

MCG 820063

Intelligent Field Interface Card (IFIC)

Terminal operators, automation engineers, control-room supervisors, and EPC specifiers running L&J Field Interface Card Racks need diagnostic visibility into field-side health — voltage, current, temperature, and Tankway activity — without dispatching a tech to the field every time something looks off. The MCG 820063 Intelligent Field Interface Card (IFIC) adds an onboard microprocessor and OLED display to the standard FIC slot, monitoring those parameters in real time and streaming them to the MCG 3900 Gauging System for control-room visibility. Selectable field voltage and current limits, integrated surge protection, and per-branch electrical isolation protect control-room equipment. Unlike conventional FICs that simply pass signals, the IFIC plugs into existing 3210i racks for an in-place intelligence upgrade — extending system life rather than triggering a rack replacement.

Key Features

Intelligent Field Diagnostics Onboard microprocessor monitors voltage, current, temperature, and Tankway activity, delivering real-time diagnostic data to the MCG 3900 system.	Selectable Field Power Field voltage and current limits are selectable, allowing optimization for different field wiring conditions while protecting connected devices.	Branch Isolation Protection Electrical isolation prevents faults or wiring issues on one branch from impacting other connected field devices.
Integrated Surge Protection Built-in surge suppression and miswire protection safeguard sensitive host equipment from transient field events.	High Device Capacity Supports up to 128 field devices per card, enabling scalable expansion without additional interface hardware.	Direct System Integration Communicates diagnostic and status data directly into the MCG 3900 Gauging System for centralized visibility.



Typical Applications



TANK FARM INTERFACES

Connects multiple gauges, transmitters, and RTUs to centralized host systems with reliable Tankway communication and diagnostic visibility.



REFINERY INSTALLATIONS

Provides protected signal handling and isolation for hazardous-area field devices in large refinery tank gauging systems.



CONTROL ROOM PROTECTION

Shields host systems from field surges, wiring faults, and overcurrent conditions that could disrupt operations.



SYSTEM EXPANSIONS

Adds capacity for additional field devices while maintaining stable communication and power distribution.



RACK UPGRADES

Drop-in replacement for legacy FIC cards in existing L&J interface racks, improving reliability and diagnostics.



PREDICTIVE MAINTENANCE

Field current and voltage trending identifies wiring degradation or moisture issues before failures occur.

Benefits



Improved Reliability

Intelligent monitoring and isolation reduce communication faults and prevent single-point failures across field networks.



Enhanced Equipment Protection

Surge suppression and selectable current limits protect host systems from damaging field electrical events.



Operational Visibility

Real-time diagnostics displayed locally and in the MCG 3900 system improve troubleshooting speed and accuracy.



Scalable Architecture

High device capacity supports system growth without additional interface cards or complex reconfiguration.



Energy Efficient Design

Reduced heat generation and efficient power handling improve long-term system stability and component life.



Simple Upgrades

Plug-in card format allows fast replacement or retrofit without rewiring or rack modifications.



Technical Specifications & Key Features

Compatibility	MCG 3210i Intelligent Field Interface Card Rack
Communication:	Tankway protocol; RS-232 host port option
Capacity:	Up to 128 field devices (gauges, transmitters, RTUs) per board
Branch Design:	4-wire data highway; isolated field wiring branches
Protection:	Surge suppression, miswire protection
Power Handling:	Provides regulated field power and communication voltage levels
Diagnostics:	Intelligent monitoring of field connections and status
Construction:	Plug-in card design for easy upgrade/maintenance

Dimensions

Typical System Layout



Model Number Selection

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Summary

Backed by Cognesense’s century-long legacy in tank measurement and safety, the MCG Intelligent Field Interface Card (IFIC) strengthens system reliability by combining secure power distribution, advanced surge protection, and intelligent monitoring. With support for large device counts and integration into the MCG 3900 Gauging System, the IFIC ensures data integrity, system scalability, and operational peace of mind — making it an essential backbone for modern tank gauging installations.

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