

FEATURES/BENEFITS

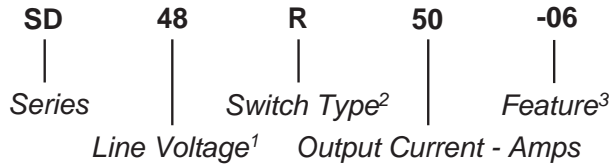
The Series SD dual-phase relays are designed for all types of loads. The design incorporates two relays in a single package. The relays utilize optical isolation to protect the control from load transients. High-current models are excellent for motor and phase angle control. The 50A 600 Vac models are available with common control connector or individual control connector. Applications include motor control, heating control, uninterruptible power supplies, light dimmers, industrial and process control, and on/off controls of AC equipment. UL recognized. UL File Number: E1285555.

- Designed for all types of loads
- Dual output (two relays in one package)
- Faston terminals
- Connector for common or individual control
- Tight zero-cross window for low EMI
- High immunity to surges



| Part Number | Description |
|-------------|-------------|
| SD24R50-06 | 12-280 Vac |
| SD24R50 | 12-280 Vac |
| SD24D40-06 | 12-280 Vac |
| SD24R40-06 | 12-280 Vac |
| SD24D50-06 | 12-280 Vac |
| SD48D40-06 | 24-500 Vac |
| SD48D50A | 24-600 Vac |
| SD48D50A2 | 24-600 Vac |

Part Number Explanation



NOTES

- 1) Line Voltage (nominal): 24 = 240 Vac; 48 = 480 Vac
- 2) Switch Type: R = Random turn-on; D = Zero-cross turn-on;
- 3) Features: -06 = Faston terminals
A = Common control adapter
A2 = Individual control adapter

INPUT (CONTROL) SPECIFICATION

| | Min | Max | Units |
|----------------------|-----|-----|-------|
| Control Range | | | |
| SD24 | 4 | 30 | Vdc |
| SD48D40-06 | 5 | 30 | Vdc |
| SD48D50XX | 10 | 30 | Vdc |

Input Current Range

| | | | |
|--------------------------|---|--|----|
| All relays (See Fig. 4a) | 3 | | mA |
|--------------------------|---|--|----|

Must Turn-Off Voltage

| | | | |
|------------|---|--|-----|
| All relays | 1 | | Vdc |
|------------|---|--|-----|

Input Resistance (Typical)

| | | |
|------------|------|------|
| SD24 | 1000 | Ohms |
| SD48D40-06 | 1000 | Ohms |
| SD48D50A | 1400 | Ohms |
| SD48D50A2 | 1800 | Ohms |

Reverse Voltage Protection

| | | | |
|------------|----|--|---|
| All relays | 30 | | V |
|------------|----|--|---|

BLOCK DIAGRAM

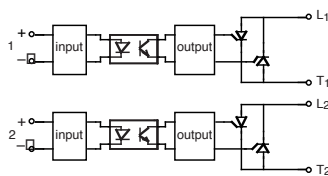


Figure 1a — All SD relays except SD48D40-06

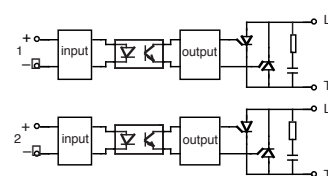


Figure 1b — SD48D40-06

MECHANICAL SPECIFICATION

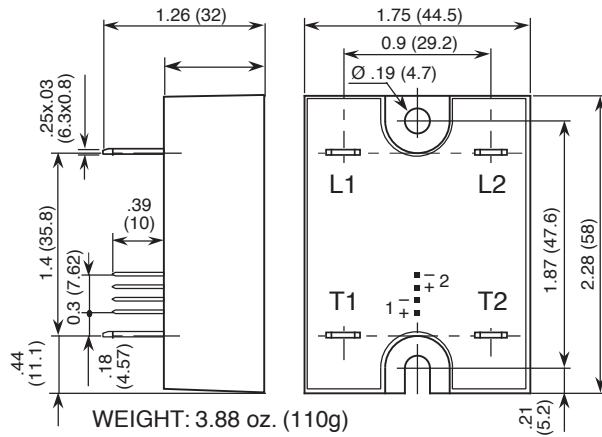


Figure 2a — SD24R50-06, and SD24D50-06; dimensions in inches (mm)



Figure 2b — SD24R50; dimensions in inches (mm)

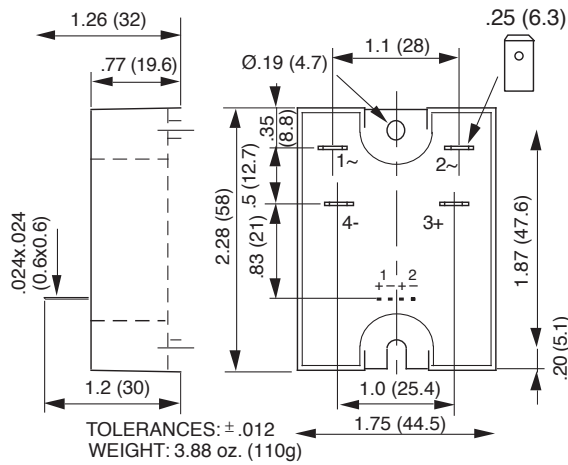


Figure 2c — SD48D40-06, SD24D40-06 and SD24R40-06; dimensions in inches (mm)



Figure 2d — SD48D50A; dimensions in inches (mm)

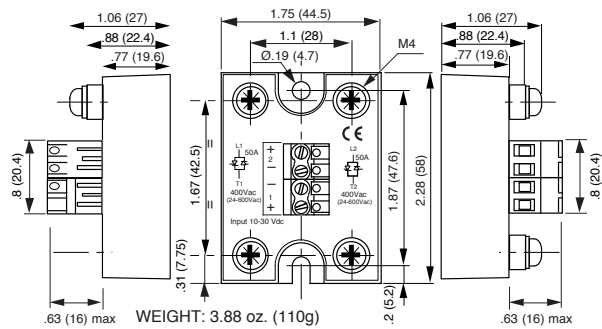


Figure 2e — SD48D50A2; dimensions in inches (mm)

TYPICAL APPLICATION

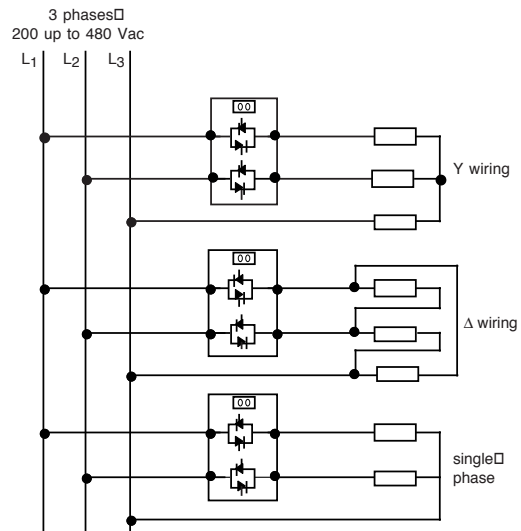


Figure 3 — SD48D50A

| OUTPUT (LOAD) SPECIFICATION | | | | |
|--|-----|------|-------|-------|
| Input Type | Min | Max | Units | |
| Operating Range | | | | |
| SD24 | R/D | 12 | 280 | Vrms |
| SD48D40-06 | | 24 | 510 | Vrms |
| SD48D50XX | | 24 | 600 | Vrms |
| Peak Voltage | | | | |
| SD24 | | | 600 | Vpeak |
| SD48 | | | 1200 | Vpeak |
| Load Current Range (Resistive) | | | | |
| SD24D40-06, SD24R40-06 & SD48D40-06 | | | | |
| | | .005 | 40 | Arms |
| All other relays | | .005 | 50 | Arms |
| Maximum Surge Current Rating (Non-Repetitive) | | | | |
| SD24D40-06, SD24R40-06, & SD48D40-06 | | | | |
| | | | 350 | A |
| All other relays | | | 550 | A |
| On-State Voltage Drop | | | | |
| All relays output current | | | 1.6 | V |
| Zero-Cross Window | | | | |
| SD | R | | NA | |
| SD | D/A | | ±12 | Vac |
| Off-State Leakage Current (60Hz) | | | | |
| SD48D40-06 | | | 2.5 | mA |
| All other relays | | | 1 | mA |
| Turn-On Time (60 Hz) | | | | |
| SD24 | R | | 0.1 | ms |
| All other relays | | | 8.3 | ms |
| Turn-Off Time (60 Hz) | | | | |
| All relays | | | 8.3 | ms |
| SD24R40-06 | | | 10 | ms |

| Input Type | Min | Max | Units |
|--|-----|-----|-----------------------|
| Off-State dv/dt | | | |
| All relays | | 500 | V/μs |
| Maximum di/dt (Non-Repetitive) | | | |
| All relays | | 50 | A/μs |
| Operating Frequency Range | | | |
| All relays | 10 | 440 | Hz |
| I²t for Match Fusing (<8.3ms) | | | |
| SD24D40-06, SD24R40-06 & SD48D40-06 | | | 612 A ² S |
| All other relays | | | 1500 A ² S |

CONTROL CHARACTERISTICS

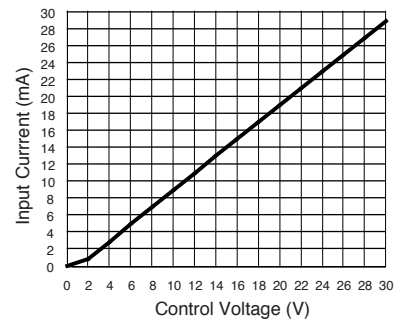


Figure 4a — SD24 and SD48D40-06 relays

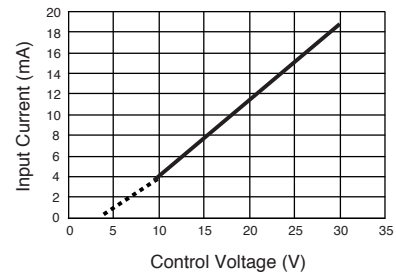


Figure 4b — SD48D50A relay

OUTPUT (LOAD) SPECIFICATION (Continued)

ENVIRONMENTAL SPECIFICATION

| | Min | Max | Units |
|-----------------------|-----|-----|-------|
| Operating Temperature | -40 | 100 | °C |
| Storage Temperature | -40 | 100 | °C |

Input-Output Isolation

SD24D40-06, SD24R40-06 & SD48D40-06

| | | |
|------------------|------|------|
| | 4000 | Vrms |
| All other relays | 3300 | Vrms |

Output-Case Isolation

SD24D40-06, SD24R40-06 & SD48D40-06

| | | |
|------------------|------|------|
| | 2500 | Vrms |
| All other relays | 3300 | Vrms |

Output to Output

| | | |
|------------------|------|------|
| SD48D50XX | 3300 | Vrms |
| All other relays | 2500 | Vrms |

Junction-Case Thermal Resistance

SD24D40-06, SD24R40-06 & SD48D40-06

| | | |
|------------------|-----|------|
| | 1.1 | °C/W |
| All other relays | 0.5 | °C/W |

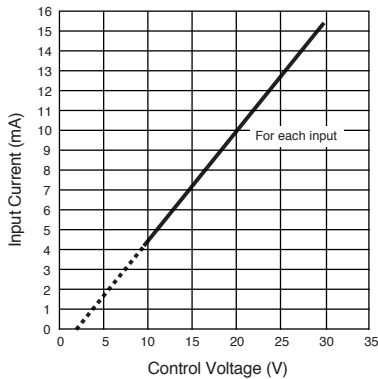


Figure 4c — SD48D50A2 relay

SURGE CURRENT

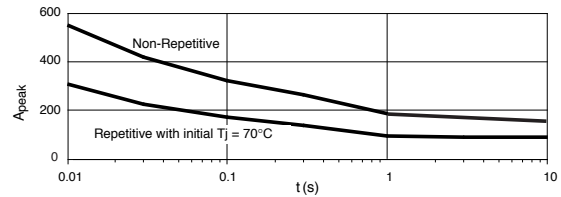


Figure 5a — SD24 50A output current

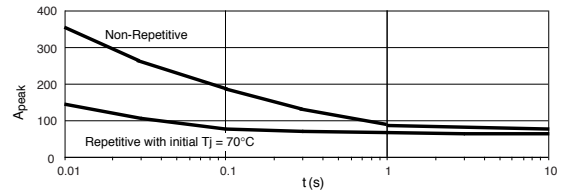


Figure 5b — SD48 40A and SD24 40A output current

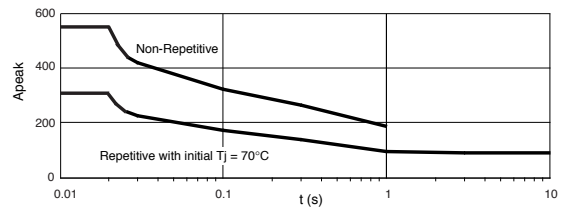


Figure 5c — SD48 50A output current

NOTES:

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

THERMAL CHARACTERISTICS



Figure 6a — SD24 50A relays output current

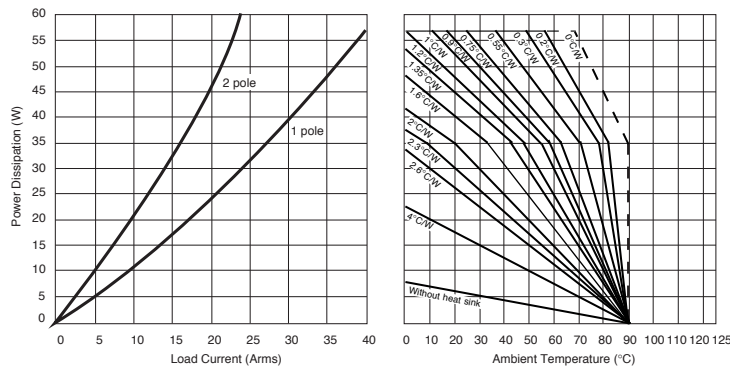


Figure 6b — SD48 40A and SD24 40A output current

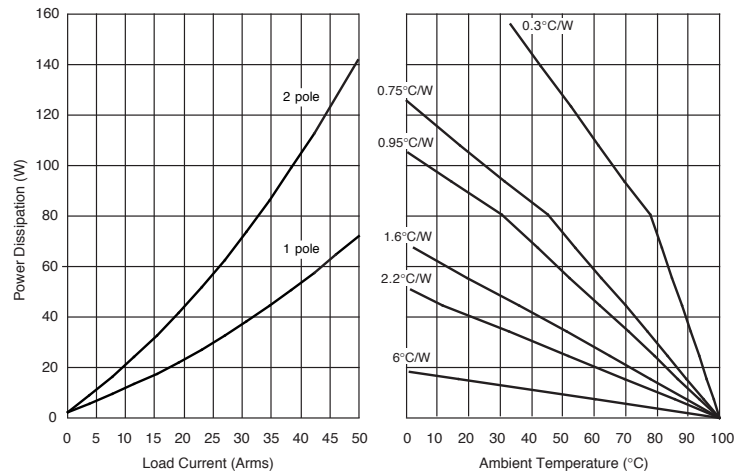


Figure 6c — SD48D50A and SD48D50A2 output current

OPTIONAL ADD-ONS

Please order add-ons separately:

- -12 — Thermal pad installed.
- -14 — Plastic touch-proof cover.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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