

PRODUCT DATA SHEET: Gas Detection Sensors

INTRODUCTION

Hansen Technologies offers a complete line of industrial quality Gas Detection Sensors, Monitors and Alert Systems for refrigerants and other common gases. Hansen state-of-the-art gas sensors utilize a range of sensing technologies to suit a given application. Hansen Gas Sensors are available in several configurations to meet various application requirements.

APPLICATIONS

Hansen Gas Sensors are suitable for use in industrial refrigeration engine rooms, cold storage rooms, processing rooms, truck docks, and for relief valve vent lines. They are also suitable for use in supermarkets, and large institutional and commercial buildings. Typical gas detection applications include Ammonia, Carbon Dioxide, Hydrocarbons, HFCs, HCFCs and CFCs.

ADVANTAGES

Hansen uses a wide variety of sensing technologies including electrochemical, semiconductor and infrared sensors to selectively detect most gases. These sensors continuously determine the level of gas present in the surrounding environment. The analog outputs (4-20mA or 0-10V DC) can interface with nearly any existing monitor, computer or PLC controller.

Sensors have built-in visual and audible alarms. An auxiliary one amp relay output is standard. A range of enclosures are offered to suit most applications. Testing and recalibration procedures are simple with Hansen Calibration Kits. Sensor elements are easily replaced.

FEATURES

- Accurate, fast responding
- Linear 4-20mA or 0-10V DC output
- Audible alarm
- SPDT alarm relay (Fail Safe Operation)
- 24V AC/DC low voltage power
- Long-life, replaceable sensor element
- Optional Quick Disconnect Plug Kit and Gas Sensor Element Shield
- Shipped factory calibrated and tested
- CE approved



Standard Gas Sensor

RANGES & RATINGS

Model	Temperature Range	Humidity %	Enclosure Rating
Standard	0°F to 105°F (-17°C to 40°C)	0-95	ABS material, NEMA4 (IP65)
Harsh	-40°F to 105°F (-40°C to 40°C)	0-95	ABS material, NEMA4 (IP65)
Extreme	-60°F to 105°F (-51°C to 40°C)	0-100	Stainless Steel, NEMA4X (IP65)
Vent Line	-40°F to 105°F (-40°C to 40°C)	0-95	ABS material, NEMA4 (IP65)
Explosion Proof	-40°F to 105°F (-40°C to 40°C)	0-95	Aluminum, NEMA7, Class I, Div II, Group C & D
Basic	0°F to 105°F (-17°C to 40°C)	0-95	ABS material, NEMA1 (IP41)

SENSOR ELEMENT TYPES

- Electrochemical: 2-3 years typical life
- Semiconductor: 7-8 years typical life
- Infrared: 8-10 years typical life

GAS DETECTION SENSOR ORDERING INFORMATION

AMMONIA			Sensor Type	Range (PPM)
Standard to 0°F(-17°C)	Harsh to -40°F(-40°C)	Extreme to -60°F(-51°C)		
HEC4-N100	HEC4H-N100	HEC4E-N100	Electrochemical	0-100
HEC4-N250	HEC4H-N250	HEC4E-N250	Electrochemical	0-250
HEC4-N1K	HEC4H-N1K	HEC4E-N1K	Electrochemical	0-1,000
HSC4-N10K	HSC4H-N10K	HSC4E-N10K	Semiconductor	0-10,000

Note: For Explosion Proof, substitute X for 4 in model number (i.e. HECX-N100)



Harsh



Extreme

VENT LINE		Sensor Type	Range (PPM)
Standard to -40°F(-40°C)	Refrigerant		
HVSC4-F5K*	Halocarbon	Semiconductor	0-5,000
HVSC4-N10K	Ammonia	Semiconductor	0-10,000

* Specify refrigerant (R22, R507, R134a, R404, R410)



Vent Line

HALOCARBON			Sensor Type	Range (PPM)
Basic to 32°F(0°C)	Harsh to -40°F(-40°C)	Extreme to -60°F(-50°C)		
HSC1-F3K/R22	HSC4H-F3K/R22	HSC4E-F3K/R22	Semiconductor	0-3,000
HSC1-F3K/R507	HSC4H-F3K/R507	HSC4E-F3K/R507	Semiconductor	0-3,000
HSC1-F3K/R134a	HSC4H-F3K/R134a	HSC4E-F3K/R134a	Semiconductor	0-3,000
HSC1-F3K/R404	HSC4H-F3K/R404	HSC4E-F3K/R404	Semiconductor	0-3,000
HSC1-F3K/R410	HSC4H-F3K/R410	HSC4E-F3K/R410	Semiconductor	0-3,000

Note: Gas Sensors available for additional refrigerants; consult factory



Explosion Proof

CO ₂			Sensor Type	Range (PPM)
Basic to 32°F(0°C)	Harsh to -40°F(-40°C)	Extreme to -60°F(-50°C)		
HIR1-C10K	HIR4H-C10K	HIR4E-C10K	Infrared	0-10,000

GAS DETECTION PRODUCTS

Hansen Technologies offers a complete line of industrial quality gas detection products for refrigerants and other common gases.

- Gas Detection Monitors
- Gas Alert Systems
- Sensor Calibration Kits
- Calibration Gas Cylinders
- Sensing Element Replacements



Basic



Portable

For more information on Hansen gas detection, review our interactive online product demo at www.hantech.com.