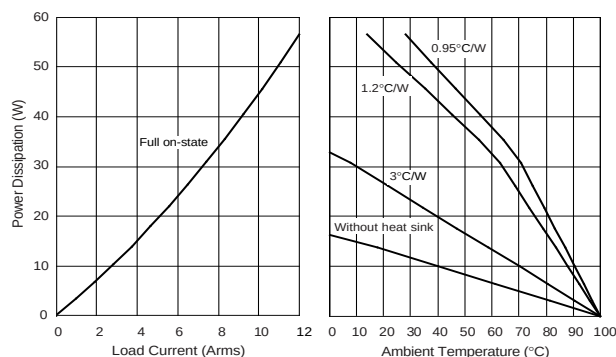


Figure 5a — 12A output

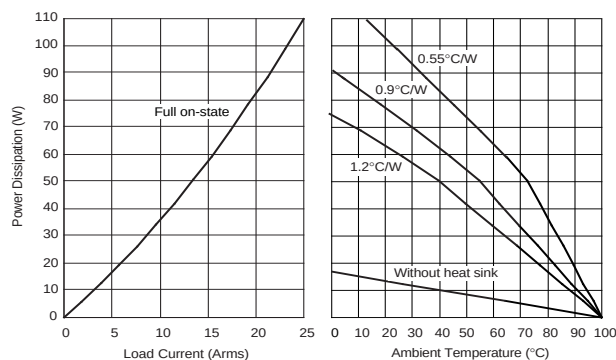


Figure 5b — 25A output

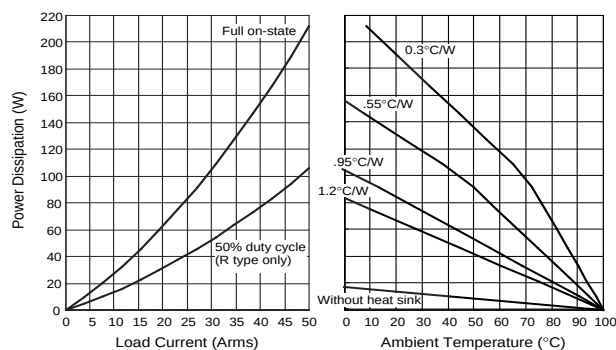


Figure 5c — 50A output

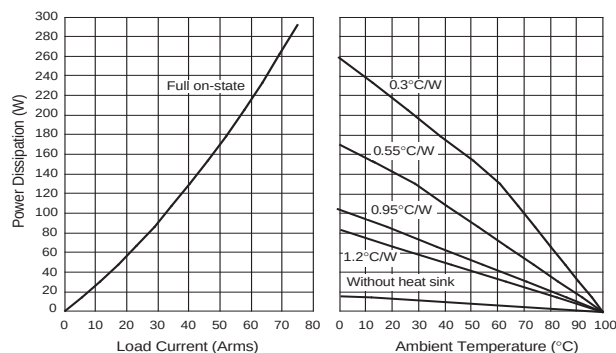


Figure 5d — 75A output

SURGE CURRENT

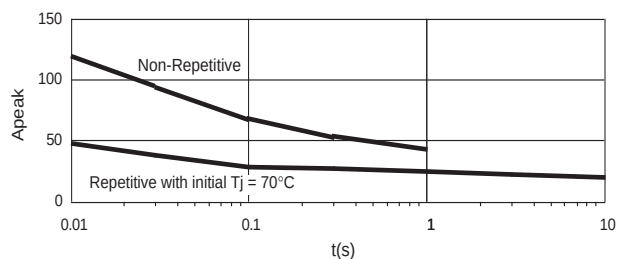


Figure 6a— 12A output

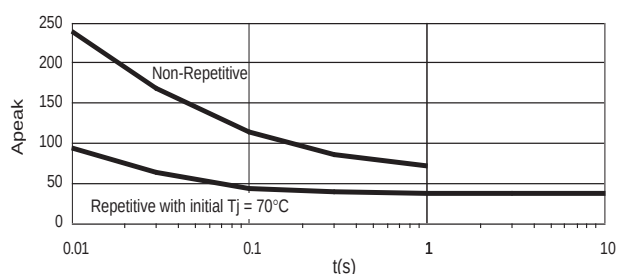


Figure 6b— 25A output

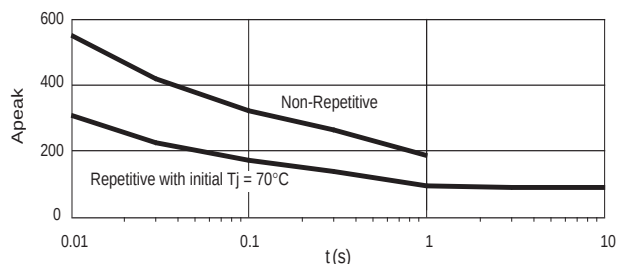


Figure 6c— 50A output

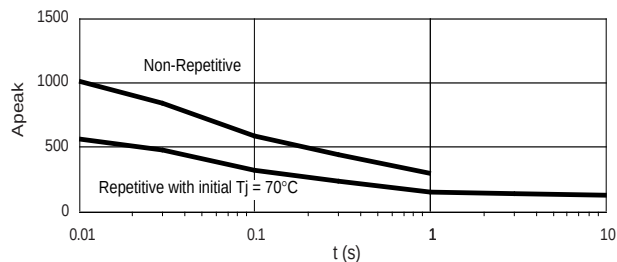


Figure 6d— 75A output

NOTES:

1. Electrical specifications at 25°C unless otherwise specified.
2. For 800Hz applications, contact factory.
3. For additional/custom applications, contact factory.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Teledyne Relays:

[E3P48D25](#) [E3P48D50](#) [E3P48D75](#) [E3P48D75-16](#) [E3P48A75](#) [E3P48R50-16](#) [E3P48A75-22](#)