



Fusion4 MiniPak

Zero in on accuracy. The Fusion4 MiniPak combines the most advanced hardware with the most intuitive, efficient and accurate controller on the market for precise single stream additive injection. Benefit from intelligent features like modular I/O for scalable functionality, the Diagnostics Dashboard for rapid fault finding, a Calibration Wizard for automated W&M calibration records, and multiple language support. The optional local access device, meanwhile, adds even more enhanced security and functionality.

Global Experience. Locally Applied.



Performance
Enhancing
Additives

Dyes and
Markers

Lubricity
Enhancers

NoX
Reduction
Additives

The Fusion4 MiniPak meets the most rigorous demands for precise additive injection.

Building on decades of experience by pioneers in the field, it's a hazardous area solution for a wide range of applications:

A Better Solution

- **Multiple language support:** English (US), English (UK), Chinese, 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

Trust Us

- Over 60 years experience in terminal operations
- Inventor of the smart additive injection controller
- Solutions for every application
- Local support with global expertise
- A single source provider with wide portfolio

Precision by Design

Fusion4 MiniPak combines the industry standard MonoBlock metering and control manifold with our Single Stream Controller (SSC). This is designed exclusively to manage chemical injection, and continuously monitors the correct additive volume, ensuring the additive ratio is correct at every point in the transaction. Every injection 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

Fusion4 MiniPak is the first additive injection system with identical controller hardware and firmware used to implement blending 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, handheld Local Access Device (LAD) for a quicker, more efficient start-up, and use the LAD again to update firmware live in the field, boosting productivity. There's no need to power down, open, and exchange EEPROMs in the SSC.

Flexible I/O and Interfacing

Assign functions to any input or output with configurable I/O. Flexible interfacing is possible via the LAD and Fusion4 Portal software package. It also supports standard communication protocols such as modbus

Smart Calibration and Diagnostics

The Fusion4 MiniPak also includes a Calibration Wizard to automatically capture every calibration transaction (including time stamps, calibration volumes, k-factor corrections and even meter serial numbers), for greater efficiency. The Diagnostics Dashboard for 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, allowing rapid, secure transfer of transaction data, configuration files and calibration records. Simple to configure and maintain, Fusion4 MiniPak also comes with a handheld infra-red controller for adjusting parameters, resetting alarms and calibration. A Calibration Kit complete with 500ml calibration jar is also available, incorporating a quick release connector, adjustable back-pressure valve, gauge, and isolation valve, for clean, accurate calibration.

Powerful Logging

The SSC can store 10,000 transaction logs, 128 alarm logs and 100 calibration logs. Advanced alarm handling, meanwhile, monitors nearly twice as many injection control parameters than any other device, while its 3.5" QVGA full colour screen clearly annunciates and differentiates all alarm conditions.

Anti Static
Additives

Cold Flow
Enhancers

Anti-foaming
Agents

Anti Icing
Additive

Detergent
Additives

Lead
Replacement

Upgrade Your Injection Control

Options to Suit Your Operation

Suitable for wherever there is a pressurized additive supply with a minimum 3 bar differential between the additive supply pressure and main product flow pressure (with typical additive supply pressure in applications of 10 Bar), Fusion4 MiniPak comes with a range of options.

- Standard flow and low flow injectors: Standard is suitable for all applications between 100 and 3000 ppm (parts per million), with a typical shot size of between 15cc and 200cc, based on typical loading flow rates of 2400 L/min. The low flow injector accommodates applications between 20 and 600 ppm, with a typical shot size of between 3cc and 40cc.
- Inlet and outlet isolation ball valves are available pre-installed on either side of the MonoBlock. 'Quick release' flushing connections fitted between the isolation ball valves and the block, and allowing the decontamination of the MonoBlock prior to maintenance, are also available.
- Ryton (polymer) gears fitted as standard, with stainless steel available where Ryton is chemically incompatible.
- Mounting on an SS back-plate as standard.
- Field entry plugs: Exd blanking can be supplied with sufficient plugs to secure all unused cable entries following installation. All unused bottom entries are blanked as standard.
- Enclosure venting with an optional Breather Drain for use where an installation is subject to fluctuations in temperature that can lead to condensation and moisture build-up. Preventing moisture build-up within the enclosure whilst ensuring the integrity and Ex approval of the installation is maintained the Breather Drain will also maintain the IP66 rating of the enclosure.



Keeping You in Control

The Fusion4 handheld controller can be used for a variety of task such as adjustment of parameters, resetting alarms and calibration of the injector. Our new LAD increases functionality and simplifies the SCC interface, allowing easy adjustment and two way data communications between the SSC and the LAD for rapid transfer of transaction data, configuration files and calibration records, as well as firmware upgrading in the field. A removable SD card makes safe area transfer of data easy.

Technical Specifications

Approvals	MSC	Sensor	Solenoid	
ATEX			II 2 G Ex d [ia] IIB T6 Gb	II 2 G Ex d IIC T6 Gb
IECEX			Ex d [ia] IIB T6	Ex d IIC T6 Gb
FM			Class1 Div1 Group C&D T6	Class1 Div1 Group C&D T6
CSA/CUL			Class1 Div1 Group C&D T6	Class1 Div1 Group C&D T6
				II 2 G Ex m II T3/T5 Gb
				Ex m IIC T3/T5 Gb
				Class1 Div1 Group C&D T3A/B
				Class1 Div1 Group C&D T3A/B
Flow		ATEX/IECEX		FM/CSA
Nominal K-Factor		Standard Flow 750 p/L		Extended Flow 5000 p/USgal
Meter Accuracy		0.50%		0.50%
Meter Repeatability		0.25%		0.25%
Max Flow Rate		11 L/min		2.5 USgal/min
Min Flow Rate		0.1 L/min		0.1 USgal/min
Max Pressure		1.6 MPa		400 psi
Max Viscosity		300 cst.		300 cst.
Environmental				
Operating Temperature		-20 °C to +65 °C (SSC -40 °C to +65 °C)		-4 °F to +149 °F (SSC -40 °F to +149 °F)
Storage Temperature		-40 °C to +85 °C		-40 °F to +185 °F
Protection Class		IP66		IP66
Humidity		% - 95% Non-Condensing		5% - 95% Non-Condensing
Materials				
Back-plate		304 Stainless Steel		304 Stainless Steel
Enclosure		Aluminium, Chromitized (class 3)		Aluminum, Chromitized (class 3)
Manifold		303 Stainless Steel		303 Stainless Steel
Meter Gears		538 Ryton (SS optional)		538 Ryton (SS optional)
Solenoid Seals		Isolast Plus®		Chemraz®
Connections				
Cable Entries		4 x M20 & 4 x M25		4 x 1" NPT
Manifold Connections		3/8" NPT		3/8" NPT
Electrical				
Voltage		88 to 264 Vac		88 to 264 Vac
Flow Meter Inputs		1 x 5 kHz dual input, 1 x 5kHz single input		1 x 5 kHz dual input, 1 x 5kHz single input
DC Inputs		2 x configurable		2 x configurable
AC Inputs		2 x configurable		2 x configurable
DC Outputs		2 x configurable		2 x configurable
AC Outputs		3 x configurable		3 x configurable
Communications		1 x 2 wire or 4 wire RS485		1 x 2 wire or 4 wire RS485
Option Card Upgrade				
RTD Input		1 x PT100 type, 3 or 4 wire		
DC Inputs		2x configurable		
AC Inputs		4x configurable		
Analogue Input		1 x 4-20mA configurable passive or active		
Analogue Output		1 x 4-20mA configurable passive or active		
AC Outputs		2x configurable		
Communications		1 x 2 wire RS485		
Interface				
Protocols		Modbus RTU, FlexConn, FMC Smith, Brooks Petrocount		
Display		3.5" QVGA color TFT LCD screen		
Languages		English (US), English (UK), French, German, Spanish, Dutch, Chinese, Japanese, Polish, Italian, Portuguese		
Handheld Devices		Fusion4 LAD (Local Access Device), Fusion4 IR Controller (Infrared)		
Weight				
Unit weight		35 lb / 16 kg (approx)		
Options		Product Number		
Fusion4 LAD FM (Local Access Device)		323-1392002		
Fusion4 LAD CSA (Local Access Device)		323-1392003		
Fusion4 LAD ATEX & IECEX (Local Access Device)		323-1392004		
Fusion4 IR Controller (UL)		10-31052		
Fusion4 IR Controller (ATEX)		10-31052-F4		
Fusion4 IR Controller (IECEX)		10-31052-F4X		

Identification Code

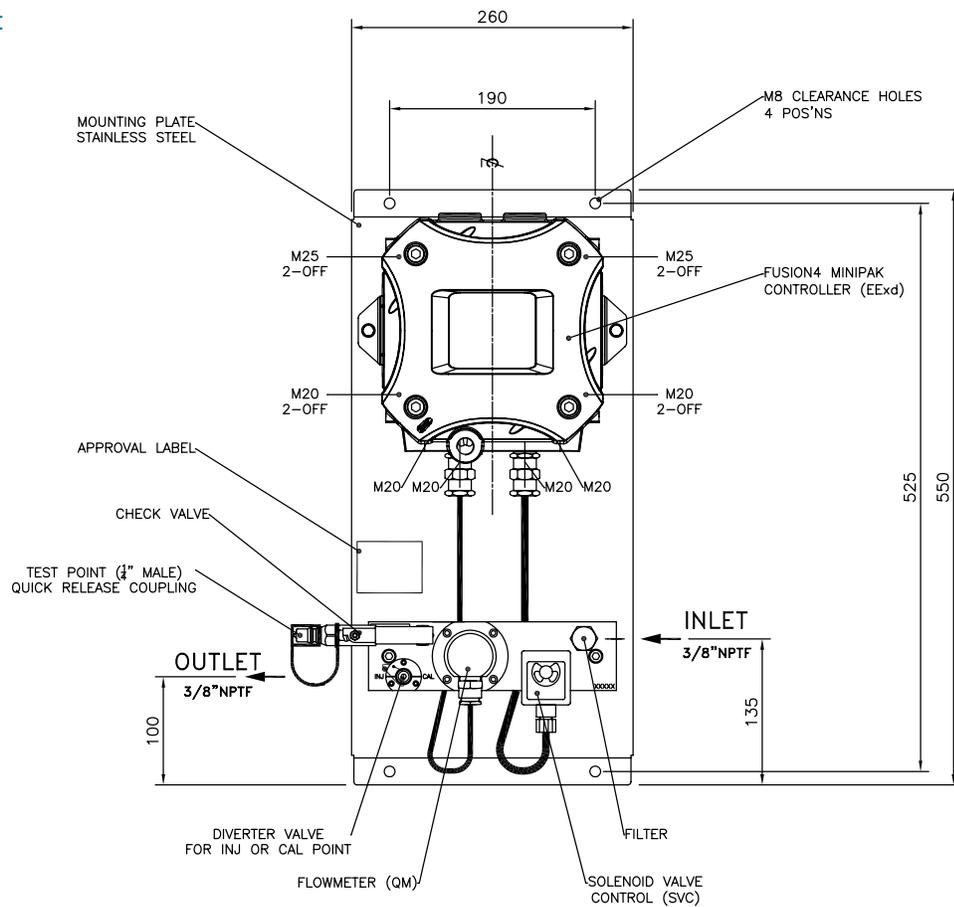
CV 1-6 Product Family		ATEX	FM
H E L A 4 0	Fusion4 MiniPak ATEX	✓	
H E L A 4 5	Fusion4 MiniPak FM		✓
CV 7 I/O Expansion			
0	Not Requested	•	•
C	Can-Option Board	•	•
CV 8 Glanding/Conduit			
1	Standard Ex Glands	•	
2	Hawke Ex Glands	•	
3	UL/FM Conduit		•
CV 9 Number of Injectors			
1	One	•	•
CV 10 Standard Flow & Gear Material			
0	No Standard Flow Injector Selected	•	•
A	Standard Flow - Ryton Gears (760 p/L)	•	
B	Standard Flow - Stainless Steel Gears (760 p/L)	•	
CV 11 Low/Extended Flow & Gear Material			
0	No Low Flow Injector Selected	b	
C	Low Flow - Ryton Gears (1460 p/L)	c	
D	Low Flow - Stainless Steel Gears (1460 p/L)	c	
E	Extended Flow - Ryton Gears (5000 p/USgal)		•
F	Extended Flow - Stainless Steel (5000 p/USgal)		•
CV 12 Solenoid - Seat Material			
1	Isolast (ATEX standard)	•	
2	PTFE	•	•
3	Chemraz (FM standard)		•
CV 13 Control Solenoid - Voltage and Temperature Class			
1	230 VAC 50Hz - T3 - Exm - Standard	•	
3	230 VAC 50Hz - T6 - Exd	•	
4	110 VAC 50Hz - T3 - Exm	•	
5	110 VAC 50Hz - T5 - Exm	•	
6	110 VAC 50Hz - T6 - Exd	•	
7	120 VAC 50/60Hz - UL/FM		•
8	240 VAC 50/60Hz - UL/FM		•
CV 14 Blocking Solenoid, Isolation & Flushing Options			
0	Not Requested	•	•
1	Isolation valve Inlet & Outlet	•	•
2	Isolation valve Inlet & Outlet + Flushing Points 1/4" QRC	•	
3	Blocking Solenoid (No Isolation Valves)	•	
4	Blocking Solenoid + Isolation valve Inlet & Outlet	•	
5	Blocking Solenoid + Isolation valve Inlet & Outlet + Flushing Points 1/4" QRC	•	
6	Thermal relief Assembly		•
7	Thermal relief Assembly + Isolation Valves - Inlet & Outlet		•
8	Thermal relief Assembly + Blocking Solenoid		•

Identification Code *(continued)*

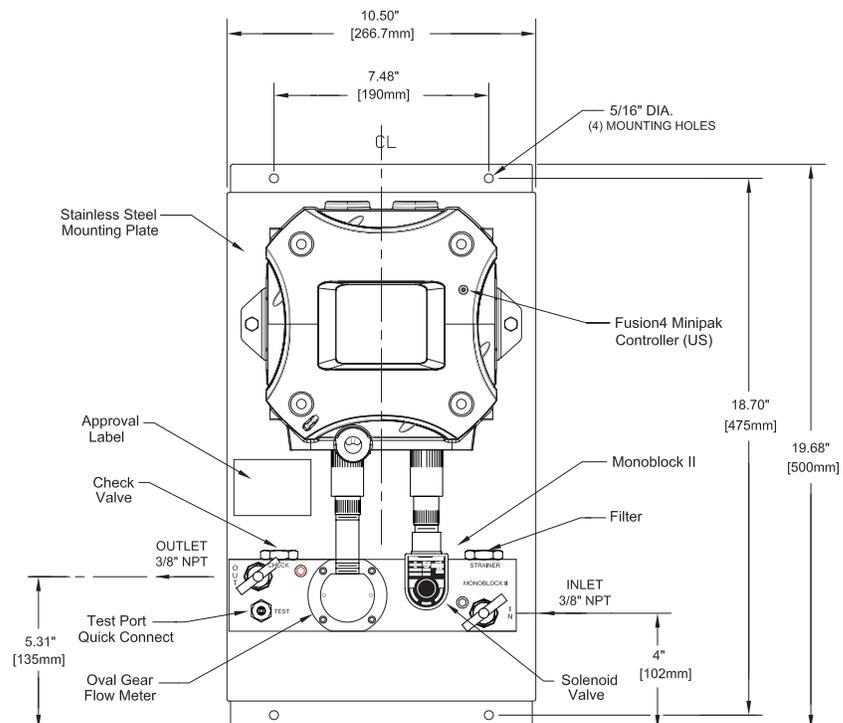
													ATEX	FM				
CV 15 Field Entry Plugs																		
0													•	•				
1													•					
2													•					
3													•					
4													•	•				
5													•					
6													•					
7													•					
A														•				
B														•				
C														•				
D														•				
CV 16 Ex Approvals																		
A													•					
B													•					
C													•					
D														•				
E														•				
H	E	L	A	4	0	0	1	1	0	0	1	1	0	0	A	Typical Identification Code		ATEX
H	E	L	A	4	0	C	3	1	0	E	3	7	6	A	D	Typical Identification Code		FM

Dimensional Drawing

Fusion4: ATEX Compliant



Fusion4: FM Compliant



For More Information

To learn more about Honeywell Enraf's Fusion4 MiniPak solutions, visit www.honeywellenraf.com or contact your Honeywell Enraf account manager.

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Honeywell Enraf

Your Terminal Operations Partner