Infrared Refrigerant Gas Detector

MGS-250

FEATURES	BENEFITS
Infrared Sensor Technology	Minimise false alarms from cross-interference from other gases, temperature and humidity
On-board Audio-visual Alarms	Enable compliance with regulatory standards, including ASHRAE 15 and EN 378
Modbus, 4-20mA output & alarm relay	Integrate with BMS / control systems to initiate action when a leak is detected
Digital Display Screen	Easy user interface for configuration and set-up
Self-diagnostics	Enhanced troubleshooting capability
Minimal Maintenance Requirements	Low cost of ownership
Optional MGS Controller Available	Create an independent, centralised alarm system with up to 6 gas detectors

4 DIGIT LED DISPLAY

Powerful, Easy-to-Use Combustion Analyzer Powered by Tune-Rite®

DESCRIPTION

The Fyrite® INSIGHT® Plus is the perfect tool for busy residential/light-commercial technicians who need to ensure safe operating conditions and determine combustion efficiency. Powered by innovative Tune-Rite® software (patent pending), the industry's first-ever on-demand HVAC "assistant," the INSIGHT® Plus helps both new and seasoned technicians save money by making more thorough and efficient service calls.

The INSIGHT® Plus includes sensors for Oxygen (O_2) and Carbon Monoxide (CO), which includes a built-in NO_x filter. The O2 sensor has a 3 year warranty, while the CO sensor can be replaced in the field without down time using B-Smart® pre-calibrated sensors. The INSIGHT® Plus calculates values like efficiency, CO_2* and CO air-free to help monitor combustion processes effectively and accurately.

*Note: The Fyrite® INSIGHT® Plus calculates CO_2 value based upon other measured values during the combustion process. It does not measure CO_2 directly.

mybacharach.com

TECHNICAL SPECIFICATIONS

PRODUCT ATTRIBUTES	DESCRIPTION
Sensor:	Long-life Non Dispersive Infrared (NDIR); 5-7 year life
Refrigerants Detected:	Broadspectrum: CFC, HFCs, HCFC, HFOs; Specific: R-22, R-134a, R-404A, R-407A, R-407C, R-407F, R-422A, R-422D, R-452B, R-507, R-514A, R-527A, HFO-1234YF, HFO-1234ZE
Range:	0-3,500 ppm
Power Supply	24 VDC, 24 VAC 50/60 Hz, 2.5 W max
Power Monitoring:	Green LED
Display:	Red 4-digit alpha-numeric LED display
Visual Alarm:	Red 4-digit LED display
Audible Alarm:	Buzzer (audible alarm), enable / disable
Fault Monitoring:	Fault codes presented to user
Analog Outputs:	4-20 mA; 0-5 V; 0-10 V; 1-5 V; 2-10 V
Relay:	1 relay rated 1 A @ 24 VAC / VDC (0.5 A, 125 V AC UL rating)
Communication:	Modbus RTU over RS-485
Baud Rate:	9,600 or 19,200 (selectable)
Start Bits:	1
Data Bits:	8
Parity:	None, odd, even (programmable)
Stop Bits:	1 or 2, programmable
Retry Time:	500 ms (min time between retries)
End of MSG:	Silent 3-5 characters
Alarm Delay:	Selectable; 0 to 15 minutes
Response Time, T90:	5 minutes
Temperature Range:	-22 to 104°F (-30 to 40°C)
Humidity Range	5-90% relative humidity, non-condensing; 0-10,000 ft. altitude
Approvals:	CE, UL/CSA/IEC/EN 61010-1
Dimensions & Weight	4.0" x 5.5" x 1.5", 6.3 oz.	102 mm x 140 mm x 37 mm, 180g

COMMON CONFIGURATIONS

PART NUMBER	DESCRIPTION
6401-0500	Infrared Halocarbon Detector, Broadband Version
6401-0501	Infrared R-22 Detector
6401-0503	Infrared R-134a Detector
6401-0504	Infrared R-404a Detector
6401-0505	Infrared R-407a Detector
6401-0507	Infrared R-407f
6401-0508	Infrared R-410a
6401-0512	Infrared R-507 Detector
6401-0514	Infrared HFO1234ZE Detector

PRODUCT ATTRIBUTES	DESCRIPTION
Measurements	
O_2	20.9%
CO (w/ integrated NO_x filter)	0 to 4,000 ppm
Stack Temperature	-4 to 1,202°F (-20 to 650°C)
Primary / Ambient Air Temperature	-4 to 600°F (-20 to 316°C)
Draft / Differential Pressure	±40 inH_2O (±10 mbar)
Display	2.8 in. (72 mm) color LCD w/ backlight
Power	4x AA batteries or optional USB wall adapter
Run Time	15 hours minimum (alkaline batteries)
Size (H x W x D)	8.0 x 3.6 x 2.3 in. (20.3 x 9.1 x 5.8 cm)
Weight	1 lb. (0.45 kg) including batteries
Fuels[1]	Natural gas, coal, oil 2/4/6, wood, kerosene, propane, butane, LPG, B5, KOKS, LEG, biofuel, + 2 optional custom fuels
Operating Conditions	23 to 113°F (-5 to 45°C), 15 to 90% RH (non-condensing), 1 ATM ±10%
Warm-Up Time	30 to 60 Seconds
Memory	100 locations
Communications	USB 2.0 (mini-B), IrDA
Approvals	CE mark, EN 50379-1 & -3
Warranty	2 years (including Sensors) 3 years for long-life O_2 sensor, if equipped