



GENERAL MONITORS

Protection for life.

MODEL DC110

Eight - Channel Readout/Relay Module



Features

- Compact Packaging
- Large Digital Displays
- LED Readouts for Each Channel
- Common Relays
- Superior Reliability

Benefits

- Requires less panel or cabinet space
- Provides clear display of the Peak Channel Reading
- Shows the status of each channel including Alarms, Calibration, Malfunction, and Reset
- Indicates ALARM, WARN & MALFunction Alarms
- Longer product life

Description

The Model DC110 is an eight-channel Readout/Relay Module designed to be used with up to eight remotely located General Monitors Combustible Smart Sensors. The front panel contains a digital display that indicates 0-99% LEL (lower explosive limit) of the gas being monitored by the Smart Sensors.

Each of the eight Combustible Smart Sensors is also provided with open collector outputs from the DC110 for the ALARM, WARN, and MALFunction conditions. These open collector outputs are referenced to DC return and will sink a maximum of 100mA when active. The open collector outputs are capable of handling external circuitry within a voltage range of 3 to 50 VDC.

Recommended uses for the open collector outputs include external relay circuit when contact closures are desired for each Smart Sensor; external logic interface (TTL, CMOS, HTL, etc.) to a central computer or control room, and external test circuitry.

The Model DC110 can be supplied with a special voting option which must be specified when ordering. A system supplied with this option will require that two channels reach the alarm setpoint before the alarm relay will actuate. All other functions remain the same.

Applications

- Drilling and Production Platforms
- Fuel Loading Facilities
- Compressor Stations
- Oil Well Logging
- LNG/LPG Processing and Storage
- Wastewater Treatment
- Gas Turbines
- Solvent Vapors
- Hydrogen Storage



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System Specifications

Input Current:	0-20mA from S4000C
Display Range:	0-99% LEL, flashing 99 for over-range indication
Accuracy:	±3% LEL or ±10% of applied gas, whichever is greater
Front Panel Switches:	Channel select, Reset
Alarm Disable:	9 position rotary switch
Alarm Setting:	16 position rotary switch
Warning Setting:	16 position rotary switch
Alarm & Warn LED test:	Incorporated with Reset switch (hold over one second)
Energized/De-Energized Relay Options:	ALARM and WARN set by DIP switch
Latching/Non-Latching Relay Options:	ALARM and WARN set by DIP switch
Channel Enable:	Set by DIP switch for each channel
Voting:	Jumper selectable - option - one or two channels ALARM only
Reset:	One momentary push-button switch
Remote Reset:	Yes
Electrical Classification:	General purpose, non-hazardous areas
Warranty:	Two years
Approvals:	CSA, FM

Environmental Specifications

Temperature Range:	32°F to 140°F (0°C to 60°C)
Storage Temperature Range:	-28°F to 130°F (-33°C to 54°C)
Humidity:	15-95% non-condensing

Electrical Specifications

Input Power:	22-30 VDC 8 watts DC110 plus 8 watts for each S4000C
Channel Input Resistance:	125 ohms maximum
Output Power:	24 VDC nominal at 0.35 amp to each S4000C
Status Indicators:	Reset,  , 8 discrete indicators for ALARM, WARN, MALFunction, CALIBrate, PEAK CHannel
Analog Signal:	4-20 mA from S4000C
Relay Ratings:	4A @ 250 VAC / 30V RMS/42.4 peak, 3A @ 30 VDC, resistive max. A1, A2 - DPDT Fault-SPDT
Cable Requirements:	3 wire shielded cable. Max. allowable distance between DC110 and S4000C with one way resistance of 10 ohms (20 ohms loop): 14 AWG - 4500 ft. (1500m)

Mechanical Specifications

Dimensions:	2.1" w x 6.9" h x 11.5" d (53mm x 175mm x 294mm)
Weight:	Approx. 3.8 lb. (1.8kg)
Mounting Configurations:	Rack, Panel, Wall, & Explosion-proof Enclosures
Standard Configuration:	DC110-1-1-2-8 (Latch alarm, non-latch warn, de-energized, FM, voting off, 8 - channels)

Specifications subject to change without notice.

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