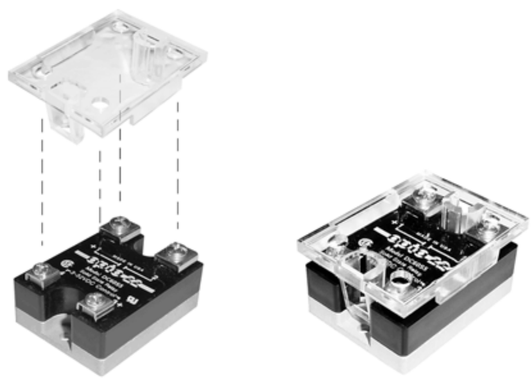
Power Series SSR Accessories

Safety Cover

A plastic safety cover (Opto 22 part number SAFETY COVER) is available for use with Opto 22 Power Series SSRs. The safety cover reduces the chance of accidental contact with relay terminals, while providing access holes for test instrumentation.



An optional plastic safety cover can be installed on a Power Series SSR.

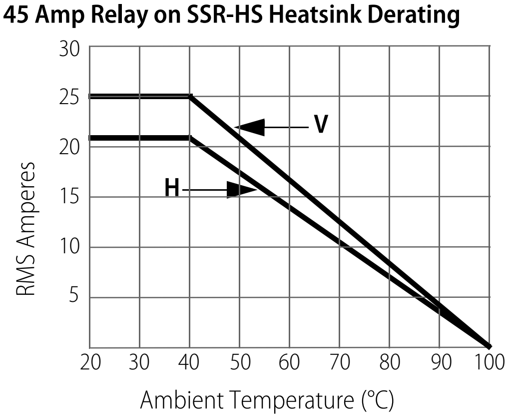
SSR-HS Heatsink

Custom designed for the Power Series SSRs, the SSR-HS heatsink provides excellent heat dissipation when mounted to the SSR with a matching thermal conductive pad, used in place of silicon grease. One thermal pad is included with the heatsink. Additional pads may be purchased in packs of 10 (part number SSR-THERMOPAD). DIN-rail adapter is included.

Thermal Ratings

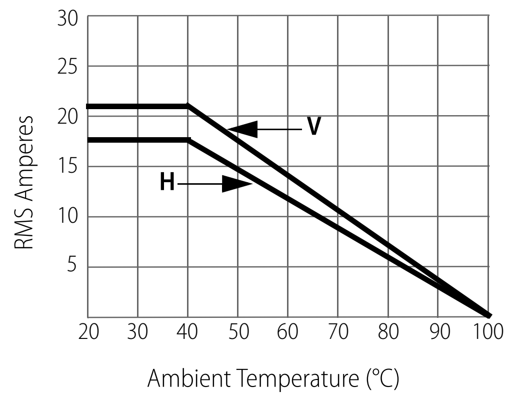
The thermal ratings shown in the following graphs were obtained with an SSR attached to a heatsink using a thermal conductive pad.

45 Amp Relay on SSR-HS Heatsink Derating



V: Heatsink mounted to a **vertical** surface
H: Heatsink mounted to a **horizontal** surface.

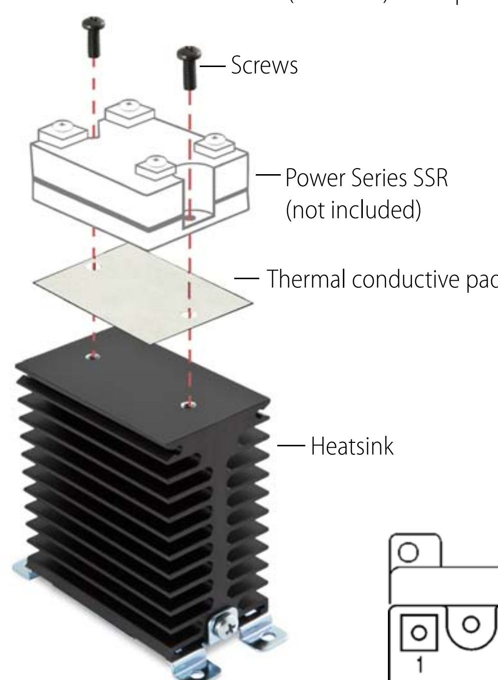
25 Amp Relay on SSR-HS Heatsink Derating



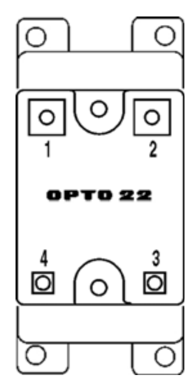
V: Heatsink mounted to a **vertical** surface
H: Heatsink mounted to a **horizontal** surface.

Heatsink Assembly

Before attaching the SSR, remove the protective film from both sides of the thermal pad, then place the pad on the heatsink making sure to align the holes. Secure the SSR to the heatsink with the two 8-32 x 3/8″ panhead Phillips screws included in the kit. Use 20 in-lb (2.26 N-m) of torque.



NOTE: To take advantage of the cooling effect of natural air flow, mount the SSR/heatsink assembly to a vertical surface with the Opto 22 logo right side up as shown here.



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AC Power Series Specifications

Opto 22 provides a full range of Power Series relays with a wide variety of voltage (120–575) and current options (3–45 amps). All Power Series relays feature 4,000 volts of optical isolation and have a high PRV rating. Operating temperature is –40 °C to 100 °C.

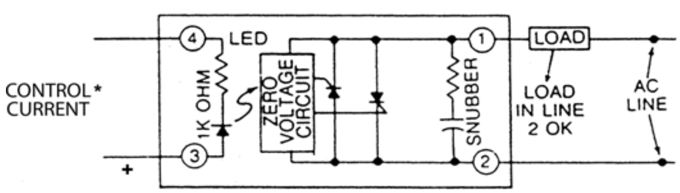
120/240/380 Volt

NOTE: Model numbers ending in -17 are replacement parts only. Their specifications are identical to the same model number without the -17. For example, 240D10-17 is identical to 240D10.

Model Number	Nominal AC Line Voltage	Nominal Current Rating (Amps)	1 cycle Surge (Amps) Peak	Nominal Signal Input Resistance (Ohms)	Signal Pick-up Voltage	Signal Drop-out Voltage	Peak Repetitive Voltage Maximum	Maximum Output Voltage Drop	Off-State Leakage (mA) Maximum**	Operating Voltage Range (Volts AC)	I^2t Rating t=8.3 (ms)	Isolation Voltage	θjc* (°C/Watt)	Dissipation (Watts/ Amp)
120D3	120	3	85	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	2.5mA	12–140	30	$4{,}000V_{RMS}$	11	1.7
120D10	120	10	110	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	7 mA	12–140	50	$4{,}000V_{RMS}$	1.3	1.6
120D25	120	25	250	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	7 mA	12–140	250	$4{,}000V_{RMS}$	1.2	1.3
120D45	120	45	650	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	7 mA	12–140	1750	$4{,}000V_{RMS}$	0.67	0.9
240D3	240	3	85	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	5 mA	24–280	30	$4{,}000V_{RMS}$	11	1.7
240D10	240	10	110	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	14 mA	24–280	50	$4{,}000V_{RMS}$	1.3	1.6
240Di10	240	10	110	730	3VDC (32V allowed)	1 VDC	600	1.6 volts	14 mA	24–280	50	$4{,}000V_{RMS}$	1.3	1.6
240D25	240	25	250	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	14 mA	24–280	250	$4{,}000V_{RMS}$	1.2	1.3
240Di25	240	25	250	730	3VDC (32V allowed)	1 VDC	600	1.6 volts	14 mA	12–280	250	$4{,}000V_{RMS}$	1.2	1.3
240D45	240	45	650	1000	3VDC (32V allowed)	1 VDC	600	1.6 volts	14 mA	24–280	1750	$4{,}000V_{RMS}$	0.67	0.9
240Di45	240	45	650	730	3VDC (32V allowed)	1 VDC	600	1.6 volts	14 mA	24–280	1750	$4{,}000V_{RMS}$	0.67	0.9
380D25	380	25	250	1000	3VDC (32V allowed)	1 VDC	800	1.6 volts	12 mA	24–420	250	$4{,}000V_{RMS}$	1.2	1.3
380D45	380	45	650	1000	3VDC (32V allowed)	1 VDC	800	1.6 volts	12 mA	24–420	1750	$4{,}000V_{RMS}$	0.67	0.9
120A10	120	10	110	33K	85VAC (280V allowed)	10 VAC	600	1.6 volts	7 mA	12–140	50	$4{,}000V_{RMS}$	1.3	1.6
120A25	120	25	250	33K	85VAC (280V allowed)	10 VAC	600	1.6 volts	7 mA	12–140	250	$4{,}000V_{RMS}$	1.2	1.3
240A10	240	10	110	33K	85VAC (280V allowed)	10 VAC	600	1.6 volts	14 mA	24–280	50	$4{,}000V_{RMS}$	1.3	1.6
240A25	240	25	250	33K	85VAC (280V allowed)	10 VAC	600	1.6 volts	14 mA	24–280	250	$4{,}000V_{RMS}$	1.2	1.3
240A45	240	45	650	33K	85VAC (280V allowed)	10 VAC	600	1.6 volts	14 mA	24–280	1750	$4{,}000V_{RMS}$	0.67	0.9

Note: θjc* = Thermal resistance from internal junction to base. Maximum internal junction temperature is 110 °C.
** Operating Frequency: 25 to 65 Hz (operates at 400 Hz with 6 times the offstate leakage)

Connection Diagram, DC Power Series



*Control Current varies with control voltage. See “Control Current Calculation” on page 17 for information.

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