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 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. 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.

Easy Maintenance

The 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, CCOE, 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, or MID compliance blending control required by European Union (EU) countries.

Field Entry Plugs

An Ex d blanking plug can be supplied with sufficient plugs to secure all unused cable entries following installation.

Enclosure Venting with Breather Drain

Enclosure venting provides an optional breather drain for use where an installation is subject to fluctuations in temperature that can lead to condensation and moisture buildup. Preventing moisture buildup within the enclosure while ensuring the integrity and Ex approval of the installation is maintained, the breather drain also maintains the IP66 rating of the enclosure.

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

APPROVALS	
ATEX	II 2 G Ex d [ia] IIB T6 Gb
IECEx	Ex d [ia] IIB T6
FM	Class I, Division 1, Groups C and D T6
CSA/CUL	Class I, Division 1, Groups C and D T6
MID	Accuracy Class 0.5

ENVIRONMENTAL	ATEX/IECEx	FM/UL
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, chromatized (Class 3)	

CONNECTIONS		
Cable Entries	Four M20 and Four M25	Four 1-inch NPT

ELECTRICAL	
Voltage	88 to 264 volts alternating current (VAC)
Flow Meter Inputs	One 5 kilohertz (kHz) dual input, one 5 kHz single input
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)

OPTIONS	PRODUCT NUMBER
Fusion4 LAD FM	323-1392002
Fusion4 LAD CSA	323-1392003
Fusion4 LAD ATEX and IECEx	323-1392004
Fusion4 IR Controller (UL)	10-31052
Fusion4 IR Controller (ATEX)	10-31052-F4
Fusion4 IR Controller (IECEx)	10-31052-F4X

Model Codes

Fusion4 SSC ATEX

CV 1-6	PRODUCT FAMILY	AVAILABILITY
HELC81	Fusion4 SSC-A Controller ATEX (additive application)	↓
HELC84	Fusion4 SSC-B Controller ATEX (blend application)	↓
CV 7	**ENCLOSURE**	
0	Not requested	·
E	SSC Ex 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	CCOE (India)	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	E		
h	8	C		

Fusion4 Single Stream Controller (SSC) FM

CV 1-6	PRODUCT FAMILY	AVAILABILITY
HELC85	Fusion4 SSC-A Controller FM/UL (Additive Application)	↓
HELC88	Fusion4 SSC-B Controller FM (Blend Application)	↓
CV 7	**ENCLOSURE**	
0	Not requested	·
F	SSC FM 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 FM version	·
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

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-B in millimeters (mm) and inches (in parentheses).

229 mm (9.016")

212 mm (8.346")

206 mm (8.11")

LAD connector

169 mm (6.654")
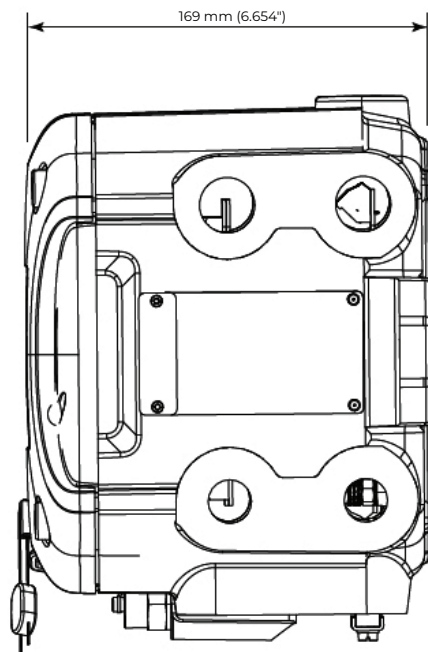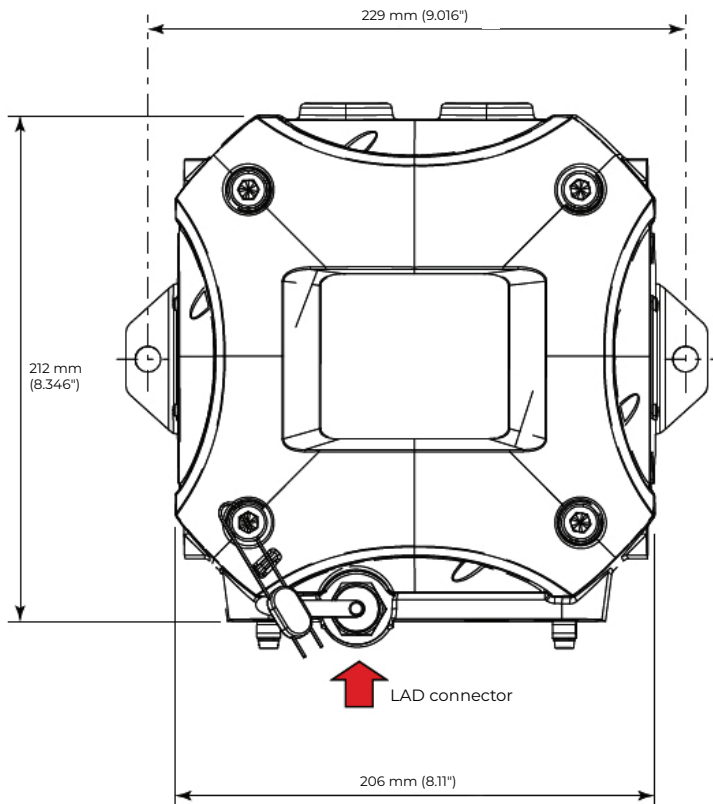
About Guidant

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.

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