

Refrigerant Gas Detection and Control System



QAS-101-R

DESCRIPTION

Gas monitor with built-in refrigerant gas sensor, wall-mounted.

APPLICATION

To detect and control levels of refrigerant gases in commercial applications such as equipment rooms and ventilation systems, etc. The monitor's binary/relay outputs can control fans, remote alarms and other devices.

FEATURES

- Continuous monitoring
- One (1) built-in solid state sensor*, long-life
- Built-in alarm horn (buzzer)
- Two-stage relay outputs, w/ status LEDs
- Easy maintenance



SPECIFICATIONS

Electric

Power supply 120 VAC, +10%/-15%, 50/60 Hz

Power consumption 8 watts

Sensor Performance

Gas detected Refrigerants, refer to section "Ordering Information"

Sensor element Solid state semiconductor*

Range 0-2000 ppm, non-linear

Accuracy 10% of range

Repeatability ± 2.5% of range

Output drift < 2% of full scale/month

Response time < 30 sec. to 85% of step change

Sensor life expectancy 5 years, normal operating environment

Sensor coverage 2,000 sq.ft., max. 3,000 sq.ft. (185 m², max. 278 m²), "under ideal conditions"

Installation Location

Mounting height 1 foot (0.31 m) above floor

Type of Control

General Two-stage control, stage 1/ low alarm stage 2/ high alarm

Stage level / setpoint Stage 1/ low alarm on @ 500 ppm, and Stage 2/ high alarm on @ 1,000 ppm, factory calibrated, and user adjustable

- switching differential 10%, fixed

Relay outputs w/ status LEDs Two (2) DPDT, 10 (7.5) A, 30 VDC - 240 VAC

- each stage level Fixed relay assignment

- sensor fail-safe Assignable to low and high alarm relays

Time delay switching - stage 1/ low alarm - stage 2/ high alarm

Audible alarm

- actuation

Control configuration Test function Status LED's indication

Calibration - interval recommended - adjustment

Environmental

Permissible ambient - working temperature -4°F to 104°F (-20°C to 40°C) - storage temperature -22°F to 122°F (-30°C to 50°C) - humidity, continuous 0 to 90% RH, non-condensing - working pressure Atmospheric ± 10%

Physical

Enclosure - material No. 16 AWG steel, enamel finish Grey - color - door Snap-on brackets, secured by (2) safety screws NEMA 1, general purpose Wall (surface) mounted Dimensions (H x W x D) 12.55 x 4.38 x 3.30 in. (319 x 111 x 84 mm) Cable entry 2 holes for 1/2 in. conduit, covered, bottom location

Enabled or disabled selectable 5 minute delay, fixed 10 minute delay, fixed Built-in buzzer, 85 dB within 1 foot, enabled or disabled selectable Stage 2/ high alarm on, and sensor fail or fail only Via built-in dip switch settings Built-in push button Green - power on Red - stage 2/ high alarm Yellow - stage 1/ low alarm Red - sensor fail

* Solid state sensors are not gas-specific, and may be sensitive to other gases, notably hydrocarbons and solvents.

SPECIFICATION

Physical (cont...)

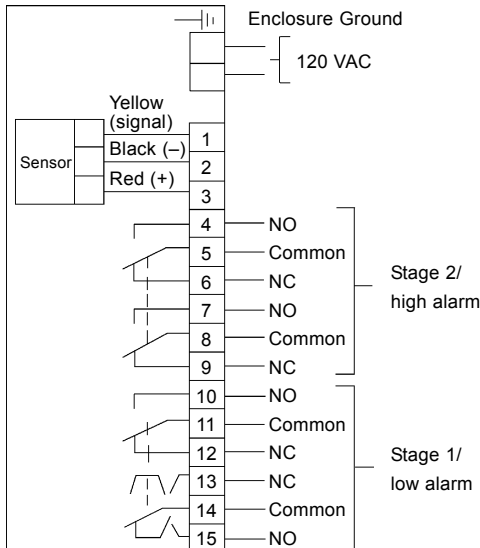
Wire connection	Terminal blocks, screw type for lead wire
Wire size	Min. 24 AWG (0.25 mm ²) Max. 14 AWG (2.5 mm ²)
Weight	5.5 lbs. (2.5 kg)

Approvals / Listings

- transformer	UL Listed
- relays	UL Recognized
- complete unit	CSA, NRTL/C, C22.2 - 205
Warranty	12 months material and workmanship

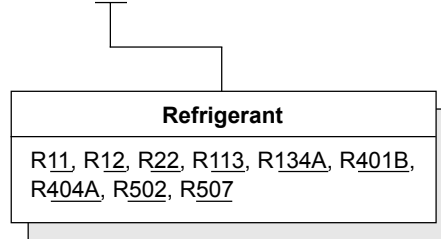
FIELD WIRING CONFIGURATION

QAS-101-R



ORDERING INFORMATION

QAS-101-RXX



Sample, ordering part number:

QAS-101-R134A

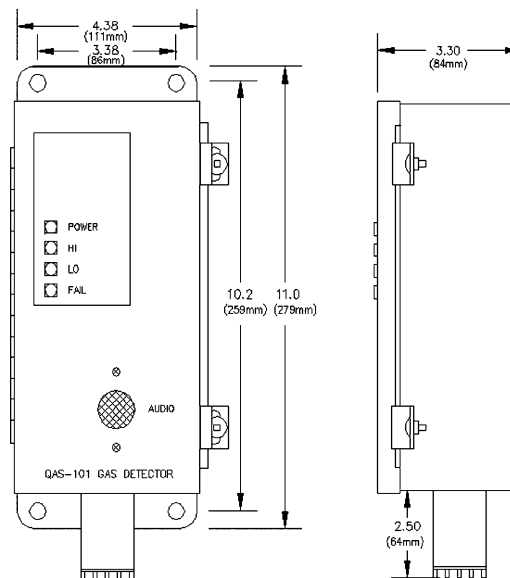
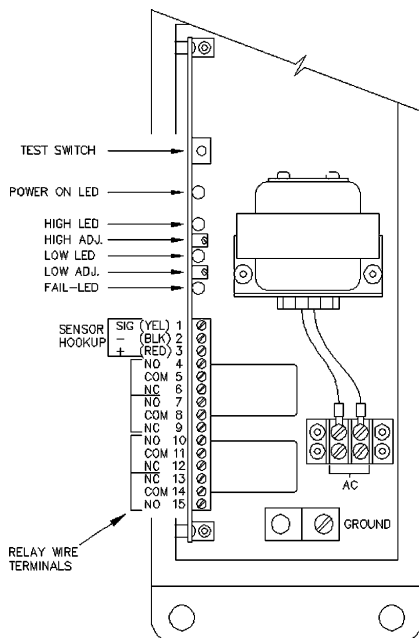
Refrigerant R134a, leak detection and control system, 120 VAC, NEMA 1 enclosure

- Built-in:
- (1) sensor
 - (1) Buzzer, audible alarm
 - (4) LED status indicators

Outputs: (2) Relays, DPDT, 10 A

Calibrated:

- Stage 1/ low alarm on at 500 ppm R134a
- Stage 2/ high alarm on at 1,000 ppm R134a



- Note:
- Do not mount near fans or doors where high velocity draft occurs, or where clean air enters!
 - When painting in the area, turn unit off, seal sensor opening with masking tape.