



Chillgard[®] L-Series Refrigerant Monitors

Specifications

Chillgard[®] LS Refrigerant Sensor Module	
DESCRIPTION	PRODUCT OFFERED
Manufacturer	MSA
Model Number	Chillgard LS Sensor Module
Principle Of Operation	Photoacoustic Infrared gas detection
Detected gases	R11, R12, R22, R123, R134a
Detection range	0-1000 ppm
Enclosure	Wall mounted plastic enclosure – water and corrosion resistant
Sample points	Single-diffusion standard Four-point pump option
Dimensions	Single-point – 7.1" x 10" x 4.25" Four-point – 14.7" x 11.2" x 5"
Weights	Single-point – 5.5 pounds Four-point – 9.5 pounds
Power	24 VAC/DC, 110/220 VAC 50/60 Hz optional
Outputs	4-20 mA and RS-485 Modbus outputs
LEDs	5 status indicators
Approvals	UL fire and shock
Operating Temperature	0 to 40° C
Detection Level	20 ppm
Response time	T50 in less than 60 seconds
Relative Humidity range	0 to 99% RH
Accessories	Calibration box to adjust calibration value Calibration kit with cylinders Unit-mounted strobe Remote light towers

Chillgard[®] LC Control Module

DESCRIPTION	PRODUCT OFFERED
Manufacturer	MSA
Model number	Chillgard LC Control Module
Enclosure	Wall-mounted plastic enclosure – water and corrosion resistant
Dimensions	7.1" x 10" x 4.25"
Weights	5.5 pounds
Power	24 DC standard 24 VAC for powering multiple sensors (optional) 110/220 VAC 50/60 Hz optional
Sensor inputs	Can accept input from up to 8 Chillgard LS Sensor points
Sensor communication	Device communicates with sensors via twisted pair RS-485 Modbus
Outputs	4-20 mA, 0-10V (identifies point being sampled), RS-232 with datalogging
Display	20-position LCD with four push buttons
Alarms	3 software adjustable alarm settings
Relays	4 internal relays indicating fault and 3 levels of alarm. All relays to be Form C SPDT rated for 8 amps at 240 VAC
Alarm relays	Software selectable for normally opened or closed and latching or non-latching
Fault relay	Normally energized to provide loss of power indication
Approvals	UL fire and shock
Operating temperature	0 to 40° C
Relative humidity range	0 to 99% RH
Audible indication	85 db horn standard 100 db horn option
Accessories	Unit mounted strobe Remote light towers

Chillgard® LE Refrigerant Monitor

DESCRIPTION	PRODUCT OFFERED
Manufacturer	MSA
Model number	Chillgard LE Refrigerant Monitor
Principle of operation	Photoacoustic Infrared Gas Detection
Detected gases	R 11, R12, R22, R 123, R134a
Detection range	0 -1000 ppm
Enclosure	Wall-mounted plastic enclosure – water and corrosion resistant
Sample points	Single-diffusion, single-point pumped or four-point pump options
Pumped units	Capable of sampling up to 300 feet with 1/8" id tubing. Appropriate filters are to be available to prevent dust and other particles from entering the sensor.
Dimensions	14.7" x 11.2" x 5"
Weights	9.5 pounds
Power	24 VAC/DC, 110/220 VAC 50/60 Hz optional
Detection level	20 ppm
Response time	T50 in less than 60 seconds
Outputs	4-20 mA, 0-10V(identifies point being sampled), RS-232 with datalogging
Display	20-position LCD with four push buttons
Alarms	3 software adjustable alarm settings
Relays	4 internal relays indicating fault and 3 levels of alarm. All relays to be Form C SPDT rated for 8 amps at 240 VAC
Alarm relays	Software selectable for normally opened or closed and latching or non-latching
Fault relay	Normally energized to provide loss of power indication
Approvals	UL fire and shock
Operating temperature	0 to 40 C
Relative humidity range	0 to 99% RH
Audible indication	85 db horn standard 100 db horn option
Accessories	Unit mounted strobe Remote light towers Calibration kit with cylinders

Maximum System Maintenance Requirements - the system shall require no periodic maintenance other than periodic checking. Periodic checking or adjustments of the unit shall be capable of being accomplished by one person at the unit location.

Manufacturer Capability Requirements - as a minimum, the Gas Monitoring Equipment manufacturer must meet the following requirements:

- a. Be capable of supplying all equipment used to check or calibrate the unit
- b. Be capable of providing on site service with factory trained personnel
- c. Be capable of providing start-up assistance and training for the owner/operator