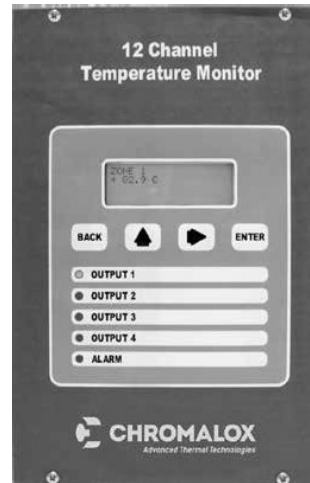


Controls

CX224 12-Channel Temperature Monitor

- Prevent Costly Damage to Motors, Generators, Transformers and Other Equipment
- Monitor Up to 12 Inputs
- Variety of Inputs: RTD, Thermocouple, 4 to 20 mA, in any Combination
- Program Via Front Panel & RS485 or RS232 (Modbus Protocol)
- Power Loss Protection
- 24 Independent Trip Points (2 Per Channel)
- 5 Outputs (Relays or Logic)
- Logic Outputs can be Used With External SSRs
- 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
- Password Protected Areas Allow Supervisory Control and Monitoring of Trip Points



Description

The CX224 consists of a 12-Channel Temperature Monitor and ChromaSoft™ CX224 Software. It is the next generation in temperature monitoring equipment from Chromalox 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.

Custom Options

- Difference between two channels
- Average reading of several channels
- Other input types

Software

CX224 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
- Data graphing for trend analysis

Controls

CX224

12-Channel Temperature Monitor

(cont'd.)

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 370 VDC, 5 watts max.

Power Loss Protection:

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

Keyboard: 4 membrane type keys with audible feedback.

Serial Interface:

RS485 or RS232 (Modbus protocol).

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.)

Agency Approvals: UL: 508

Stocked Items

Part Number	PCN
CX224-A1A	309913
CX224-A1B	309921

Ordering Information

Complete the model number using the matrix provided.

Accessories

Part Number	Description
AC102734	Communications package. Includes isoated RS232 to RS485 converter, power supply for converter, 6' (1.8 m) serial cable and DB25 to DB9 Adapter
TI241	8-Channel thermocouple isolator. Electrically isolates grounded thermocouples for use with CX224

CX224 12-Temperature Monitor

Code	Power supply
A	85-240 VAC @ 50/60 Hz / 110-370 VDC
Code	Output
1	Relays
2	Logic (5 VDC)
Code	Interface
A	RS232
B	RS485
CX224 - A 1 A	Typical Model Number

The CX224 monitor comes complete with CX224 software.

MULTI-LOOP CONTROLLERS