CT224 12-Channel Temperature Monitor

Comprehensive Machinery Protection

The CT224 consists of a 12-Channel Temperature Monitor and MincoSoft™ CT224 Software. It is the next generation in temperature monitoring equipment from Minco designed to meet the needs of electric machinery protection. The 12-channel scanning capability, standard RS485/RS232 interface and Windows-compatible software utility for system configuration and data logging provide overtemperature and undertemperature protection and critical feedback to safeguard expensive machinery.

Overview

• UL and cUL recognized to help meet regulatory compliance

• PC programmable with Windows compatible software makes monitoring easy and efficient, allowing quick reprogramming and extensive data logging

• Mix and match sensor input types for freedom to adapt to pre-installed bearing and apparatus sensors

• Ability to monitor 12 inputs allows you to monitor stator sensors from two motors

• Five outputs, relays or logic offers either internal relay trips or flexibility of external control

• Logic outputs can be used with external SSRs

• Prevent costly damage to motors, generators, transformers, and other equipment

• Power loss protection

• 24 independent trip points (2 per channel)

• Programmable deadband (hysteresis)

• Rugged steel enclosure

• Can be used as a 4-channel on/off controller

• Display High, Low, or Any valid zones

• Self calibrating

Software

MincoSoft™ CT224 software features:

• Compatibility with Microsoft® Windows® operating system

• User-friendly configuration program

• Save unlimited set-up configurations

• Commission mode to test configurations before implementation

• Continuously displayed measurement and relay status of all 12 channels

• Data logging

Custom options

Contact Minco for other optional features. Some examples are:

• Difference between two channels

• Average reading of several channels

• Other input types

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CT224 12-Channel Temperature Monitor

Specifications

Input: 1 to 12 RTDs (2 or 3-wire), thermocouples, or 4 to 20 mA current loops. Accepts any combination of input types.

Standard Input types:
RTD:
  -200 to 700°C: PA (Platinum / 100 Ω / 0.00392 Ω/Ω/°C)
  -200 to 700°C: PB (Platinum / 100 Ω / 0.00391 Ω/Ω/°C)
  -200 to 850°C: PD/PE (Platinum / 100 Ω / 0.00385 Ω/Ω/°C)
  -200 to 600°C: PF (Platinum / 1000 Ω / 0.00385 Ω/Ω/°C)
   -80 to 260°C: NA (Nickel / 120 Ω / 0.00672 Ω/Ω/°C)
  -100 to 260°C: CA (Copper / 10 Ω / 0.00427 Ω/Ω/°C)
Thermocouple (grounded models require TI241):
  -270 to 1000°C: Type E
  -200 to 1200°C: Type J
  -270 to 1150°C: Type K
  -270 to 400°C: Type T
4 to 20 mA current loop: Pressure (PSI, Bar), Humidity (%), Temperature (°F, °C), Vibration (G), and process variable (mA, VDC) Note: 4 to 20 mA inputs must be linear with respect to the measured variable.

Input scan rate: 1.5 seconds maximum.

Input fault detection: Options for ignoring, sounding alarm, or tripping relays associated with the failed sensor. Other zones are unaffected.

Output: 24 independent trip points (2 per channel): 5 relays, one relay is intended for use as an alarm function (but can be configured as a trip point), and one internal audible alarm. Alarm may be programmed to sound when selected relays trip. Logic output option is available for controlling external SSRs or sending a signal to another device.

Relays: Form C, SPDT 10 A @ 250 VAC/24 VDC resistive load; 10 A make current; 2500 VA breaking capacity, ¼ HP at 120 VAC motor load.

Trip point hysteresis (deadband): Programmable from 0 to 20 (°C or °F).

Display: 20 × 4 line backlit LCD. 0.1°C or 0.1°F resolution. Front panel LEDs indicate relay and alarm status.

Accuracy: 2°C (3°F) in 0 to 60°C (32 to 158°F) ambient, over entire range of the input.

Supply power: 85 to 240 VAC @ 50/60 Hz. or 110 to 250 VDC, 5 watts max.; or 18 to 36 VDC, 6 watts max.

Keyboard: 4 membrane type keys with audible feedback.

Serial interface: RS485 or RS232 (Modbus protocol).

Power loss protection: Trip points and program parameters stored in non-volatile memory. Normal operation resumes when power is restored.

Programming: Programmable from front panel or via RS485 or RS232 interface using Modbus protocol. PC software is included for data logging, commissioning, and configuration. Program settings may be password protected.

Firmware fault protection: Watchdog resets microprocessor if it fails to perform program sequence.

Enclosure: Steel case; NEMA 4 front panel.

Ambient temperature rating: 0 to 60°C (32 to 158°F).

Connections: Terminal blocks at rear accept wires to AWG 12.

Leadwire resistance compensation: Up to 30 Ω per leadwire for RTDs, with no effect on reading.

Dimensions: 7.5 × 11.5 × 2″ (191 × 292 × 51 mm).

Mounting: Panel mount enclosure. Cutout size of 6.8 × 10.6″ (173 × 269 mm).

Weight: 3.8 lbs. (1.72 kg.).

Approvals: UL 508, CSA C22.2 No. 14-M91.

Accessories

AC102734: Communication package. Includes isolated RS232 to RS485 converter, power supply, cable, and adapter.

TI241: 8-channel thermocouple isolator.

Specification options

CT224	Model number
A	**Power supply** A: 85-240 VAC @ 50/60 Hz / 110-250 VDC B: 18-36 VDC
1	**Output** 1: Relays 2: Logic (5 VDC)
A	**Interface** A: RS232 B: RS485
CT224A1A = Sample part number	

Specifications subject to change.

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