INFRARED CO2 GAS MONITOR

Gas Detection For Life

RI-215 Series

Features

- Easy to read LCD digital display
- Compact, lightweight and easy installation
- Highly reliable non-dispersive infrared detection method
- Recorder output signal
- Automatic control of ventilation systems
- Alarm contact output provided
- 4-20 mA output provided
- Diffusion or sample draw versions available

Applications

- Meets ASHRAE 1969 IAQ Standard of 2,000 ppm max PEL
- Detection of CO2 for NFPA 12 Regulations-CO2 storage tank leaks
- Green houses, wineries, breweries, food processing, and other industry applications

The RI-215 series of IR CO2 montitors are widely used in the measurement and control of CO2 levels in a variety of applications where CO2 monitoring or detection is required. A highly accurate, RKI non-dispersive infrared absorption sensor is used to provide direct measurements through diffusion or sample draw monitors, and activate alarms or control ventilation systems based on preset CO2 levels. Each model provides a digital readout in parts per million of CO2 providing precise measurement and direct visual indication of gas levels. A 4-20 mA output is provided to send a signal to a fire panel or other PLC system and a relay is available to trip an alarm or activate a ventilation system.

Three levels of measurement are provided: 0-2,000 ppm (ASHRAE 1969 IAQ max PEL), 0-5,000 ppm (leak detection of CO2 storage tanks) and 0-9,999 ppm. The RI-215A runs on 24 VAC or 24 VDC and the RI-215D with sample drawing pump runs on 115 VAC or 220 VAC. Each are designed for indoor use only and supplied in a NEMA 12 enclosure that is easily accessible for calibration, service, and continuous monitoring. RKI offers additional monitors with higher measurement levels in portable or installation applications. Please contact an RKI authorized representative for more information on other CO2 monitors available.

RI-215 Series

Model		RI-215A	RI-215D
Detection Method		Non dispersive infrared absorption method (NDIR)	
Sample Method		Sample drawing pump	Diffusion
Measuring Gas		Carbon dioxide (CO2) in air	
Measuring Range		0-2,000 ppm, 0-5,000 ppm, or 0-9,990 ppm * Specify one of these ranges when ordering	
Resolution		1 ppm for 0-2,000 ppm 10 ppm for 2,000-9,990 ppm	
Repeatability		± 3% of full scale (at constant temperature and humidity conditions)	
Output Signal		0-10 VDC linear (load resistance: Min. 300K Ω), or 4-20 mA DC linear (load resistance: Max. 500 Ω) *Specify one of these outputs when ordering	
Flow Rate		N/A	Above 1.0 liter/min
Alarm	Alarm Range	50 ppm - Full scale (adjustable in steps of 10 ppm) *Standard alarm point 1,000 ppm	
	Alarm	125 VAC, 0.5 A (load resistance), Dry contact (normally open)	
Operation Temp. & Humidity		0 ~ 40°C (32-104°F), 10-90%RH (non-condensing)	
Warming Up Time		30 minutes for full warm up (display starts after 1 minute)	
Power Requirement		24 VDC ± 10% or 24 VAC ± 10%	115 VAC or 220 VAC, ± 10%, 50/60 Hz
Installation Method		Wall mount vertically, indoor locations only	
Outer Dimensions		Approx 78(W) x 78(H) x 31(D) mm Approx 3.1(W) x 3.1(H) x 1.2(D) in.	Approx 220(W) x 200(H) x 76(D) mm Approx 8.7(W) x 7.9(H) x 3.0(D) in.
Weight		Approx. 200g (6.50 oz.)	Approx. 3.6kg (7.9 lbs.)

Symptoms of Exposure to CO_2

CO_2 %	Symptom
0.1	Typical office environment CO_2 hygiene control level (1,000 ppm)
0.2	ASHRAE maximum permissible limit (2,000 ppm)
0.5	TLV (Threshold Limit Value) Level (5,000 ppm)
1~2	Restless
3~5	Increased rate of breathing. Pulse and blood pressure increase. Eventually headache and dizziness occur.
6~7	Breathing becomes difficult
7~10	Unconscious within a few minutes
20	Unconscious within a few seconds and death

RI-215D

RI-215A

* Specifications subject to change without notice.

RKI INSTRUMENTS

A9812 UL REGISTERED FIRM ISO 9001:2000

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