



Options for Phase Angle Firing Small Loads

Watlow offers a couple of options to work with small single-phase loads (less than 35 Amps) that require phase angle firing.

The simplest option is to use an enhanced DIN-A-MITE style C with phase angle firing. Even though this controller is a 50-amp controller, it can be used with smaller amperage loads. Sometimes the Din-a-mite style C is impractical due to size or extra cost. In these cases a phase angle firing controller could consist of several individual components: 1-Solid State Relay, 1-Phase Angle Firing Card, 1-Transformer Assembly and 1-Heatsink assembly. Here are some common combinations:

Amperage Requirement	Part Number							
	Solid State Relay		Heatsink	AT – Phase Angle Firing Card*		Transformer		
	120 to 240 V	277 to 480 V		4 to 20 mA	0 to 5 VDC	120VAC	240VAC	480VAC
< 4 Amps	SSR-240-10A-RND	SSR-480-50A-RND	Not Required**	RPC-5422-42-60H	RPC-5422-05-60H	08-5915	08-5765	08-5766
4 to 10 Amps	SSR-240-10A-RND	SSR-480-50A-RND	Z100-0815-000A	RPC-5422-42-60H	RPC-5422-05-60H	08-5915	08-5765	08-5766
10 to 18 Amps	SSR-240-50A-RND	SSR-480-50A-RND	Z100-0815-000A	RPC-5422-42-60H	RPC-5422-05-60H	08-5915	08-5765	08-5766
18 to 35 Amps	SSR-240-50A-RND	SSR-480-50A-RND	Z100-0815-000B	RPC-5422-42-60H	RPC-5422-05-60H	08-5915	08-5765	08-5766

* The Phase angle firing card can be ordered for 50 or 60 Hertz calibration. The “60H” designation can be changed to “50H” for 50 Hertz calibration.

**When used with loads of less than 4 amps, the 10 amp or 50 amp Solid State Relay can be used without an additional heatsink.

For manual control of the power controller, order 0 to 5 VDC calibration and the manual control kit P/N 08-5362.

Example

You require a Phase Angle Controller for a 120VAC, 6 Amp load, using a 4 to 20mA control signal. Using the table above you would order the following parts:

SSR-240-10A-RND	120 to 240V Solid State Relay
Z100-0815-000A	Heatsink Assembly
RPC-5422-42-60H	Phase Angle Firing Card calibrated for 4 to 20mA
08-5915	Power Transformer for 120VAC