Document Number: MKIII_SI_001

BLENDTECH

Product Description

The BLENDTECH MARK III SI SMART ADDITIVE INJECTOR unit is a modern electronic microprocessor based injector package designed for use in a variety of chemical additive applications. The unit is suitable for indoor or outdoor use

Features

System Description

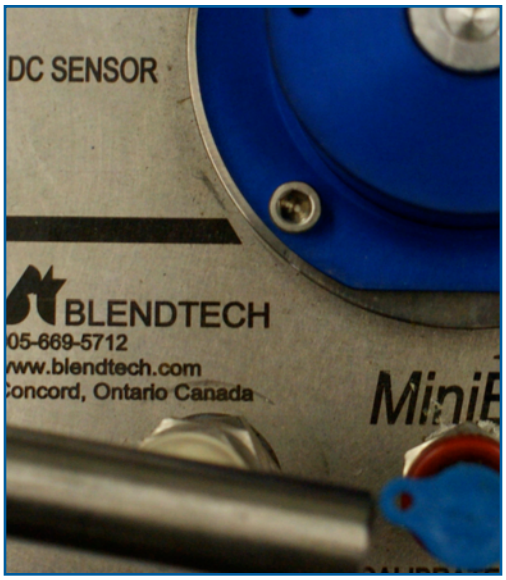
The MARK III SI SMART ADDITIVE INJECTOR package processes and displays the data required for accurate control of additive injections. The MARK III SI unit normally operates as an intelligent slave to the main product transfer system but can also operate as a stand alone unit.

When enabled, the MARK III SI unit monitors the main product flow meter and causes the additive to be injected in proportion to the main product flow. Control of the additive is accomplished by a solenoid operated flow control valve. Should the MARK III SI unit be unable to maintain the required injection rate, an alarm is generated and the “permissive” output circuit is turned off.

The MARK III SI unit maintains its’ own internal calibration factors for both the main and additive flow meters and all user changeable parameters in nonvolatile memory in the MARK III SI unit. These parameters may be changed via the unit’s front panel or through a RS-485 serial channel or via the Bluetooth communications link. The RS-485 party line and Bluetooth communications circuits permit monitoring and control of the MARK III SI unit. The MARK III SI is compatible with BLENDTECH’s BlendCOMM Management and Control (MAC) Communications protocol. The MARK III SI supports both the MODBUS and Accuload communication protocols.

The MARK III SI uses the FLEx iO input output signal structure. All digital inputs and outputs are completely user configurable. Input and output signals can be assigned to three inputs and three outputs.

The MARK III SI is configured with a 2 line 16 character display, suitable for low temperature operation. The display supports multi-language operation.



Model MKIII SI 7718

- For low dosage applications
- Flow rate 0.03 to 0.30 GPM *(0.12 to 1.20 lpm)* at 1 cSt.
- Maximum operating pressure 450 psig
- Maximum differential pressure 145 psig
- High pressure solenoid available
- Accuracy 0.25 to 0.50 % of flow.
- Nominal Meter K_f 12000 ppg *(3174 ppl)*

Model MKIII SI 7738

- For most typical additives.
- Flow rate 0.3 to 3.0 GPM *(1.2 to 12.0 lpm)* at 1 cSt.
- Maximum operating pressure 450 psig
- Maximum differential pressure 145 psig
- High pressure solenoid available
- Accuracy 0.25 to 0.50 % of flow.
- Nominal Meter K_f 3000 ppg *(792 ppl)*

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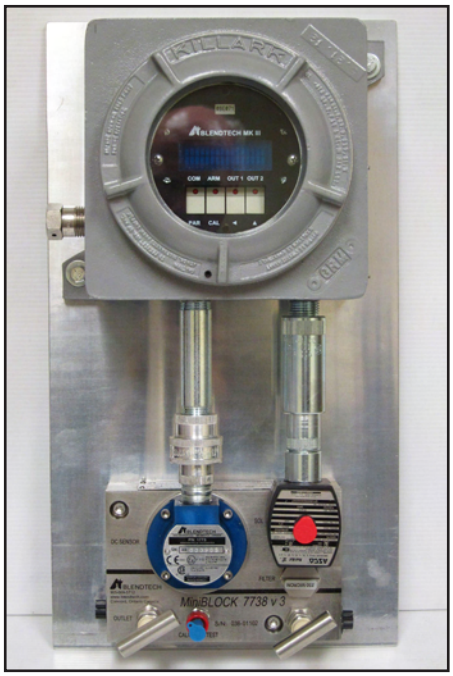
We lead the way...

FLEx iO
BLENDTECH Configurable I/O System

Bluetooth®

Key Features

- Clean starts - no contamination
- Additive totals
- Additive pulse output
- Supports a variety of flow meters
- Accepts flow meter pulse rates up to 5kHz.
- Error checking and alarm generation
- Provides for calibration of each flow meter pulser
- Pump control for additive
- Additive Overtreat
- Nonvolatile memory



Technical Specifications

Electrical Power Supply

Option 1:

115/220 VAC, 60/50 Hz, 50 Watts

Option 2:

12V - 24V DC, 20 Watts

Digital Inputs

3 FLEx iO DC Inputs

2 High Speed FLEx iO Inputs with a 5kHz. maximum count rate

Type:

Dry contact closure (TTL compatible)

Max. open circuit voltage 5V DC

Max. short circuit current 1 mA

Will accept 12V logic level signals

Digital Outputs

1 High Speed FLEx iO Digital Outputs

Type:

Optically isolated darlington outputs

30 mA maximum 50 VDC open circuit voltage

Relay Outputs

2 Standard FLEx iO Outputs

Type:

Industry standard 250 VAC 8A / 30 VDC 5A, fuse protected, relay moules.

Communications

- RS-485 data two wire communications

  Baud rate: Selectable 1200 to 19200
- Bluetooth data link
- MODBUS Available

Display

Multi-language - 16 character, 2 line alpha numeric display

Environment

Unit suitable for indoor or outdoor use with appropriate enclosure

Mechanical (Injection Manifold)

- 3/8" FNPT inlet and outlet port connections.
- Swagelok quick-connect fitting with dust cap on calibration port *(316 L).*
- Integrated basket screen strainer 230 micron *(60 mesh).*
- Check valve on output port 1psig cracking pressure.

Performance:

10:1 turndown

Minimum injection size of 2cc

Operating Pressures

300 psi maximum

40 psi minimum differential

145 psi maximum differential

Materials of Construction

Option 1:

Manifold and meter body 304 Stainless Steel.

Option 2 *(special order)*:

Manifold and meter body High Strength Aluminium.

All wetted seals teflon or Chemraz.

Meter Gears 300 series stainless.

Options

- Calibration Kit *(recommended)*
- Thermal Relief Kit *(for dye applications)*

Hazardous Areas

Option 1:

System UL / CSA Approved for Class I, Group D, Zone 1 Hazardous Areas.

C SA US

Option 2:

KEMA 07 ATEX 0009 EEx d, m IIA T3

CE Approved

Ex CE

Specifications subject to change without prior notification

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