



ISO 9001
Certified

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Engineering Specification

Gas Detection Control System

Model: Detcon Model 1600-N4X

Type: Multi-Channel / NEMA 4X Enclosure

The gas detection control system shall consist of a field programmable multi-channel controller housed in a NEMA 4X weatherproof enclosure with internal fixed panel and door-mounted window. System capacity shall be up to 16 active channels of gas detection. The control system shall be capable of operating from an input voltage of both 120 VAC and 22.5-28 VDC (24 VDC nominal). The control system shall be equipped with din rail mounted input protection modules designed for use in harsh industrial environments.

The sensor input signals to the control system shall be 4-20 milliamps via din rail mounted 4 channel addressable input modules. These addressable modules may be mounted internal to the system control enclosure or may be remote mounted within reasonable digital communication system limitations.

The control system shall be microprocessor based and shall be equipped with a touch screen graphic display of gas type, gas concentration and relative alarm condition for each field mounted sensor. The controller shall use reverse video graphics to indicate discrete alarm conditions for each active channel.

The control system shall provide addressable and programmable alarm relay modules. The addressable relay modules may be din rail mounted internal to the control system enclosure or may be remote mounted within reasonable digital communication system limitations. Each addressable relay module shall include 4 relays rated for 5 amps (@ 30 VDC), with discrete form "C" contacts. Alarm relay configuration and action shall be user programmable via embedded intuitive software accessed using the touch screen. There shall be a provision to configure alarm relays in a normally energized (failsafe) or normally de-energized mode of operation. There shall be a provision to configure alarm relays for latching or non-latching operation. There shall be a provision to select an alarm acknowledge/alarm silence function for each alarm relay.

The control system shall have diagnostic circuitry to continuously monitor for system faults including field wiring between the sensors and addressable input modules, alarm relay modules and the control unit.

The control system shall include an addressable RS-485 serial communication port.

The control system shall include a provision to disable alarm relays during calibration without inhibition of panel LCD or alarm LED indicators. The alarm relay disable function will include an auto reset feature after a 30 minute timeout.

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