

## DESCRIPTION

The Q2050 Wall Mount Enclosure Series using R8471 controller technology are designed for easy field installation of a comprehensive gas detection system. These enclosures are designed for a NEMA 4X rating and are available in two sizes. They are pre-assembled with any combination of up to six single channel gas controllers mounted within, including those for combustible, hydrogen sulfide, carbon monoxide, chlorine and oxygen gas detection. The enclosures can be supplied with a power supply that is pre-wired to the controller input power connections, or controller input power (+24 vdc) can be brought in from outside the enclosure and wired directly to the controllers.

The enclosures are made of fiberglass with a door that features a full view polycarbonate window and a stainless steel hinge and twist locks. Wiring access holes can be drilled at the time of installation or the enclosure can be provided with pre-drilled holes with watertight conduit fittings installed, as specified.

Installation of the Q2050 Series Enclosures with gas controllers involves mounting the enclosure, drilling a wiring access hole (if not custom drilled), installing appropriate hardware, then proceeding with the usual gas detection system wiring (providing input power, connecting the gas sensors to the controller, and connecting annunciating/indicating/alarm response devices to the controller outputs). Two enclosure sizes are available:

### **Q2050 and Q2051**

Dimensions – Shown in Figure 1

Capacity – One or two controllers with power supply, or  
One to four controllers without power supply

### **Q2052**

Dimensions – Shown in Figure 2.

Capacity – One to four controllers with power supply

### **Q2053**

Dimensions – Shown in Figure 2.

Capacity – Five or six controllers without power supply



## STANDARD FEATURES

### **ENCLOSURE**

- One to six controllers (any combination)
- Controllers mount on a removable subpanel
- Designed for NEMA 4X rating
- Fiberglass box with full view polycarbonate window
- Stainless steel twist locks and hinge
- Easy access wiring terminal strip for each controller
- Offered with or without self-contained power supply
- Field power terminal strip for units with a power supply

### **CONTROLLERS**

- Bar graph, digital display and LEDs
- AutoCal
- Microprocessor-based
- Relay or non-relay models available
- Relay contacts for high, auxiliary and low alarm and fault
- Configurable relays
- 4 to 20 milliampere output available
- Isolated/non-isolated current output

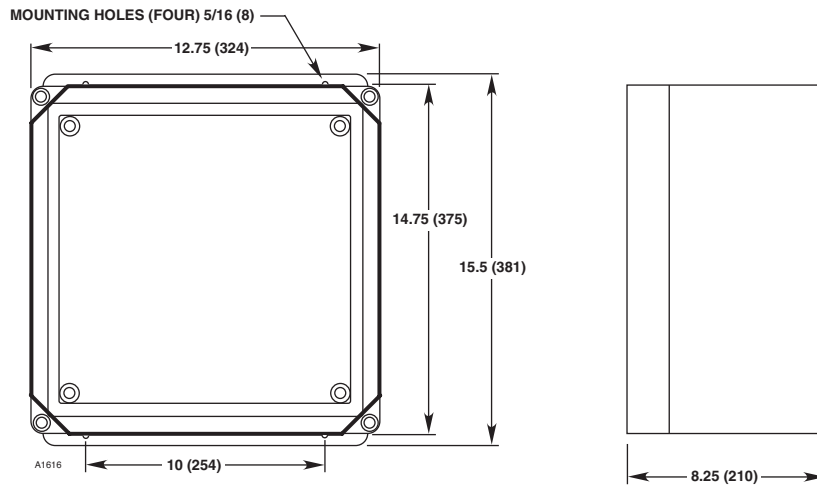


Figure 1—Q2050 and Q2051 Mounting Dimensions in Inches (Millimeters)

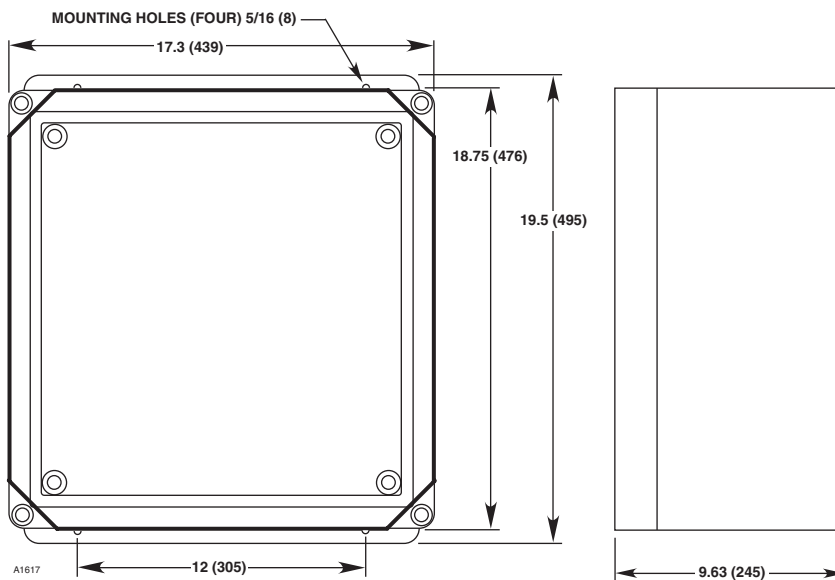


Figure 2—Q2052 and Q2053 Mounting Dimensions in Inches (Millimeters)

## OPTIONS

- Horn (100 db at 10 feet, 120 vac, 50/60 Hz, weatherproof, mounted separately from enclosure)
- Strobe (blue, 25 watt, 90 flashes per minute, 120 vac, 50/60 Hz, NEMA 3R rating, mounted separately from enclosure)
- External reset switch installed on enclosure
- 3/4 inch watertight conduit fitting for access to field wiring
- Fused field wiring terminal strip
- Heaters
- For special order needs, contact factory.

## INPUT VOLTAGES—

Models with no power supply:

External +24 volt dc source must be provided to power the controllers (range of 18 to 32 volts dc acceptable). Maximum ripple should not exceed 5 volts peak-to-peak. The sum of dc plus ripple must be  $\geq 18$  vdc and  $\leq 32$  vdc.

Models with power supply provided:

- Standard model requires 120 volts ac (range of 105 to 132 volts ac acceptable); 47 to 63 Hz, provides up to 3.6 amperes at 24 volts dc and 77°F (25°C).
- Optional models available that accept 100, 220, or 230/240 volts ac (+10%, -13%); 47 to 63 Hz. Specify input voltage when ordering.

**POWER CONSUMPTION (excluding transmitters)—**

Each controller with relays – 1.2 watts nominal, 3.5 watts maximum

Each controller without relays – 0.7 watt nominal, 1.3 watts maximum

**TEMPERATURE RANGE—**

Recommended maximum ambient temperature is 105°F (41°C). Recommended minimum ambient temperature is 25°F (-4°C). Non-intrusive cooling and heating options are available, consult factory for additional information.

**Controller Rating**

Operating: +32°F to +140°F (0°C to +60°C)

Storage: -49°F to +185°F (-45°C to +85°C)

**Power Supply Rating**

Operating: +32°F to +122°F (0°C to +50°C)

Storage: -40°F to +185°F (-40°C to +85°C)

**DIMENSIONS—**

Figure 1 shows the dimensions for the Q2050 and Q2051.

Figure 2 shows the dimensions for the Q2052 and Q2053.

**SHIPPING WEIGHT (approximate)—**

Q2050 (small enclosure without power supply):

1 controller – 12.5 lb (5.7 kg)

2 controllers – 13.0 lb (5.9 kg)

3 controllers – 14.5 lb (6.6 kg)

4 controllers – 15.0 lb (6.8 kg)

Q2051 (small enclosure with power supply):

1 controller – 19.0 lb (8.6 kg)

2 controllers – 19.5 lb (8.8 kg)

Q2052 (large enclosure with power supply):

1 controller – 25.0 lb (11.3 kg)

2 controllers – 25.5 lb (11.6 kg)

3 controllers – 26.0 lb (11.8 kg)

4 controllers – 26.5 lb (12.0 kg)

Q2053 (large enclosure without power supply):

5 controllers – 19.5 lb (8.8 kg)

6 controllers – 20.0 lb (9.1 kg)

**R8471 Gas Controllers and Corresponding Instruction Manuals**

R8471A Combustible Gas Controller 95-8398

R8471B H<sub>2</sub>S Gas Controller 95-8401

R8471C Oxygen Gas Controller 95-8405

R8471D Chlorine Gas Controller 95-8412

R8471E Carbon Monoxide Gas Controller 95-8410

**WIRING—**

Figure 3 shows controller terminal configuration.

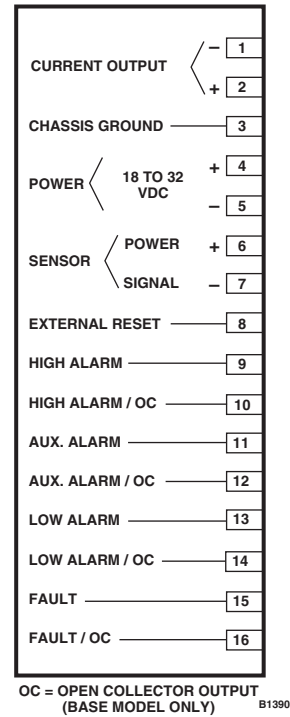


Figure 3—Controller Terminal Configuration

# ORDERING INFORMATION

For assistance in ordering, please contact:

Detector Electronics Corporation  
6901 West 110th Street  
Minneapolis, Minnesota 55438 USA  
Operator: (952) 941-5665 or (800) 765-FIRE  
Customer Service: (952) 946-6491  
Fax: (952) 829-8750  
Web site: [www.det-tronics.com](http://www.det-tronics.com)  
E-mail: [detronics@detronics.com](mailto:detronics@detronics.com)

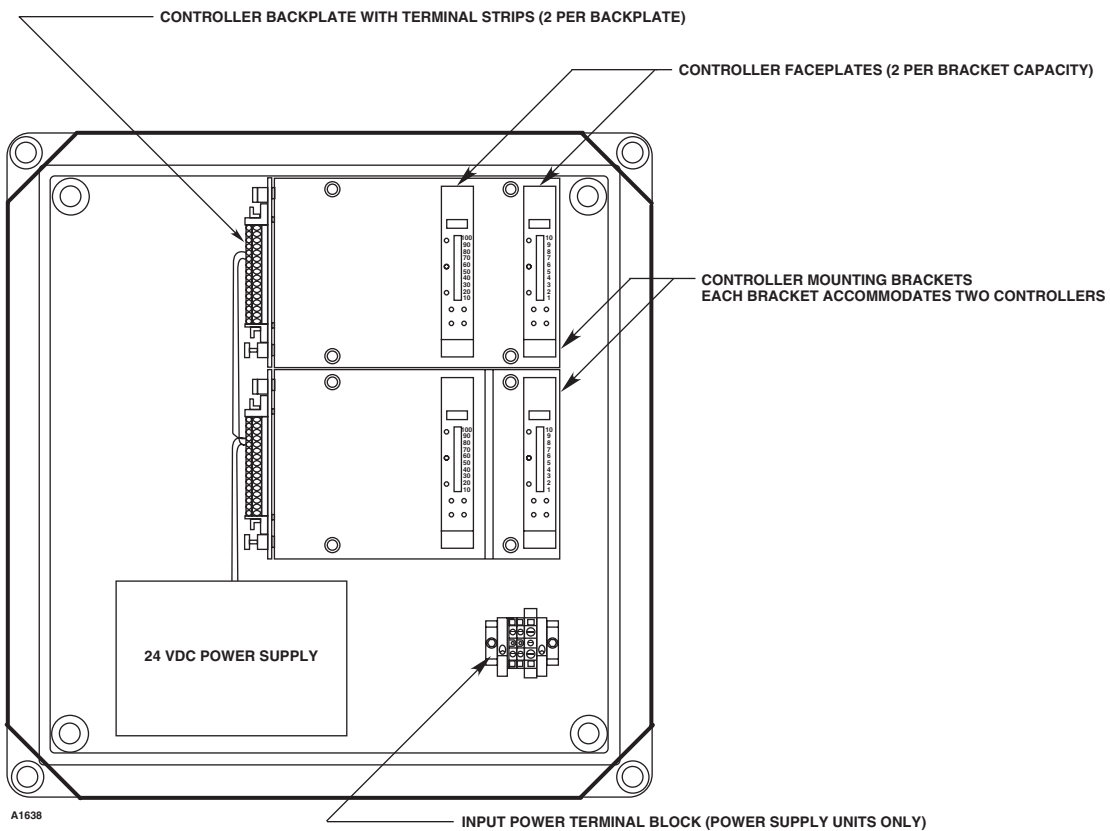


Figure 4—Typical Model - Large Enclosure with Four Controllers and a Power Supply

## Detector Electronics Corporation

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