

# 2-DOF PID Temperature Controller with Program/Fixed Control

This 2-DOF PID temperature controller provides precise temperature control using program and fixed control modes. It features dual output control and compatibility with thermocouple, RTD, and analog voltage/current sensors.



## Overview

### High-Precision Temperature Control

The TN series temperature controllers provide high-precision thermal management using an advanced 2-DOF PID algorithm. With a rapid 50ms sampling rate and  $\pm 0.2\%$  measurement accuracy, these units are engineered for demanding industrial processes. The versatile design supports both program and fixed control modes, making it an ideal choice for applications requiring simultaneous heating and cooling capabilities.

## Performance

### Key Performance Metrics

**50 ms**

Sampling Rate

**0.2 %**

Measurement Accuracy

## Control Features

Control Algorithms	2-DOF PID, Group PID, Zone PID, Anti-Reset Windup
Program Control Specifications	Up to 10 patterns x 20 steps program setting

## Connectivity

### Communication Interfaces

- RS485
- Modbus RTU/ASCII
- PLC ladder-less
- Sync-Master

Communication Speed	115200 bps
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## Hardware

### Operational Features

Simultaneous Heating/Cooling • Heater Burnout Alarm • Timer Function • Detachable Terminal Blocks • PC Parameter Setting