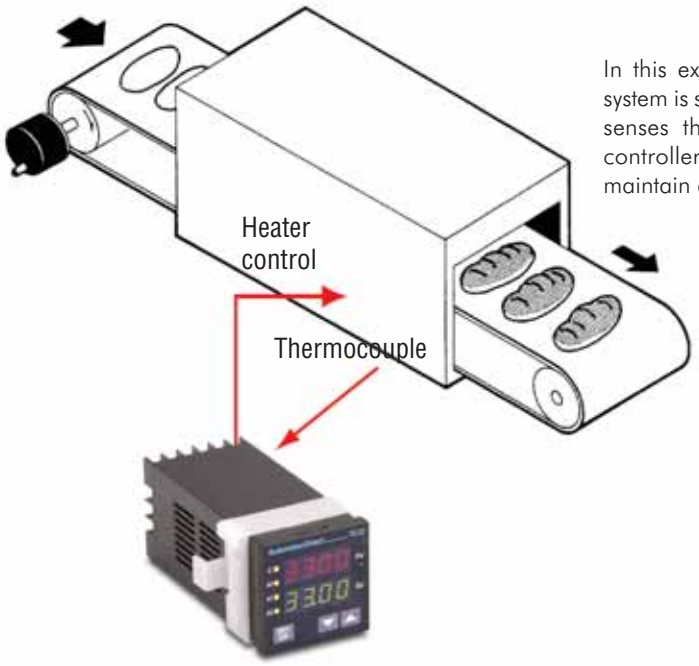
Temperature / Process Controllers

Temperature/Process Controllers Selection Guide			
			
Description	***On/Off Controller PM Series***	***Temperature Controller TC Series***	***Process Controller PC35 Series***
	On/Off controller with two mechanical relays. Universal inputs include T/C, RTD, mA,mV, V Fully scalable display	Temperature controller with two mechanical relays and one 4-20mA output. Inputs include T/C and RTD. Autotune PID control with ramp and soak profile	Process controller with two mechanical relays and one 4-20mA output. Inputs include T/C, RTD, mA, mV, V. Autotune PID control with 49 segment ramp/soak profile
Input (Universal PV)	T/C, RTD, mA, mV, V	T/C, RTD	T/C, RTD, mA, mV, V
Input (Digital)	N/A	N/A	Optional: One
Outputs (Control, Alarm)	Two mechanical relays	Two mechanical relays or one mechanical relay Optional: One 4-20mA output Optional: DC pulse output	Two mechanical or two solid state relays Optional: One 4-20mA output Optional: DC pulse output
Output Relay Ratings	Mechanical 3A @ 250VAC	Mechanical 3A @ 250VAC	Mechanical 3A @ 250VAC Solid state 1A @ 240VAC
4-20 mA Load Rating	N/A	500Ω @ 12VDC	500Ω @ 24VDC
Input Power	90-260VAC	90-260VAC	90-260VAC
Control Routines	On/off control	PID, autotune, on/off control, Time proportioned	PID, autotune, time proportioned, ON, OFF
Security	Three level function protection via keypad	N/A	Seven level function protection via keypad
Enclosure Rating	NEMA 1 - faceplate	NEMA 1 - faceplate	Nema 1 - faceplate
Prices starting at	<--->	<--->	<--->
Note: The manual for these products is available online. Please visit our Web site at www.automationdirect.com.			

Application example: oven temperature control



In this example, an oven control system is shown. The thermocouple senses the temperature and the controller adjusts the heater to maintain a constant temperature.

PM/TC/PC Series Process Controllers

Flexible and powerful

- **Universal sensor inputs.** How many times have you had to open a secret compartment with tiny dipswitches just to select your input range? This is even more difficult to do on a preinstalled controller. With all AUTOMATIONDIRECT process/temperature controllers, this difficulty is eliminated with the ability to select your inputs from the front panel.
- **Configurability.** Many controller manufacturers force the user to choose their input sensors and output control parameters before they can order the controller. Each controller has a predetermined input, such as a J-type thermocouple. If your application changes, you must order a whole new controller. With these process/temperature controllers, all inputs and outputs are configurable from the front panel. With a push of a button, switch from a thermocouple input to a RTD input to a voltage/current input.
- **Sensor break detection.** All models include built-in logic to detect if an input sensor is broken. If a wire is cut or the sensor just quits working, the controllers will turn on an alarm contact. This feature could save thousands of dollars in lost time.
- **Control logic.** TC33 and PC35 controllers offer full "PID Autotuning" in the automatic or manual control modes. Algorithms available range from simple on/off control to full PID control including P, PI, or even PID control. This selectability allows the controller to be used in almost all types of applications.

Process/temperature controllers with great features

All controllers offer:

- LCD display(s)
- LED status indicators
- Programming keys for easy setup and monitoring.

Feature	PM24 Series	TC33 Series	PC35 Series
Temperature (T/C & RTD) inputs	Yes	Yes	Yes
Other process inputs	Yes	No	Yes
Digital input	No	No	Yes
On/off control	Yes	Yes	Yes
4-20 mA control	No	Yes	Yes
Time proportioned control	No	Yes	Yes