

## Digital Temperature Control Selection

Digital temperature controls fall into two basic types, process controllers and high limit controls (over temperature controls).

Process Controls handle the temperature and time requirements of the heat treat processes. These controls come in two types, non-programmable (single set point) and programmable.

Non-Programmable controls such as the model 935 are a single set point control, you simply input the desired temperature, along with a length of time to hold this temperature once achieved. The furnace heats to the desired temperature as fast as possible, holds for the amount of time, then ends the process. At the end of the process, the control can either hold the temperature or let the furnace cool down. The timer can be disabled. When disabled the control only requires a temperature setting input. The furnace will stay at the set temperature until changed or turned off. This is the least expensive standard control.

Programmable Controls such as the models SD4R

and the F4H allow the heat up rate to be controlled, temperature can be ramped down as well as ramped up, multi-step heat treating can be input as a single process, and heat treat process programs can be stored in the controls memory for easy and accurate repeatability. In manual mode (non-program), the controls work the same as the model 935 with the timer disabled.

High Limit Controls such as the model LV help protect the furnace and load in the case of a failure in the primary (process) control or other related primary control loop components. The high limit control loop is completely independent of the primary control loop.

All control types are available with an optional audible alarm feature, which can signal a given process point or end of process.

The programmable process controls are available with an optional data communication package which allows full control interface with a computer.



### WATLOW SD4 STANDARD CONTROL FOUR 10 STEP PROGRAM MEMORY FILES

Microprocessor-based, ¼ DIN programmable ramping control providing four, 10 step program memory files, or easy to use non-ramping set point operation. The SD4 is designed to operate in the most demanding industrial environments.

Interface: Front panel push buttons, LED displays

### WATLOW F4 CONTROL 250 STEP RAMPING CONTROL

This microprocessor based ¼ DIN ramping control providing 250 steps of programmability within up to 40 nameable profiles. Control over broad temperature ranges using the four sets of PID parameters.

Interface: Membrane front panel, single four digit LED's with second four line LCD display.



### WATLOW 935 CONTROLS

Microprocessor based single set-point control with soak timer.

Interface: Membrane front panel, single four digit LED's

### WATLOW HIGH LIMIT CONTROL OPTIONAL ADDITION TO PRIMARY CONTROL

This FM approved limit control is operated using a separate thermocouple.

Mechanical relays break power to the elements when tripped. A High Limit Control gives added assurance at a small cost that the furnace and materials fired do not exceed the temperature indicated.

