

QUADSET REFRIGERANT GAS MONITOR

QD-REF Series
January 2012

R-11, R-12, R-22, R-23, R-114, R-123, R-134A, R-402A, R-404A, R-407A, R-407C
R-407C, R-408A, R-409A, R-410A, R500, R502, R507A, NH3

Features

- High-accuracy refrigerant-specific NDIR sensor
- Up to 4 points of detection
- Diffusion or sample draw
- 4-line LCD included and Removable Keypad available
- 3-Stage relay output with LED status indicators
- Optional - 4-20mA output
- Easy to install and maintain
- Meets and exceeds ANSI/ASHRAE 15-1994

Applications

- Suitable for control of emergency ventilation systems and for personnel protection
- Refrigerant leak or spill detection from chillers, pipes, compressors and valves
- Commercial or industrial facilities using chillers or refrigeration units, food plants, meat-packing plants and cryogenic plants
- Direct connection to the existing building management system (BMS) or DDCS



The Acme Quadset Refrigerant Gas Monitor is designed to detect refrigerant leaks in enclosed areas. The Monitor utilizes a sophisticated NDIR sensor specific to any one of the commercially available refrigerants. It can monitor over a range of 0-1000ppm with a resolution threshold as low as 1ppm.

The Quadset can monitor up to four locations in one of two modes of operation, diffusion or sample-draw.

In the diffusion mode, up to four RF-IR-ST-24 Refrigerant Sensor/Transmitters can be daisy-chained to the Monitor and transmit data on a RS-485 communication bus.

In the sample-draw mode, built-in diaphragm pumps continuously draw air samples from the four locations via tubing, the incoming samples are then diverted to a built-in sensor by means of a sequencer and solenoid valves.

The Quadset is easy to install and maintain. It has a 4-line backlit LCD for refrigerant gas readings and LED indicators for relay output status. The LCD is also used for programming the system parameters via a removable keypad.

Designed to act as a fixed in-situ safety monitor, the Quadset automatically operates the mechanical ventilation system of a facility upon detection of low levels of refrigerants, thereby protecting occupants, personnel and gas-sensitive goods and products.

The standard Monitor has a 3-stage relay output configuration and a malfunction relay. Options include 4-20mA analog output based on average or worst reading, a strobe light and/or a horn.

With the increased use of gas detection in maintenance and industrial facilities, the Quadset allows installers and users to meet code requirements in an economical fashion using commercial-grade gas detection equipment.

The Quadset contains all the well-known standard features of ACME's gas detection line; a robust enclosure, the latest sensor technology and state-of-the-art electronics. For more versatile gas options, please consult the ACME binder or website.

Standard unit specifications

GASES DETECTED: R-11, R-12, R-22, R-123, R-134A, R-407C, R-410A, R507A, NH3.....

SENSOR TECHNOLOGY: NDIR Infrared

SENSING METHOD: Diffusion or sample-draw

DETECTION RANGE: 0-1000ppm

RESOLUTION: 1ppm

ACCURACY: +/- 5ppm

RESPONSE TIME (T90%): 60 seconds

POWER REQUIREMENTS: 24V or 120V or 240V 50/60 Hz

OUTPUTS: 3-stage relay; contact rating 3A @ 120VAC inductive 4-20mA

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

HUMIDITY RANGE: 0-95% RH Non-condensing

EXPECTED LIFETIME: 10 years

ENCLOSURE: NEMA 1 - Metal with locked door for Surface Mounting

DIMENSIONS: 16" x 12" x 6"
(400mm x 300mm x 150mm)

RECOMMENDED

CALIBRATION: Every 6 months

Ordering Information

MODEL NUMBER	GAS DETECTED
R11-QD-REF-X*-Y**-Z***	R-11
R12-QD-REF-X*-Y**-Z***	R-12
R22-QD-REF-X*-Y**-Z***	R-22
R123-QD-REF-X*-Y**-Z***	R-123
R134-QD-REF-X*-Y**-Z***	R-134a

Power Supply and other Options

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

**Y = 1; 4-20mA output

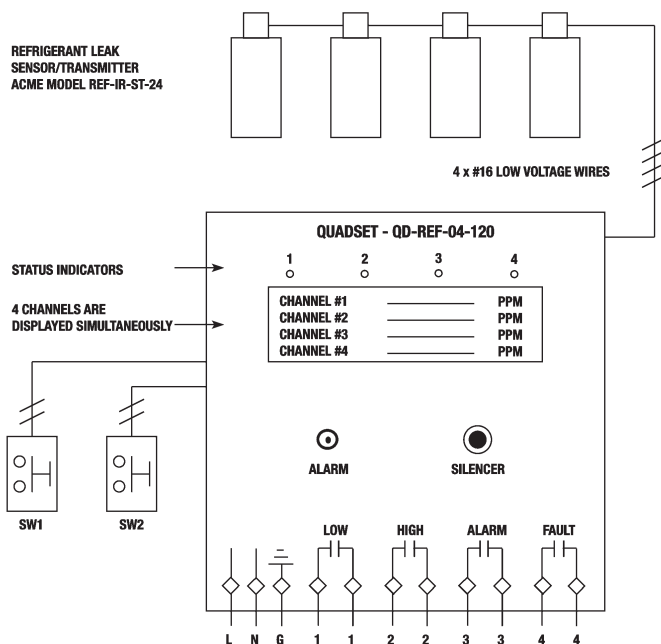
**Y = Leave empty if not required

***Z = SH; for built-in strobe / horn

***Z = RSH; for remote strobe / horn

***Z = Leave empty if not required

Typical Wiring Diagram



Other Acme Refrigerant Gas detection products

- REF-IR(-ST)**
- Stand-alone detection unit.
 - Infrared sensor technology.
 - Relay outputs or Analog output (ST option).

- VOC-3**
- Stand-alone detection unit.
 - Metal Oxide Semiconductor (MOS) sensor technology.
 - Relay Outputs.

IN THE U.S.A.
ACME ENGINEERING PROD. INC.

Trimex Ind. Bldg., PMB #10
2330 State Route 11
Moers, N.Y. 12958

Tel. : (518) 236-5659
Fax : (518) 236-6941

E-mail : info@acmeprod.com • www.acmeprod.com

IN CANADA
ACME ENGINEERING PROD. INC.

5706 Royalmount Ave.,
Montreal, Quebec
H4P 1K5

Tel. : (514) 342-5656
Fax : (514) 342-3131



REPRESENTED BY: