

ADVANCE™ Multipoint Gas Detector Series 1620B



CAPITAL CONTROLS

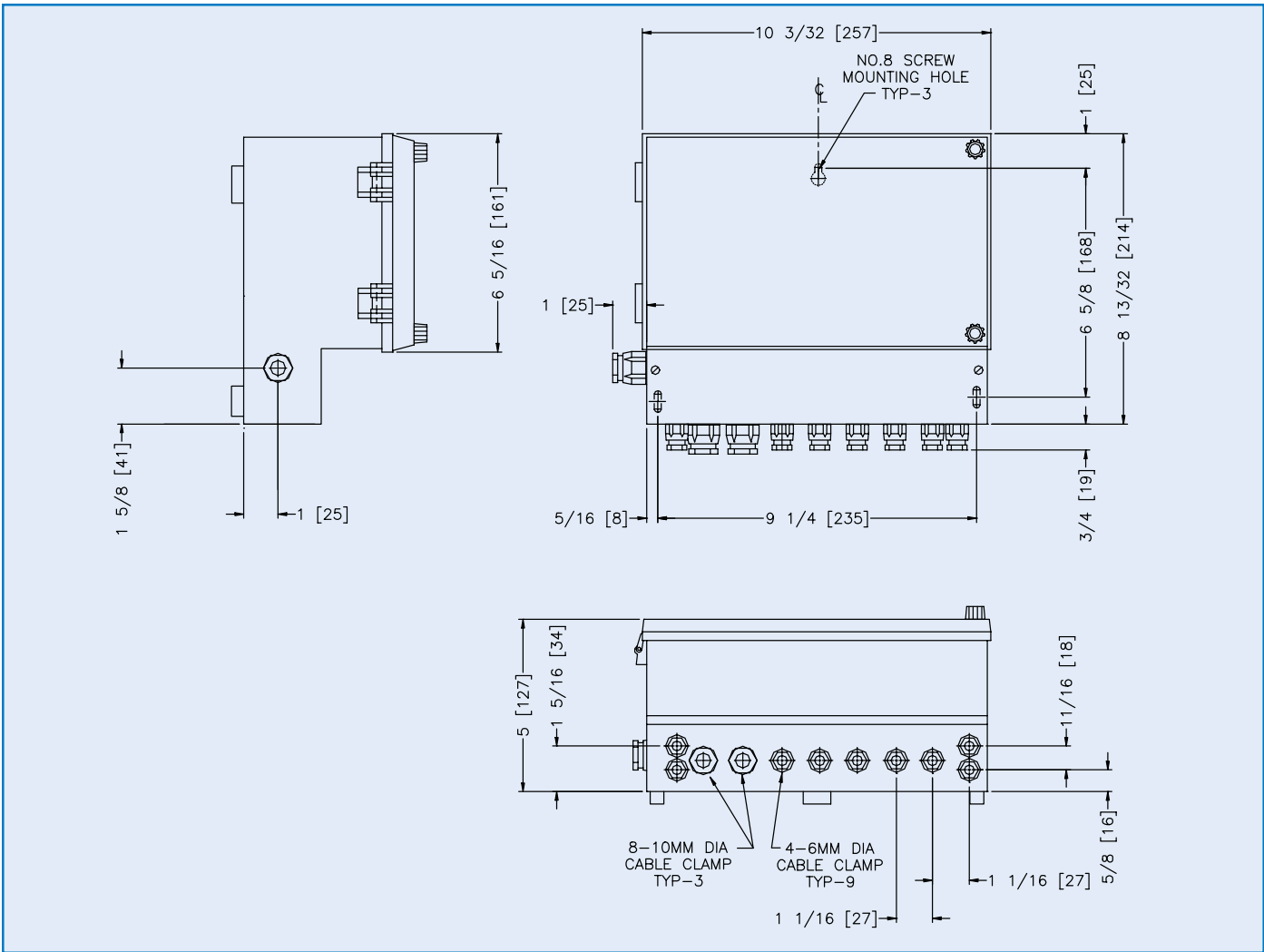


- ◆ Chlorine or sulfur dioxide gas detection
- ◆ Monitors 1 to 8 locations
- ◆ Automatic or manual scanning
- ◆ Maintenance-free, long-life sensor
- ◆ Front panel setup and control
- ◆ Audible alarm annunciator
- ◆ RFI/EMI protection
- ◆ Optional remote indicator
- ◆ Optional power back-up

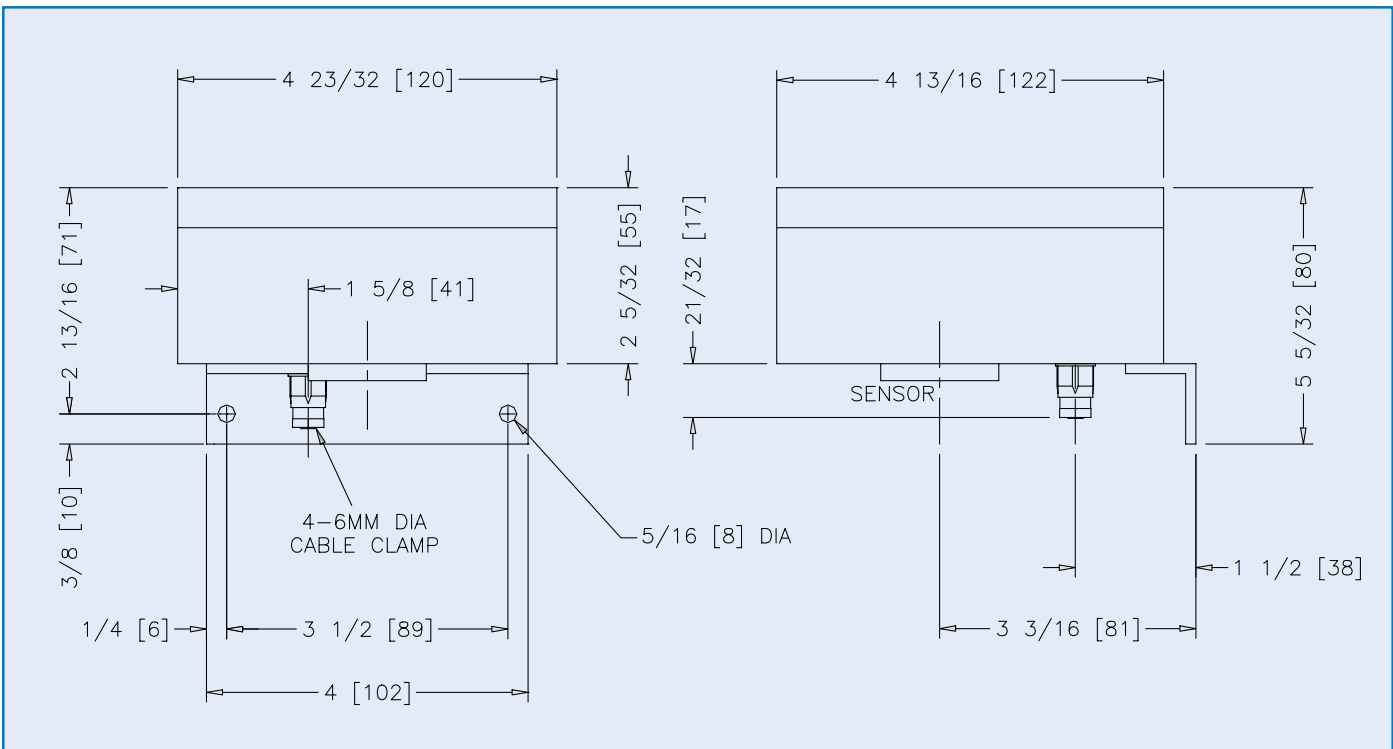
Capital Controls ADVANCE™ Multipoint Gas Detector Series 1620B provides continuous detection of chlorine or sulfur dioxide gas in a normally clean air environment in up to eight (8) distinct locations.

The modular gas detection system consists of a single indicator/receiver and a sensing module for each location (up to eight locations) for monitoring for the presence of either chlorine or sulfur dioxide gas. Series 1620B is designed to continuously and independently sense for the presence of gas. The system can be expanded in the field, as requirements change, to monitor up to eight locations.

The sensor module incorporates an electrochemical sensing element and conditioning electronics required for operation with the receiver. The sensing element and conditioning electronics are housed in a high-impact, corrosion resistant, NEMA 4X enclosure and may be mounted up to 1,000 feet (305 meters) from the receiver. The sensor module may be located indoors or outdoors.



Receiver Dimensions (for reference only)



Sensor Dimensions (For reference only)

Technical Data

RECEIVER

Quality Standard: ISO 9001
Compliance: CE
Power Requirements: 120 or 240 Vac, 50/60 Hz, single phase
Power Consumption: 24 watts
Input: 4-20 mAdc (per sensor)
Sensor Stabilization Timer: Jumper selectable 1/2, 1, 2, 4, 8, 16 minutes
Sensing Points: 1-8 switch selectable
Sensor Sequencing: Automatic or Manual Rate, jumper plug selectable 0.5, 1, 2, or 8 seconds per channel
Output: 18-24 Vdc (per sensor)
Indication Signal: 4-20 mAdc into 9)00 ohms maximum
Alarm and Malfunction Contacts: 10 amps maximum at 240 Vac maximum, or 10 amps at 28 Vdc, resistive or inductive load, SPDT, (N.O./N.C.) DPDT (N.O./N.C.) by jumper selection when dedicated to alarm function
Alarm/Malfunction Relay Reset: Latching (manual reset) only
Display:
Bar Graph Indicator
Range: 0-10 ppm
Accuracy: ±1 Bar Segment
LED Indicators: POWER, READY, MALFUNCTION, ALARM, BAR GRAPH INDICATOR, SENSOR INDICATOR
Ambient Temperature: -20°F to 150°F (-29°C to 65°C)
Enclosure: NEMA 4X
Overall Dimensions: 10 3/32" (257 mm) L x 5" (127 mm) D x 8 13/32" (214 mm) H
Weight: 6 lbs. (3 kgs)

SENSOR

Response Time: 30 seconds maximum for 80% of range to 10 ppm gas at 20°C, after stabilization.
Type: Electrochemical of the Micro Redox type
Gases: Chlorine (Cl₂) or Sulfur Dioxide (SO₂)
Minimum Detectable Concentration: 0.5 ppm by volume
Operating Temperature Range: -2°F to 131°F (-20°C to 55°C).
Operating Humidity Range: 15% to 90% R.H.
Recovery Time: 3 minutes for 90% of range at 10 ppm gas concentration.
Output Signal: Standard 4-20 mAdc
Connection Requirements: 3-conductor, shielded, 22 AWG cable
Maximum Separation between receiver and sensor: 1000 feet (305 meters)
Enclosure: NEMA 4X
Overall Dimensions: 4 23/32" (120 mm) L x 5 5/32" (80 mm) D x 2 13/16" (71 mm) H
Weight: 9 oz. (.25 kgs)

Gas	Interference Gases for Chlorine Sensor		Interference Gas for Sulfur Dioxide Sensor	
	Concentration	Approximate Equivalent to Chlorine Signal	Concentration	Approximate Equivalent to Sulfur Dioxide Signal
Hydrogen	100 ppm	-1 ppm	100 ppm	1 ppm
Carbon Monoxide	100 ppm	-1 ppm	--	--
Ethylene	100 ppm	-1 ppm	--	--
Sulfur Dioxide	100 ppm	-5 ppm	--	--
Nitric Oxide	100 ppm	+1 ppm	--	--
Chlorine	--	--	10 ppm	<0.6 ppm
Hydrogen Sulfide	--	--	100 ppm	200 ppm
Alcohols	--	--	100 ppm	<1 ppm
Nitrous Dioxide (internal combustion exhaust)	10 ppm	+16 ppm	10 ppm	-10 ppm

Warranty and Capability

Capital Controls warrants its gas detectors for eighteen (18) months from the date of invoice, or twelve (12) months from date of installation.

Capital Controls is ISO 9001 certified to provide quality and precision materials. Disinfection technologies, water quality monitors and instrumentation for water and wastewater are areas of specialization. Over 35 years of industrial and municipal application experience in the water and wastewater industries is incorporated into the equipment design to provide high quality comprehensive solutions for the global market.

Brief Specification

The multipoint gas detection system for (chlorine) (sulfur dioxide) shall consist of sealed electrochemical type sensors, housed in NEMA 4X enclosures. In the presence of gas, a current flow will develop and be transmitted to the receiver. The maximum separation between the receiver and each sensor shall be 1000 feet (305 meters).

The receiver shall process and display incoming signals from the sensor modules, and be housed in a NEMA 4X enclosure. The receiver shall contain the following components: a power switch and LED indicators for power and ready; set point alarm level, field set via push button on the front of the receiver and indicated by on the bar graph by a flashing bar segment; an LED alarm indicator and annunciator with corresponding contact; an LED malfunction indicator with selectable manual or automatic reset relay contact; an acknowledge button for silencing audible alarm; a RESET button for clearing alarm and malfunction circuits; an LED bar graph display in the range of 0-10 ppm; a LED numerical sensor indicator for display of sensor being scanned and push buttons for selecting automatic or manual scan. A 4-20 mAdc output signal shall be provided to transmit scanned levels.

Protection shall be provided against radio frequency/electromagnetic interference typically present at industrial and municipal plants. The unit shall operate from a (120 Vac) (240 Vac) 50/60 Hz single phase power supply. Battery terminals shall be provided for use in the event of a power failure. The gas detector shall be Capital Controls Series 1620B.

An optional power back-up shall be provided, and shall automatically provide power in the event of a power failure. The unit shall automatically and continuously recharge to supply maximum support to the gas detector and/or the remote indicator. The power back-up shall be Capital Controls Model 1640.

An optional remote indicator shall be provided to remotely indicate and alarm when a preset gas level is exceeded. A cumulative bar graph indicator shall provide level indication. An annunciator shall provide audible indication of an alarm condition and an ALARM light will flash until the condition is cleared. The remote indicator shall be Capital Controls Model 1630.

Design improvements may be made without notice.

Represented by:



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