



GUIDANT

# Fusion4 Single Stream Controller

The most advanced injection and blending controller on the market



# Injection and Blending Control

The Fusion4 Single Stream Controller (SSC) combines the most advanced hardware with the most intuitive, efficient, and accurate controller on the market for precise single-stream additive injection and blending.

Benefit from intelligent features like modular input/output (I/O) for scalable functionality, the Diagnostics dashboard for rapid fault finding, the Calibration Wizard for automated weights and measures (W&M) calibration records, and multiple language support. Meanwhile, the optional local access device (LAD) adds even more enhanced security and functionality.

## A Better Solution

### Multiple Language Support

English (US and UK), Mandarin, Japanese, French, Spanish, Portuguese, Italian, Dutch, German, and Polish

### Rapid Start-Up

With the Calibration Wizard and 45-second configuration

### Zero-Downtime

Firmware upgrades live in the field with the LAD

### Configurable, Expandable I/O

For flexible operations and easy start-up

### Huge Transaction Archives

Up to 10,000 transaction records

### Advanced Alarm Handling

Monitor nearly twice as many injection control parameters than any other device

### Real-Time Diagnostics

From the diagnostics dashboard



# Keeping You In Control

## Precision by Design

The Fusion4 SSC controls the industry-standard MonoBlock metering manifold or third-party metering hardware. It is designed exclusively to manage chemical injection or blending operations and continuously monitor the correct additive or blending volume, ensuring the ratio is correct at every point in the transaction. Every dosing adds the precise amount needed to maintain the ratio, providing unmatched accuracy, reducing giveaways, and saving you money.

## A Standard Platform for More Efficient Operations

The Fusion4 SSC is the first controller with identical hardware and different firmware used to implement blending and additive control. A common platform for both means more efficient maintenance, a lighter inventory for spares, and quicker training for personnel.

## Simple Configuration and Updates

Configure it from new in less than 45 seconds with the optional smart, hand-held LAD for a quicker, more efficient start-up, and use the LAD later to update firmware live in the field, boosting productivity.

## Flexible I/O and Interfacing

Assign functions to any input or output with configurable I/O. Flexible interfacing is possible with the Fusion4 MSC-L or Fusion4 Portal software. See [Fusion4 Portal brochure](#) (SB06308) for more information. It also supports standard communication protocols, such as Modbus for interfacing.



## Smart Calibration and Diagnostics

The Fusion4 SSC includes the Calibration Wizard to automatically capture every calibration transaction—including timestamps, calibration volumes, k-factor corrections, and even meter serial numbers—for greater efficiency. The Diagnostics dashboard provides complete hardware monitoring from a single screen, helps boost reliability, and reduces maintenance.

## Live Data Transfer

The optional LAD facilitates two-way data communications between the Fusion4 SSC and the LAD, enabling rapid, secure transfer of transaction data, configuration files, and calibration records. Simple to configure and maintain, the Fusion4 SSC is also compatible with a handheld infrared controller for adjusting parameters, resetting alarms, and calibration.

## Power Logging

The Fusion4 SSC can store up to 10,000 transaction logs, 128 alarm logs, and 100 calibration logs.

Advanced alarm handling monitors nearly twice as many control parameters than any other device, while its 3.5" Quarter Video Graphics Array (QVGA) full-color screen clearly annunciates and differentiates all alarm conditions.

# Options to Suit Your Operation

## Meets the Most Rigorous Global Safety Requirements

Our controller hardware is certified to be installed in hazardous areas classified as Class I, Division 1 by National Electrical Code (NEC) standards or Zone I by International Electrotechnical Commission (IEC) standards. In addition, it carries multiple agency approvals, such as ATEX, IECEx, UL-Brazil, PESO, FM, and CSA, ensuring that it meets the most rigorous safety requirements globally.

## Versatile Controller

Our versatile controller can be ordered with an optional I/O board, with or without an enclosure,

## Field Entry Plugs and Breather Drains

Optional Ex d–certified blanking plugs and breather drains can be supplied to secure all unused cable entries after installation.

## Fusion4 LAD

The Fusion4 handheld controller can be used for a variety of tasks—such as adjustment of parameters, resetting alarms, and calibration of the injector.

The LAD increases functionality and simplifies the SSC interface, enabling easy adjustment and two-way data communications between the SSC and the LAD for rapid transfer of transactional data, configuration files, and calibration records, as well as firmware upgrading in the field. A removable Secure Digital (SD) card makes safe area transfer of data easy.



# Technical Specifications

| Ex Safety Approvals            |  |  |
|--------------------------------|--|--|
| Region                         | Protection   | Certificate  |
| ATEX (EU)                      | II 2 G Ex d [ia] IIB T6 Gb   | KEMA 10ATEX0095X                                   |
| IECEX (International)          | Ex d [ia] IIB T6   | IECEX KEM 10.0044X                                 |
| FM (USA)                       | Class I, Division 1, Groups C and D T6   | FM17US0199   |
| CSA (Canada)                   | Class I, Division 1, Groups C and D T6, Zone 1 Ex d [ia] IIB T6  | File Number 305885                                 |
| UL Brazil (Brazil)             | Ex d [ia] IIB T6   | UL-BR 25.1436                                      |
| PESO (India)                   | Ex d [ia] IIB T6   | Pending  |
| Weights and Measures Approvals |  |  |
| NMi Netherlands                | SSC-A  | TC8779 Evaluation Certificate (Accuracy Class 0.5) |
| NMi Netherlands                | SSC-B  | TC7852 Evaluation Certificate (Accuracy Class 0.5) |
| Environmental                  |  |  |
|                                | SI Units   | Imperial Units                                     |
| Operating Temperature          | -40 to 65 °C   | -40 to 149 °F                                      |
| Storage Temperature            | -40 to 85 °C   | -40 to 185 °F                                      |
| Protection Class               | IP66   | IP66   |
| Humidity                       | 5 to 95% noncondensing   | 5 to 95% noncondensing                             |
| Materials                      |  |  |
| Enclosure                      | Aluminum, painted  |  |
| Entries                        |  |  |
| Cable Entries                  | <ul style="list-style-type: none"> <li>Four M20 and Four M25</li> <li>Four 1-inch NPT</li> </ul>                   |  |
| Electrical                     |  |  |
| Voltage                        | 88 to 264 volts alternating current (VAC) 50/60 Hz   |  |
| Flow Meter Inputs              | <ul style="list-style-type: none"> <li>One 5 kilohertz (kHz) dual input</li> <li>One 5 kHz single input</li> </ul> |  |
| DC Inputs                      | Two configurable   |  |
| AC Inputs                      | Two configurable   |  |
| DC Outputs                     | Two configurable   |  |
| AC Outputs                     | Three configurable   |  |
| Communications                 | One 2-wire or 4-wire RS485   |  |
| Interface                      |  |  |
| Protocols                      | Modbus remote terminal unit (RTU), FlexConn, Smith Meter, Brooks Petrocount  |  |
| Display                        | 3.5-inch QVGA color thin-film transistor (TFT) liquid-crystal display (LCD) screen                                 |  |
| Languages                      | English (US and UK), French, German, Spanish, Dutch, Mandarin, Japanese, Polish, Italian, and Portuguese           |  |
| Weight                         |  |  |
| Unit Weight                    | Approximately 35 pounds (lb)/16 kilograms (kg)   |  |

## Optional LAD

| Options                           | Product Number |
|-----------------------------------|----------------|
| Fusion4 LAD FM                    | 323-1392002    |
| Fusion4 LAD ATEX, IECEX, and PESO | 323-1392004    |
| Fusion4 LAD UL Brazil             | 323-1392005    |

# Modeling Codes for Fusion4 SSC Metric Enclosure

| Characterization Value (CV) |   |              |
|-----------------------------|---|--------------|
| CV 1 through 6              | Product Family  | Availability |
| HELC81                      | Fusion4 SSC-A Controller (additive application)               | ↓            |
| HELC84                      | Fusion4 SSC-B Controller (blend application)                  | ↓            |
| CV 7                        | Enclosure   |              |
| 0                           | Not requested   | .            |
| E                           | SSC Metric enclosure  | .            |
| CV 8                        | Option Board  |              |
| 0                           | Not requested   | .            |
| C                           | Can-option board  | .            |
| CV 9                        | Firmware  |              |
| A                           | Additive  | .            |
| B                           | Blending  | .            |
| C                           | Blending - MID-compliant control                              | h            |
| CV 10                       | Mounting Options  |              |
| 0                           | Not requested   | .            |
| 1                           | MiniPak back plate (no block)                                 | d            |
| CV 11                       | Field Entry Plugs   |              |
| 0                           | Not requested   | .            |
| 1                           | Four M20 Ex d blanking plugs                                  | b            |
| 2                           | Four M25 Ex d blanking plugs                                  | b            |
| 3                           | Four M20 and four M25 Exd blanking plugs (full)               | b            |
| 4                           | Breather only, no plugs                                       | b            |
| 5                           | Four M20 Ex d blanking plugs and breather                     | b            |
| 6                           | Four M25 Ex d blanking plugs and breather                     | b            |
| 7                           | Four M20 and four M25 Ex d blanking plugs (full) and breather | b            |
| CV 12                       | Ex Approvals  |              |
| 0                           | None  | f            |
| A                           | ATEX  | b            |
| B                           | IECEX   | b            |
| C                           | PESO (India)  | b            |
| F                           | UL Brazil   | b            |

## Typical Model Code

| CV    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|
| Value | H | E | L | C | 8 | 1 | E | C | B | 0  | 7  | A  |

## Restrictions

| Restriction Letter | Only Available with Selection |           | Not Available with Selection |           |
|--------------------|-------------------------------|-----------|------------------------------|-----------|
|                    | CV                            | Selection | CV                           | Selection |
| b                  | 7                             | E         |                              |           |
| d                  |                               |           | 7                            | 0         |
| f                  | 7                             | 0         |                              |           |
| h                  | 8                             | C         |                              |           |

# Modeling Codes for Fusion4 SSC NPT Enclosure

| Characterization Value (CV) |  |              |
|-----------------------------|--|--------------|
| CV 1 through 6              | Product Family                                   | Availability |
| HELC85                      | Fusion4 SSC-A Controller (additive application)  | ↓            |
| HELC88                      | Fusion4 SSC-B Controller (blend application)     | ↓            |
| CV 7                        | Enclosure  |              |
| 0                           | Not requested                                    | .            |
| F                           | SSC NPT Enclosure                                | .            |
| CV 8                        | Option Board                                     |              |
| 0                           | Not requested                                    | .            |
| C                           | Can-option board                                 | .            |
| CV 9                        | Firmware   |              |
| A                           | Additive   | .            |
| B                           | Blending   | .            |
| CV 10                       | Mounting Options                                 |              |
| 0                           | Not requested                                    | .            |
| C                           | Spacer plate                                     | .            |
| CV 11                       | Field Entry Plugs                                |              |
| 0                           | Not requested                                    | .            |
| 4                           | Breather only no plugs                           | .            |
| A                           | Two 1-inch NPT Ex d blanking plugs               | g            |
| B                           | Four 1-inch NPT Ex d blanking plugs              | g            |
| C                           | Two 1-inch NPT Ex d blanking plugs and breather  | g            |
| D                           | Four 1-inch NPT Ex d blanking plugs and breather | g            |
| CV 12                       | Ex Approvals                                     |              |
| 0                           | None   | f            |
| D                           | FM   | g            |
| E                           | CSA  | g            |
| F                           | UL Brazil  | g            |

## Typical Model Code

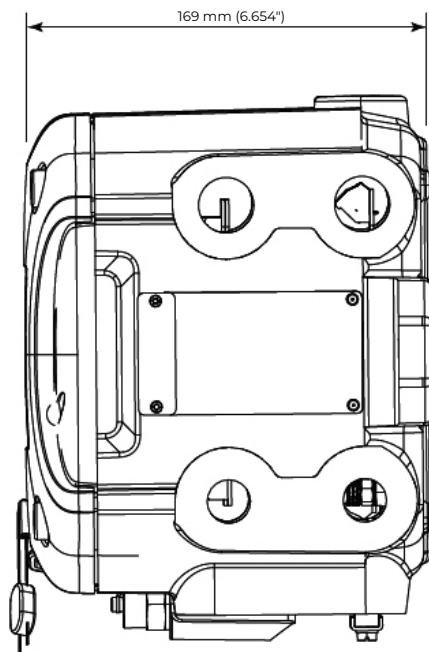
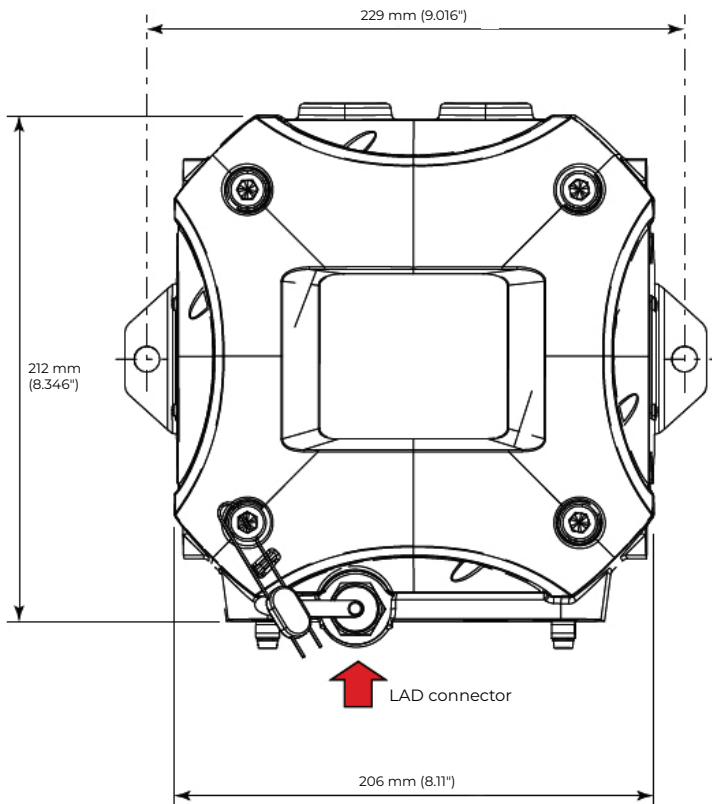
| CV    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|
| Value | H | E | L | C | 8 | 8 | F | A | A | C  | D  | D  |

## Restrictions

| Restriction Letter | Only Available with Selection |           | Not Available with Selection |           |
|--------------------|-------------------------------|-----------|------------------------------|-----------|
|                    | CV                            | Selection | CV                           | Selection |
| F                  | 7                             | 0         |                              |           |
| G                  | 7                             | F         |                              |           |

## Dimensions

Dimensions of the SSC in millimeters (mm) and inches (in parentheses).



## 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 90 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.

### Corporate Website

[GuidantMeasurement.com](https://www.GuidantMeasurement.com)

### Guidant Knowledge Base

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