Thermo
ELECTRON CORPORATION

Series 4400

Critical Alarm & Multi-Channel Process Monitor

Like it's Series 4000 Alarm Monitor predecessors, the **Series 4400 Critical Alarm & Multi-Channel Process Monitor** provides a direct process reading and multi-channel monitoring of process systems. Utilizing the latest in microprocessor technology the Series 4400 offers high performance, flexibility, high reliability and superior specifications.

With a wide range of inputs, flexible output capability and field proven reliability, the Series 4400 offers the end user unlimited options for monitoring, recording and reporting on all categories of critical process systems.

- **The Series 4400 is available in 6, 12 and 24 channel versions mounted in a DIN Enclosure which can be ordered with rack or panel mounting options. Channel cards can be ordered and added as needed**
- **Each Channel card provides "Continuous/Autonomous" monitoring of 2 conventional threshold set points, with the added feature of independent *"rate-of-change"* alarm and *"early indication"* of problems. Each will accept a wide range of inputs and has single channel integrity.**
- **Internal Central Monitor card supervises each Channel card. Interconnection is via the Lonworks Echelon bus system.**
- **Hardware and password security to prevent unauthorized tampering.**
- **Simple, quick configuration setup via front panel programming.**
- **The optional MMI Interface software allows for system configuration via PC communications along with data logging, trend display and event logging.**
- **Can be used as a standalone unit or linked with other Series 4400's via the RS323/RS485 option.**
- **External communications via Modbus™ for easy integration into large DCS/Scada Systems.**

SERIS 4400 INPUTS:
Any Combination Accepted

RTD	RANGE
Ohm	0 to 450 Ohms
Pt100 ∝0.0385Ω/°	-200°C to 850°C
Pt100 ∝0.0385Ω/°	-200°C to 645°C
Ni120	-70°C to 300°C
Cu10	-50°C to 250°C
Cu30	-50°C to 25°C
Pt20	-50°C to 25°C
THERMOCOUPLE	**RANGE**
J	-180°C to 750°C
K	-180°C to 1250°C
T	-200°C to 400°C
E	-60°C to 1000°C
N	-0°C to 1210°C
R	-0°C to 1600°C
S	-0°C to 1560°C
L	-200°C to 900°C
U	-200°C to 600°C
INPUT	**RANGE**
Ohms	0 to 450 Ohms
Millivolt	-10mV to 100mV
Volt	0V to 1V, 0V to 5V & 1V to 5V
Milliamp	4ma to 20mA, 0mA to 10mA & 0mA to 20mA

Applications

- **Temperature Monitoring**
- **Vibration Monitoring**
- **Pressure Monitoring**
- **Flow Monitoring**
- **Pump Performance Monitoring**

Series 4400 Multi-Channel Process Monitoring System

CHASSIS MODEL NUMBER

Series 4400AM - XX - XX - XX

CHASSIS CAPACITY
06 - 6 Channel Maximum
12 - 12 Channel Maximum
24 - 24 Channel Maximum

POWER SUPPLY
P1 - 24VDC
P3 - 110VAC 50/60Hz
P4 - 220/240VAC 50/60Hz

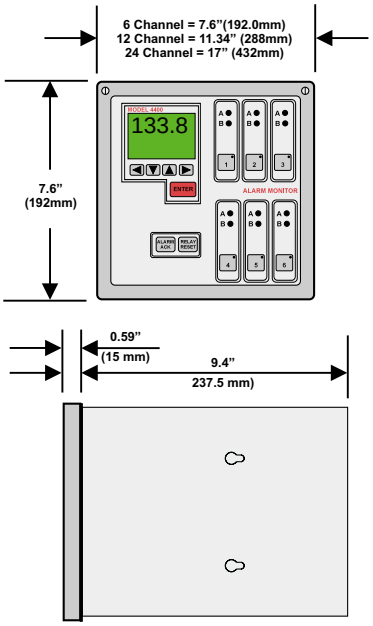
OPTIONS (Any Combination)
B1 - 24VDC
C1 - Conduit Cable Box
D1 - Adapter Plate for 19 inch Rack Mounting.
E1 - IP54 Sealing Kit
F1 - Bezel for Panel Mounting
G1 - RS232/RS485 with MMI Interface Software
CS - CSA Certification

UNIVERSAL CHANNEL CARD MODEL NUMBER

4401AM - XX

OPTIONS
H1 - Channel Alarm relays (resistive loads only).
H2 - Channel Alarm Relays (Resistive & Inductive Loads)
M1 - Output Current (4-20, 0-10 or 0-20mA). Can be added to option H1 or H2.

DIMENSIONS



SPECIFICATIONS

Temperature Range:	Operation: 32 to 122°F (0 to 50°C). Storage: -40 to 158°F (-40 to 70°C)
Humidity:	0-95% RH in accordance with the requirements of IEC 68-2-31.
Vibration:	Tested in Accordance with IEC-2-6.
Shock:	Drop tested to IEC 68-2-31.
Delay Time:	Adjustable 0 to 60 Seconds individually for each set-point.
Dead-Band:	Adjustable 0 to 25% of span in 1% increments individually for each set-point.
Response Time:	Less than 800 milliseconds with delay set at zero.
Alarm Log:	Alarm events and operator action time-tagged and logged. Up to 256 event capacity.
Transmitter Power Rail:	Up to 1 amp at 24VDC available on rear terminals for powering transmitters.
Environmental:	Complies with the requirements of EN61010-1. Environmental Protection IP65.
Hazardous Area Certification:	CSA Listed.
EMC:	Complies with EN 50081-1 Emissions and EN 50082-2 Immunity.
Weight:	6 Channel: 6.4 kg Max. 12 Channel: 9.0 kg Max. 24 Channel 14.5 kg Max.
Outputs:	• *Alarm Relays*: Two supplied as standard. • *H1 Option:* Two SPDT per channel (resistive). • H2 Option: Two SPDT per channel (Resistive/Inductive). • *M1 Option*: DC Analog re-transmission output per channel (0-10mA, 0-20mA & 4-20mA). • *System*: Local display option. LED for each Alarm.
Electrical:	• *P1 Option:* 24VDC. • *P3 Option:* 110 VAC 50/60Hz. • *P4 Option:* 220/240 VAC 50/60Hz.

Company

For over 20 years, Thermo Electron has been the recognized leader in the measurement of air/gas flow and very low differential pressure in industrial applications. Thermo offers a complete line of pitot/static probes and arrays, turbine flowmeters for liquid and gas, D.P. Transmitters, the unique Nozzle-Pitot flow sensor and a complete family of Current to Pressure (I/P), Voltage to Pressure (E/P) and Pressure to Current (P/I) Transducers. Contact Thermo Electron, or Thermo's representative, for further information, specifications and application assistance.

Thermo ELECTRON CORPORATION

Thermo Electron Corpoation
9303 W. Sam Houston Pkwy. S.
Houston, Texas 77099
Telephone: (713) 272-0404 Facsimile: (713) 272-2273

www.thermo.com
Let us point you in the right direction.

ISO 9001

Represented By:

MD71-4400-01, January 2000.