

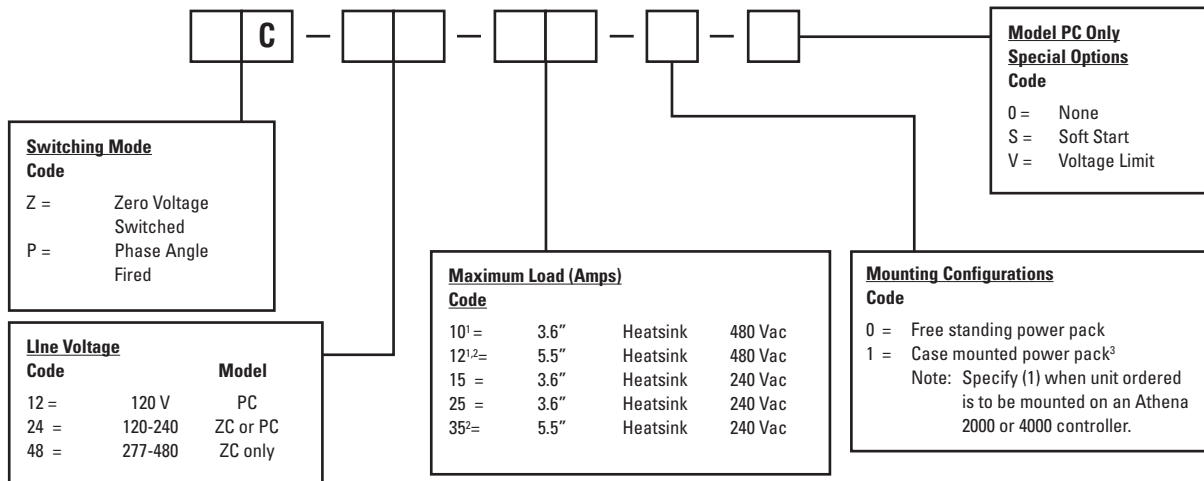
Solid-State Contactors Series ZC and PC



The Athena ZC and PC contactors are available as zero voltage switched (ZC) and phase angle-fired (PC) contactors that can be used for control of resistive heater loads. The controller provides full power rating at 102°F (49°C) ambient temperature, and extends heater life while eliminating thermal shock.

- ▲ All Solid-State Design – No Maintenance Required
- ▲ Soft-Start and Voltage Limit (Optional on PC)

Ordering Information



Example: Model ZC-2425-1-a controller with a zero voltage switching mode; a line voltage of 120-240 V; a maximum load (amps) of a 3.6" heatsink, 240 Vac; and a case-mounted power pack configuration.

CAUTION Possible fire hazard. Because these controls or associated equipment may not always fail safe, an approved temperature and/or pressure safety control should be used for safe operation.

NOTES:

- ¹ Only 480 Vac available. None higher. ZC only.
- ² Panel mounting only.
- ³ Not available on 35A model

Technical Specifications

Inputs (minimum voltage) 3 V input signal, minimum, is needed. Standard Athena "S" or "F" output controllers can energize up to three units in series. Model ZC- 3-32 Vdc pulsed voltage, optically isolated from output (2500 V). Requires Athena output type "S". Model PC- 4-20 mA proportional current, optically isolated from output (2500 V). Requires Athena output type "F".

Ambient Temperature 120°F (49°C) maximum for rated amperes
Output Ampere Rating Resistive loads only, 277-480 Vac is ZC Unit Only

Note For greater ampere loads, consult factory.

| Model | Supply Voltage | Nominal Rating Max. | | | Voltage Drop | Max. Leakage |
|-------|----------------|---------------------|----------------|------------|--------------|--------------|
| | | 3.6" Heat Sink | 5.5" Heat Sink | Peak Surge | | |
| ZC | 120-240 | 15 A | N/A | 250 A | 1.6 V | 15 mA |
| | 120-240 | 25 A | 35 A | 650 A | 1.6 V | 15 mA |
| | 277-480 | 10 A | 12 A | 150 A | 3.2 V | 1 mA |
| PC | 120/240 | 15 A | N/A | 310 | 5.0 V | 10 mA |
| | 120/240 | 25 A | 35 A | 310 | 8.0/5.0 V | 10 mA |

Options available for PC units only

Soft-Start Option 0 to maximum output within 30 seconds standard. Consult factory for slower or faster turn-on times.

Voltage Limit Option Output limit is adjustable from 35% to 95% of line input voltage.

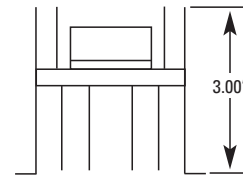
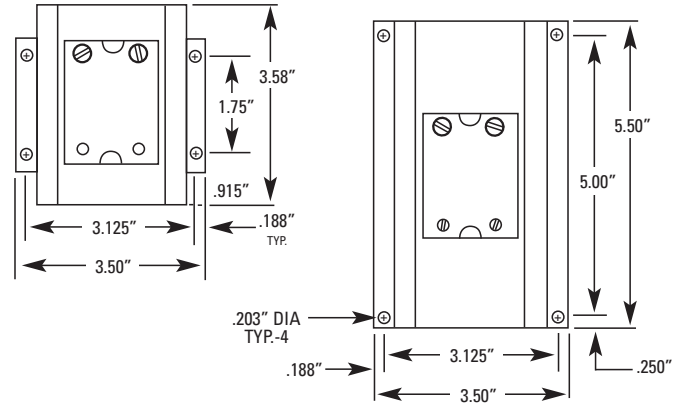
Zero Voltage Switching

Series ZC contactors offer zero voltage switching for EMI/RFI free operation. A time proportional 3-32 Vdc input signal is required to energize these contactors (use with Athena "S" output controller).

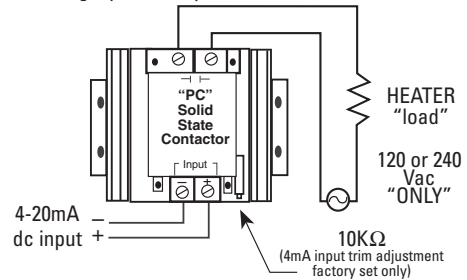
Phase Angle-Fired Switching

Phase angle-fired switching provides continuously variable voltage output by governing the point of turn-on (firing) of each half cycle of the full AC sine wave. Low mass heating elements such as heating lamps and hot wires are recommended applications. Use with Athena "F" output (4-20 mA) controller.

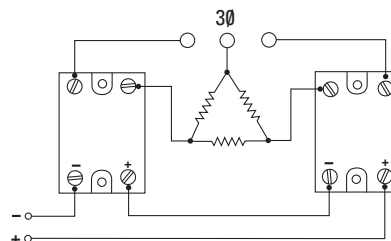
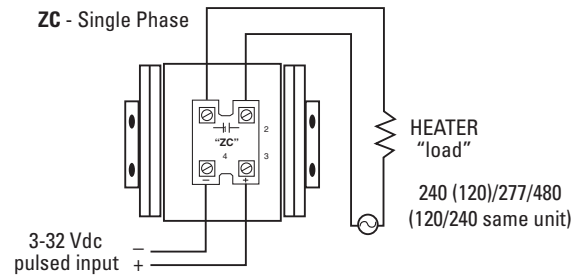
Phase angle firing allows for two options not available with ZC solid state contactors. Soft-Start provides slow turn on for high inrush loads, such as quartz lamps and Tungsten elements. Voltage limit restricts load current by capping the peak-to-peak output voltage.



PC (single phase only)



ZC - Single Phase



ZC - Three Phase