

Mod-Tronic MT300 Temperature Monitor/Alarm

User-programmable three input temperature monitor system



Overview

Mod-Tronic's MT300 consists of a 3-channel temperature monitor and alarm system that controls three relay outputs based on user-programmable set points to help safeguard expensive machinery.

RTD or Thermocouple Inputs

Temperature Monitor
3-Channel RTD/Thermocouple

CH 3 TEMPERATURE 130 °C

PEAK RESET, MANUAL FAN, TEST, SILENCE, CANCEL, ENTER MENU, FAN, ALARM, TRIP

MOD-TRONIC
INSTRUMENTS LIMITED
MODEL MT300

CAL US

- Universal inputs of 100 and 1000 ohm platinum RTDs and Types E and K Thermocouples
- Wide measurement range of -50°C to 300°C (-58°F to 572°F)
- Isolated 4-20mA current loop output
- 3 Year Warranty
- Programmable through the front panel, MODBUS over USB or isolated RS-485

PC software included for quick, easy configuration and data logging!

FAN 30A, ALARM 10A, TRIP 10A, 4-20 mA CURRENT

Features

The MT300 offers users a completely programmable monitor and alarm with improved measurement range and universal inputs. The microprocessor-based design maintains accuracy over a wide range of temperatures and conducts regular self-checks to ensure correct operation. Additionally, one of the relay outputs is specifically designed for control of a cooling fan, and the user-configurable fan exercise option extends the fan life and reduces bearing lock-up.

Other key features include:

- **Universal inputs of 100 and 1000 Ω platinum RTDs and Types E and K thermocouples**
- **Configurable through the front-panel interface, MODBUS over USB or the isolated RS-485, PC software included for data logging and configuration**
- **User-configurable measurement range to Celsius or Fahrenheit scale**
- **Large, dimmable 7-digit LED display allows easy programming and visibility at various distances and lighting conditions**
- **Dual password design allows certain users to have full configuration access and others, set points only**
- **Non-volatile memory storage of per-channel min/max temperatures for recall in the event of power-loss**
- **Electrically isolated 4-20mA output signal allows for connection to PLCs or remote displays**
- **UL/cUL recognition (MT300A and MT300B) and CE certification (MT300A)**

Technical Specifications

Performance	Measurement Range	-50°C to 300°C (-58°F to 572°F), 1°C resolution, 2°C full-range accuracy
	Relay Contact Ratings	Voltage: 240V AC or 28VDC* (not rated for higher VDC) Fan Relay: SPST, 30A @ 240VAC or 1.5HP @ 55°C, derates to 22A or 1.5HP @ 72°C. *20A @ 28VDC Trip/Alarm Relays: SPDT, 10A @ 240VAC or 28VDC
	Current Loop Outputs <i>Isolated, industry-standard 4-20mA current-loop output for forwarding of reading to PLC or remote indicator.</i>	Configuration: High value, low value, specific channel selection. Scaling: Offset from -100°C to 100°C, span from 50°C to 350°C Error signaling: 3.5mA or 23mA output during sensor failure. Power: isolated loop power –or– non-isolated self-powered
	Communications	MODBUS over USB or isolated RS-485, RTU, 300-38400bps
	Certifications	UL/cUL recognized (MT300A and MT300B) and CE certification (MT300A)
Environment	Sensor Inputs <i>Note: "Universal" inputs are standard and are electrically isolated from control logic and communications.</i>	RTD: 100 Ω or 1000 Ω Platinum, 0.00385 Ω /°C TCR , 2- or 3-wire connection, Open and shorted sensor detection Thermocouple: Type K or Type E thermocouple, open detection.
	Temperature Range	-30°C to 72°C (-22°F to 162°F), 95% humidity, non-condensing
	Output Relays	Connection: Terminal block, 30 AWG to 10 AWG wire
Mechanical	User Interface	Display: LED, 7-segment, red, 0.56" height, dimmable Indicators: LED, red: Fan, Trip, Alarm, Peak, Manual Fan, Test
	Dimensions	Front-panel: 6.3" x 9.9" Cut-out: 5.67" x 9.17" Depth: 1.9"
	Enclosure	Metal, corrosion-resistant. NEMA 4 front panel.

Applications

Mod-Tronic's MT300 temperature monitor and alarm is designed with the specifications for dry-type transformer monitoring and protection. Additional applications include use in pumps, compressors and motors.

Ordering Options

MT300A	AC power, 120-240VAC, 50-60Hz, 120-240VDC
MT300B	DC power: 21-36VDC