

# REFRIGERANT

Economical, general purpose Refrigerant gas detector or controller. These detectors provide an early warning of hazardous concentrations of R-11, R-12, R-22, R-123, R134a, etc.



**Wall Mount**  
Available for Refrigerant,  
NDIR Only

## APPLICATION:

To sense and transmit Refrigerant gas concentrations to any compatible electronic analog control, DDC/PLC controller, or automation system. Also provides a visible and audible alarm for high concentrations of gas. Some areas in which the unit may be used include: cold storage facilities, compressor rooms, arenas, hazardous material storage areas, and ventilation systems.

## FEATURES:

- Optional LCD for displaying PPM level.
- Optional Audible Alarm.
- Microprocessor based (12 bit accuracy).
- System configuration saved in non-volatile memory.
- Relays can be configured with normally open or closed contacts.

SPECIFICATIONS	REFRIGERANT DETECTOR – Product
Gas Detected	R-11, R-12, R-22, R-123, R-134a (R123 only available in NDIR)
Range	See Product Ordering Information
Area Coverage	160 m <sup>2</sup> (1,500 sq. ft.) or 6 meter radius (20 ft. radius)
Calibration Accuracy	0.5% (12 bit accuracy)
Sensor Accuracy	For sensor specifications see Product Ordering Information
Sensing Element	Solid State or NDIR
Operating Temperature	-10°C – 40°C (19°F – 105°F) (call for other temperature applications)
Humidity Range	0 – 95%
Manufacturing Process	ISO 9002 certified
Relay	DPDT, N.O. or N.C. Contacts rated 5A @ 24 Vdc. (Two relays not available with 4-20mA output exception NDIR sensor)
Input	24 – 38 Vdc / 17 - 27 Vac
Output Analog Signals	4-20mA (Solid State), 4-20mA / 0-10 Vdc (NDIR)
Audible Alarm (optional)	65 dB @ 1 m (3 ft.)
LCD Display (optional)	LCD for displaying PPM level
LEDs	Green and yellow LEDs for normal and failure indication / 10 step LED display (Solid State only)
Field Calibration	Remote calibration, applying calibration gas standards



# HAZARDOUS GAS: PRODUCT ORDERING INFORMATION

MODEL	Description							
FGD	Refrigerant Gas Detector (R11, R12, R123, R134a, etc.)							
AGD	Toxic Gas Detector							
CGD	Combustible Gas Detector (Propane, Methane, ISO-Butane and Hydrogen)							
	CODE	Sensing Element and Accuracy		Refrigerant	Toxic	Combustible		
	1	NDIR		3%	N/A	N/A		
	2	Solid state		10%	10%	5%		
	3	Electrochemical		N/A	5%	N/A		
	4	Catalytic		N/A	N/A	3%		
	CODE	Gas Type		Range – Solid State	Other (see above)			
	C	R11 – Refrigerant Gas Detector (FGD)		250 – 2000 PPM	0 – 1000 PPM			
	D	R12 – Refrigerant Gas Detector (FGD)		250 – 2000 PPM	0 – 1000 PPM			
	E	R22 – Refrigerant Gas Detector (FGD)		250 – 2000 PPM	0 – 1000 PPM			
	F	R123 – Refrigerant Gas Detector (FGD)		N/A	0 – 1000 PPM			
	G	R134a – Refrigerant Gas Detector (FGD)		250 – 2000 PPM	0 – 1000 PPM			
	H	Ammonia – Toxic Gas Detector (AGD)		N/A	0 – 100 PPM			
	I	Propane – Combustible Gas Detector (CGD)		0 – 100% LEL	0 – 100% LEL			
	J	Methane – Combustible Gas Detector (CGD)		0 – 100% LEL	0 – 100% LEL			
	K	ISO-Butane-Combustible Gas Detector (CGD)		0 – 100% LEL	0 – 100% LEL			
	L	Hydrogen - Combustible Gas Detector (CGD)		0 – 100% LEL	2.5% (electrochemical)			
	N	Nitrogen Dioxide – Toxic Gas Detector (AGD)		N/A	0 – 10 PPM			
	CODE	Enclosure (see note 1)						
	2	ABS						
	3	Metal Duct Weather Proof						
	4	Metal Space Weather Proof						
	7	Duct Sampling Enclosure, Metal						
	8	Wallmount Explosion Proof Enclosure (Not available for solid state units)						
	9	Space ABS, Weather proof (Not available for solid state units)						
	CODE	Circuit Board Relay						
	0	No Relay						
	1	One Relay (DPDT, N.O. or N.C., 5A @ 24 VDC)						
	2	Three Alarm Relays (DPDT, N.O. or N.C., 5A @ 24 VDC, FGD1 units only)						
	CODE	Relay (not available with 4 – 20mA output)						
	0	No relay						
	1	One relay (DPDT, N.O. or N.C., 5A @ 24 VDC)						
	2	Two alarm relays & one fault relay (DPDT, N.O. or N.C., 5A @ 24 VDC, FGD1 units only)						
	CODE	Options						
	0	No options						
	1	LCD – Standard on FGD1 units						
	2	PCB Mount Audible Alarm						
	FGD	3	C	2	1	0	1	← Typical Model Number

**Example:** Electrochemical R11 c/w ABS space, 4-20 mA & relay outputs and LCD display

Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.



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