



Optimum Cycle Control for High-precision Control with Low Noise

- Smaller than a Normal Power Controller.
- Enables low-noise power control in combination with zero-cross SSRs. (See note.)
- One Controller can control up to 8 SSRs.
- RS-485 communications to set manipulated variables and heater burnout detection. The Smart FB Library for the G3ZA can also be used.
- CE Marking

Main Upgraded Functions

- Soft-start function added for lamp heaters.
- Three-phase optimum cycle control added for three-phase heaters.
- Combining with special CT for 150-A current detection.

Note: The G3ZA must be used in combination with an SSR without the zero cross function when the soft-start function is used.



Refer to *Safety Precautions* on page 9.

Features

Comparison between the G3ZA and Normal Power Controllers

Item	Normal Power Controllers	G3ZA
Connections	<p>Power Controllers Controlled Using Current Output of 4 to 20 mA</p> <p>Multi-channel Temperature Controller</p> <p>Power Controller Power Controller Power Controller</p>	<p>Control Using Communications from a Host Device</p> <ul style="list-style-type: none"> • Direct connection is possible using an EJ1 Modular Temperature Controller. <p>EJ1N -HFU EJ1N-TC4 or EJ1C EJ1N-TC2 -EDU</p> <p>Modular Temperature Controller (EJ1)</p> <p>G3ZA Eight SSRs G3ZA Eight SSRs G3ZA Eight SSRs</p>
	<p>4 to 20 mA commands</p> <p>Programmable Controller</p> <p>Power controller Power controller Power controller ... Power controller</p> <p>8 total</p>	<p>RS-485 commands</p> <p>Programmable Controller</p> <p>Serial Communications Unit (RS-485)</p> <p>G3ZA-8 SSR SSR SSR ... SSR</p> <p>8 total</p>
Control method	<p>Phase Control</p> <ul style="list-style-type: none"> • Response is fast and high-precision temperature control is possible. • Harmonics and noise are problems. 	<p>Optimum Cycle Control (High-precision Zero Cross Control)</p> <ul style="list-style-type: none"> • Outputs are turned ON and OFF each half cycle. • Zero-cross control is performed. • Noise is suppressed while achieving high-speed response with high-precision temperature control.