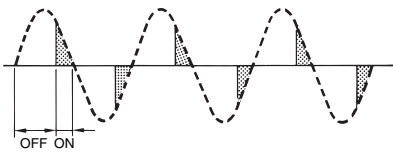


Power Controller Glossary

Phase Control

- Output is varied at half-phase intervals. Therefore, highly accurate temperature control is possible.



- The change in current output of the Temperature Controller between 4 and 20 mA is used for analog control of the output power of the G3PX. This function suppresses heat shock and ensures fine control without being influenced by external disturbance. As a result, each heater can withstand long use.

Duty Setting

As shown in the following graphs, the change of output can be adjusted with an internal or external variable resistor.

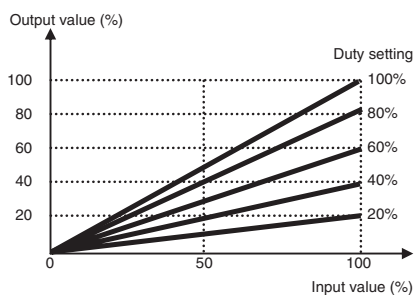
In the case of an electric oven, overshooting may result by using a heater with a capacity that is excessively high for the size of the oven.

By adjusting the duty-setting variable resistor, the overshooting can be suppressed.

For example, if a duty of 60% is set for a 5-kW heater, a maximum of 3 kW will be input into the heater. Thus, it operates as a 3-kW heater.

Duty Setting All G3PW Models

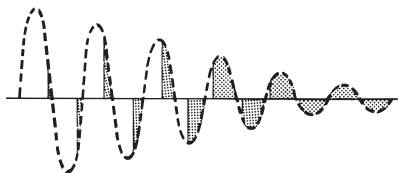
Duty Setting (in all G3PW Models)



Soft-start

This function suppresses the inrush current that is caused when the load is turned ON, thus ensuring smooth starting of the load.

This function is especially effective for loads that involve high inrush current, such as halogen lamps.



Base-up

This function briefly keeps the output of the G3PX turned ON after heating when the input signal is OFF.

This is effective for a smooth start of equipment that is slow in initial heating operation.

Constant Current

The constant current function automatically suppresses the inrush current when it is too large to be sufficiently suppressed by the soft start function, thus protecting the heater and system from damage.

■ Connection Examples of G3PW and Temperature Controller

- The soft-start time is adjusted between 0 and 99.9 s, thus enabling the heaters to withstand long use.
- If a single Temperature Controller is in control of more than one heater, by making a proper duty setting, the difference in temperature between the heaters can be improved. (Connection Example 2)

Note: The temperature at point B can be higher than that at point A due to thermal interference. In that case, make the duty set value for heater B smaller than that for heater A so that there will be no difference in temperature between points A and B.

