WALLACE & TIERNAN® SYSTEMS
ACUTEC™ 35 GAS DETECTION SYSTEM

The Acutec™ 35 system utilises the latest on-line gas monitoring technology to provide a flexible and reliable, self-testing detection system in a compact modular design. With sensors to detect the presence of chlorine, ammonia or sulfur dioxide gases in ambient air, the Acutec 35 system is ideal for detecting leaks from storage containers, process piping or gas feed equipment in any type of water, wastewater or industrial plant environment.

THE BEST GAS DETECTION SYSTEM FOR YOU

The Acutec 35 system's modular design allows for a wide range of configurations. Easy and neat installation, using standard enclosures.

The receiver module is available in a choice of either a detector or monitor version, which has an LED display and an mA output signal. Both provide two selectable levels of alarm. A low level warning alarm would indicate transient leak conditions, whereas a second alarm is to initiate a full alert in the event of more serious leaks. And as for other support, there is an optional Auto-Test unit. This incorporates an integral gas generator that automatically tests the sensor each day, sounding alarms in the event of sensor failure. This added safety feature also reduces the costs incurred by running manual procedures.

Combine the features of the Acutec 35 system with the fact that it comes with the backing and technical support of one of the world's most respected chemical feed and disinfection companies and you will see why the Acutec 35 system is the best gas detection system for your operation. Every single component in the Acutec 35 system is manufactured and vigorously tested under quality controlled processes to ensure accuracy and reliability.

Key Benefits

- Gas detection for Chlorine, Ammonia or Sulfur Dioxide
- Simple and neat installation of module components
- Easy access to control panel via hinged cover on the NEMA 4X enclosure
- Audible horn to provide local warning
- Choice of detector or monitor version
- Sunlight readable 4 digit LED on the monitor
- Single or multipoint gas detection systems
- Automatic integral gas generator

INSTALLATION

The flexibility of the modular system allows for simple installation of single or multipoint gas detection systems. Each point of detection requires the installation of one sensor / transmitter and one receiver module. The sensor / transmitter is installed in the area to be monitored and the receiver module can be located up to 300 m (1000 ft) away. A power supply module, sufficient for use with up to two receivers, is housed with the receivers in a NEMA 4X enclosure.

All enclosures are provided with knockouts on all four sides to facilitate wiring using the 1/2″ FNPT (12.7 mm) conduit hubs provided. Equally suitable for indoor or outdoor applications, these NEMA 4X - rated polystyrene enclosures are fitted with a tough hinged polycarbonate window for clear visibility of all indicators and easy access to the control panel. Included within the enclosure is a piezoelectric horn to provide audible local warning.

Receiver Module

Two versions of the receiver are available. The detector signals the presence of specified gas and includes two gas alarm set points and three configurable and assignable gas alarm relays. It is also supplied with a separate sensor alarm and relay. The monitor provides, in addition to the above, an LED display of gas concentrations in PPM and an isolated 4-20mA output.

Each module is switch-programmable for full scale range. A single switch on the front panel provides alarm acknowledgement, reset functions, alarm relay inhibition, on-demand activation of Auto-Test and LED indicator testing. In addition, LED light bars provide a visual indication of alarm status.

Power Supply Mode

This module, designed for installation alongside the receiver module, can accept any AC input between 85-255 VAC, transforming the supply to a 12 VDC output for the receiver module without any modification or adjustment. Loss of input power is indicated by a built-in power failure alarm relay. 1 module provides the power to operate 1 or 2 receiver modules, an integral audible alarm and the charging of the optional battery back-up.

Control Enclosure

A single or dual point standard enclosure is provided for housing the power supply module and either 1 or 2 receiver modules. The enclosure is rated NEMA 4X with a ringed polycarbonate window. An integral audible alarm horn is included as standard.

Sensor/Transmitter

A highly efficient electrochemical gas sensor for location in areas where gas leakage could occur is combined with an equally efficient transmitter; both housed in a NEMA 4X enclosure. Digitally converted measurements of gas concentrations are then sent to the receiver module located anywhere up to 300 m (1000 ft) away.

An optional Auto-Test facility is available for fitting to a sensor. Consisting of an electrochemical generator, it automatically tests the sensor everyday, triggering an alarm if a fault is found. The Auto-Test option also provides early warning of reduced sensitivity that can occur over time, allowing users to determine when sensors need replacing.

Battery Back-Up System

The battery back-up option consists of a sealed lead-acid battery mounted in its own enclosure. In the event of power failure, it will maintain all receiver functions for a minimum of 12 hours on a single point system or 6 hours on a dual point system. Battery charging is fully automatic and continuous through the power supply module.
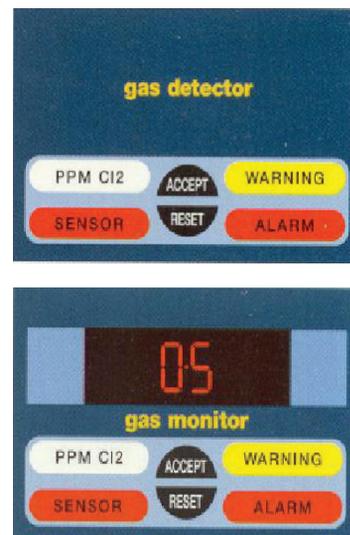
TECHNICAL DATA

Gases Detected

Chlorine, sulfur dioxide, ammonia

Gas Ranges

	Std. Range	Min. Range	Max. Range
Cl_2	0-10 ppm	0-5 ppm	0-50 ppm
SO_2	0-20 ppm	0-10 ppm	0-100 ppm
NH_3	0-100 ppm	0-50 ppm	0-500 ppm

Power requirements

85-255 VAC, 50/60 HZ 1 Amp - Self-regulating

Ambient temperature

-18° to 40°C (0° to 105°F) continuous
-23° to 49°C (-10° to 120°F) intermittent

Humidity

0-99% non-condensing

Gas alarm setpoints

- 2 independent setpoints
- Warning level - adjustable from 5% - 100% of range
- Alarm level - adjustable from 5% - 100% of range

Alarm indicators

High intensity LED bars

Function

- WARNING indicator non-latching
- Alarm indicator latching

Alarm relays

3 assignable alarm relays for either alarm setpoint 10A at 120 VAC, 5A at 250 VAC, resistive, SPDT configurable for normal/fail-safe, latching/non-latching and fast/slow operation.

Alarm relay and indicator reset

Activated from front panel switch or through remote reset.

Sensor alarm

Indicates loss of sensor/transmitter input or failure of optional sensor Auto-Test.

Sensor alarm relay and indicator

Front panel LED indicator and relay; 10A, at 120 VAC, 5A at 250 VAC, resistive SPDT factory set to fail-safe operation.

Monitor concentration display

4-digit LED, sunlight readable.

Monitor concentration output signal

Isolated 4-20 mA DC, 1000 ohm maximum load.

Power supply output voltage

Regulated 13.7 VDC, 1A supplied to 1 or 2 receivers. Also, for recharging external battery, audible back-up and for integral Alarm horn power.

Audible alarm horn

Weatherproof 12 VDC piezoelectric horn 85-dB output Signal for local alarming.

Power failure alarm relay

- Loss of AC input power.
- 1 relay 10A at 120 VAC, 5A at 250 VAC, SPDT resistive.

Enclosure

NEMA 4X Polystyrene with knockouts on four sides for 12.7 mm (1/2") FNPT conduit hubs.

- 4 single point enclosure - 4 conduit hubs are provided.
- 4 dual point enclosure - 7 conduit hubs are provided.

Gas sensor type

Electrochemical gas diffusion

Gas sensor connection distance

Up to 300 m (1000 ft) to receiver.

Two wire cable

- For a dual point unit, 15 m (50 ft) of cable is provided.
- For a single point unit, 8 m (25 ft) of cable is provided.

Sensor operating life

2 years

Sensor storage life

5 years

Optional battery back-up

Battery type	12 VDC, 4 Amp HR sealed lead acid
Battery capacity	For single point unit, min. 12 hrs. (avg. 24 hrs.) For dual point unit, min. 6 hrs. (avg. 12 hrs.)
Charge control	Current limited to 0.75A max.
Charge time	10 hours typically from fully discharged
Low voltage cutoff	Relay disconnect at 10 VDC
Fault protection	Relay disconnect on shorted charger wiring
Battery life	Min. 3 yrs. in operation

FRONT VIEW   SIDE VIEW

FRONT VIEW   SIDE VIEW
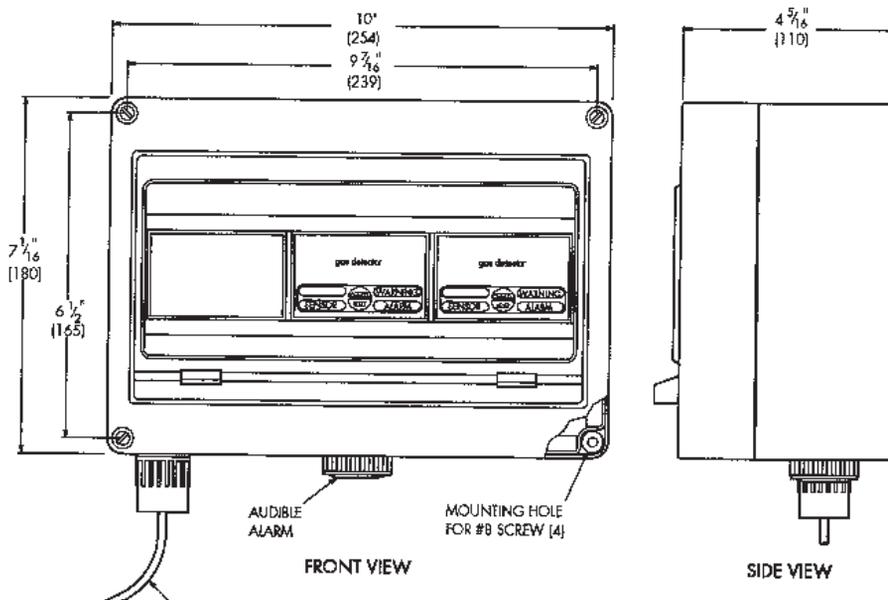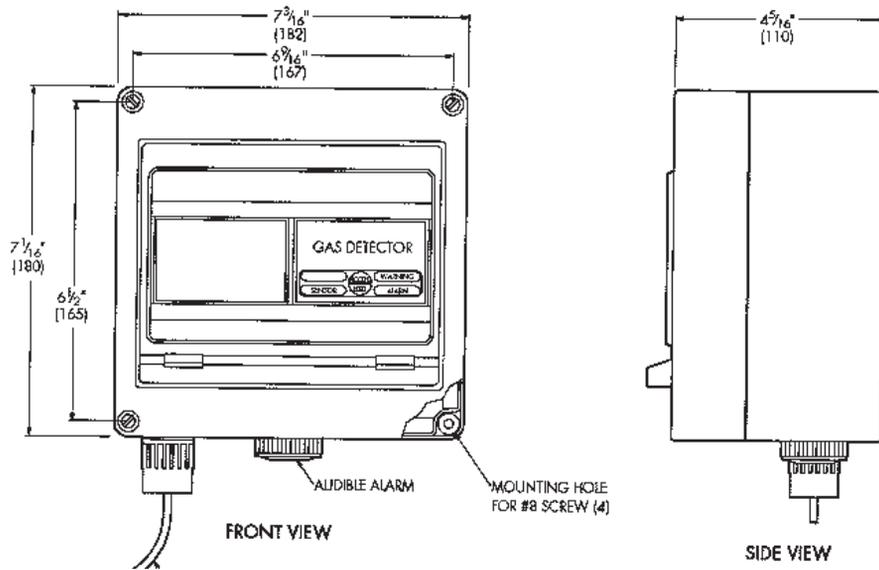
* For complete dimensions, see WT.050.130.100 for single point, WT.050.130.102 for dual point, and WT.050.130.104 for battery backup.b