

MSA Bacharach® X30 Refrigerant Monitor

Safety Compliance in Refrigeration Applications



Description

The MSA Bacharach® X30 Refrigerant Monitor simplifies compliance with refrigeration safety codes, helping you save time and reduce installation costs. With intuitive app-based setup and maintenance, users can easily commission and manage their gas detection system—no specialized training or tools required. Pre-calibrated sensor modules make upkeep fast and hassle-free, eliminating the need for calibration gas.

Installers benefit from a streamlined housing engineered for fast, intuitive installation and effortless operation. Including daisy-chained power and Modbus communication, enabling seamless integration into building management systems (BMS/BAS).

Features

Benefits

Mobile App Interface	Simplifies commissioning, configuration, and maintenance—no specialized training or tools required to set alarm behaviors or thresholds.
Pre-calibrated Sensors	Reduces maintenance time and costs through streamlined procedures.
Semi-automated Calibration	User-friendly setup—no need for potentiometers or voltmeters.
Temperature-compensated Measurement or Gas Specificity	Enhances reliability by reducing false alarms and enhances detection accuracy in refrigeration environments. Benefit from out of the box gas versatility or gas-specific calibration.
Digital Communications	Seamlessly integrates with BMS/BAS control systems via Modbus protocol.
Audible and Visual Alarms	Supports ASHRAE 15 and EN378 indication requirements—no extra hardware or accessories needed
Multiple Cable Entries and Terminals	Fast and straightforward wiring installation with daisy-chained power and digital communication.
Low-temperature Performance	Designed for all refrigeration environments—including machinery rooms, cold storage, and walk-in freezers—while maintaining reliable performance down to -40°F (-40°C).

MSA Bacharach® X30 Refrigerant Monitor



Product Attributes	Description	Definition
GAS AND RANGES	Refrigerants (Semiconductor) — includes R-290	1,000 ppm
	CO ₂	5,000 / 10,000 / 20,000 ppm
STATUS INDICATOR	Single tri-color LED (green, red, orange) per Channel	
BUZZER	>90 dB @ 4" (10 cm)	
OUTPUT	Analog or Digital	1x Analog Output (4 to 20 mA, 1 to 5 V, 2 to 10 V), Modbus RTU digital output
POWER SUPPLY	24 VDC ± 20% 24 VAC ± 20%, 50/60 Hz	
RELAY	1 Relay, DPDT, 24 VAC/DC, 2A max	
ENCLOSURE	IP66	
SIZE (WXHXD) APPROX	6.4" x 5.2" x 3" (164x132x76 mm)	
WEIGHT APPROX	13.7 oz (388 g)	
APPROVALS	CE, UL/CSA/IEC/EN 61010-1 <i>*additional information below</i>	
AMBIENT CONDITIONS	Temperature	Semiconductor -40° to 122°F / -40° to +50°C Infrared -40° to 122°F / -40° to +50°C
	Humidity	5 to 90 % RH, non condensing
	Pressure	23.6 to 32.5 inch Hg / 800 to 1,100 mbar

* Note for Approvals Information:

MD 2006/42/EC:

- EN 378-1:2016+A1:2020
- EN 378-3:2016+A1:2020

The following standards were utilized as a guide to satisfy the requirements of the Machinery Equipment Directive:

- ANSI/ASHRAE Standard 15-2022
- ANSI/IIAR CO2 (2012)
- EN 14624:2020 (Indicating Device)
- EN IEC 62990-1:2022 (Response Time)
- UL THC 1498
- FM TD 221:2018

* Note for Response Time:

TEST METHOD PER EN 14624:2020 (THRESHOLD SETTING TO LOW ALARM DEFAULT)

R1234YF, R1234ZE, R290, R32, R448A, R449A, R454A, R454B, R455A, R404A, R407C, R410A, R454C, R507A, R515B	average response time per EN 14624:2020 (≤ 30s)
R1233ZD, R134A, R407A, R513A	average response time per EN IEC 62990-1:2022 (≤ 95s)

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit [MSAsafety.com/offices](https://us.msasafety.com/offices).

