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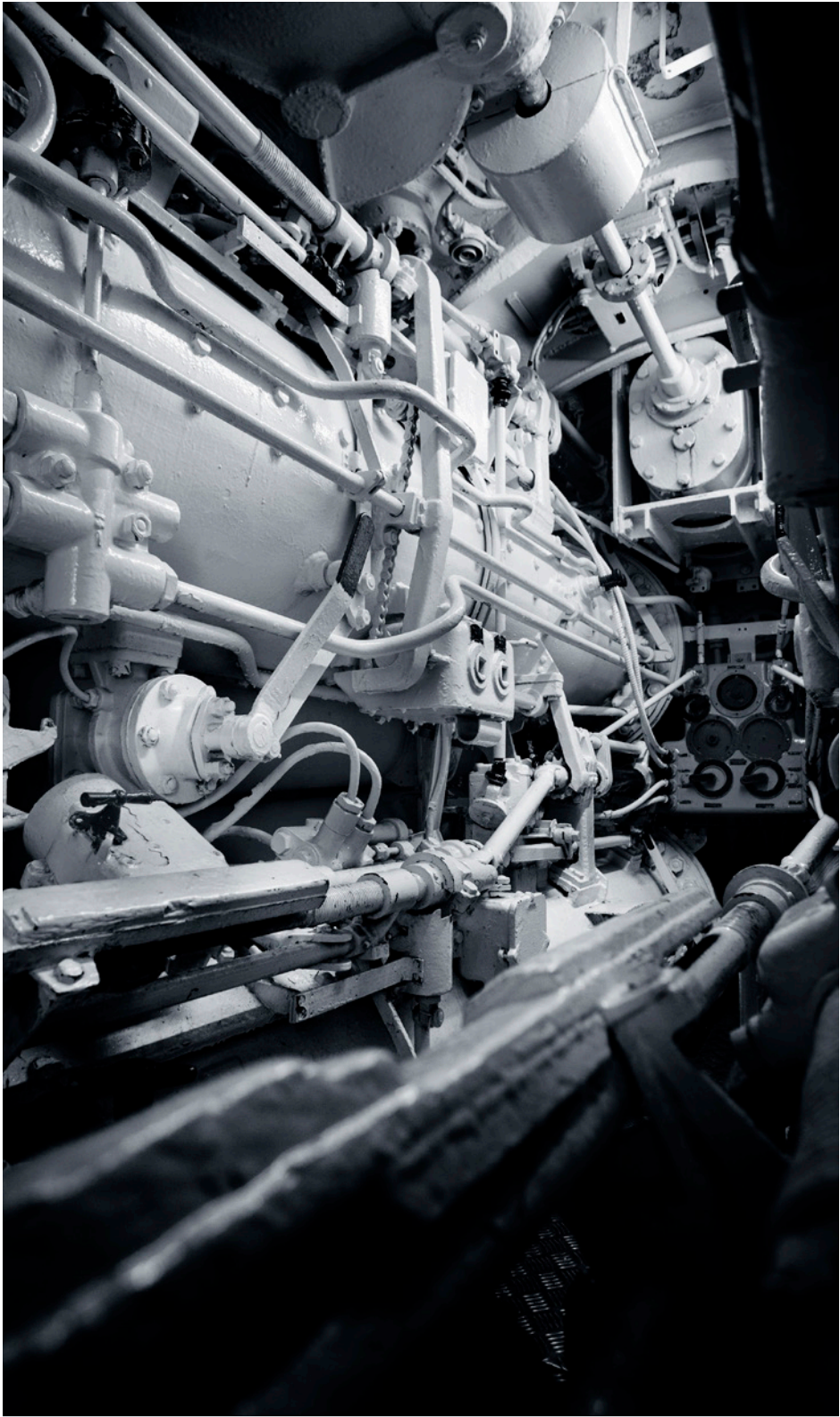
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**Note**  
Please note that specifications and exact product offering are subject to change without notice. Additional shipping and handling fees may apply for some products. This publication is not intended to form the basis of a contract.

# Application Guide

Use this simple reference guide to determine the right solution for any refrigerated industrial environment.

If your application includes:	We recommend:
<ul style="list-style-type: none"> <li>Freezers</li> <li>Coolers</li> <li>Refrigerated Docks and related areas</li> </ul>	<b>EC-FX-NH3-0/100-ATMOS-N1</b> Electrochemical sensor, ammonia (NH <sub>3</sub> ), 0-100 ppm, ATMOS, NEMA 1 enclosure <i>Part no. ECFX-100-AN</i>
<ul style="list-style-type: none"> <li>Processing Areas</li> <li>Washdown Areas</li> <li>Outdoors</li> <li>Rooftop Air Handlers and related areas</li> </ul>	<b>EC-FX-NH3-0/100-ATMOS-ST</b> Electrochemical sensor, ammonia (NH <sub>3</sub> ), 0-100 ppm, ATMOS, stainless steel enclosure <i>Part no. ECFX-100-AS</i>
<ul style="list-style-type: none"> <li>Engine Room Detection, low level</li> </ul>	<b>EC-FX-NH3-0/250-N1</b> Electrochemical sensor, ammonia (NH <sub>3</sub> ), 0-250 ppm, NEMA 1 enclosure <i>Part no. ECFX-250-N</i>
<ul style="list-style-type: none"> <li>Engine Room Detection, high level</li> </ul>	<b>IR-F9-NH3-0/2%-N1</b> AirScan™ Infrared sensor, ammonia (NH <sub>3</sub> ), 0-20,000 ppm, NEMA 1 enclosure <i>Part no. M-512345</i>
<ul style="list-style-type: none"> <li>Vent Line Relief Monitoring</li> </ul>	<b>VL-F7-NH3-N4-LPA-MK</b> Solid state ammonia (NH <sub>3</sub> ) Vent Line sensor, linear pre-amp, with mounting kit <i>Part no. M-510000</i>
<ul style="list-style-type: none"> <li>Gas Detection System</li> </ul>	<b>Digital Gas Controller</b> HA71 in NEMA 4X enclosure - 16 channel <i>Part no. HA71N4</i>  AirAlert-96d Gas Detection Controller - 96 channel <i>Part no. AA96D-DLC</i>
<ul style="list-style-type: none"> <li>Working on a refrigeration system, ie. draining oil, checking values, charging a system, incident response</li> </ul>	<b>Portable Personal Protection Monitor</b> Ammonia (NH <sub>3</sub> ) 0-400 ppm <i>Part no. GAXT-A2-DL</i>
<ul style="list-style-type: none"> <li>Occupied spaces</li> </ul>	<b>Notification Device</b> Horn/strobe 12 or 24 VDC, 2 wire <i>Part no. P2W-P</i>



In response to the challenging conditions found in Industrial Refrigeration, Honeywell Analytics has developed an innovative new ammonia detector — delivering reliability, accuracy and long-lasting performance that you can't get anywhere else.

The EC-FX-NH3, an evolution of our proven Manning EC-F9-NH3, features an all-new ammonia sensor with a proprietary electrolyte that stands up to harsh environments.

Our proprietary new EC-FX sensor, backed by rigorous testing, was engineered to Honeywell's highest standards of safety, reliability and cost-effectiveness. We are so confident in the performance of our new sensor that it comes with a three-year warranty — twice the warranty of most competing sensors.

### Rugged construction for long-term reliability

- Unlike fragile plastic housings that may break in cold temperatures, the heavy-duty steel enclosure of the EC-FX-NH3 was built to withstand cold and wet environments. The EC-FX-NH3 is also available in stainless steel.

### ATMOS™ Technology for environmental flexibility

- The EC-FX-NH3 automatically adapts to its environment and can operate in -50°F and 100% humidity. So whether you're monitoring ammonia in a banana room or a blast freezer, during dry conditions or a hot-water washdown, the detector maintains accurate and reliable performance.

### SensorCheck™ Technology for peace of mind

- The EC-FX-NH3 is equipped with a microprocessor that checks the electrical viability of the sensor every 24 hours. If there's a problem, SensorCheck sends an indication to your controller — so you can rest assured that the sensor is operating properly.

### Optional LCD for real-time visibility

- With an easy-to-read display, you can clearly see the ammonia concentration at any given time. The optional display also makes it easy to set alarm levels and change settings — all from the detector.

### Backwards compatible

- The EC-FX sensor is backwards compatible with both EC-F9-NH3 and EC-F2-NH3.

## EC-FX (continued)

<b>EC-FX NH3 0/100 ppm</b>	<b>Model Number</b>	<b>Order Number</b>
EC-FX NH3 0/100ppm ATMOS LCD NEMA 1 Encl	ECFX-100-ALN	ECFX-100-ALN
EC-FX NH3 0/100ppm ATMOS LCD St Steel Enc	ECFX-100-ALS	ECFX-100-ALS
EC-FX NH3 0/100ppm ATMOS NEMA 1 Enclosure	ECFX-100-AN	ECFX-100-AN
EC-FX NH3 0/100ppm ATMOS St Steel Encl	ECFX-100-AS	ECFX-100-AS
EC-FX NH3 0/100ppm LCD NEMA 1 Enclosure	ECFX-100-LN	ECFX-100-LN
EC-FX NH3 0/100ppm LCD St Steel Enclosure	ECFX-100-LS	ECFX-100-LS
EC-FX NH3 0/100ppm NEMA 1 Enclosure	ECFX-100-N	ECFX-100-N
EC-FX NH3 0/100ppm NEMA 1 Encl (301EM)	ECFX-100-N-EM	ECFX-100-N-EM
EC-FX NH3 0/100ppm Stainless Steel Encl	ECFX-100-S	ECFX-100-S

<b>EC-FX NH3 0/200 ppm</b>	<b>Model Number</b>	<b>Order Number</b>
EC-FX NH3 0/200ppm ATMOS NEMA 1 Enclosure	ECFX-200-AN	ECFX-200-AN
EC-FX NH3 0/200ppm ATMOS St Steel Encl	ECFX-200-AS	ECFX-200-AS
EC-FX NH3 0/200ppm NEMA 1 Enclosure	ECFX-200-N	ECFX-200-N
EC-FX NH3 0/200ppm Stainless Steel Encl	ECFX-200-S	ECFX-200-S

<b>EC-FX NH3 0/250 ppm</b>	<b>Model Number</b>	<b>Order Number</b>
EC-FX NH3 0/250ppm ATMOS LCD NEMA 1 Encl	ECFX-250-ALN	ECFX-250-ALN
EC-FX NH3 0/250ppm ATMOS LCD St Steel Enc	ECFX-250-ALS	ECFX-250-ALS
EC-FX NH3 0/250ppm ATMOS NEMA 1 Enclosure	ECFX-250-AN	ECFX-250-AN
EC-FX NH3 0/250ppm ATMOS St Steel Encl	ECFX-250-AS	ECFX-250-AS
EC-FX NH3 0/250ppm LCD NEMA 1 Enclosure	ECFX-250-LN	ECFX-250-LN
EC-FX NH3 0/250ppm NEMA 1 Enclosure	ECFX-250-N	ECFX-250-N
EC-FX NH3 0/250ppm NEMA 1 Encl (301EM)	ECFX-250-N-EM	ECFX-250-N-EM
EC-FX NH3 0/250ppm Stainless Steel Encl	ECFX-250-S	ECFX-250-S

<b>EC-FX-NH3 Replacements</b>	<b>Model Number</b>	<b>Order Number</b>
Replacement ammonia (NH <sub>3</sub> ) cell, 0-100/200/250 ppm <i>Note: Backwards compatible with EC-F2 &amp; EC-F9 transmitters</i>	EC-FX-NH3-LR	EC-FX-NH3-LR

<b>EC-FX Calibration Equipment</b>	<b>Order Number</b>
EC-FX calibration adapter	EC-FX-CA
EC-FX calibration kit, 17 L / 34 L, 0.3 LPM regulator	EC-FX-CK
EC-FX calibration kit, 29 L, 0.3 LPM regulator	EC-FX-CK1
EC-FX calibration kit, 58 L / 103 L, 0.3 LPM regulator	EC-FX-CK2
Regulator 0.3 LPM, 17 L / 34 L	EC-FX-REG1
Regulator 0.3 LPM, 29 L / 58 L / 103 L	EC-FX-REG2

**EC-F9-NH3-0/500**

	Model Number	Order Number
Ammonia (NH <sub>3</sub> ), 0-500 ppm, NEMA 1 enclosure	EC-F9-NH3-0/500-N1	M-600343
Ammonia (NH <sub>3</sub> ), 0-500 ppm, LCD, NEMA 1 enclosure	EC-F9-NH3-0/500-LCD-N1	M-510929
Ammonia (NH <sub>3</sub> ), 0-500 ppm, ATMOS, NEMA 1 enclosure	EC-F9-NH3-0/500-ATMOS-N1	M-600354
Ammonia (NH <sub>3</sub> ), 0-500 ppm, ATMOS, LCD, NEMA 1 enclosure	EC-F9-NH3-0/500-ATMOS-LCD-N1	M-510997
Ammonia (NH <sub>3</sub> ), 0-500 ppm, stainless steel enclosure	EC-F9-NH3-0/500-ST	M-510741
Ammonia (NH <sub>3</sub> ), 0-500 ppm, LCD, stainless steel enclosure	EC-F9-NH3-0/500-LCD-ST	M-512693
Ammonia (NH <sub>3</sub> ), 0-500 ppm, ATMOS, stainless steel enclosure	EC-F9-NH3-0/500-ATMOS-ST	M-600361
Ammonia (NH <sub>3</sub> ), 0-500 ppm, ATMOS, LCD, stainless steel enclosure	EC-F9-NH3-0/500-ATMOS-LCD-ST	M-510998

**EC-F9-NH3-0/1000**

	Model Number	Order Number
Ammonia (NH <sub>3</sub> ), 0-1,000 ppm, NEMA 1 enclosure	EC-F9-NH3-0/1000-N1	M-509334
Ammonia (NH <sub>3</sub> ), 0-1,000 ppm, stainless steel enclosure	EC-F9-NH3-0/1000-ST	M-509341
Ammonia (NH <sub>3</sub> ), 0-1,000 ppm, LCD, NEMA 1 enclosure	EC-F9-NH3-0/1000-LCD-N1	M-511108
Ammonia (NH <sub>3</sub> ), 0-1,000 ppm, ATMOS, NEMA 1 enclosure	EC-F9-NH3-0/1000-ATMOS-N1	M-509337
Ammonia (NH <sub>3</sub> ), 0-1,000 ppm, ATMOS, stainless steel enclosure	EC-F9-NH3-0/1000-ATMOS-ST	M-509345
Ammonia (NH <sub>3</sub> ), 0-1,000 ppm, ATMOS, LCD, stainless steel enclosure	EC-F9-NH3-0/1000-ATMOS-LCD-ST	M-512505

**EC-F9-NH3 Replacements**

	Model Number	Order Number
Ammonia (NH <sub>3</sub> ) transmitter	EC-F9-RT-NH3	M-600450
Ammonia (NH <sub>3</sub> ) transmitter with ATMOS	EC-F9-RT-NH3	M-511102
Replacement ammonia (NH <sub>3</sub> ) cell	EC-F2-RC-NH3	M-507975
Replacement ammonia (NH <sub>3</sub> ) high range cell	EC-F2-RC-NH3	M-600043
Replacement ammonia (NH <sub>3</sub> ) cell	EC-F2-NH3-RC-EXP	M-600045





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# AirScan™ IR-F9

*R-404a, R-22, R-507, R-134a, R-407a, R-410a, R-422d, NH<sub>3</sub>, CO<sub>2</sub>*



The Airscan™ IR-F9 is an infrared diffusion design sensor that allows all points of detection to be monitored simultaneously. The IR-F9 responds to refrigerants in the range of 0-3,000 ppm and features SensorCheck™ technology that continually monitors sensor performance. The IR-F9 is available in an aluminum or stainless enclosure, with or without ATMOS™ technology. ATMOS technology allows for operation in environments with temperatures as low as -60°F/-50°C (super heat).

IR-F9 units configured to a full scale of 0-500 ppm are **California Air Resources Board (CARB)** compliant.

## Refrigerant Specific

- Rapid response to refrigerants including R-404a, R-22, R-507, R-134a, R-407a, R-410a, R-422d, NH<sub>3</sub> and CO<sub>2</sub>
- Internal monitoring of 4-20 mA loop circuitry continuously

## Diffusion-Design Sensor

- Has no moving parts and doesn't require pumps or filters
- All points of detection can be monitored continuously at an affordable cost

## Versatility

- Can be used with any Honeywell Analytics readout
- Standard range of 0-3,000 ppm, can be rescaled for lower trip points
- Provides a linear output of 4-20 mA as a function of refrigerant concentration
- Simple, real-time calibration eliminates maintenance downtime
- Automatically adapts to fluctuating temperatures

## Long-Lasting Performance

- Unique internal reference channel compensates for dust particles, source degradation, humidity and temperature fluctuation, food odours, chemical cleaners, etc.

## ATMOS™ Technology

- Allows for operation down to -60°F (-50°C) and in condensing humidity environments or during washdown (super heat)
- Automatically adapts to its environment and provides accurate and reliable performance under the harshest conditions

## SensorCheck™ Technology

- Checks operating parameters of sensors and sends a notification output signal if an anomaly is identified
- Tests the sensor every 24 hours for electrical viability
- Indication can be detected by a gas monitor or PLC

## Housing

- High-mass metal bench provides structural and thermal stability and greater immunity to vibration
- Superior EMI/RFI shielding

# AirScan™ IR-F9 (continued)

<b>AirScan™ IR-F9 R134a</b>	<b>Model Number</b>	<b>Order Number</b>
R134a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R134a-0/1000-N1	M-512203
R134a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R134a-0/1000-ATMOS-ST	M-512444
R134a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R134a-0/3000-N1	M-600472
R134a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R134a-0/3000-ATMOS-N1	M-511474

<b>AirScan™ IR-F9 R22</b>	<b>Model Number</b>	<b>Order Number</b>
R22 0-500 ppm, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R22-0/500-N1	M-600421
R22 0-500 ppm, ATMOS, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R22-0/500-ATMOS-N1	M-600394
R22 0-500 ppm, ATMOS, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R22-0/500-ATMOS-ST	M-600393
R22 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R22-0/1000-N1	M-510845
R22 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R22-0/1000-ATMOS-N1	M-510851
R22 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R22-0/3000-N1	M-600396
R22 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R22-0/3000-ATMOS-N1	M-600428
R22 0-3,000 ppm, stainless steel enclosure	IR-F9-R22-0/3000-ST	M-600446
R22 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R22-0/3000-ATMOS-ST	M-600471
R22 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R22-0/3000-ATMOS-SH-ST	M-700000

<b>AirScan™ IR-F9 R422d</b>	<b>Model Number</b>	<b>Order Number</b>
R422d 0-500 ppm, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R422d-0/500-N1	M-700016
R422d 0-500 ppm, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R422d-0/500-ST	M-700017
R422d 0-500 ppm, ATMOS, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R422d-0/500-ATMOS-N1	M-700018
R422d 0-500 ppm, ATMOS, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R422d-0/500-ATMOS-ST	M-700019
R422d 0-500 ppm, ATMOS, super heat, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R422d-0/500-ATMOS-SH-N1	M-700020
R422d 0-500 ppm, ATMOS, super heat, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R422d-0/500-ATMOS-SH-ST	M-700021
R422d 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R422d-0/1000-N1	M-700026
R422d 0-1,000 ppm, stainless steel enclosure	IR-F9-R422d-0/1000-ST	M-700027
R422d 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R422d-0/1000-ATMOS-N1	M-700028
R422d 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R422d-0/1000-ATMOS-ST	M-700029
R422d 0-1,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R422d-0/1000-ATMOS-SH-ST	M-700030
R422d 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R422d-0/3000-N1	M-700035
R422d 0-3,000 ppm, stainless steel enclosure	IR-F9-R422d-0/3000-ST	M-700036
R422d 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R422d-0/3000-ATMOS-N1	M-700037
R422d 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R422d-0/3000-ATMOS-ST	M-700038
R422d 0-3,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R422d-0/3000-ATMOS-SH-N1	M-700039
R422d 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R422d-0/3000-ATMOS-SH-ST	M-700040

# AirScan™ IR-F9 (continued)

<b>AirScan™ IR-F9 R404a</b>	<b>Model Number</b>	<b>Order Number</b>
R404a 0-500 ppm, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R404a-0/500-N1	M-512259
R404a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R404a-0/1,000-N1	M-510844
R404a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R404A-0/1000-ATMOS-N1	M-700003
R404a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R404A-0/1000-ATMOS-ST	M-512443
R404a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R404a-0/3000-N1	M-600422
R404a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R404a-0/3000-ATMOS-N1	M-600469
R404a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R404A-0/3000-ATMOS-ST	M-512522

<b>AirScan™ IR-F9 R407a</b>	<b>Model Number</b>	<b>Order Number</b>
R407a 0-500 ppm, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R407a-0/500-N1	M-700045
R407a 0-500 ppm, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R407a-0/500-ST	M-700046
R407a 0-500 ppm, ATMOS, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R407a-0/500-ATMOS-N1	M-700047
R407a 0-500 ppm, ATMOS, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R407a-0/500-ATMOS-ST	M-700048
R407a 0-500 ppm, ATMOS, super heat, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R407a-0/500-ATMOS-SH-N1	M-700049
R407a 0-500 ppm, ATMOS, super heat, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R407a-0/500-ATMOS-SH-ST	M-700050
R407a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R407a-0/1000-N1	M-700055
R407a 0-1,000 ppm, stainless steel enclosure	IR-F9-R407a-0/1000-ST	M-700056
R407a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R407a-0/1000-ATMOS-N1	M-700057
R407a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R407a-0/1000-ATMOS-ST	M-700058
R407a 0-1,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R407a-0/1000-ATMOS-SH-N1	M-700059
R407a 0-1,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R407a-0/1000-ATMOS-SH-ST	M-700060
R407a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R407a-0/3000-N1	M-700065
R407a 0-3,000 ppm, stainless steel enclosure	IR-F9-R407a-0/3000-ST	M-700066
R407a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R407a-0/3000-ATMOS-N1	M-700067
R407a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R407a-0/3000-ATMOS-ST	M-700068
R407a 0-3,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R407a-0/3000-ATMOS-SH-N1	M-700069
R407a 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R407a-0/3000-ATMOS-SH-ST	M-700070

<b>AirScan™ IR-F9 R410a</b>	<b>Model Number</b>	<b>Order Number</b>
R410a 0-1,000 ppm, NEMA 1 enclosure	IR-F9-R410a-0/1000-N1	M-700075
R410a 0-1,000 ppm, stainless steel enclosure	IR-F9-R410a-0/1000-ST	M-700076
R410a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R410a-0/1000-ATMOS-N1	M-700077
R410a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R410a-0/1000-ATMOS-ST	M-700078
R410a 0-1,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R410a-0/1000-ATMOS-SH-N1	M-700079
R410a 0-1,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R410a-0/1000-ATMOS-SH-ST	M-700080
R410a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R410a-0/3000-N1	M-700085
R410a 0-3,000 ppm, stainless steel enclosure	IR-F9-R410a-0/3000-ST	M-700086
R410a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R410a-0/3000-ATMOS-N1	M-700087
R410a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R410a-0/3000-ATMOS-ST	M-700088
R410a 0-3,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-R410a-0/3000-ATMOS-SH-N1	M-700089
R410a 0-3,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-R410a-0/3000-ATMOS-SH-ST	M-700090



# AirScan™ IR-F9 (continued)

<b>AirScan™ IR-F9 R507a</b>	<b>Model Number</b>	<b>Order Number</b>
R507a 0-500 ppm, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R507a-0/500-N1	M-600416
R507a 0-500 ppm, ATMOS, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-R507a-0/500-ATMOS-N1	M-512247
R507a 0-500 ppm, ATMOS, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-R507a-0/500-ATMOS-ST	M-600414
R507a 0/1,000 ppm, NEMA 1 enclosure	IR-F9-R507a-0/1000-N1	M-512283
R507a 0-1,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R507a-0/1000-ATMOS-N1	M-511471
R507a 0-1,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R507A-0/1000-ATMOS-ST	M-700006
R507a 0-3,000 ppm, NEMA 1 enclosure	IR-F9-R507a-0/3000-N1	M-600417
R507a 0-3,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-R507a-0/3000-ATMOS-N1	M-600410
R507a 0-3,000 ppm, stainless steel enclosure	IR-F9-R507a-0/3000-ST	M-511611
R507a 0-3,000 ppm, ATMOS, stainless steel enclosure	IR-F9-R507a-0/3000-ATMOS-ST	M-600415

<b>AirScan™ IR-F9 Carbon Dioxide (CO)</b>	<b>Model Number</b>	<b>Order Number</b>
Carbon dioxide (CO), 0-10,000 ppm, NEMA 1 enclosure	IR-F9-CO2-1%-N1	M-511793
Carbon dioxide (CO), 0-10,000 ppm, ATMOS, NEMA 1	IR-F9-CO2-1%-ATMOS-N1	M-511821
Carbon dioxide (CO), 0-10,000 ppm, ATMOS, super heat, NEMA 1 enclosure	IR-F9-CO2-0/1%-ATMOS-SH-N1	M-511866
Carbon dioxide (CO), 0-10,000 ppm, stainless steel enclosure	IR-F9-CO2-1%-ST	M-512127
Carbon dioxide (CO), 0-10,000 ppm, ATMOS, stainless steel enclosure	IR-F9-CO2-1%-ATMOS-ST	M-511858
Carbon dioxide (CO), 0-10,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-CO2-1%-ATMOS-SH-ST	M-512193
Carbon dioxide (CO), 0-30,000 ppm, NEMA 1 enclosure	IR-F9-CO2-3%-N1	M-511825
Carbon dioxide (CO), 0-30,000 ppm, ATMOS, NEMA 1	IR-F9-CO2-3%-ATMOS-N1	M-511828
Carbon dioxide (CO), 0-30,000 ppm, ATMOS, super heat, NEMA 1	IR-F9-CO2-3%-ATMOS-SH-N1	M-511829
Carbon dioxide (CO), 0-30,000 ppm, ATMOS, stainless steel enclosure	IR-F9-CO2-3%-ATMOS-ST	M-512094

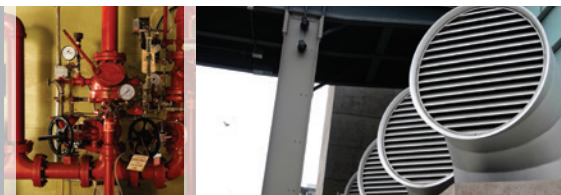
# AirScan™ IR-F9 (continued)

<b>AirScan™ IR-F9 Ammonia (NH<sub>3</sub>)</b>	<b>Model Number</b>	<b>Order Number</b>
Ammonia (NH <sub>3</sub> ), 0-20,000 ppm, NEMA 1 enclosure	IR-F9-NH3-0/2%-N1	M-512345
Ammonia (NH <sub>3</sub> ), 0-20,000 ppm, ATMOS, NEMA 1 enclosure	IR-F9-NH3-0/2%-ATMOS-N1	M-512342
Ammonia (NH <sub>3</sub> ), 0-20,000 ppm, stainless steel enclosure	IR-F9-NH3-0/2%-ST	M-512352
Ammonia (NH <sub>3</sub> ), 0-20,000 ppm, ATMOS, stainless steel enclosure	IR-F9-NH3-0/2%-ATMOS-ST	M-512353
Ammonia (NH <sub>3</sub> ), 0-20,000 ppm, ATMOS, super heat, stainless steel enclosure	IR-F9-NH3-0/2%-ATMOS-SH-ST	M-700005

<b>AirScan™ IR-F9 HFO1234yf</b>	<b>Model Number</b>	<b>Order Number</b>
HFO1234yf 0/500, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-HFO1234YF-0/500-N1	M-700261
HFO1234yf 0/500, ATMOS, NEMA 1 enclosure, <b>CARB compliant</b>	IR-F9-HFO1234YF-0/500-ATMOS-N1	M-700262
HFO1234yf 0/500, stainless steel enclosure, <b>CARB compliant</b>	IR-F9-HFO1234YF-0/500-SS	M-700263
HFO1234yf 0/500, ATMOS, Stainless Steel Enclosure, <b>CARB compliant</b>	IR-F9-HFO1234YF-0/500-ATMOS-SS	M-700264
HFO1234yf 0/1000, NEMA 1 enclosure	IR-F9-HFO1234YF-0/1000-N1	M-700266
HFO1234yf 0/1000, ATMOS, NEMA 1 enclosure	IR-F9-HFO1234YF-0/1000-ATMOS-N1	M-700267
HFO1234yf 0/1000, ATMOS, NEMA 1 enclosure	IR-F9-HFO1234YF-0/1000-SS	M-700268
HFO1234yf 0/1000, ATMOS, stainless steel enclosure	IR-F9-HFO1234YF-0/1000-ATMOS-SS	M-700269
HFO1234yf 0/3000, NEMA 1 enclosure	IR-F9-HFO1234YF-0/3000-N1	M-700271
HFO1234yf 0/3000, ATMOS, NEMA 1 enclosure	IR-F9-HFO1234YF-0/3000-ATMOS-N1	M-700272
HFO1234yf 0/3000, ATMOS, NEMA 1 enclosure	IR-F9-HFO1234YF-0/3000-SS	M-700273
HFO1234yf 0/3000, ATMOS, stainless steel enclosure	IR-F9-HFO1234YF-0/3000-ATMOS-SS	M-700274

# Vent Line

*NH<sub>3</sub>, R22*



The Vent Line sensor continuously monitors vent line headers for ammonia and fluorocarbons. High concentrations of refrigerant gases in vent lines are warnings of system overpressure or leaking relief valves. Either can pose danger to employees and equipment. Wasted refrigerants are costly and can mean overtime labor and plant downtime. Designed to be installed in refrigeration vent lines, the VL sensor is supplied with a 2 in. cast steel "T", plug and nipple.

The sensor is embedded in a 2 in. forged steel bull plug and houses a four-point terminal strip for electrically connecting the sensor and preamp. The linear 4-20 mA output pre-amp is housed in a separate enclosure.

The Vent Line leak detector is designed to be electrically connected to and monitored by all Honeywell Analytics readouts or can send a signal directly to a PLC.

Vent Line solid-state sensors are broad spectrum devices and will sense other vapors in addition to the target gas. Please discuss details of the application with Honeywell Analytics, including other gases that may be present and whether the vent line is discharging to atmosphere or water tank.

## Beneficial Features

- Improves personnel, product and equipment safety
- Extremely reliable sensor assembly
- Easy to calibrate and adjust
- Simple to install
- Continuous monitoring
- Can potentially lower insurance rates
- Input directly to central alarm systems
- Linear 4-20 mA output

Vent Line Sensors	Model Number	Order Number
Ammonia (NH <sub>3</sub> ) Vent Line sensor, linear pre-amp, with mounting kit	VL-F7-NH3-N4-LPA-MK	M-510000
R22 Vent Line sensor, linear pre-amp, with mounting kit	VL-F7-R22-N4-LPA-MK	M-600104
Ammonia (NH <sub>3</sub> ) Vent Line sensor, linear pre-amp, no mounting kit	VL-F7-NH3-N4-LPA-No	M-600253

Vent Line Replacement Sensors	Model Number	Order Number
Replacement Vent Line sensor	VL-F7-NH3-N4-RA	M-600105
Replacement linear pre-amp (in stainless steel enclosure) for Vent Line sensor	VL-LPA	M-600106





# Sensepoint® XCD

Flammable, Toxic & Oxygen  
Gas Detector and Transmitter

$NH_3$ ,  $CH_4$ , COMB



The Sensepoint XCD range provides comprehensive monitoring of flammable, toxic and Oxygen gas hazards in potentially explosive atmospheres, both indoors and outdoors. Users can modify detector operation using the LCD and magnet switches without ever needing to open the unit. This enables one-man, non-intrusive operation and reduces routine maintenance time and costs.

## One-Stop Shop

- Flammable (catalytic or infrared), toxic and oxygen versions available
- New and retrofit applications
- Suitable for indoor or outdoor use
- Aluminium explosion-proof housing
- IP66 as standard

## Proven and Reliable Sensor Technology

- Surecell™ electrochemical sensors
- Reflex® sensor health check
- Poison immune infrared sensors
- Poison resistant catalytic bead sensors
- Long life sensors

## Easy to Use

- User friendly and intuitive tri-colour backlit display with digits, bar graph and icons
- Fully configurable via magnetic switches
- Selectable sink or source 4-20 mA output
- Auto-inhibit during maintenance
- Modbus communications for remote diagnostics/configuration

## Cost Effective

- Common transmitter platform
- Minimal training required
- Reduced spares
- Non-intrusive, one-man operation
- Plug-in sensor replacement
- Modbus multi drop option offers cabling savings

## Simple Installation

- Plug-in display module removes to give access to terminal area
- Integral mounting bracket
- 2 x 3/4 in. NPT cable/conduit entries
- Removable plug/socket type terminal blocks for ease of wiring
- Sink/source switch to suit preferred wiring topology

## Range of Optional Accessories

- Remote sensor gassing kit
- Duct mounting kit
- Calibration gas flow housing
- Collecting cone

## Approvals

- US and Canadian
- Compliant with UL and CSA standards

# Sensepoint® XCD (continued)

<b>UL/cUL/CSA/INMETRO APPROVAL (LM25)</b>	<b>Order Number</b>
UL/CSA approved flammable catalytic bead sensor, pre-calibrated for 0-20% LEL ammonia (NH <sub>3</sub> ), 3/4 in. NPT entry	SVIP3701
Combustible (CH <sub>4</sub> ) explosion proof transmitter (Cat Bead), 4-20 mA, 3 relays, Modbus, 0-100% aluminum enclosure	SPXCDULNFX

<b>Sensepoint XCD Replacement Toxic, Flammable, and Oxygen (O<sub>2</sub>) cartridges</b>	<b>Order Number</b>
Flammable catalytic 0-100%LEL (20.0 to 100.0% LEL)	SPXCDXSFSS

<b>Accessories, Replacement Sensor Cartridges &amp; Spares</b>	<b>Order Number</b>
Calibration cap	S3KCAL
Collecting cone for use with lighter than air gases	SPXCDCC
Duct mounting kit	SPXCDDMK
Mounting bracket (includes bolts, nuts, brackets)	SPXCDMTBR
Sunshade/deluge protection	SPXCDSDP
Sensepoint XCD standard weather protection	SPXCDWP
Sensor retainer with locking screw	SPXCDSRLS
Allen key for stopper	SPXCDAKS
Hex wrench for earth screw	SPXCDHWES
Earth bracket and screws	SPXCDEBS
Magnetic wand	SPXCDMAG
Replacement display module for FL and IR	SPXCDDMF
Replacement terminal module for FL and IR	SPXCDTMF



# GasAlert EXTREME

## Single-Gas Detector

**NH<sub>3</sub>**



Compact and affordable, the GasAlert Extreme this single gas detector offers easy on/off operation and extended longevity with a field-replaceable battery and sensor. A wide range of tamperproof user options and multi-language display make the GasAlert Extreme an ideal solution for a variety of applications; plus, datalogging is now standard on all units. Calibration is a simple automatic procedure and is compatible with BW's MicroDock II automatic test and calibration system.

### Standard Package Contents

- Detector complete with sensor, stainless steel alligator clip and concussion-proof housing
- Calibration/test cap and hose
- Manual
- Multi-language CD manual

GasAlert Extreme	Model Number	Order Number
Ammonia (NH <sub>3</sub> ) with yellow housing, 0-100 ppm	GAXT-A-DL	115050-L3
Ammonia (NH <sub>3</sub> ) with yellow housing, 0-400 ppm	GAXT-A2-DL	119141-L3

GasAlert Extreme Consumables	Model Number	Order Number
Ammonia (NH <sub>3</sub> ) (range 0-100 ppm)	SR-A04	113588-L3
Ammonia (NH <sub>3</sub> ) (range 0-400 ppm)	SR-A204	125226-L3

GasAlert Extreme Accessories	Model Number	Order Number
Test cap and hose replacement	GA-TC-1	131635-L3



# HA20, HA40 & HA71

## Digital Gas Controllers



Honeywell Analytics offers a family of gas detection controllers that monitor 2, 4, 8, or 16 points of gas detection. Our digital gas controllers are designed to work in the harshest industrial environments. These controllers are rated for Class I, Div. 2, Groups A, B, C, and D.

### Enhanced Technology

- Accepts inputs from up to two (HA-20) or four (HA-40) 4-20 mA sensors transmitters. Internal power supply generates 24 Vdc and provides 15 watts total system power; optional 50 watts supply available.
- CSA certified to C22.2 NO. 152 for combustible detection and Class I, Div. 2, Groups A,B,C,D CE mark
- 3 independent alarm levels per channel. Relay Acknowledge feature allows silencing of external audible devices during existing alarm conditions
- Graphic LCD readout displays monitored data as bar graphs, trends and engineering units. Alarm LED's flash when new and become steady after acknowledged
- Two standard SPDT common alarm relays for HORN, HIGH, WARN or FAULT
- Internal 50 watt power supply provides more room to install wiring

### Beneficial Options

- Optional discrete channel alarm relays are available
- Options such as Modbus slave RS-485 serial port, data logging, 4-20 mA outputs, discrete alarm relays and others are supported
- Cal Mode offers pushbutton zero/span calibration for direct sensor interface applications. Authorization Mode allows locking of critical configuration variables
- Touch and magnetic keypad for nonintrusive operation in potentially hazardous locations
- NEMA 4X (Div. 2 certified) and Explosion-Proof wall mount packaging options available

# HA20, HA40 & HA71

## Digital Gas Controllers

### HA20 & HA40

The HA20 and HA40 controllers are designed to provide simultaneous display and alarm functions for two (HA20) or four (HA40) 4-20 mA sensor transmitters. Each system has three independent alarm levels per channel. HA40 options include an RS-485 Modbus slave port that allows up to 128 HA40's to be multi-dropped into a single data highway.

HA20 2-Channel Controllers Standard Configurations	Order Number
Two channel NEMA 4X controller with 6 discrete relays	HA20PY
Two channel NEMA 4X controller, 6 discrete relays, Class I, Div. 2 strobe	HA20PY-S
Two channel painted steel controller with 6 discrete relays	HA20PCS
Two channel painted steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA20PCS-S
Two channel stainless steel controller with 6 discrete relays	HA20SS
Two channel stainless steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA20SS-S
HA20 2-Channel Controllers Custom Configurations	Order Number
Compact Enclosure - Two channel NEMA 4X controller - custom configuration <i>Note: internal power supply limited to 15W - 1000-2259 external power supply required increase to 50W</i>	HA20N4
Two channel NEMA 4X controller - custom configuration	HA20PY-C
Two channel painted steel controller - custom configuration	HA20PCS-C
Two channel stainless steel controller - custom configuration	HA20SS-C
HA20 2-Channel Controllers I/O Options	Order Number
Dual 4-20 mA analog input	10-0221-2
Dual 4-20 mA analog output	10-0223
One bridge sensor / one EC sensor input combo	10-0216
Dual bridge sensor input	10-0219
Relay option to add six 5 amp Form C relays	10-0222
HA20 2-Channel Controllers Accessories	Order Number
Div. 2 red xenon strobe light (includes mounting)	10-0284
Div. 2 amber xenon strobe light (includes mounting)	10-0285
100db piezo audible (compact NEMA 4X enclosure only - general purpose)	1000-1892
50 watt NEMA 4X Div. 2 external power supply - for use with HA20N4	1000-2259
50 watt NEMA 4X Div. 2 - internal power supply	10-0315
550V A/300 watt UPS / surge protector with power loss relay	10-0287

# HA20, HA40 & HA71 (continued)

<b>HA40 4-Channel Controllers Standard Configurations</b>	<b>Order Number</b>
Four channel NEMA 4X controller with 6 discrete relays	HA40PY
Four channel NEMA 4X controller, 6 discrete relays, Class I, Div. 2 strobe	HA40PY-S
Four channel NEMA 4X controller, 6 discrete relays, Class I, Div. 2 strobe, RS-485 Modbus RTU interface	HA40PY-S-M
Four channel painted steel controller, with 6 discrete relays	HA40PCS
Four channel painted steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA40PCS-S
Four channel painted steel controller, 6 discrete relays, Class I, Div. 2 strobe, RS-485 Modbus RTU interface	HA40PCS-S-M
Four channel stainless steel controller with 6 discrete relays	HA40SS
Four channel stainless steel controller, 6 discrete relays, Class I, Div. 2 strobe	HA40SS-S
Four channel stainless steel controller, 6 discrete relays, Class I, Div. 2 strobe, RS-485 Modbus RTU interface	HA40SS-S-M

<b>HA40 4-Channel Controllers Custom Configurations</b>	<b>Order Number</b>
Four channel NEMA 4X controller - custom configuration	HA40PY-C
Four channel painted steel controller - custom configuration	HA40PCS-C
Four channel stainless steel controller - custom configuration	HA40SS-C

<b>HA40 4-Channel Controllers I/O Options</b>	<b>Order Number</b>
Four channel 4-20 mA analog input PCB	10-0221-4
Four channel 4-20 mA output	10-0308
Four channel bridge sensor input	10-0309
RS-232 / RS-485 Modbus RTU addressable interface	10-0253
Relay option to add six 5 amp Form C relays	10-0222

<b>HA40 4-Channel Controllers Accessories</b>	<b>Order Number</b>
Div. 2 red xenon strobe light (includes mounting)	10-0284
Div. 2 amber xenon strobe light (includes mounting)	10-0285
50 watt NEMA 4X Div. 2 - internal power supply	10-0315
550V A/300 watt UPS / surge protector with power loss relay	10-0287



# HA20, HA40 & HA71 (continued)

## HA71

The Honeywell Analytics HA71 16 Channel Digital Gas Controller is a Class I, Div. 2 controller designed to provide simultaneous display and alarm functions for up to 16 input variables. A graphic LCD displays monitored data as trends, bar graphs and engineering units. Three adjustable alarm levels are provided per channel. Relay outputs allow control of beacons, horns and other alarm events. A horn relay may be set for steady or pulsing operation. Analog inputs may be accepted and conditioned via sensor specific analog input cards. The standard Modbus Master port allows input data to be retrieved from Modbus slave devices.

Enclosure options include a NEMA 4X enclosure and 19 in. rack/panel mount enclosure. These package styles support addition of up to 7 I<sup>2</sup>C option board footprints (3 without 10-0180 expansion kit option) inside each respective enclosure. Additional options may be added externally or in other enclosures. Includes magnetic keypad for non-intrusive control.

<b>HA71 8 &amp; 16-Channel Controllers Standard Configurations</b>	<b>Order Number</b>
HA71 in NEMA 4X enclosure, 8 channel, standard configuration	HA71N4-8
HA71 in NEMA 4X enclosure, 16 channel, standard configuration	HA71N4-16
<b>HA71 8 &amp; 16-Channel Controllers Custom Configurations</b>	<b>Order Number</b>
Panel mount rack including bezel/rack hardware and magnetic keypad for non-intrusive control	HA71PM
HA71 in NEMA 4X enclosure including magnetic keypad for non-intrusive control	HA71N4
<b>HA71 8 &amp; 16-Channel Controllers I/O Options</b>	<b>Order Number</b>
I <sup>2</sup> C analog 8 input board including EXC terminals	10-0158
I <sup>2</sup> C catalytic bead LEL sensor / mA input board	10-0191
Dual catalytic bead LEL module (requires 10-0191)	10-0192
I <sup>2</sup> C RTD / resistive / 4-20 mA 8 input board	10-0170
I <sup>2</sup> C analog 4-20 mA 8 output board	10-0167
RS-485 to RS-232 converter (RS-485 RTU to PC DB9)	10-0177
I <sup>2</sup> C printer interface with parallel, RS-232, and RS-422 ports	10-0229
Auxiliary common alarm relay board (additional Form C Relay for ALM 1, ALM 2 and HORN)	10-0144
I <sup>2</sup> C discrete alarm relay board (8, 5A Form C relays)	10-0195
NEMA 4X expansion enclosure for up to 8 option PCB's	10-0178
NEMA 4X expansion plate (adds up to 4 option positions)	10-0180
85-240 V <sub>AC</sub> universal input 150 watt 24 V <sub>DC</sub> power supply	10-0172
100db piezo audible alarm added to NEMA 4X enclosure	1000-1892
Amber/red dual light stack with 80db horn; general purpose	1000-1906
Human/machine interface (HMI) software package (CD)	HA-71-HMI
<b>HA71 8 &amp; 16-Channel Controllers Accessories</b>	<b>Order Number</b>
Replacement main I/O PCB for HA71/XP	10-0142
Replacement main I/O PCB for HA71PM (ribbon connector on circuit side of PCB)	10-0213
Replacement HA71 flat panel lcd module	10-0006
Replacement complete HA71 front panel electronic nest assembly including 10-0006 LCD	10-0185
I <sup>2</sup> C 6 in. I/O cable	0010-1110
I <sup>2</sup> C 10 in. I/O cable	0010-1180
"Small red" magnetic wand for NEMA 4X Enclosures	1000-0076

# GM-JR

## Readout Module



The GM-JR Readout Module provides a calibrated 20 segment LED bargraph, alarm and fault LEDs, single trip point in 5% increments, and relay output. This versatile module provides a readout and relay inside a sensor housing or can be used as a remote warning device showing gas concentration levels, e.g., at a machine room entrance. The basic GM-JR Readout Module is mounted in the door of its own enclosure for easy viewing, and has a separate terminal board for the optional sensor and/or power cable connections. It is available in "stand-alone" and "feed-through" designs.

GM-JR Readout Module	Model Number	Order Number
GM-JR, feed-through configuration, NEMA 1 enclosure	GM-JR-N1-FT	M-510426
GM-JR, stand alone configuration, NEMA 1 enclosure	GM-JR-N1-SA	M-600024
GM-JR power supply, 24 V <sub>DC</sub> , 1A	GM-JR-PS	M-600031
GM-JR, stand alone configuration, stainless enclosure	GM-JR-ST-SA	M-511326
GM-JR, feed-through configuration, stainless enclosure	GM-JR-ST-FT	M-700004



# AirAlert 96d

## Multi-Channel Readout



The AirAlert 96d is designed for installation and operational simplicity for continuous monitoring and control of toxic gases, combustible gases and oxygen hazards, provides continuous monitoring of up to 96 connected sensors on three distinct channels. Installation costs are minimized by using an addressable RS-485 Modbus communication protocol. Only two pairs of wires are required to connect all of the gas sensors and relay modules to one of the controller's three input channels. The AirAlert 96d provides a full array of displays, user-friendly menu-driven program allows for minor fine-tuning of the sequence of operation to reconfiguration of the entire network, automatic datalogging capability, cast aluminum enclosure.

### 96 Sensor Capacity

- Supports up to 96 network devices
- Three distinct channels act as the nerve centre of a modular gas detection network

### Menu-Driven Program

- Easily fine-tune applications ranging from minor operational sequences to reconfiguration of entire network
- Simple push-button program facilitates adjustments

### Centralized Information

- Interface with or function individually with plant control

### Customizable

- Supports any combination of Honeywell Analytics gas sensors, including NH<sub>3</sub>, CO<sub>2</sub>, H<sub>2</sub>, CO, Cl<sub>2</sub>, CFC's, HCFC's, HFC's, CH<sub>4</sub>, O<sub>2</sub>, NO<sub>2</sub>, and more
- Field-programmable alarm levels for each sensor
- Zoning capability allows for up to 126 zones

### Immediate At-a-Glance Status

- 122 x 32 alphanumeric LCD display provides continuous information for the entire network

### Automatic Datalogging Capability

- Controller provides automatic datalogging within cast aluminum enclosure
- Sensor concentrations and alarms is recorded for analysis

### Easy Installation

- Cost is reduced by addressable RS-485 Modbus communication protocol
- Installation requires only two pairs of wires to connect each gas sensors and relay modules to one of the controller's three input channels

AirAlert 96D Multi-Channel Readout	Model Number	Order Number
Gas detection controller with data logger	AA96D-DLC	AA96D-DLC
Gas detection controller with data logger and BACnet output	AA96D-DLC-BIP	AA96D-DLC-BIP

AirAlert 96D Interface Modules	Model Number	Order Number
AirAlert RM8 Relay Module, RS485	AA96D-RM8	AA96D-RM8
301AP Annunciator Panel for 301C Controller	301-AP	301-AP
Interface module 4-20 to RS485 with phoenix connector	420MDBS-96D	M-511352*
Interface module 4-20 to RS485 with screw connector	420MDBS-96D-SC	M-511353*
Interface module 4-20 to RS485 with phoenix connector (for use with a PLC)	420MDBS-96D-IM	M-510457*
Interface module 4-20 to RS485 with screw connector (for use with a PLC)	420MDBS-96D-IM-SC	M-700010*

\*Note: MDBS modules require factory-set configuration parameters. Please specify at time of ordering. Use of this module inside a sensor will invalidate any certifications.

# Accessories



The SpectraAlert Advance series of notification is designed to simplify installations, with features such as plug in design, 11 field selectable candela settings, and 4 color lens options.

## Horn & Strobes

## Order Number

Horn/strobe 24 V <sub>DC</sub> , 4 wire	P4W-P
Horn/strobe 24 V <sub>DC</sub> , 2 wire	P2W-P
Horn/strobe 24 V <sub>DC</sub> , 2 wire, high candela	P2WH-P
Horn/strobe 24 V <sub>DC</sub> , 2 wire, outdoor location	P2WK-P
Horn/strobe 24 V <sub>DC</sub> , 2 wire, outdoor location, high candela	P2WHK-P
Horn/strobe 24 V <sub>DC</sub> , 2 wire, ceiling mount	PC2W-P
Horn/strobe 24 V <sub>DC</sub> , 2 wire, ceiling mount, high candela	PC2WH-P
Horn 24 V <sub>DC</sub> , 2 wire	SW-P
Horn 24 V <sub>DC</sub> , 2 wire, high candela	SWH-P
Horn 24 V <sub>DC</sub> , 2 wire, outdoor location	SWK-P
Horn 24 V <sub>DC</sub> , 2 wire, high candela, outdoor location	SWHK-P
120 V <sub>AC</sub> mounting plate adaptor (for use with 2-wire horn/strobes)	MP120K
Lens - blue	LENS-B
Lens - red	LENS-R
Lens - amber	LENS-A
Lens - green	LENS-G





The Dual Relay Module (DRM) is a single channel 4-20mA analog input feed-thru module that provides a dual stage alarm with isolated relay outputs. It utilizes two relay outputs used to activate local annunciators, warning strobes, PLC inputs, and other output-driven applications. The DRM also allows you to wire up to three modules in series for added relays and alarm trip level flexibility.

Engine Room Horn & Strobe	Order Number
24 V <sub>DC</sub> -6.5A power supply	M-600268
Relay plug, terminates 4/20 signal at sensor providing relay output. 3A @ 24 V <sub>DC</sub> rating	M-600008
GM-JR-PS GM-JR power supply, 24 V <sub>DC</sub> , 1A	M-600031
Power supply, 24 V <sub>DC</sub> , 6.5 A	M-600400
Liquid crystal display for use with EC-FX and EC-F9	M-510150
DRM, dual relay module	M-511300
UPS750VA 120V APC Smart-UPS 750 VA	M-507960
UPS1000VA 120V APC Smart-UPS 1000 VA	M-508370
UPSAPCBP, battery unit for APC Smart-UPS	SMX48RMBP2U

# Calibration Kits and Accessories

## Regulator Guide for Industrial Products

EC-FX NH3	0.3 LPM	*New calibration procedure
EC-F9 NH3	0.3 LPM	*New calibration procedure
EC-F2	0.3 LPM	*New calibration procedure
EC-F3	O <sub>2</sub> sensor 0.75 - 1.0 LPM	
IR-F9	0.75 - 1.0 LPM	

\*For information on the new calibration procedure please contact us at [HA\\_Manning@Honeywell.com](mailto:HA_Manning@Honeywell.com)

## EC-FX Calibration Equipment

## Order Number

EC-FX CALIBRATION ADAPTER	EC-FX-CA
EC-FX CAL KIT 17/34L .300LPM REG	EC-FX-CK
EC-FX CAL KIT 29L .300LPM REG	EC-FX-CK1
EC-FX CAL KIT 58/103L .300LPM REG	EC-FX-CK2
REGULATOR .300LPM 17/34L	EC-FX-REG1
REGULATOR .300LPM 29/58/103L	EC-FX-REG2

## Calibration Kits

## Order Number

Calibration Kit, with # 418 valve, fittings, tubing, and instructions (no gas cylinders)	11252-L9
Calibration Kit, with # 518 valve, fittings, tubing, and instructions (no gas cylinders) for use with 29 L cylinders	11253-L9
Calibration Kit, with # 518 valve, fittings, tubing, and instructions (no gas cylinders) for use with 58/103 L cylinders	11337-L9
CK-A calibration adaptor	10244
CK-R-1LPM-518 regulator 1.0 LPM #518 (for 29/58/103 L cylinders)	10597-L9
CK-R-1LPM-418 regulator 1.0 LPM #418 (for 17/34 L cylinders)	10687-L9

## 103 Liter Gas Cylinders

## Order Number

Cylinder of 1,000 ppm R507, balance air	10704
Cylinder of 3,000 ppm R507, balance air	11261
Cylinder of nitrogen (N <sub>2</sub> )	10237
Cylinder of 500 ppm R507, balance air	11389-L9
Cylinder of 500 ppm HFO1234YF, balance N <sub>2</sub> , 103 L	GFV543
Cylinder of 1000 ppm HFO1234YF, balance N <sub>2</sub> , 103 L	GFV544
Cylinder of 3000 ppm HFO1234YF, balance N <sub>2</sub> , 103 L	GFV545

## 58 Liter Gas Cylinders

## Order Number

Cylinder of 5 ppm chlorine (Cl <sub>2</sub> ), balance N <sub>2</sub>	10711-L9
Cylinder of 10 ppm chlorine (Cl <sub>2</sub> ), balance N <sub>2</sub>	11355-L9
Cylinder of 25 ppm hydrogen sulfide (H <sub>2</sub> S), balance N <sub>2</sub>	10594
Cylinder of 10 ppm nitric oxide (NO), balance N <sub>2</sub>	10975
Cylinder of 10 ppm sulfur dioxide (SO <sub>2</sub> ), balance N <sub>2</sub>	10232
Cylinder of 10 ppm nitrogen dioxide (NO <sub>2</sub> ), balance N <sub>2</sub>	10233-L9

# Calibration Kits and Accessories

## 29 Liter Gas Cylinders

	Order Number
Cylinder of 50 ppm ammonia (NH <sub>3</sub> ), balance air	10566-L9
Cylinder of 100 ppm ammonia (NH <sub>3</sub> ), balance air	10518-L9
Cylinder of 250 ppm ammonia (NH <sub>3</sub> ), balance air	10517-L9
Cylinder of 300 ppm ammonia (NH <sub>3</sub> ), balance air	11224-L9
Cylinder of 1,000 ppm ammonia (NH <sub>3</sub> ), balance air	10559-L9
Cylinder of 1% ammonia (NH <sub>3</sub> ), balance air	10528-L9
Cylinder of 2% ammonia (NH <sub>3</sub> ), balance air	10520-L9

## 17 Liter Gas Cylinders

	Order Number
Cylinder of 1000 ppm carbon dioxide (CO <sub>2</sub> ), balance N <sub>2</sub>	11193
Cylinder of 1% carbon dioxide (CO <sub>2</sub> ), balance N <sub>2</sub>	10560-L9
Cylinder of 3% carbon dioxide (CO <sub>2</sub> ), balance N <sub>2</sub>	11365-L9
Cylinder of 5% carbon dioxide (CO <sub>2</sub> ), balance N <sub>2</sub>	10561-L9
Cylinder of 15% oxygen (O <sub>2</sub> ), balance N <sub>2</sub>	10558-L9
Cylinder of 20.9% oxygen (O <sub>2</sub> ), balance N <sub>2</sub>	10562-L9
Cylinder of 200 ppm carbon monoxide (CO), balance air	10661-L9
Cylinder of 2,000 ppm hydrogen (H <sub>2</sub> ), balance air	10236-L9
Cylinder of 500 ppm hydrogen (H <sub>2</sub> ), balance air	10235
Cylinder of 500 ppm, R123, balance N <sub>2</sub>	11198-L9
Cylinder of 1,000 ppm R134a, balance air	11413-L9
Cylinder of 3,000 ppm R134a, balance air	11213-L9
Cylinder of 500 ppm R22, balance air	11083-L9
Cylinder of 1,000 ppm R22, balance air	10563
Cylinder of 3,000 ppm R22, balance air	10564
Cylinder of 1,000 ppm R404a, balance air	10976-L9
Cylinder of 3,000 ppm R404a, balance air	10928-L9
Cylinder of zero air	10557-L9
Cylinder of 500 ppm R422, balance air	GFV453
Cylinder of 1000 ppm R422, balance air	GFV454
Cylinder of 3000 ppm R422, balance air	GFV455
Cylinder of 1000 ppm R410a, balance air	GFV456
Cylinder of 3000 ppm R410a, balance air	GFV457
Cylinder of 500 ppm R407a, balance air	GFV458
Cylinder of 1000 ppm R407a, balance air	GFV459
Cylinder of 3000 ppm R407a, balance air	GFV460

# Honeywell Analytics Service

Honeywell Analytics' global standing for portable, fixed and low level toxic gas detection is backed up with a dedicated team of professionals that takes service and support to a whole new level.

It's your choice...

Whatever industry you're in, we have the levels of support that are right for your business.

It's your business. It's your industry.

And no matter whether you're managing personnel for confined space entry, or securing your plant against gas risks, the process has to keep moving. The alternative is downtime, or even total shutdown, and then the risks to your business are far greater.

Honeywell provides service levels that make it easy to choose the right kind of support to keep your plant and people safe; to keep your business up and running - because that's our job!

Choose from:

## **Commissioning**

- Configuration and commissioning
- Functional tests
- Start-up
- Staff training
- Bump testing

## **Contract Maintenance**

### **Service and Repair**

- On-site/workshop repair and calibration
- Modification and conversion

### **Calibration and Surveys**

- Instrument calibration equipment certified to national/regional standards
- Site surveys
- Stock surveys



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## Notes



# Honeywell Analytics Lines of Business



## Commercial

Gas detection from standalone units to fully engineered, multi-point systems, all offering cost-effective regulatory compliance

- » Applications: parking structures, chillers, mechanical rooms, office towers, commercial buildings, shopping centers, swimming pools, golf courses, schools and universities, laboratories

### Find out more

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## Industrial

Renowned Sieger and Manning gas detection systems with advanced electrochemical, infrared and open path sensing technologies

- » Applications: oil and gas, cold storage, water/wastewater treatment, chemicals, engine rooms, plastics and fibers, agriculture, printing and light industrial



## High Tech/Government

A complete portfolio of gas and chemical detection instrumentation including infrared spectroscopy (MST) with no cross interference, to Chemcassette paper-based solutions (MDA Scientific) offering detection down to parts per billion

- » Applications: semiconductor manufacturing and nanotechnology, aerospace propulsion and safety, specialty chemicals industry, research laboratories, emergency response

## Portables

Single or multi-gas and other premium detectors with compact, lightweight designs ranging from simple alarm only units to advanced, fully configurable and serviceable instruments

- » Applications: underground utility and electricity ducts, boiler rooms, post-fire sites, sewers, industrial plants, industrial hygiene, first responder teams, remote fleets



## Technical Services

24/7 global network includes post-sales service and Systems Integration teams

- » Emergency call out, service contracts, on/off-site repair, training and commissioning
- » Complete range of spares, consumables and accessories

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