



CHILLGARD M-100

Photoacoustic Infrared Refrigerant Sensor

MSA's CHILLGARD M-100 Refrigerant Sensor is designed to detect the presence of the most common halogenated refrigerants in cold storage facilities, mechanical equipment rooms and other refrigerant applications. This compact sensor can be mounted almost anywhere to detect potential leaks of halogenated refrigerants. Easy installation ensures fast and practical integration into existing automated systems.

- Low-level detection – down to as low as 20 ppm
- Versatility – capable of operating within a wide temperature and humidity range
- Low maintenance – no moving parts
- Easy installation – simply secure back plate to wall
- Proven photoacoustic infrared refrigerant sensor

Application

- Cold-storage facilities
- Meat-packing plants
- Mechanical equipment rooms
- Solvent-cleaning stations
- Other specialist applications

Ordering Information

CHILLGARD M-100 is available with a number of options including:

- Refrigerant gas detected
- Temperature & Relative Humidity sensors
- Current or voltage analogue output or RS-485 ModBUS digital output
- De-icer option operates at temperatures down to -30°C

Standard Gases*

10086542 R-22 in Nitrogen

10086543 R-123 in Nitrogen

10086544 R-134a in Nitrogen

10086545 R-404a in Nitrogen

*Other gases are available.

CHILLGARD M-100 can be configured for individual requirements. Please contact your MSA representative for ordering details.



Technical Specifications

Dimensions (H x W x D)

115 x 91 x 36 mm

Weight

160 g

Visual Indicators

3 LED's to indicate power, fault and alarm

Operating Power

24 VDC + 20%, 24 VAC + 20%, 50/60 Hz
Class 2, UL 60950/CSA certified

Power Consumption

< 2.7 watts

Wiring

Up to 2.5 mm², Class 2 copper wiring

Output Options

4–20 mA sourcing, < 500 Ω load
2–10 V, 10 kΩ load RS-485 ModBUS RTU

Operating Temperature

0° to 65°C (32° to 150°F),
–30° lower temp. spec. with de-icer option

Relative Humidity (RH)

0–95% RH non-condensing

Pressure

Operating 700–1080 hPa

Operating Range

0–1000 ppm

Limit of Detection

20 ppm

Minimum Alarm

50 ppm

Response Time

50% of a step change in less than 4.5 min

Repeatability

± 10 ppm at 50 ppm

Linearity

0–100 ppm linear,
100–1000 ppm ± 5% of reading

Temperature Sensor

± 0.4°C at 25°C

Humidity Sensor

± 3% RH at 50% RH and 25°C

Standard Gases*

R-22, R-123, R-134a, R-404a

Approvals

Certified to UL to UL Std 61010-1 and CSA 61010, CE approval; complies with the applicable LVD and EMC directives, Complies with detection requirements of ASHRAE 15-2004, EN 50270 Type 2, EN 61000-6-3, EN 61010

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