



# Manning Airscan™ IRF9 SPECIFICATIONS

## Refrigerant, Ammonia and Carbon Dioxide Detector

| General Specification        |                                                                                                                                                                                                                                                                                           |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Use</b>                   | Infrared (diffusion) type sensor that works in conjunction with any Honeywell Analytics Manning readout or alarm unit. This detection platform can monitor for ammonia, carbon dioxide, and a number of refrigerant gases. The IRF9 satisfies AB32 California code and is CARB compliant. |
| Common Operation             |                                                                                                                                                                                                                                                                                           |
| <b>Gases Monitored</b>       | R-404a, R-22, R-507a, R-514a, R-134a, R-407a, R-410a, R-422d, HFO-1234yf, HFO-1234ze, HFO-1233zd, NH <sub>3</sub> , CO <sub>2</sub>                                                                                                                                                       |
| <b>Gas Sampling</b>          | Diffusion method with no moving parts, real time continuous monitoring of all points                                                                                                                                                                                                      |
| <b>Output</b>                | Linear 4/20 mA output into a load resistor of 500 ohm maximum                                                                                                                                                                                                                             |
| <b>Accuracy</b>              | +/- 3% full scale                                                                                                                                                                                                                                                                         |
| <b>Repeatability</b>         | +/- 1% full scale                                                                                                                                                                                                                                                                         |
| Operational                  |                                                                                                                                                                                                                                                                                           |
| <b>Humidity</b>              | 0-100% RH (condensing)                                                                                                                                                                                                                                                                    |
| <b>Operating Temperature</b> | Standard: -30°C to +60°C / -20°F to +140°F<br>ATMOS: -40°C to +60°C / -40°F to +140°F<br>Superheat: -50°C to +60°C / -60°F to +140°F                                                                                                                                                      |
| <b>Storage Temperature</b>   | -28°C to +60°C / -20°F to +140°F                                                                                                                                                                                                                                                          |
| Common Module                |                                                                                                                                                                                                                                                                                           |
| <b>Cable Recommendation</b>  | Three conductor, stranded shielded cable with drain wire, all enclosed in a vinyl jacket. For cable runs up to 200 feet, use 18# AWG (Belden #8770 or equivalent).                                                                                                                        |
| <b>Power Source</b>          | 24 Volts DC regulated, 1.2 amp max.                                                                                                                                                                                                                                                       |
| <b>Repeatability</b>         | +/- 1% full scale                                                                                                                                                                                                                                                                         |
| Sensor Specifications        |                                                                                                                                                                                                                                                                                           |
| <b>Response Time</b>         | T90 = 10 seconds<br>with full-scale calibration gas @ .75 litres/min. flow rate                                                                                                                                                                                                           |
| <b>Ranges</b>                | R Gases: 0-500 ppm, 0-1,000 ppm, 0-3,000 ppm<br>CO <sub>2</sub> : 0-1%, 0-3%; NH <sub>3</sub> : 0-2%, 0-4%                                                                                                                                                                                |
| <b>Sensor Viability Test</b> | SensorCheck, an internal microprocessor determines the sensor's electrical viability every 24 hours. If the viability test fails, a 0.5 mA signal will indicate a fault. An internal light will show if a sensor is dried up or disconnected.                                             |
| <b>Enclosure</b>             | 16 gauge painted steel or stainless steel. NEMA 4, UL 508 listed, CSA certified for use with industrial control equipment.                                                                                                                                                                |
| <b>Weight</b>                | 4.4 lbs.                                                                                                                                                                                                                                                                                  |

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