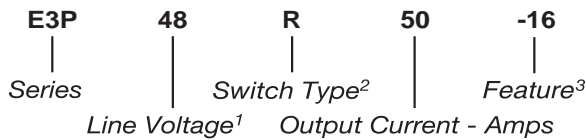


Part Number	Description
E3P48R50-16	50A, 520 Vac
E3P48D50-16	50A, 520 Vac
E3P48D75-16	75A, 520 Vac
E3P48D12	12A, 600 Vac
E3P48D25	25A, 600 Vac
E3P48D50	50A, 600 Vac
E3P48A50	50A, 600 Vac
E3P48D75	75A, 600 Vac
E3P48A75	75A, 600 Vac

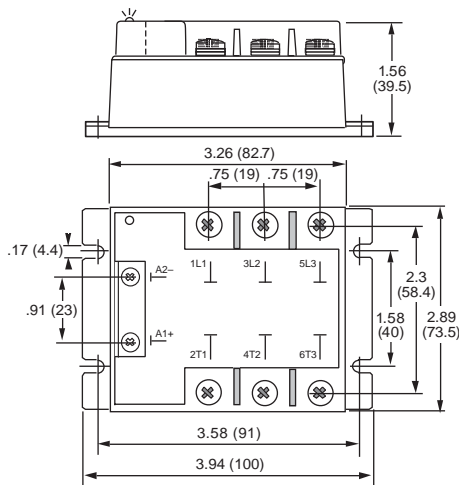
Part Number Explanation



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

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.

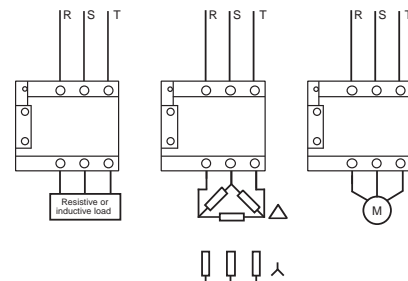


Figure 2 — E3P relays

INPUT (CONTROL) SPECIFICATION

	Input Type	Min	Max	Units
Control Range				
E3P	R/D	8.5	30	Vdc
E3P	A	90	240	Vac/Vdc
Input Current Range				
E3P	R/D	10	45	mA
E3P	A	4	11	mA
Must Turn-Off Voltage				
All Relays			4	Vdc
Input Resistance (Typical)				
E3P	R/D		620	Ohms
E3P	A		21	KOhms
Reverse Voltage Protection				
E3P	R/D		30	V
E3P	A		N/A	

BLOCK DIAGRAM

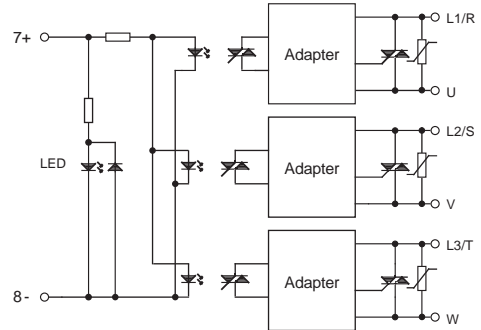


Figure 4a — E3P48R50-16

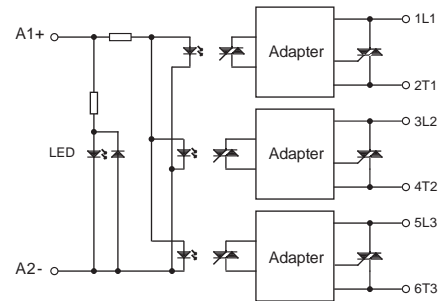


Figure 4b — E3P48D relays

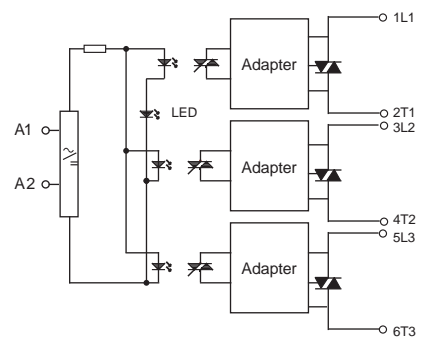


Figure 4c — E3P48A50 and E3P48A75

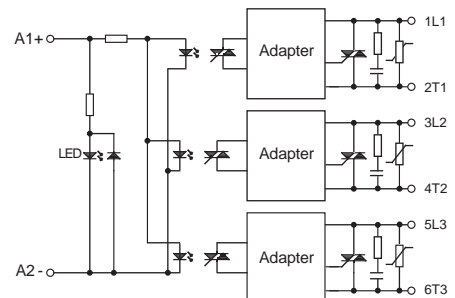


Figure 4d — E3P48DXX-16

CONTROL CHARACTERISTIC

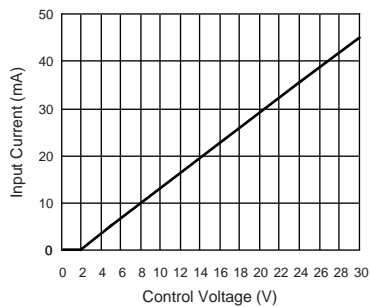


Figure 3a — All E3P relays except E3P48A50 and E3P48A75

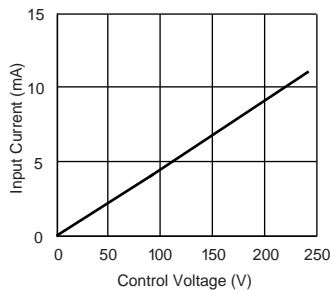


Figure 3b — E3P48A50 and E3P48A75

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				I²t for Match Fusing (<8.3 ms)			
E3P with -16 option 50A output		12	Arms	12A output		72	A ² S
E3P with -16 option 75A output		16	Arms	25A output		265	A ² S
				50A output		1500	A ² S
				75A output		5000	A ² S
Maximum Surge Current Rating (Non-Repetitive)				ENVIRONMENTAL SPECIFICATION			
12A output		120	A		Min	Max	Units
25A output		230	A	Operating Temperature			
50A output		550	A	E3P48D50	-55	100	°C
75A output		1000	A	All other relays	-40	100	°C
On-State Voltage Drop				Storage Temperature			
All relays output current		1.4	V	E3P48D50	-55	100	°C
				All other relays	-40	100	°C
Zero-Cross Window (Typical)				Input-Output Isolation			
E3P48DXX-16		12	V	Input-Output Isolation	4000		Vrms
E3P48		24	V	Output-Case Isolation			
E3P48R		N/A		E3P48D50	2500		Vrms
				E3P48D50	2500		Vrms
Off-State Leakage Current (60 Hz)				All other relays			
E3P48DXX-16		5	mA		3300		Vrms
All other relays		1	mA				
Turn-On Time (60 Hz)							
E3P48R		0.1	ms				
All relays		8.3	ms				

THERMAL CHARACTERISTICS

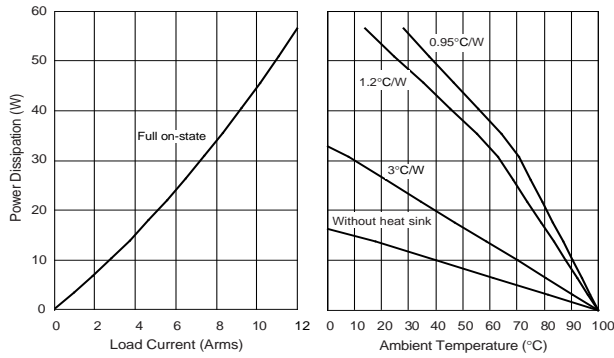


Figure 5a — 12A output

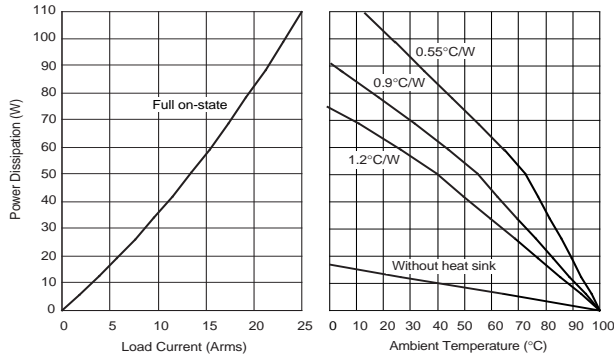


Figure 5b — 25A output

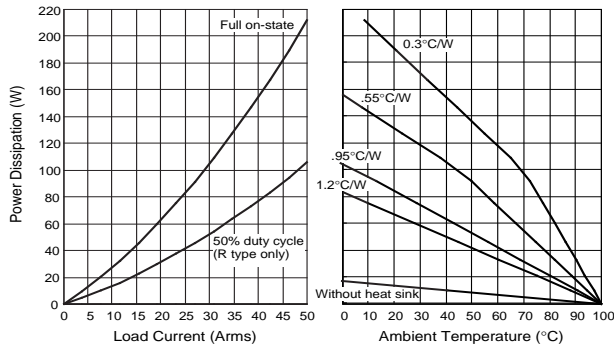


Figure 5c — 50A output

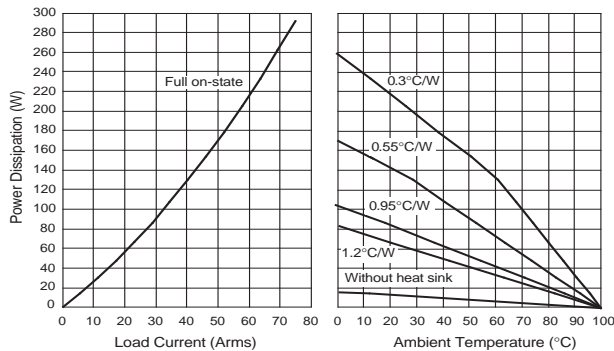


Figure 5d — 75A output

SURGE CURRENT

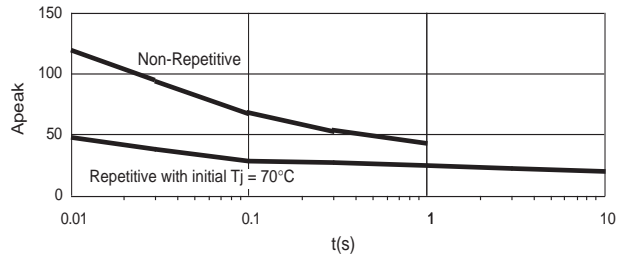


Figure 6a— 12A output

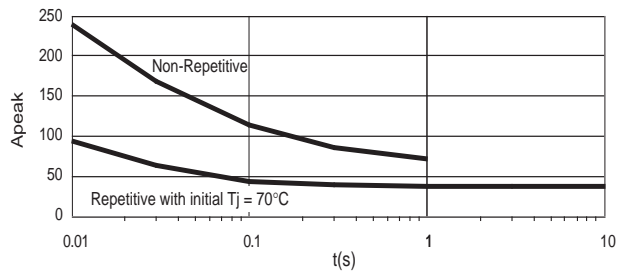


Figure 6b— 25A output

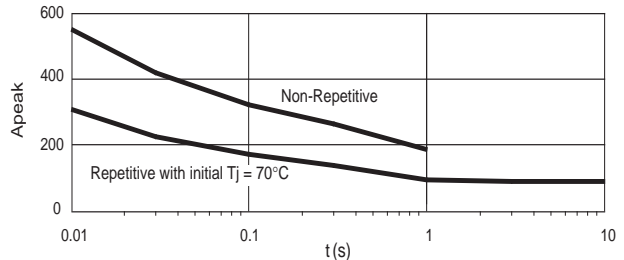


Figure 6c— 50A output

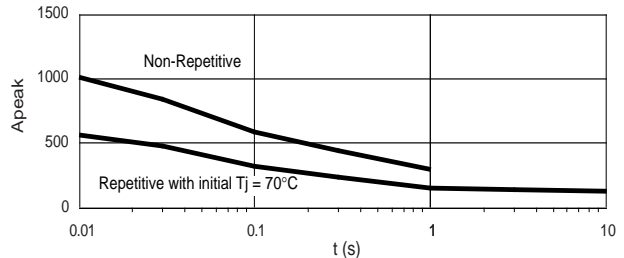


Figure 6d— 75A output

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