TruSense™ MG Refrigerant Monitor

TRANE TECHNOLOGIES

Introduction

Trane TruSense™ MG refrigerant monitor provides reliable, 1 ppm refrigerant detection for equipment room protection and for early warning of refrigerant leaks. It is able to sense multiple refrigerant gases and locations using refrigerant specific infrared photo-acoustic sensing, a technology proven to provide stable operation and minimize false alarms. The Trane TruSense MG refrigerant monitor is intended for indoor use in mechanical equipment rooms or for areas where bulk refrigerants are stored. Trane TruSense MG refrigerant monitors conform to the requirements and recommendations of ASHRAE Guideline 3, 1996, and ASHRAE Standard 15, 2007.

The TruSense MG multiple refrigerant gas sensing capability allows a single TruSense MG monitor to protect facilities having several different refrigerants. It also gives users the option of anticipating future refrigerant changes. In addition, TruSense MG monitors have the option of sensing oxygen concentration or carbon monoxide concentration.

Each Trane TruSense MG has a user keypad with clear language human interface for fast and convenient operation. It has a standard 4 to 20 mA analog output for interface with Trane Tracer Summit™ and other building automation systems. It also has standard alarm relays and optional alarm lights to provide alarm functions required by local codes and other agencies. Finally, every TruSense MG has Trane's unequalled worldwide parts, technical and service support.

Unique features

Infrared photo acoustic sensing

The TruSense MG uses advanced infrared photo-acoustic sensing technology for false-alarm-resistant and accurate operation. This eliminates the "Auto Zero" functions required by other infrared refrigerant monitors, and accordingly improves maintenance and reliability.

True specifications

Today, there is no standard rule for specifying refrigerant monitor performance. Trane publishes complete and understandable performance specifications. This helps assure designers that TruSense MG monitors will have the sensitivity required by the life safety specifications of their state and local building codes.

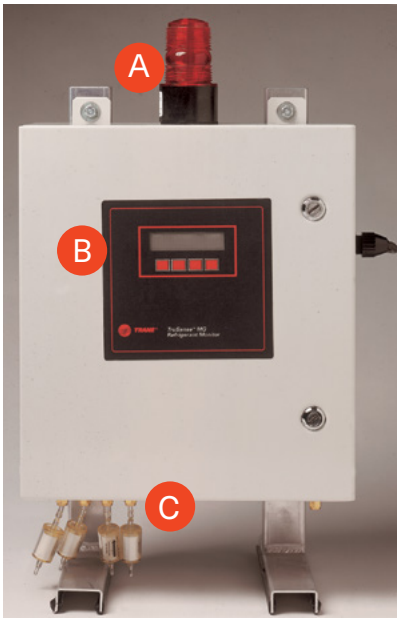
100% performance verification

It's hard to tell if a refrigerant monitor is working. Every TruSense MG refrigerant sensor is factory tested with NIST (National Institute of Standards and Technology) refrigerant calibration gas prior to shipment to verify that it can sense refrigerant at its acceptable exposure limit (AEL). Additionally, UL2075 Performance Testing backs up the specification parameters for a number of refrigerants.

Optional carbon monoxide and oxygen sensors

Combustion gases or other asphyxiation sources are often present in refrigeration equipment rooms. TruSense MG offers the choice of a built-in carbon monoxide concentration or oxygen concentration sensor. These sensors can help alert occupants to the presence of these hazards.

- Sensor choice includes: 0 - 25% oxygen, 0 - 100 ppm carbon monoxide, or 0 to 500 ppm carbon monoxide.



A Optional unit mounted beacon

B Clear language display

C Up to eight sampling ports

Multiple refrigerant sensing capability

TruSense MG units can be factory calibrated to sense up to six different refrigerants using the same instrument.

Calibration

- Standard units can be selected for HCFC-123, CFC-11, HCFC-22, HFC 134a, CFC-12, CFC-113, CFC-114, CFC-500, CFC-502 or ammonia. Special calibrations available for most other refrigerants. For each selected gas, TruSense monitors are factory calibrated using NIST traceable calibration gas.

A Power supply

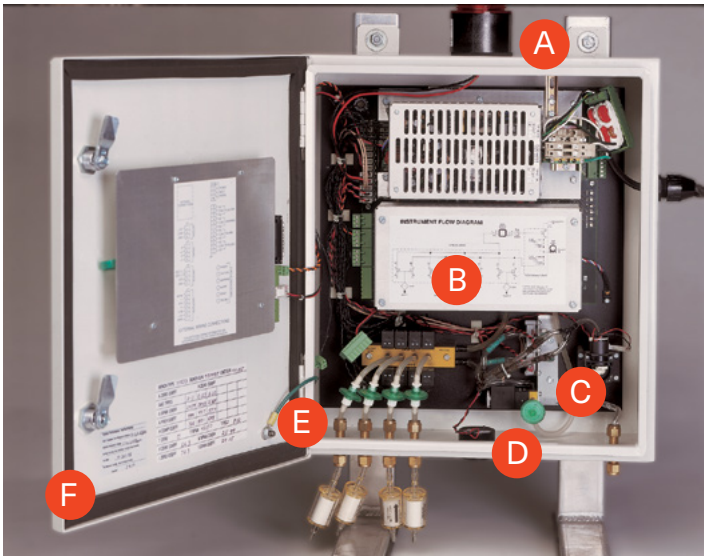
B Optical bench

C Sample pump

D Alarm (buzzer)

E Standard internal filters

F Designed as NEMA 4



Clear language display

- Clear language display with keypad, mounted in unit front panel.
- Automatic display of concentration and alarm information
- Extensive service diagnostics

Optional single light beacon

- Unit-mounted
- Visually alerts to refrigerant leak. This function parallels the audible alarm, when the horn sounds, the beacon will light.

Standard internal filters

- Ensures a clean sample, free from dust and dirt.

Enclosure

- Sealed and moisture-resistant, painted with black trim
- Operating weight: With multichannel sequencer, 45 lbs.
- Permanent wall mounting
- Dimensions – 18” H × 6” D × 16” W
- Designed as NEMA 4

Solenoid valve

- Allows for one, four, or eight sample points.
- Visually alerts to refrigerant leak. This function parallels the audible alarm, when the horn sounds, the beacon will light.

Sample system

Pump has unique brushless DC motor design suitable for continuous operation.

- One, four or eight sensing channels
- 0.75 liters per minute — typical
- Tube size: ¼ inches O.D., 1⁄8 inches I.D.
- Recommended maximum tubing length: 150 feet - Up to 500 feet is allowed where response time is not critical (0.180 inch ID tubing recommended for 500’ length)

Agency listing

- UL2075 listed for single and multiple refrigerant configurations (excludes auxiliary sensor).

Performance

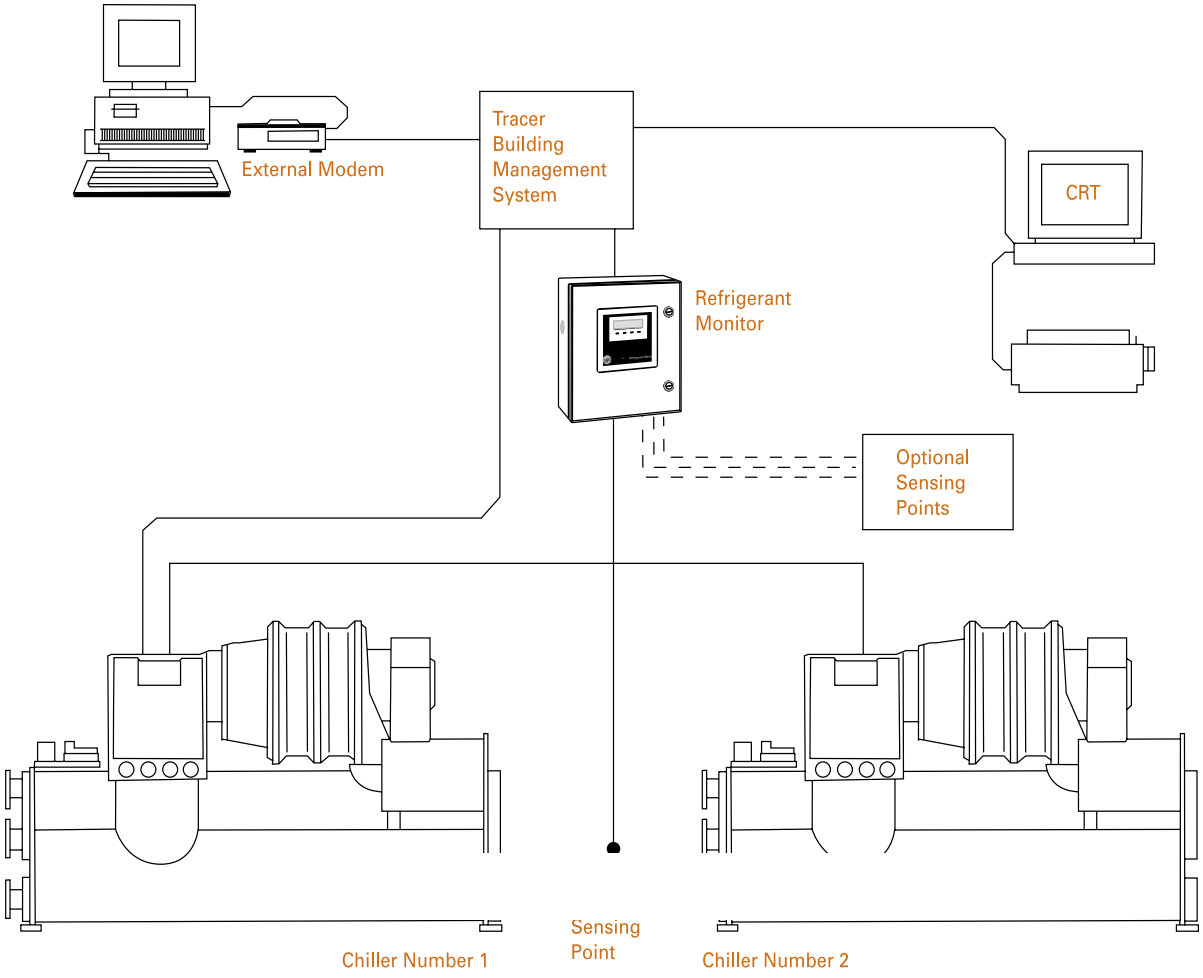
- Minimum sensed gas concentration: 1 ppm
- Precision: 0-50 ppm, ±1 ppm; 51-1000 ppm; ± 10% of reading.

Electrical

- 115 VAC, 60 Hz, 1 Phase, 70 Watts
- 220 VAC, 50 Hz, 1 Phase, 75 Watts

Optional alarm outputs

- Optional remote light beacon with single, double or triple lights
- Standard three concentration alarm relays and one trouble alarm relay
- Optional 8-relay, 16-relay, and 24-relay remote modules
- Latched alarms can be reset at monitor or from remote contact closure
- All alarms are field adjustable and can be field configured as latching or non-latching



Learn more at trane.com

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