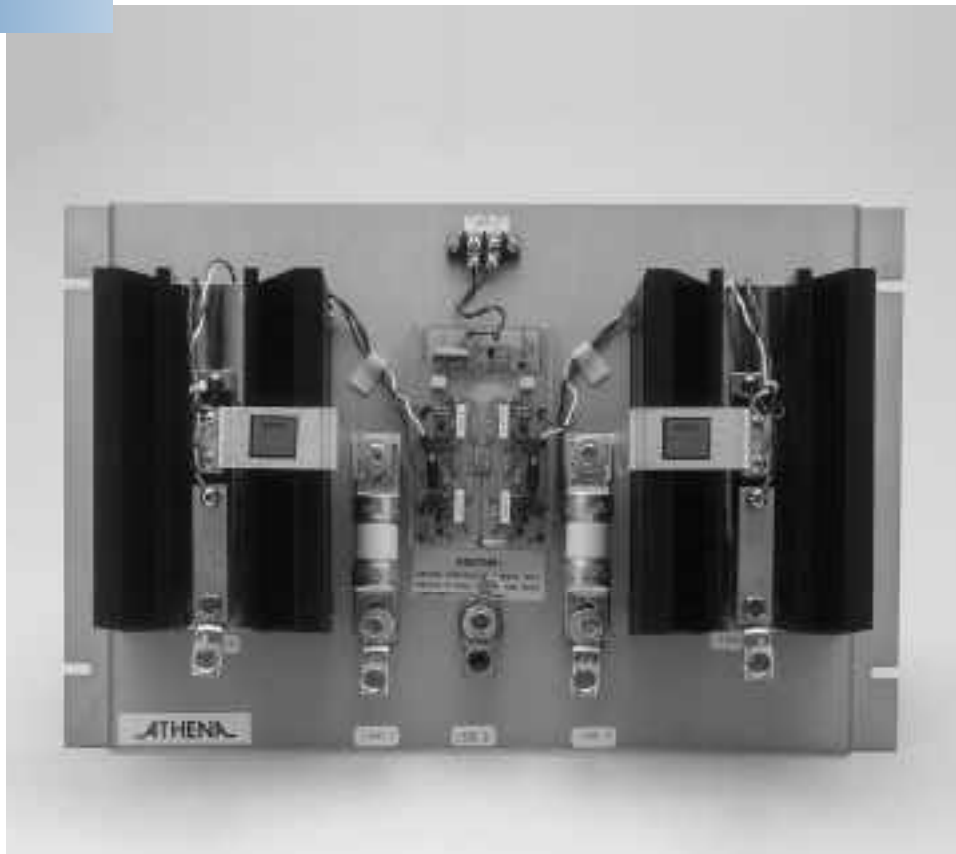


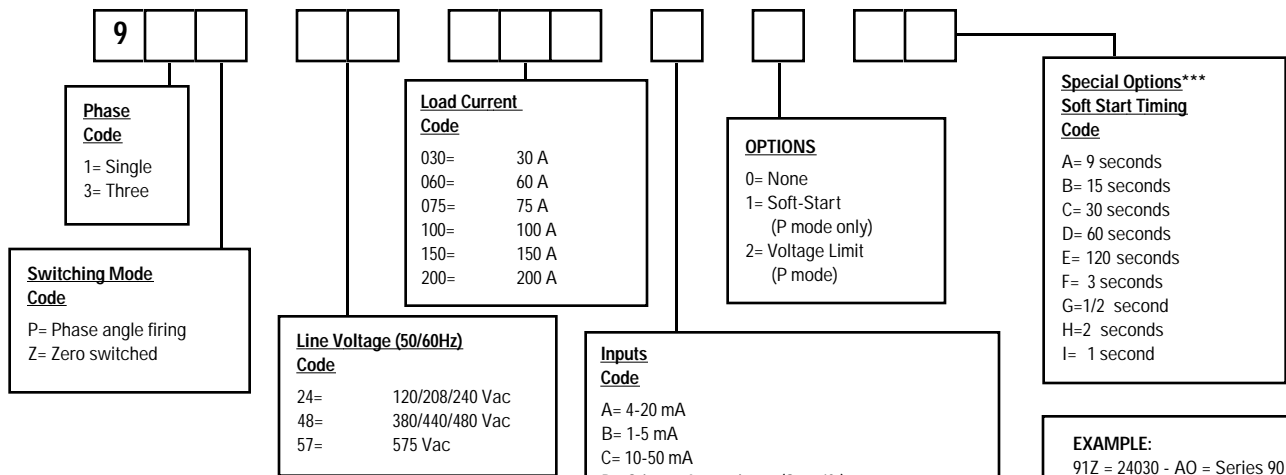
Phase-Angle Fired or Zero-Switched SCR Power Controls for Electrically Heated Processes

(Resistive Loads Only)

- High Efficiency - Power Conservation at Setpoint
- No Maintenance - All Solid State Components
- No Relay Noise - Contact Arc Noise Eliminated
- Extends Heater Life - Eliminates Thermal Shock
- Stable Process Temperature Cuts Product Waste
- All Terminals Are Push-on or Screw Type Components, for Ease of Connection
- New Lower Profile Heatsink Design Provides Additional Space Savings
- I²T Fuse Protection



Ordering Information



To Order: Determine proper line voltage; load current; type of load; options required, if any; and input signal to power controller.

Use these equations to determine load current.

For load currents above 200 A, consult Athena or your local Athena representative.

$$\text{Single-Phase Load Current} = \frac{\text{watts (load)}}{\text{volts (line)}} = \text{amps}$$

$$\text{Three-Phase Load Current} = \frac{\text{watts (load)}}{1.73 \times \text{volts (line)}} = \text{amps}$$

EXAMPLE:
91Z = 24030 - AO = Series 90 Power Controller 9, rated single-phase 1 zero-voltage proportioning mode Z 240 Vac line voltage 24, 30 A load current 030 4 to 20 mA input A, with no option 0

** Not Available on 3 Phase, Phase Angle Units (93P)
*** Soft Start Timing Available on Phase Angle Only (91P & 93P)



SERIES 91 & 93 SCR POWER CONTROLLERS

SPECIFICATIONS

Use With:	Any Athena "F" output temperature controller, and all other milliamp output controllers.
Supply Voltage:	120/208/240; 380/440/480/575 Vac: 1 or 3 phase. Phase connections not critical on 3-phase units
Frequency:	50-60 Hz
Ambient Temperature:	32° to 122°F (0° to 50°C) for listed power ratings.
Cooling:	Convection to 200 A
Input:	4 to 20 mA standard (minimum voltage requirement-10V) All inputs electrically isolated via optical coupling (See above for additional inputs)
Protection:	Sub-cycle, current-limiting fuse. Transient voltage suppression.
Load:	Resistive. 3-phase - 3-wire wye or delta.

IMPORTANT:

Proper selection of your Athena solid-state power controller will ensure many years of trouble free and precise temperature control.

SERIES 91 AND 93 POWER CONTROLLERS

are designed to proportion electric power to resistive loads only. Some resistive loads exhibit high inrush currents: e.g., quartz lamps with tungsten elements. Power controllers used to drive these loads must be ordered with soft-start option 1 (specify time in seconds), available only with 91P or 93P controllers.

DIMENSIONS

Output Current (A)	Dimensions HxWxD (in)	Output Current (A)	Dimensions HxWxD (in)	Output Current (A)	Dimensions HxWxD (in)
91P & 91Z		93Z		93P	
30	12¼ x 10¼ x 4	30	8¾ x 19 x 4	30	14 x 19 x 4
60	12¼ x 10¼ x 4	60	8¾ x 19 x 4	60	14 x 19 x 4
75	12¼ x 10¼ x 6	75	12¼ x 19 x 6	100	17½ x 19 x 6
100	12¼ x 10¼ x 6	100	12¼ x 19 x 6	150	19¼ x 24 x 10
150	17 x 13 x 10	150	17½ x 19 x 10	200	19¼ x 24 x 10
200	17 x 13 x 10	200	17½ x 19 x 10		