

Opto-22 Z240D10
Solid State Relay



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\$35.00

In Stock

Qty Available: 1

Used and in Excellent Condition

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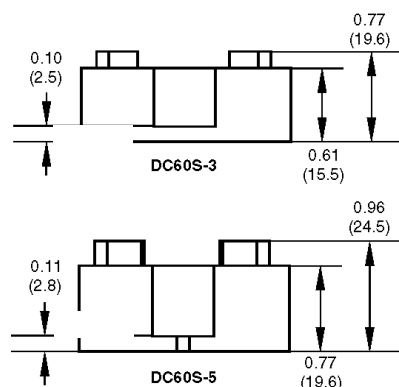
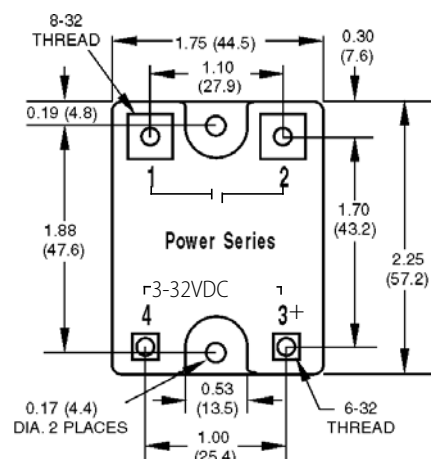
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480/575 Volt (cont)

Dimensional Drawings

NOTE: All dimensions are nominal. We do not recommend mounting the terminal side of the SSR to a flat PCB (printed circuit board) or other flat surface, because there may be some variation in terminal height from one terminal to another and from one SSR to another.



Side view: Part numbers
DC60S3, 120D3, and
240D3 only

Side view: All other
part numbers

Z SERIES SPECIFICATIONS

AC Power: 120/240 Volt

The Z Series employs a unique heat transfer system that makes it possible for Opto 22 to deliver a low-cost, 10-amp, solid-state relay in an all-plastic case. The push-on tool-free quick-connect

terminals make the Z Series ideal for high-volume OEM applications. Operating temperature is -40°C to 100°C . (Ambient temperature will affect the current rating.)

	Z120D10	Z240D10
Nominal AC Line Voltage Nominal	120	240
Current Rating (Amps)	10*	10*
1 cycle Surge (Amps) Peak	110	110
Nominal Signal Input Resistance (Ohms)	1000	1000
Signal Pick-up Voltage	3VDC (32V allowed)	3VDC (32V allowed)
Signal Drop-out Voltage	1 VDC	1 VDC
Peak Repetitive Voltage Maximum	600	600
Maximum Output Voltage Drop	1.6 volts	1.6 volts
Off-State Leakage (mA) Maximum**	6 mA	12 mA
Operating Voltage Range (Volts AC)	12–140	24–280
I^2t Rating $t=8.3$ (ms)	50	50
Isolation Voltage	4,000 V_{RMS}	4,000 V_{RMS}
θ_{jc} *** ($^{\circ}\text{C}/\text{Watt}$) Dissipation (Watts/Amp)	4	4

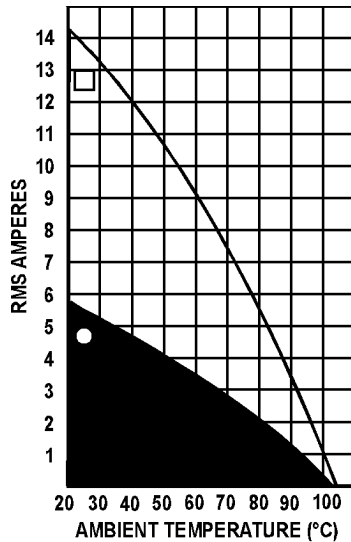
Notes: * Ambient temperature will affect the current rating. For details, see the Thermal Ratings chart.
 ** Operating Frequency: 25 to 65 Hz (operates at 400 Hz with 6 times the offstate leakage).
 *** θ_{jc} = Thermal resistance from internal junction to base. Maximum internal junction temperature is 110°C .

NOTE: Part number Z240D10-17 is a replacement part only. Its specifications are identical to Z240D10.

AC Power: 120/240 Volt (cont.)

Thermal Ratings

Ambient temperature will affect the current rating.



FREE AIR



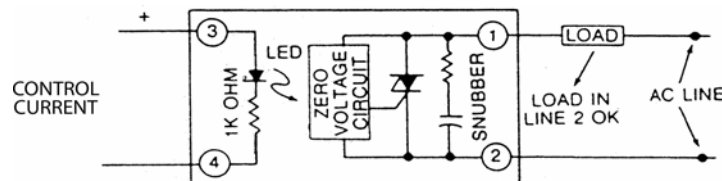
MOUNTED ON A HEATSINK
WITH 2°C/WATT RATING

Surge Current Data

Time Second	Time* (Cycles)	Peak Amps
0.017	1	110
0.050	3	85
0.100	6	70
0.200	12	60
0.500	30	50
1	60	40
2	120	33
3	180	32
4	240	31
5	300	30
10	600	28

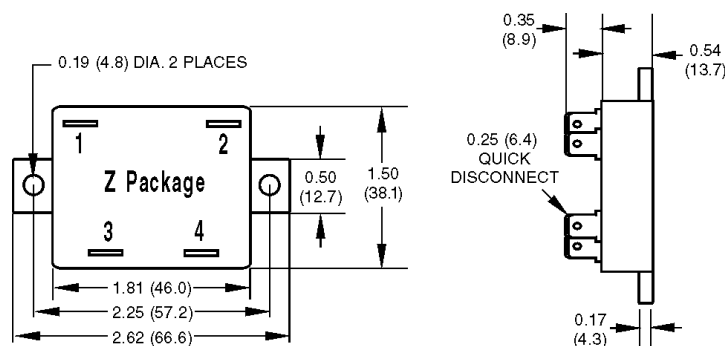
Note: *60 Hz

Connection Diagram



Control Current varies with control voltage. For details, see "Control Current Calculation" on page 17.

Dimensional Drawings



NOTE: All dimensions are nominal. We do not recommend mounting the terminal side of the SSR to a flat PCB (printed circuit board) or other flat surface, because there may be some variation in terminal height or alignment from one terminal to another and from one SSR to another.

PRINTED CIRCUIT SERIES SPECIFICATIONS

AC Power: MP and P Series

The MP Series packaging is designed with a minimum footprint to allow maximum relay density on the printed circuit board.
The P Series power relays provide low-profile for 0.5-inch (12.7 mm)

center mounting on printed circuit boards.
Operating temperature: -40 °C to 100 °C. (Ambient temperature will affect the current rating.)

	MP120D2 or P120D2	MP120D4 or P120D4	MP240D2 or P240D2	MP240D4 or P240D4	MP380D4
Nominal AC Line Voltage	120	120	240	240	380
Nominal Current Rating (Amps)	2*	4*	2*	4*	4*
1 cycle Surge (Amps) Peak	20	85	20	85	85
Nominal Signal Input Resistance (Ohms)	1000	1000	1000	1000	1000
Signal Pick-up Voltage	3VDC**** (24V allowed)	3VDC**** (24V allowed)	3VDC**** (24V allowed)	3VDC**** (24V allowed)	3VDC**** (24V allowed)
Signal Drop-out Voltage	1 VDC	1 VDC	1 VDC	1 VDC	1 VDC
Peak Repetitive Voltage Maximum	600	600	600	600	800
Maximum Output Voltage Drop	1.6 volts	1.6 volts	1.6 volts	1.6 volts	1.6 volts
Off-State Leakage mA Maximum**	5 mA	5 mA	5 mA	5 mA	5 mA
Operating Voltage Range (Volts AC)	12–140	12–140	24–280	24–280	24–420
I ² t Rating t=8.3 (ms)	2	30	2	30	30
Isolation Voltage	4,000 V _{RMS}	4,000 V _{RMS}	4,000 V _{RMS}	4,000 V _{RMS}	4,000 V _{RMS}
θ _{jc} *** °C/Watt	20	6.5	20	6.5	6.5
Dissipation Watts/Amp	1.2	1.2	1.2	1.2	1.2
Rating (Motor Load)	1 FLA at 120 VAC 6 LRA at 120 VAC	2.5 FLA at 240 VAC 6 LRA at 240 VAC	1 FLA at 120 VAC 15 LRA at 120 VAC	2.5 FLA at 240 VAC 15 LRA at 240 VAC	2.5 FLA at 380 VAC 15 LRA at 380 VAC

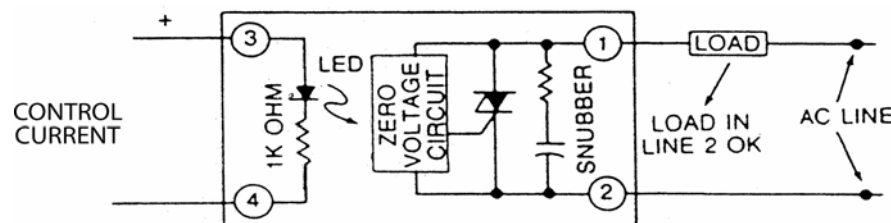
Notes: * Ambient temperature will affect the current rating. For details, see the Thermal Ratings chart.

** Operating Frequency: 25 to 65 Hz (operates at 400 Hz with 6 times the offstate leakage)

*** θ_{jc} = Thermal resistance from internal junction to base. Maximum internal junction temperature is 110 °C.

**** = P Series 32 volts maximum.

Connection Diagram



NOTE: Part numbers ending in -17 are replacement parts only. Their specifications are identical to the same part number without the -17. For example, P240D4-17 is identical to P240D4.

Control Current varies with control voltage. For details, see ["Control Current Calculation"](#) on page 17.

AC Power: MP and P Series (cont.)

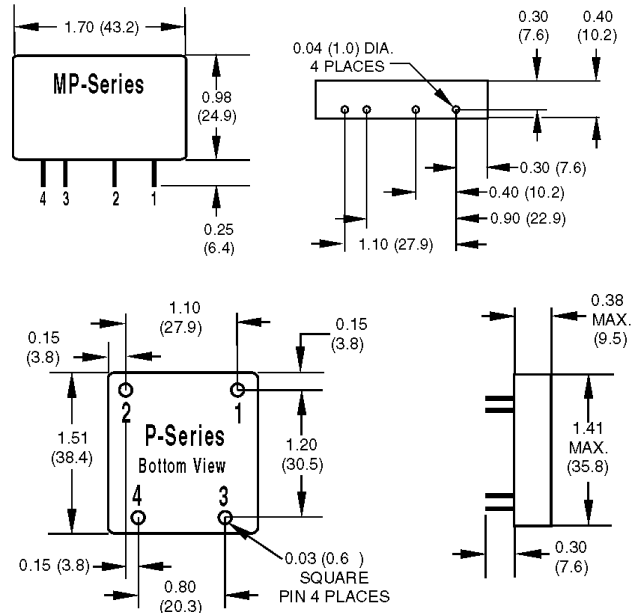
Surge Current Data

Time (Seconds)	Time* (Cycles)	2-Amp Peak Amps	4-Amp Peak Amps
0.017	1	20	85
0.050	3	18	66
0.100	6	15	53
0.200	12	11	45
0.500	30	9	37
1	60	8.5	31
2	120	8	28
3	180	7.5	27
4	240	7	26
5	300	6.5	25
10	600	6	24

Note: *60 Hz

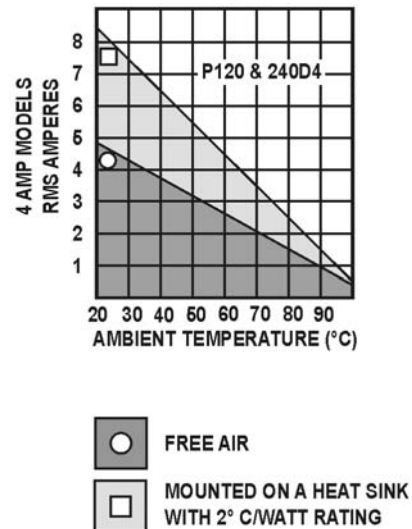
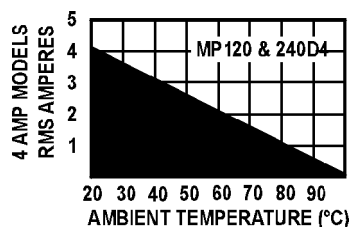
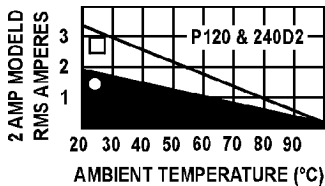
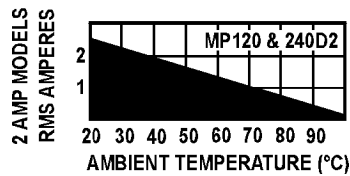
Dimensional Drawings

NOTE: All dimensions are nominal.



Thermal Ratings

Ambient temperature will affect the current rating.



DC SWITCHING SERIES SPECIFICATIONS

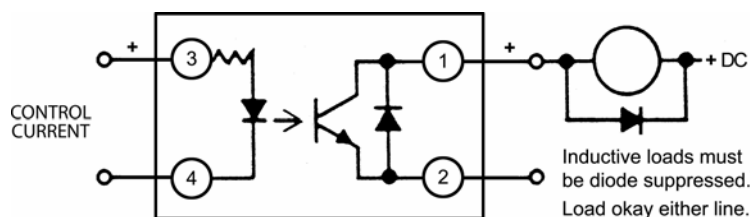
	DC60P or DC60MP	DC200P or DC200MP	DC60S-3	DC60S-5
Operating Voltage Range	5–60 VDC	5–200 VDC	5–60 VDC	5–60 VDC
Forward Voltage Drop	1.5 volts at 3 amps	1.5 volts at 1 amp	1.5 volts at 3 amps	1.5 volts at 5 amps
Nominal Current Rating (Amps)	3*	1*	3*	5*
Off-State Blocking	60 VDC	250 VDC	60 VDC	60 VDC
Signal Pickup Voltage	3 VDC 32 Volts** allowed	3 VDC 32 Volts** allowed	3 VDC 32 Volts allowed	3 VDC 32 Volts allowed
Signal Dropout Voltage	1 VDC	1 VDC	1 VDC	1 VDC
Signal Input Impedance	1,000 ohms	1,000 ohms	1,000 ohms	1,000 ohms
1 Second Surge	5 amps	2 amps	5 amps	10 amps
Operating Temp. Range	–40 °C to 100 °C	–40 °C to 100 °C	–40 °C to 100 °C	–40 °C to 100 °C
Isolation Voltage	4,000 V _{RMS}	4,000 V _{RMS}	4,000 V _{RMS}	4,000 V _{RMS}
Off-State Leakage	1 mA maximum	1 mA maximum	1 mA maximum	1 mA maximum
Package Type	P/MP series	P/MP series	Power series	Power series
Turn-on Time	100 usec	100 usec	100 usec	100 usec
Turn-off Time	750 usec	750 usec	750 usec	750 usec

Notes: * Ambient temperature will affect the current rating. For details, see the Thermal Ratings chart.

** MP series maximum allowed control signal is 24 VDC.

NOTE: When controlling an inductive load, like a solenoid or coil, a commutating diode must be used. Install the commutating diode across the terminals of the load (not the SSR terminals). This will protect the SSR from damage caused by voltage spikes when turning off the load.

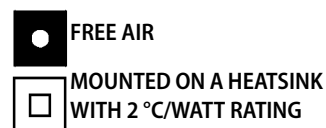
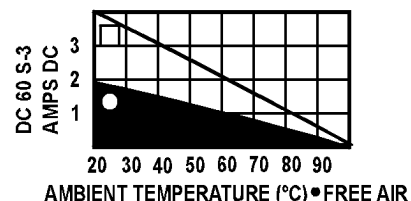
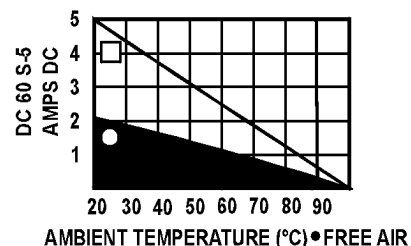
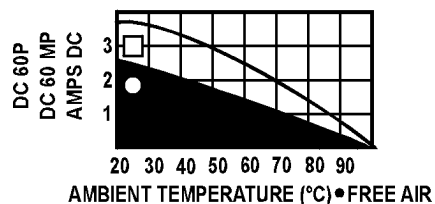
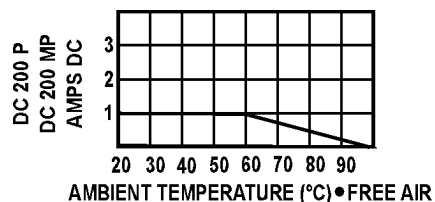
Model DC60MP Basic Schematic (also applies to the other SSRs on this page)



Control Current varies with control voltage. For details, see "Control Current Calculation" on page 17.

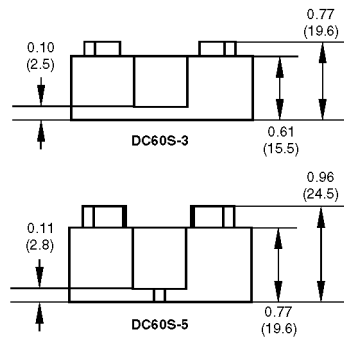
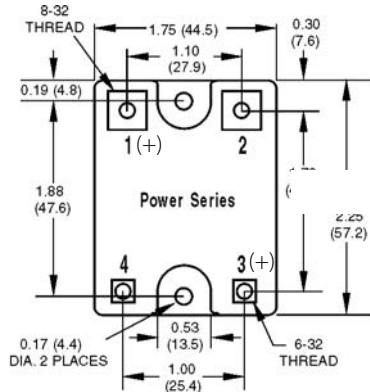
Thermal Ratings

Ambient temperature will affect the current rating.



Dimensional Drawings

NOTE: All dimensions are nominal. We do not recommend mounting the terminal side of a Power Series or Z series SSR to a flat PCB (printed circuit board) or other flat surface, because there may be some variation in terminal height or alignment from one terminal to another and from one SSR to another. For mounting on PCBs, use the MP series or P series.

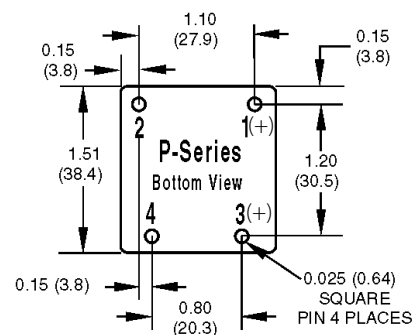
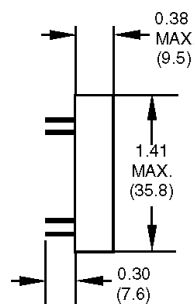
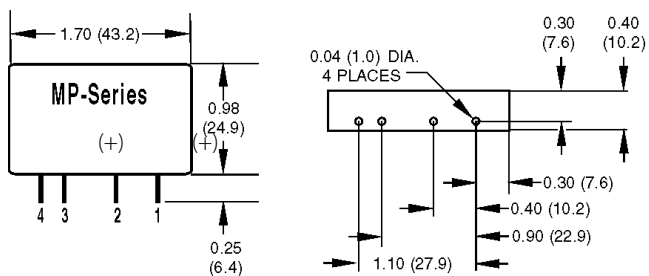
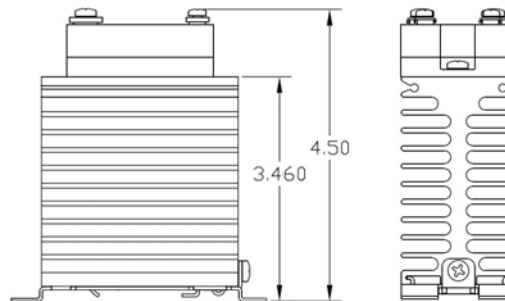
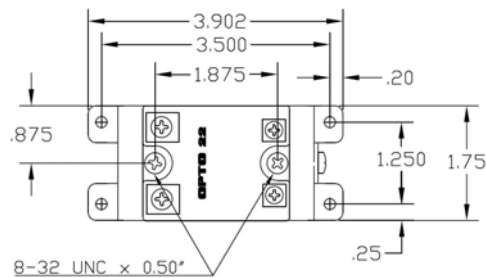


Side view: Part numbers DC60S3, 120D3, and 240D3 only

Side view: All other part numbers

Power Series SSR with SSR-HS Heat Sink, top view

Power Series SSR with SSR-HS Heat Sink, side view



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