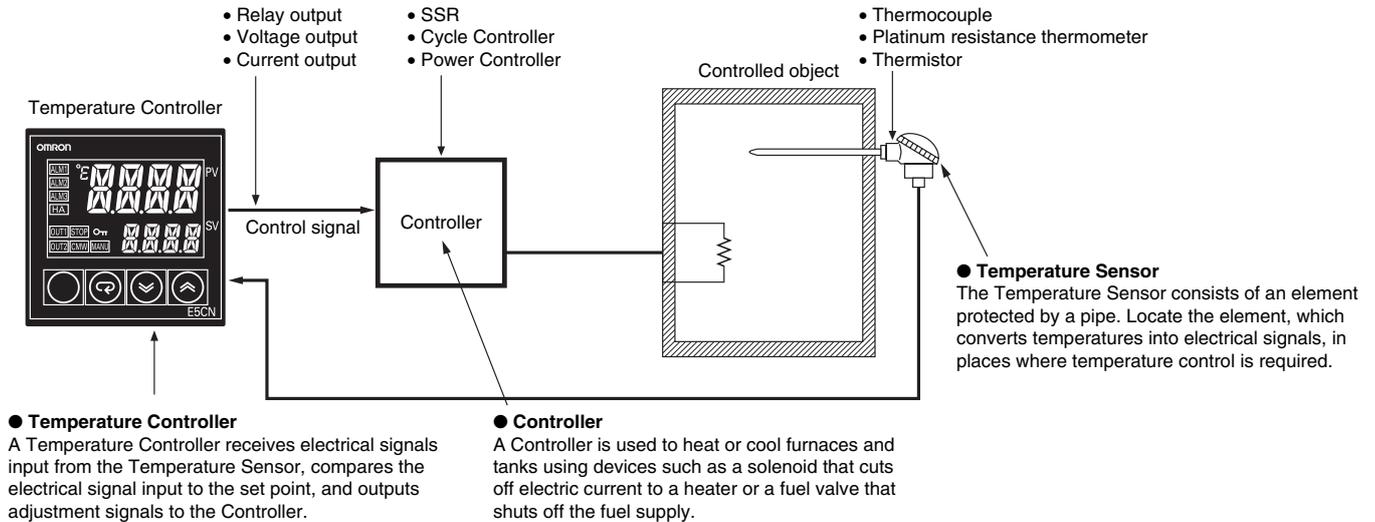


## Over View of Temperature Controllers

### Temperature Control Configuration Example

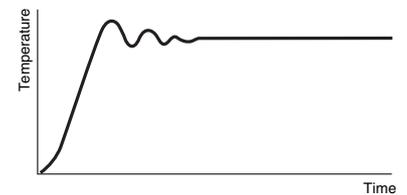
The following example describes the basic configuration for temperature control.



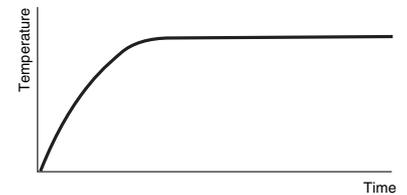
### Temperature Control

The set point is input to operate the Temperature Controller. The time required for stable temperature control varies with the controlled object. Attempting to shorten the response time will usually result in overshooting or hunting the temperature. The response time must not be shortened to reduce overshooting or hunting the temperature. There are applications that require prompt, stable control in the waveform shown in (1) despite overshooting. There are other applications that require the suppression of overshooting in the waveform shown in (3) despite the long time required to stabilize the temperature. In other words, the type of temperature control varies with the application and purpose. The waveform shown in (2) is usually considered to be a proper one for standard applications.

1. The temperature stabilizes after overshooting several times.



2. Proper response



3. The response is slow in reaching the set point.



### Characteristics of the Controlled Object

Before selecting a Temperature Controller or Temperature Sensor, it is necessary to understand the thermal characteristics of the controlled object for proper temperature control.

