

2400 Series System Controller

The Series 2400 System is a highly reliable, 24 channel, expandable, micro-processor controlled monitoring and alarm system.

It receives and processes signals from a wide range of gas detectors and flame detectors (including analogue and digital process variables) and produces corresponding outputs to drive audible and visual indicators, mimic panels and programmable logic controllers.

The system's design allows it to operate as a stand alone control system or it may slave to an existing process control system. As a slave system, the Series 2400 can operate with any existing distributed control system (DCS), programmable logic controller (PLC) or supervisory control and data acquisition system (SCADA) by way of a RS485 bus using Modbus® protocol.



Application

The 2400 System can be utilised in any combination of the following offshore, marine, petrochemical and industrial applications:

Monitor toxic and flammable gas levels and generate audible/visual warnings, alarms and control outputs (such as emergency shutdown and/or ventilation control)

Monitor flame, fire, thermal and smoke detectors, break-glass, and generate audible/visual warnings, alarms and control fire suppression outputs

Monitor oxygen deficiency levels and generate audible/visual warnings, alarms and control outputs

Monitor plant process functions (such as temperature, flow, level and pressure) and generate audible/visual warnings, alarms and control outputs such as process shutdowns

Features

- Standard 19" rack mountable
- Accommodates up to 24 gas detectors per rack
- Microprocessor controlled
- Accepts inputs from combustible and toxic gas sensors, flame sensors or any 4-20mA device
- Two-line alpha-numeric display
- User friendly
- Retains data on loss of power
- Fully programmable from front panel
- Built-in self diagnosis - watch dog
- Fan control logic
- Software "Voting Logic" output
- Optional RS485 Modbus® digital interface
- Optional data and event logging

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Specifications

Physical specifications

Size (with clearances) Card Rack	13.3cm high x 48.3cm wide x 24.0cm deep
Size (with clearances) 4-20mA Option	10.0cm high x 35.5cm wide x 4.0cm thick
Size (with clearances) Relay Module Drvr	10.0cm high x 8.0cm wide x 2.0cm thick
Size (with clearances) Relay Module	7.0cm high x 14.2cm wide x 2.7cm thick
Operating Temperature Range	0 to 40°C

Electrical specifications

Power Requirements (Full system with options)	24 ±6Vdc, 6.0A (Standard) or 240/110Vac, 50/60 Hz (Option)
Input Channels (Maximum)	24
Types of Input (One per Channel): Three-wire Bridge Sensors (3 Watts maximum)	4-20mA, 24Vdc Loop-powered Sensors 4-20mA, 3-wire Sensors(2-12Vdc adjustable) 4-20mA, 3-wire Sensors (24 ±6Vdc fixed)
Two-wire Fire/Flame Detection Units	Compatible
Outputs (Standard Configuration)	Three relays: Common Fault, Common Alarm Low, Common Alarm High, : SPDT, 3A, 250Vac/30Vdc
Outputs (4-20mA Output Option)	Up to 24 each 4-20mA source outputs into 600 Ohms (maximum)
Outputs (Relay Output Option)	Up to 96 Relays (four per channel): SPDT, 10A, 250Vac/30Vdc (Maximum for four Relay Module Drivers and three Relay Modules per driver)

Visual indicator specification

Liquid Crystal Display (Control Module)	Backlit alphanumeric display indicates channel, status, unit of measure, substance/area measured, previous minimum/maximum values and channel output current.
LEDs (2400CCM Control Module)	Indicate status of POWER and FAULT LEDs (2400GDM Dual Channel Gas Module): Indicate status of ALARM HIGH, ALARM LOW, FAULT and ISOLATE for each channel and POWER status for module.
EDs (2400FDM Dual Channel Fire Module)	Indicate status of ISOLATE, FAULT and ALARM for each channel and POWER status for module.
LEDs (2400AIM Dual Channel Analog Module)	Indicate status of A2 (ALARM HIGH), A1 (ALARM LOW), FAULT and channel and POWER status for module ISOLATE for each



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