

Wireless MultiSet Gas Detection and Control System

CEW(LS) Series
January 2008

Scalable system using Wireless Sensor-Transmitters communicating with a central Control Panel as well as Remote Wireless Relay Modules to operate ventilation equipment & Remote Alarms.

Features

- FCC/IC/ETSI/CE approved RF modules for up to 256 remote sensor-transmitters & up to 96 Remote Relay Modules.
- Minimal installation cost - virtually no field wiring required.
- Continuous 2 year Battery-powered sensor operation with self diagnostics. Sensors are also available for 24V AC operation.
- Relay outputs from the Control Panel or from Remote Wireless Relay Modules.
- “Plug-and-play”.

Applications

- Energy savings through the intermittent operation of ventilation equipment in enclosed facilities.
- Suitable for garages, tunnels, warehouses and other enclosed commercial locations where a hazardous build-up of gases may occur.
- Ideal for retrofit of existing buildings to improve safety and conserve energy.
- Designed for multiple stage projects.

The ACME Wireless MultiSet series is a microprocessor-based multipoint multigas wireless detection and control system that can be used with a wide variety of ACME toxic, combustible, refrigerant & oxygen gas sensors. The sensors can be grouped in any combination. The communication between the Control Panel and the remote sensor-transmitters is accomplished through a 900 MHz or 2.4 GHz wireless network operating in a range of 1500-2000 ft. , (indoors).

The versatility of the system allows the user to customize the system parameters (ON-OFF level setpoints, time delays, hysteresis, scan rate, sensor type and range, etc.) via a removable keypad and LCD screen. The password-protected menu-driven options appear in plain English for easy field-programming.

The LCD display provides a continuous digital read-out of gas concentrations for each sensor-transmitter, as well as levels status (LOW, HIGH & ALARM), the battery voltage and the time elapsed in minutes since the last transmission.

In its most basic configuration, the MultiSet Control Panel supports up to 256 channels where each channel is treated independently controlling a fan zone. In this configuration each channel has a set of relay outputs for Low, High and Alarm levels and/or a 4-20 mA signal proportional to the gas concentration. In a more practical application, the channels are divided into groups that collectively serve various fan zones. In the latter configuration each group (zone) has a set of relay output contacts and/or 4-20mA signal proportional to the demand from that group.



The MultiSet series Sensor-Transmitters are available with different sensor technologies depending on the type of gas detected. Electrochemical cell type sensors are common for most of the toxic gases, non-dispersive infrared (NDIR) for CO₂ & Refrigerant Gases and Combustible Gas sensors are catalytic bead (pellistor) type.

The Sensor-Transmitters' batteries are designed for a 2-year life. The Sensor-Transmitters are also available with 24V AC input instead of batteries.

Acme also offers other version of the MutiSet where only a maximum of 4 channels (CEW4) or 32 channels (CEW) are supported. Output configurations are limited and the user keypad is optional.

Sensor-Transmitter specifications

GASES DETECTED: CO, Diesel Fumes (NO₂), CO₂, O₂, H₂, H₂S, Ammonia, etc. Methane, Propane & Butane Family of refrigerant gases

SENSOR TECHNOLOGY: Electrochemical, NDIR or Catalytic Bead

SENSING METHOD: Diffusion type

DETECTION RANGE: Varies by gas

ACCURACY: +/- 5ppm of reading

POWER REQUIREMENTS: Battery (12V DC)
Also available in 24V AC

BATTERY LIFE: 2 Years

COMMUNICATION: 900 MHz Wireless network

COMMUNICATION RANGE: 1500-2000 ft., (indoors)

OPERATING TEMPERATURE: 32°F to 104°F (0°C to +40°C)*

HUMIDITY RANGE: 0-95% RH Non-condensing

EXPECTED LIFETIME: 2 Years for Electrochemical;
2 Years for Catalytic Bead;
10 Years for NDIR;

ENCLOSURE: NEMA 3

CALIBRATION VERIFICATION: Yearly

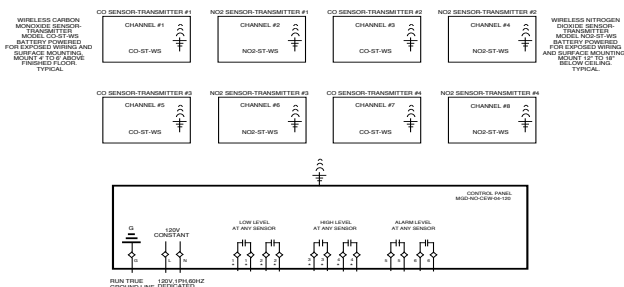
* Extended temperature range available.

Other Acme wireless products

CEW4 Wireless QuadSet 4-point Multigas Detection & Control System.
Same other features as the MultiSet.

CEW Wireless QuadSet 32-point Multigas Detection & Control System.
Same other features as the MultiSet.

Typical Wiring Diagram



Ordering Information

MODEL NUMBER	GAS DETECTED
CP-CEW-N-X*	GASOLINE EXHAUST (CO)
DG-NO-CEW-N-X*	DIESEL FUMES (NO ₂)
CO ₂ -CEW-N-X*	CARBON DIOXIDE (CO ₂)
MDG-NO-CEW-N-X*	GASOLINE/DIESEL (CO/NO ₂)
O ₂ -CEW-N-X*	OXYGEN (O ₂)
H ₂ -CEW-N-X*	HYDROGEN (H ₂)
H ₂ S-CEW-N-X*	HYDROGEN SULFIDE (H ₂ S)
NH ₃ -CEW-N-X*	AMMONIA (NH ₃)

These sensors require local power source of 24V AC due to their higher power consumption.

40-CH ₄ -CEW-N-X*	METHANE (CH ₄)
40-C ₃ H ₈ -CEW-N-X*	PROPANE (C ₃ H ₈)
40-C ₄ H ₁₀ -CEW-N-X*	BUTANE (C ₄ H ₁₀)
REF**-CEW-N-X*	Refrigerant Gases

N = Number of sensors for each gas.

Add a "-BB" suffix at the end to indicate a battery back-up.

** REF = Refrigerant Gas desired.

For combinations of gases or other gases available, please contact the factory for more information.

Power Supply Options for Control Panel

*X	LINE VOLTAGE
24	24 V 50/60 HZ
120	120V 50/60 HZ
240	240V 50/60 HZ
277	277V 50/60 HZ

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