

Process Temperature Controllers



Utilising same branded temperature controllers can give users an integrated solution for precise temperature and humidity control, enhanced process reliability, and seamless industrial automation connectivity.

For example, when combining the PTC-1202A-M1 Process Temperature Controller, with UTC-4204A-M1 Universal Temperature Controller together with the MHT-1202 Humidity + Temperature Controller, a comprehensive environmental control solution for demanding industrial processes is created. Together, these three devices provide precise temperature regulation, humidity monitoring, alarm management, and centralised communication for improved process stability and product quality.

The PTC-1202A-M1 serves as the primary process temperature controller, supporting thermocouple, RTD, and analogue inputs with configurable PID or ON/OFF control. Its analogue retransmission capability, RS-485 Modbus RTU communication, and multiple output options make it ideal for controlling heaters, cooling systems, and process equipment operating up to 1200°C with K-type thermocouples.

Whereas UTC-4204A-M1 complements the system by providing universal sensor compatibility, including J, K, R, S, PT-100, and PT.1 inputs. Its four relay outputs enable simultaneous management of heating, cooling, and alarm functions, while PID auto-tuning ensures optimized temperature control. The integrated 4–20 mA output and Modbus RTU communication simplify SCADA or PLC integration.

In comparison, the MHT-1202 adds critical environmental monitoring by measuring both temperature and relative humidity from 0.0–100.0% RH with 0.1% resolution. Dual relay outputs and optional RS-485 Modbus communication allow humidity control and alarm functions to be incorporated into the same automation network.

A practical example application would be a pharmaceutical stability testing chamber. The PTC-1202A-M1 maintains precise chamber heating, the UTC-4204A-M1 controls auxiliary heating, cooling, and safety alarms, while the MHT-1202 continuously regulates humidity conditions. Through Modbus RTU connectivity, all three devices can communicate with a central PLC or SCADA system. This provides real-time monitoring, data logging, alarm reporting, as well as coordinated environmental control to ensure regulatory compliance and consistent product testing conditions.

By using these three controllers together, businesses can achieve more accurate process control, and simplify system monitoring that would ultimately save time and operating costs.

Call us for more information on process temperature controllers for your specific needs.