

Fusion4 Multistream Controller Additive

Unmatched control for additive injection



Global Terminal Experience Locally Applied

Additive injection is a critical part of the petroleum terminal business requiring high levels of safety, precise measurements, complete control, and accurate recording of added volumes. Fusion4 MSC-A controls up to 24 additive streams simultaneously, communicating with up to six preset controller devices or SCADA HMI/TAS control systems for injection management.

A Better Solution

Multiple Masters

Communicates simultaneously with up to six master devices, such as load computers, facilitating whole-bay injection management.

Rapid Start-Up

Enabled by the Calibration Wizard and 60-second configuration. Configurable, expandable I/O and scalable functionality using MSC-A expansion packs.

Huge Transaction Archives

Stores up to 240,000 transaction records.

Advanced Alarm Handling

Monitor injection control parameters and alarm page on large 8-inch color display.

Real-Time Diagnostics

Multiple diagnostics dashboards (stream, I/O type, system health, Ethernet and serial Communications) and switch-count register for every I/O.

With over 80 years of innovative measurement solutions experience, Guidant is an industry leader offering the most advanced measurement solutions portfolio on the market.

The Fusion4 Multistream Controller Additive (MSC-A) is an intelligent, hazardous-area additive injection controller with state-of-the-art technology for high-accuracy additive injection applications in the global oil storage and distribution industry. This advanced controller features the highest input/output count available, which enables exceptional functionality and unrivalled additive-stream control. This advanced controller features the highest input/output (I/O) count available, which enables exceptional functionality and unrivalled additive stream control.

The Fusion4 MSC-A manages injections by automatically correcting the additive injected volume across injection cycles. It continuously monitors additive volumes in up to 24 streams and ensures on-spec additive delivery in every transaction.



Take Control of Your Additive Operations

Precision by Design

Precision is about smart compensation to overcome momentary line pressure changes. MSC-A monitors more critical operational parameters than any other device, so you know as soon as the precision of your additive operation is compromised.

Connectivity Is Key

MSC-A includes a wide range of built-in protocol libraries and communication network capabilities. Supporting up to seven serial and three Ethernet ports, it integrates seamlessly with industry-standard systems like TAS, DCS, PLC, SCADA HMI, or third-party batch controllers to enable connectivity and protect your existing investments.

Flexible I/O and Interfacing

The Fusion4 MSC-A enables you to assign functions to any input or output with configurable I/O. Flexible interfacing is possible using the LAD, which can copy and paste a configuration file to and from any other MSC device. The LAD also facilitates two-way data communications with the Fusion4 MSC-A, ensuring rapid, secure transfer of transaction data, calibration records, and firmware upgrades without opening the device enclosure.

Smart Calibration and Diagnostics

The Fusion4 MSC-A also includes a calibration wizard designed to automatically capture every calibration record (including time stamps, calibration volumes, K-factor corrections, and even meter serial numbers) for greater traceability and security.

Multiple diagnostic dashboards are available for complete hardware and communications monitoring from a single screen to improve reliability and reduce maintenance time.

Efficient Configuration and Updates

Configure your new Fusion4 MSC-A in less than 60 seconds with the smart, handheld Local Access Device (LAD) for a faster, more efficient start-up, and use the LAD again to update firmware live in the field, boosting productivity.

You won't need to power down, open, and exchange EPROMs in the Fusion4 MSC-A.

The Information Age

If precise control is at the heart of the Fusion4 MSC-A, then information is in its DNA.

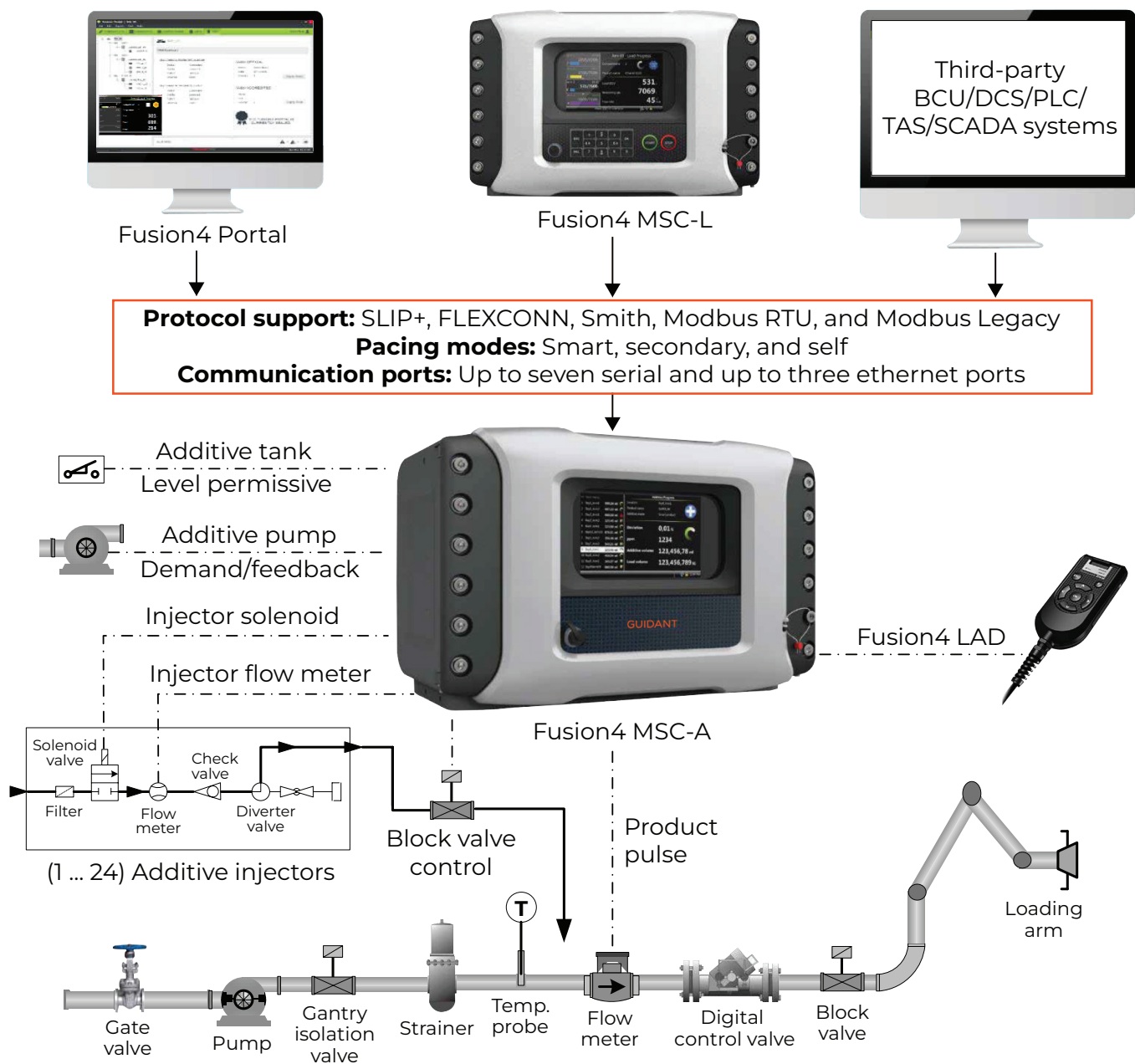
At every level, the MSC-A collates, displays, archives, and distributes an unparalleled level of system information, equipping you to make the right operational and business decisions for your site. Control optimization, transaction traceability, calibration security, and enhanced diagnostic tracking are all facilitated by this advanced level of data, leaving you without a shred of doubt about the effectiveness of your additive operations.

Multiple Language Support

Dutch, English (US and UK), French, German, Italian, Japanese, Mandarin, Spanish, Polish, and Portuguese language choices are available for loading progress screens.

Full System Control

With modular expansion pack upgradability, the MSC-A has the I/O capability to manage all peripheral system elements, such as pump starting, tank level monitoring, block valve control, and system pressure and temperature monitoring.



Graphic representation showing a basic setup of the additive controller. Additional interfaces might be needed based on site requirements.

Superior Application Flexibility

Fusion4 MSC-A offers comprehensive interfaces for the additive injection application. The capabilities detailed here are available for each of the 24 supported additive streams.

Application Type	Basic	Standard	Advanced
Functionalities	Requires basic I/O and functionalities	Requires more I/O and minimal functionalities	Requires complete I/O and functionalities
Additive flow pulses • Hard wired	✓	✓	✓
Solenoid control • Hard wired	✓	✓	✓
Additive volume output • Hard wired • Comms	✓	✓	✓
Permissive enable • Hard wired • Comms • Fusion4 LAD or IR	✓	✓	✓
Alarm reset • Hard wired • Comms • Fusion4 LAD or IR	✓	✓	✓
Alarm indication • Hard wired • Comms	✓	✓	✓
Alarm shutdown • Hard wired • Comms	✓	✓	✓
Pump start • Hard wired		✓	✓
Pump feedback • Hard wired		✓	✓
Start clean arm • Hard wired • Comms		✓	✓
Inject-now signal • Hard wired • Comms		✓	✓
Injection recipe (b/w batches) • Comms • Fusion4 LAD or IR		✓	✓
Self-paced • Configurable timer			✓
Injection feedback • Hard wired			✓
Analog additive volume output • Hard wired			✓
External solenoid or block valve control • Hard wired			✓
System interlock • Hard wired • Comms			✓
Tank empty • Hard wired			✓
Tank low level • Hard wired			✓

A Smarter User Interface

Fusion4 MSC-A offers a unique user experience built for the way people work. Comparable to smart phone and tablet screens, the unit's self-explanatory icons ensure easy access to all operations and functions.

M - Main Menu		Main Menu	
1	BAY1 ARM1	37.33 ml	
2	BAY2 ARM2	41.33 ml	
3	BAY3 ARM3	38.67 ml	
4	BAY4 ARM4	40.00 ml	
5	BAY5 ARM5	40.00 ml	
6	BAY6 ARM6	38.67 ml	
7	BAY7 ARM7	40.00 ml	
8	BAY8 ARM8	40.00 ml	
9	BAY9 ARM9	52.00 ml	
10	BAY10 ARM1	38.67 ml	
11	BAY11 ARM1	37.33 ml	
12	BAY12 ARM1	41.33 ml	
LAD Functions		15:08:26	

M - Main Menu		Laatste Transactie	
1	BAY1 ARM1	6.40 ml	
2	BAY2 ARM2	8.80 ml	
3	BAY3 ARM3	10.33 ml	
4	BAY4 ARM4	10.60 ml	
5	BAY5 ARM5	10.73 ml	
6	BAY6 ARM6	10.33 ml	
7	BAY7 ARM7	10.93 ml	
8	BAY8 ARM8	10.33 ml	
9	BAY9 ARM9	10.27 ml	
10	BAY10 ARM1	10.87 ml	
11	BAY11 ARM1	8.30 ml	
12	BAY12 ARM1	10.37 ml	
		Dagtotalen	
		Aantal trans.	0
		Totaal volume	0 L
		10:28:33	

Features and Benefits

- The events log stores 2,000 entries, recording key events on each device to enhance security, such as sealing or operator logins
- The last 1,000 calibration records are stored for robust auditing of loading arm proving operations
- The Calibration Wizard minimizes proving downtime for automated proving process and record capture
- The diagnostics dashboard provides a real-time operational overview of all device inputs and outputs
- You can import device configurations for rapid device start-ups in under a minute, in the field via LAD or remotely via the Fusion4 Portal
- The modular I/O allow plugin upgrades the system in comprehensive, efficient steps
- On-device configurable I/O enables device functionality to be reassigned at will to accommodate new system setups
- Device firmware is upgradable without opening the enclosure or powering down
- SMART additive injection volume corrections during a transaction ensure absolute on-spec additive delivery

Discover More Products in the Fusion4 Portfolio

Fusion4 MultiPak

Fusion4 Multipak is a complete, off-the-shelf additive solution that integrates the industry's most-used additive injection block—Mono-Block—with an additive injection skid for the most complex applications.

Fusion4 MultiPak is the perfect solution for a number of chemical dosing applications, including truck loading additives, rail loading additives, and aviation fuel additive operations. The Fusion4 MultiPak station integrates additive injector panels with the Fusion4 MSC-A on a free-standing frame, providing rapid installation and reduced commissioning time.



Fusion4 Portal

The Fusion4 Portal software suite brings together wide-ranging remote monitoring and supervisory capabilities for all Fusion4 devices in a single, integrated dashboard.

Available as a modular package, you can bundle the functional modules you need to print transactions (bills of lading), monitor real-time audit trails, and optimize settings to get your operations up and running quicker.



About Guidant

As the undisputed leader in liquid and gas custody transfer solutions with the largest global install base, Guidant's legacy is built on more than 80 years of expertise, accuracy, reliability, and best-in-class technologies. We are a private company focused on the measurement solutions business, serving emerging and established energy markets across the globe.

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