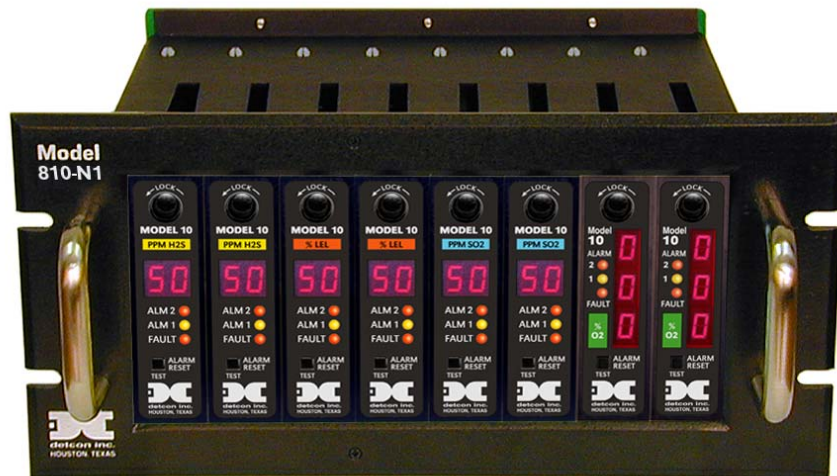




Model 810-N1-24VDC Panel Mount Control Enclosure



Operator's Installation and Instruction Manual

◆ DETCON, Inc.

3200 Research Forest Dr.,
The Woodlands, Texas 77387
Ph.281.367.4100 / Fax 281.298.2868

www.detcon.com

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Shipping Address: 3200 A-1 Research Forest Dr., The Woodlands Texas 77381
Mailing Address: P.O. Box 8067, The Woodlands Texas 77387-8067
Phone: 888.367.4286, 281.367.4100 • Fax: 281.292.2860 • www.detcon.com • sales@detcon.com

1.0 INTRODUCTION

Detcon Model 810-N1-24VDC Rack consists of 3 major assemblies:

- 1 The NEMA 1 rackmount control enclosure.
- 2 The single channel digital control modules.
- 3 The remote mount gas sensor assemblies.

The NEMA 1 control enclosure is detailed in section 1.0 of the manual, the control modules in section 2.0, and applicable sensor assemblies in section 3.0.

2.0 DESCRIPTION

Detcon Model 810-N1-24VDC along with Model 10B digital control modules is designed to serve as a host assembly for up to eight remote mount gas detection sensor assemblies. The control enclosure is rated NEMA 1 suitable for installation in non-hazardous locations. The single channel modular design supports application flexibility wherein multiple function gas detection systems can be configured in any combination up to eight channels. All control modules are plug-in front panel accessible for easy maintenance and repair.

Discreet output terminal strips located on the controller motherboard are provided for sensor terminations, Form C dry contact alarm outputs (normally open, normally closed and common) for two alarms plus fault, 4-20 mA outputs for remote recording devices, and RS-485 serial Modbus™. Additional terminations are provided for VDC power in, and remote alarm reset.

Form C relay outputs may be discreet or zoned by gold plated jumper tabs located on the controller mother board.

3.0 SPECIFICATIONS

Electrical Classification	NEMA 1
Dimensions	7"W, 5.25"H, 8"D
Capacity	8 Single Channels
Power Input	24 VDC
Alarm Contacts	Discreet Fault, Low, High, per Channel 5 Amps @ 30VDC / 5 Amps @ 125VAC Common, Normally Open and Normally Closed
Outputs	Discreet 4-20 mA DC Serial RS-485 Modbus™
Operating Temperature Range	-40°F to +175°F
Power Consumption	<5 Watts per Channel (includes gas sensor and control module)
Warranty	Two Years

4.0 REMOTE RESET

The reset function is effective when the Model 10B's respective alarms have been programmed in the latching position and alarm conditions have passed. The alarm reset function is common to all controllers and is activated by closing the circuit between the two reset contacts. A normally open momentary switch is suitable.

5.0 INSTALLATION

1. Securely mount the 810-N1-24VDC rack enclosure in accordance with Figure 1.

Panel cutout (centered) 9.75" x 5"
Panel depth - 8"

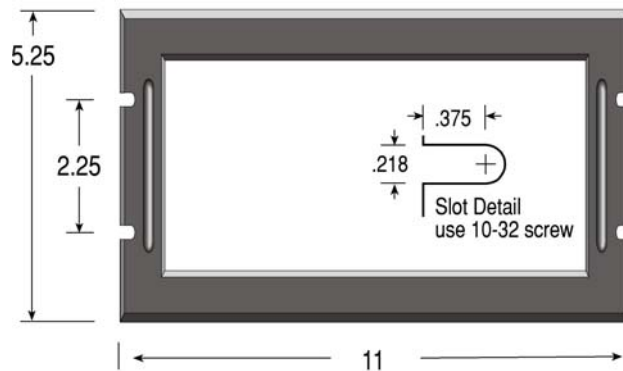


Figure 1 810-N1-24VDC dimensions

Note:

Reference figure 2 for wiring terminations

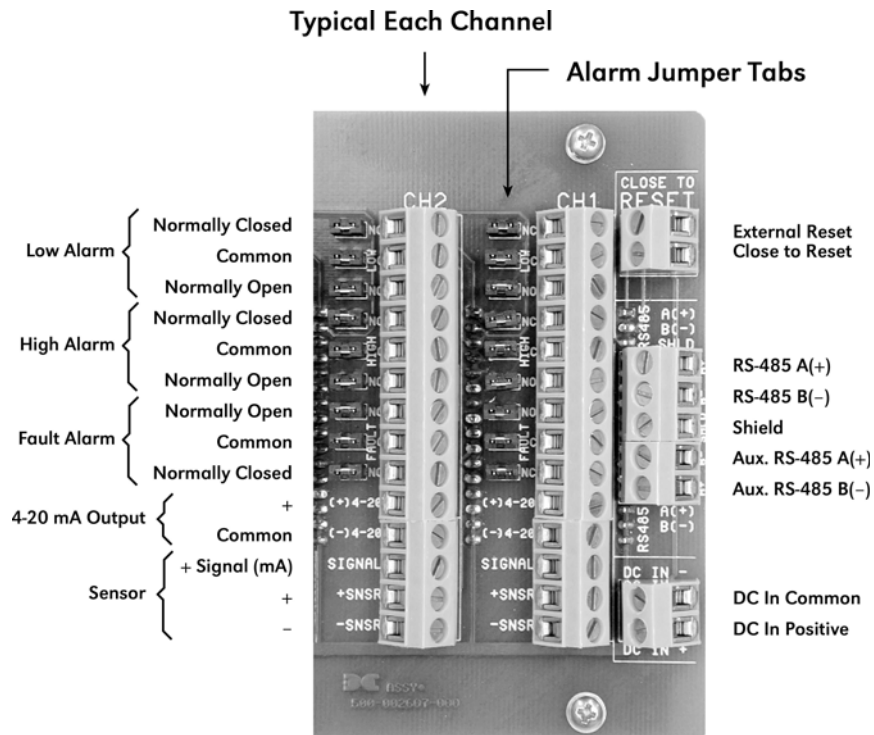


Figure 2 Wiring Terminations

Caution: Observe correct polarity when terminating all input/output field wiring. Failure to do so may result in circuit damage on power up.

2. Observe correct polarity when terminating all input/output field wiring. Failure to do so may result in circuit damage on power up.
3. Connect 24 VDC input to the terminal strip labeled “DC IN” (+ and –).
4. If applicable, connect a normally open momentary remote mounted switch to the lugless terminal (labeled RESET) located on the controller mother board.
5. If applicable, terminate the discrete 4-20 mA output to external device(s): Terminals are labeled “(+) 20” and “(-) 4-20”.
6. If applicable, terminate the RS-485 serial output to external device(s). Terminals are labeled “A (+)”, “(-)”, and “SHLD”.
7. Refer to installation and wiring detail of remote mount sensor assemblies as detailed in section 3.0. Terminate field wiring from sensors to Model 410-N1-24VDC rack lugless terminal strips located on controller mother board.
8. Alarm relay outputs may be discrete, zoned, or common via gold plated jumper tabs. Configure accordingly.

Note: Based on the application and use of relay contact outputs, complete all wiring terminations prior application of power. Shut-in controls may be omitted until system test is complete.

6.0 START-UP

Upon completion of all field wiring: Apply 24 VDC power. Note that each Model 10B controller digital display illuminates. Varying readings may occur during sensor warm-up. A 10 second alarm delay will on power up. Refer to sections 2.0 and 3.0 for additional start-up detail.

7.0 MAINTENANCE AND REPAIR

The Detcon Model 410-N1s modular design allows for minimum down time during maintenance and/repair. A model 10B control module may be changed by turning the latch knob clockwise until it stops and then sliding it out of the panel by pulling on the latch knob. To install, slide the 10B control module into the 410-N1-24VDC control enclosure and then secure by turning the latch knob counter-clockwise until it stops. See section 3 for more information on the 10B control module.

8.0 SPARE PARTS

0224	Gold plated jumper tab
910-000008-003	Model Series 10 Blank Plate

9.0 WARRANTY

Detcon inc., as manufacturer, warrants under intended normal use each new Model 810-N1-24VDC rack control enclosure to be free from defects in material and workmanship for a period of one year. The warranty period begins from the date of shipment to the original purchaser and ends one year thereafter. All warranties and service policies are FOB the Detcon Inc. facility located in The Woodlands, Texas.

Appendix C

Revision History

Revision	Date	Changes made	Approval
0.0	07/22/2011	Original Release.	RH

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