

# MODEL 7100

## MULTI CHANNEL DIGITAL CONTROLLER

### FOR OXYGEN, TOXIC & COMBUSTIBLE TRANSMITTERS



- **Mix Analog and Digital Inputs**
- **8 or 16 Fully Configurable Channels**
- **RS-485 Modbus® Master/Slave I/O**
- **Common Alarm & Horn Relays Included**
- **Optional Discrete Alarm Relays**
- **Advanced, Multi-Mode LCD Graphic Display**
- **Visual Alarm Annunciation (52), All Channels**
- **115/230 VAC, 50/60 Hz or 24 VDC Operation**
- **NEMA 4X, UL Listed Enclosure, Standard**

The Sensidyne 7100 Controller integrates up to eight or sixteen channels of gas detection with minimum user set-up. Input tags, names, and types are assigned, and alarm levels set. Any input configuration may be copied to another channel.

System options include 8-channel input and output cards (2), 8-Relay alarm cards (6), and internal transmitter power supply. Plug-in terminal strips are used so that field wiring does not have to be removed to replace a circuit board.

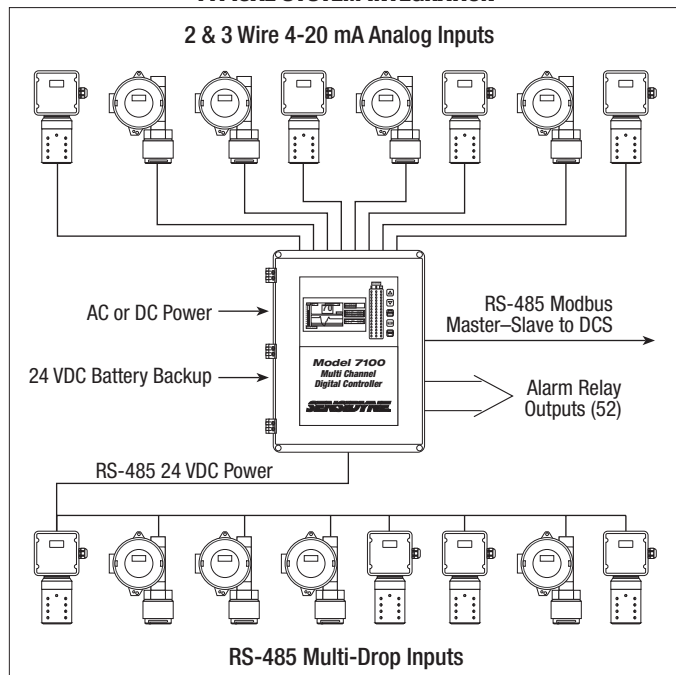
The LCD graphic display provides bar graph, trending and troubleshooting modes. User configuration is simplified with menu and copy functions. All system parameters are password protected and stored in non-volatile memory. Rack-mount and explosion-proof Enclosure options provide flexibility of application.

#### Application Description

The 7100 Controller integrates Toxic Gas, LEL or Oxygen Deficiency gas detection to provide local alarm contacts (horns, strobes, other) and indication, with serial output (Modbus Protocol) to a DCS.

- Digital Inputs with Digital Output (RS-485)
- Digital Inputs (RS-485) with Analog Outputs
- 4-20 mA Inputs with Digital Output (RS-485)
- 4-20 mA and Digital Inputs with Digital Output

#### TYPICAL SYSTEM INTEGRATION



#### Typical Industries and Uses

- |                           |                            |
|---------------------------|----------------------------|
| Manufacturing             | Hazardous Material Storage |
| Pharmaceutical            | Semiconductor Fabrication  |
| Methane Remediation       | Natural Gas Processing     |
| Hydrocarbon Pipelines     | Float Glass Making         |
| Transportation Garages    | Plating Processes          |
| Water & Waste Treatment   | HVAC Industry              |
| Petrochemical (Plastics)  | Utility Rooms              |
| Specialty Gas Bottling    | Solvent Recovery           |
| Annealing Processes       | Air Separation Plants      |
| Chlor-Alkali Plants       | Coatings Manufacturing     |
| Fertilizer Plants         | NGL Facilities & Pipelines |
| Ferrous Metals            | Coke Oven Batteries        |
| Non-Ferrous Smelting      | Specialty Chemicals        |
| Poultry & Meat Processing | Ore Processing             |
| Precious Metals Mining    | Beverage Plants            |
| Petroleum Refining        | Cold Storage Facilities    |
| Battery Rooms             | Fruit & Vegetable Storage  |
| Electricity Generation    | Textile Dyes & Chemicals   |



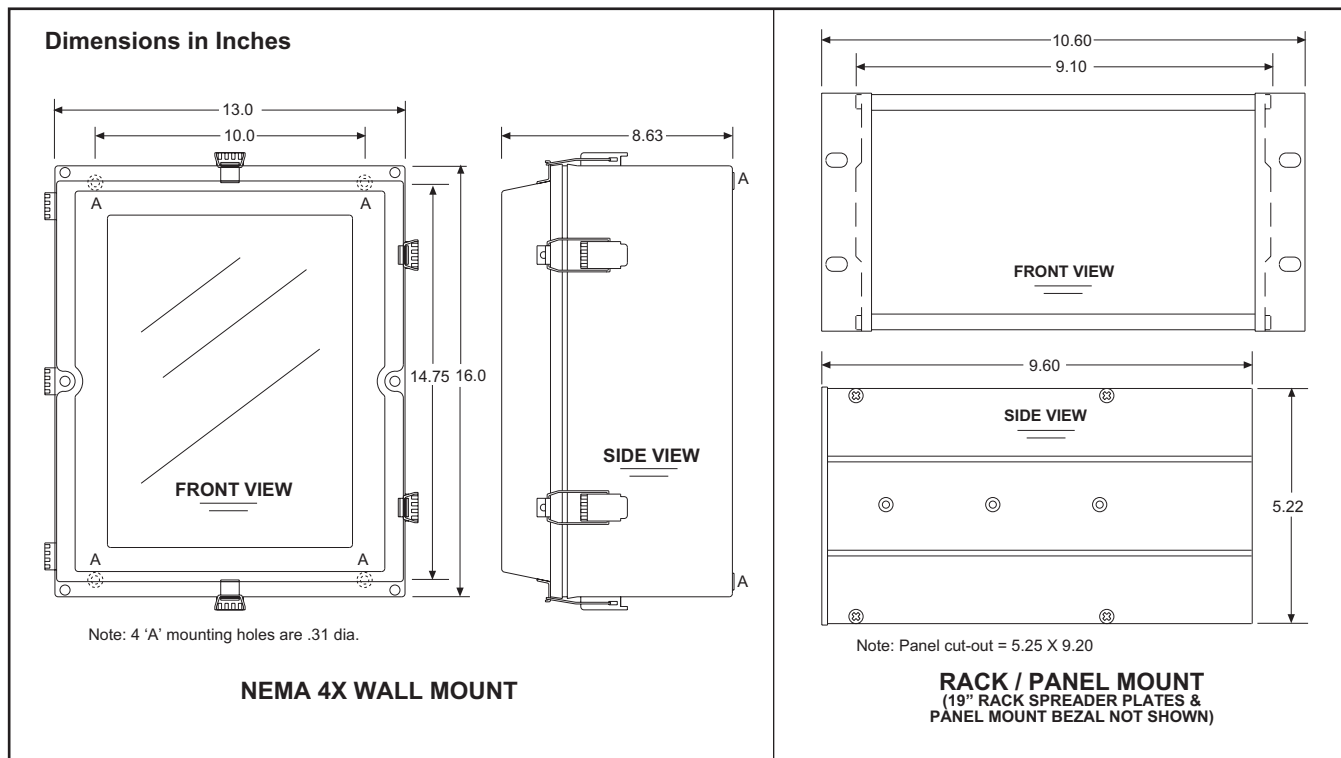
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## SPECIFICATIONS

Analog Inputs (optional) .....	16, 4-20 mA inputs (100 ohms impedance) includes +power supply terminals for each channel for 2 or 3 wire transmitters
Analog Outputs (optional) .....	16, 4-20 mA outputs (Max load 800 ohms with nominal 24 Vdc power supply)
Discrete Alarm Relays (optional) .....	SPDT, 5 amp, 250 VAC or 40 VDC (Resistive)
Serial Ports .....	Master & Slave RS-485 with Transmit / Receive LEDs Modbus® RTU Protocol
Common Alarm Relays .....	4 or 8, SPDT, 5 amp, 250 VAC or 30 Vdc (resistive)
Display .....	128 x 240 graphic LCD with backlight. Displays bar graphs, trends, and engineering units. 52 discrete LED's indicate alarm status for 16 channels and common relays
Temperature Range .....	-20°C to 60°C (-4°F to 140°F)
Transmitter Power Supply .....	24 Vdc, 60 watts
Housing Options .....	NEMA 4X fiberglass wall mount 1/2 length 19 inch rack / panel mount NEMA 7 explosion-proof wall mount with magnetic controls

## ORDERING INFORMATION

7013931-1 .....	Model 7100 with NEMA 4X Wall Mount Housing
7013931-2 .....	Model 7100 with Panel / Rack Mount Housing
7013931-3 .....	Model 7100 with NEMA 7 Wall Mount Explosion-Proof Housing (includes magnetic keypad for non-intrusive control)
7017436 .....	Auxiliary Alarm 1, Alarm 2, & Horn relay board, adds 5 amp Form C common relay's (piggybacks standard common alarm board)
7017437 .....	8 Channel, 4-20 mA analog input board
7017438 .....	8 Channel, 4-20 mA analog output board
7017439 .....	8 Channel discrete 5 amp, Form C relay board, configurable for Alarm 1, Alarm, or FAIL, with adjacent channel zoning capability (6 maximum)
7017440 .....	6 channel Catalytic Bead Sensor input board (also configurable for 4-20 mA inputs)
7017467 .....	24 Vdc 150 watt power supply



# SENSIDYNE®

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*Sensidyne manufactures, supplies and services gas detection systems and air sampling pumps characterized by their ease of use, accuracy, economical cost, and durability.*



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