



# Detcon MODEL 1600A-N4X

## GAS DETECTION ALARM AND CONTROL SYSTEM

ISO 9001: 2000  
Certified

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### DESCRIPTION

Detcon Model 1600A-N4X is a “user-configurable” multi-channel gas alarm control system. System capacity is 16 active channels. It can receive and supervise 4-20 milliamp DC inputs or it can be configured to poll up to 16 serial devices via RS-485 Modbus RTU.

The Model 1600A-N4X controller features a modular design that allows the user to customize their selection of stand-alone input and output modules. I/O modules are addressable. Three standard I/O functions are available; a 4-channel 4-20 mA input module (DA-4), a 4-alarm relay output module (RL-4), and 4-channel 4-20 mA output module (AO-4).

Modules are din-rail mounted and stackable allowing for seamless system expansion. These addressable I/O modules may be housed internal to the main system enclosure or they may be packaged for remote mounting in a separate enclosure suitable for the area classification in which they will be installed. The remote mounting option can in some cases significantly reduce wiring and installation cost.

The status of each active input is displayed on a backlit LCD Touch Screen that also serves as a user interface. Typical input status indication includes channel number, tag name, gas type, concentration, and alarm status. Each input can be configured for up to 3 alarm levels. A fourth alarm is based on fault detection functions integral to the system. Each system application can include either common or discreet alarm relays or a combination of both. RS-485 or RS-232 serial output is provided for communication with PLC’s, PC’s, DCS’s, and remote screens.

The control system can be powered by 110/230 VAC or 20-30 VDC. Detcon’s full range of gas sensors, which are purchased separately, can be mixed and matched to create a gas detection system consisting of toxic gas, combustible gas, or oxygen deficiency. A wide range of field devices such as liquid level, temperature, pressure, flow etc. can also be configured for input to the control system. Features include one-touch Alarm Inhibit, Alarm Reset, and Alarm Silence (Acknowledge) functions.

The Model 1600A-N4X controller provides for a unique combination of user programming flexibility and customizable expansion capability, in a low-cost and simple-to-operate package.

### FEATURES

- ▷ 1 to 16 channel input capacity
- ▷ 4-20 mA or Modbus RTU serial input capability
- ▷ Readily field expandable
- ▷ I/O modules can be located remotely from controller
- ▷ Large LCD with Touch-screen User Interface
- ▷ RS-232 or RS-485 serial output to other monitoring devices
- ▷ Alarm Inhibit, Alarm Acknowledge, and Alarm Reset Functions
- ▷ Lightning & overvoltage protection standard

### ORDER GUIDE

PN 954-161610-000	Model 1600A-N4X Control System
<b>Addressable I/O Modules</b>	
PN 976-041400-000	Model DA-4 Four Channel 4-20 mA DC Input Module
PN 975-041400-000	Model RL-4 Four Alarm Relay Module
PN 975-041401-000	Model AO-4 Four Channel 4-20mA Output Module



### SPECIFICATIONS

#### Capacity

User Configurable:  
up to 16 analog or serial inputs

#### Inputs

Analog 4-20 mA (using DA-4 Modules)  
RS-485 Modbus™ RTU

#### Outputs

User Configurable:  
4-20 mA outputs (using AO-4 Modules)  
Form “C” Relay Contacts (using RL--4 Modules)  
Standard: RS-485

#### Accuracy/Repeatability

Display: < 1% F.S.  
DA-4: < 1% F.S.  
AO-4: < 1% F.S.

#### Power Input

110-230 VAC; 20-30 VDC

#### Power Consumption

Base 1600A Controller: 20 Watts @ 24 VDC  
Total Power dependent on:  
Number of I/O Modules  
Number of Gas Sensors  
not to exceed 120 watts

#### Display

5 inch Backlit LCD  
Touch-screen

#### Electrical Classification

NEMA 4X

#### Dimensions

16"W x 18"H x 9"D

#### Operating Temperature Range

0°C to +50°C

#### Warranty

One year

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