Minco CT425 Temperature Controller

Versatile, configurable controller

Minco's CT425 Temperature Controller provides simple, yet quick customization for most controller applications. The CT425 Temperature Controller features three user-configurable outputs, two programmable inputs, and communication via USB.

Overview

Minco's CT425 Temperature Controller is a PID temperature controller capable of reading two independent temperature sensors (RTDs). By utilizing an internal solid state relay, logic voltage output, and internal mechanical relay, the controller is fully configurable. Simply connect the CT425 to a laptop or PC to configure.

Features

Flexible configuration for:
- Inputs
  - Utilize one or two Platinum RTDs
  - Choose 100 or 1000 ohm RTDs (independently programmable)
- Outputs
  - Utilize up to three outputs
    - Solid state relay
    - Logic voltage
    - Mechanical relay
  - Choose control type
    - PID
    - On/Off (mechanical relay only)
    - Alarm
- USB and a user-friendly software package allow for easy setup and use
- 32-bit microprocessor executes both PID loops simultaneously at individually configurable rates up to 25 times/second
- High current capacity internal switching
- Electrically isolated switching outputs increase high voltage safety
- AC powered models perform zero-cross detection to reduce switching noise
- LED indicators provide a quick confirmation of correct sensors input operation

Applications

The CT425 is designed for a variety of applications that include heating and cooling of equipment or processes. The CT425's versatility makes it ideal to use as an off-the-shelf prototyping tool or as an economical controller for small to medium volume applications. Moreover, the CT425's modular design provides the platform for fast and cost-effective custom designs for medium to high volume applications.

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Key Specifications

		CT425 Temperature Controller			
Performance	Measurement Range	-70°C to 650°C (-94°C to 1202°F), 0.25°C full-range accuracy at 25C			
	Input Power	Model CT425A: 120VAC, 50-60Hz Model CT425B: 10.5-60VDC Model CT425C: 240VAC, 50-60Hz			
	Sensor Inputs (RTD)	100Ω or 1000Ω Platinum, 0.00385Ω/Ω/°C TCR, 2-wire connection, Open and shorted sensor detection			
	Connections	5mm spacing terminal block			
Environment	Output Ratings	Output	Max Voltage	Current (25C)	Current (55C)
		120VAC Solid State (CT425A)	120VAC	6A	5A
		DC Solid State (CT425B)	60VDC	15A	11A
		240VAC Solid State (CT425C)	240VAC	3A	2.5A
		Mechanical Relay	250VAC/30VDC	10A resistive	
		Logic Voltage	4.4V, +/- 0.1V output	26mA, +/- 3mA	
	Temperature Range	-40°C to 70°C, 95% humidity, non-condensing			
Mechanical	Dimensions	5.46" x 3.34" x 1.22"			
	Weight	350 grams (12.3 ounces)			
	Enclosure	UL 94V-0 ABS plastic with epoxy potting			

Ordering Information

To configure your temperature controller, select from the options listed below to determine the complete part number.

	CT425 Power Supply
CT425A	120VAC power, 120 VAC solid state relay
CT425B	10.5–60VDC power, DC solid state relay
CT425C	240VAC power, 240 VAC solid state relay

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