

MCG 1097

WirelessHART Relief Alarm

For terminal operators, EH&S teams, maintenance personnel, and automation engineers who need reliable visibility into tank pressure-relief events without installing new wiring, the MCG 1097 provides a fully wireless, battery-powered relief alarm that integrates seamlessly with modern control systems. It delivers real-time notification when pressure, vacuum, or overflow vents open, and continuously reports device and battery status using WirelessHART. Unlike traditional wired alarms that require conduit, trenching, or costly engineering work, the MCG 1097 installs directly at the vent point and communicates through the MCG 7030 Touch Panel Alarm Monitor and MCG 5200 WirelessHART Gateway for simple DCS/PLC/SCADA connectivity. Its rugged design, extended-life lithium battery, and built-in diagnostics ensure dependable operation across harsh terminal and tank-farm environments. By eliminating wiring, improving operator safety, and providing continuous insight into vent activity, the MCG 1097 enables safer operation, easier compliance, and reduced maintenance for new and existing storage facilities.



Key Features

Wireless Installation

Eliminates all wiring and conduit, allowing rapid deployment on new or existing tanks while significantly reducing project engineering, installation time, and overall system cost.

Real-Time Vent Alerts

Transmits immediate notification when pressure, vacuum, or overflow devices lift, giving operators actionable insight to prevent unsafe conditions and product loss.

Continuous Device Monitoring

Reports battery condition and abnormal states continuously, ensuring operators always know device health and can respond proactively before failures occur.

Seamless System Integration

Communicates directly with the MCG 7030 and MCG 5200, enabling simple connectivity to DCS, PLC, and SCADA platforms without additional hardware.

Long-Life Power Design

Uses an extended-life lithium battery engineered for at least one year of operation, minimizing intervention and ensuring dependable field performance.

Hazardous-Area Ready

Compact, rugged construction supports use at tank vents and relief points in demanding industrial environments where safety and reliability are essential.



Typical Applications



VAPOR PRESSURE RELIEF

Detects and reports pressure vent activity, helping prevent tank overpressure events and enabling faster operator response during abnormal conditions.



VACUUM RELIEF EVENTS

Monitors vacuum vent openings to protect tanks from structural damage caused by rapid pressure drops during emptying or thermal contraction.



LIQUID OVERFLOW INDICATION

Alerts operators when liquid reaches overflow vents, reducing spill risk and helping facilities maintain environmental and regulatory compliance.



BLANKET GAS FAILURES

Identifies inert gas blanket loss or valve malfunction, enabling quick corrective actions to maintain safe tank conditions.



VENT ACTIVITY TRENDING

Provides continuous venting data for operational insight, helping identify recurring pressure issues before they develop into safety concerns.



REMOTE TANK MONITORING

Supports tanks located far from control rooms by providing wireless relief status without requiring personnel to manually inspect vent conditions.

Benefits



Improved Safety Compliance

Delivers real-time relief activity data that eliminates uncertainty and supports audit-ready reporting for API and environmental requirements.



Lower Installation Costs

Wireless design removes the need for pulling cable or installing conduit, reducing total project time, engineering labor, and material expenses.



Reduced Operator Exposure

Remote visibility minimizes manual tank climbs and vent inspections, enhancing safety and reducing time spent in hazardous areas.



High Reporting Reliability

Proprietary algorithms ensure fast, accurate alarm transmission and battery status updates for dependable monitoring in field conditions.



Flexible System Integration

Works seamlessly with MCG 7030/5200 systems or external host platforms, enabling easy incorporation into new or existing architectures.



Long-Life Field Operation

Extended-life battery and rugged enclosure support continuous service with minimal maintenance, lowering lifecycle costs across tank farms.



Technical Specifications & Key Features

Communication:	WirelessHART
Power Supply:	Lithium battery (≥1 year life); optional 24 VDC supply
Outputs:	Alarm condition + battery status transmitted wirelessly
Integration:	Pairs with MCG 7030 Touch Panel Monitor & MCG 5200 Gateway; connects to PLC/DCS/SCADA
Enclosure:	Compact, rugged design suitable for hazardous areas
Applications:	Pressure relief, vacuum relief, overflow, and blanketing failure monitoring

Typical System Layout

Figure 1

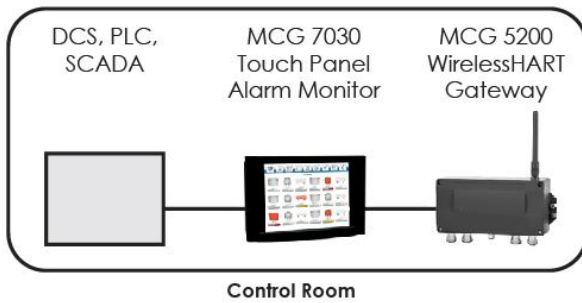
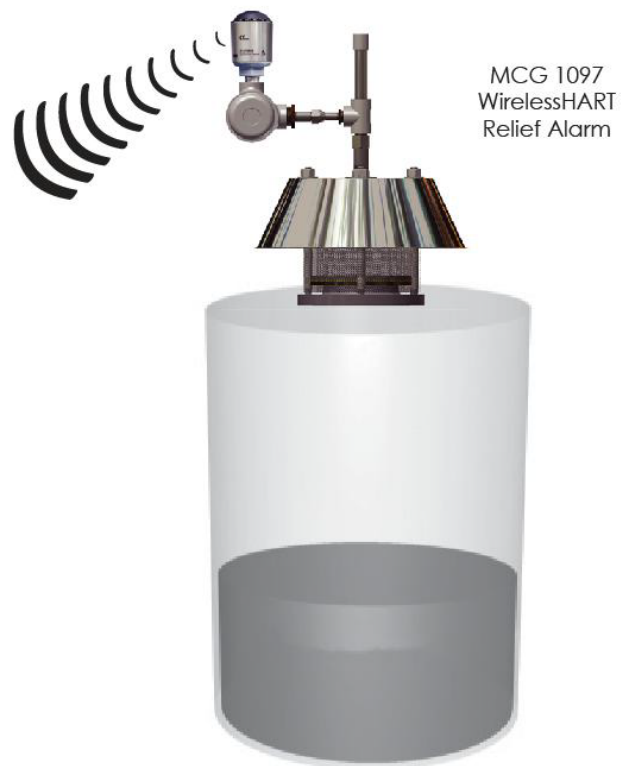
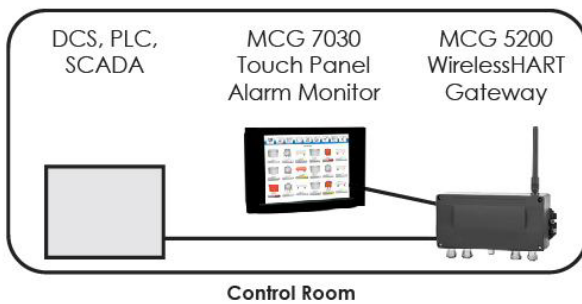


Figure 2





Model Number Selection

The model number will consist of a base number MCG 1097 followed by 1 digit.
This digit will represent 1 option table:

A • ACOMMUNICATION	
2	WirelessHART

B • POWER	
0	Battery
1	24 VDC

Summary

L&J Engineering brings over 100 years of expertise in tank safety and monitoring. The MCG 1097 embodies this legacy by delivering reliable, real-time WirelessHART monitoring of pressure, vacuum, and overflow vent activity, helping facilities improve safety, reduce installation cost, and modernize relief-event visibility without running new wiring. Its long-life battery, continuous diagnostics, and seamless integration with L&J monitoring systems make it a dependable upgrade for terminals seeking safer and more efficient tank-vent monitoring.

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