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ДОЗИРУЮЩЕЕ ОБОРУДОВАНИЕ

Технические характеристики на

Fusion4 MultiPak



Product Information Note

Fusion4 MultiPak



With 35 years of additive control experience, having sold over 100,000 additive injectors worldwide, industry leader Honeywell Enraf has created the most advanced additive controller on the market. The Fusion4 MultiPak features the greatest I/O density available – which combines to offer exceptional functionality and unrivalled stream control. With enhanced information, precision and integration capabilities, Fusion4 MultiPak is part of an extensive portfolio of products which combine seamlessly. **Global Experience. Locally Applied.**

Take Control

The Fusion4 MultiPak combines the industry standard MonoBlock additive metering and control manifold with the Fusion4 MSC-A (Multi Stream Controller - Additive). This system is designed exclusively to manage chemical injection, and continuously monitors the correct additive volumes across up to 12 streams ensuring the additive ratio is correct at every point in each transaction. The MultiPak is the perfect multiple stream additive injection solution for a number of chemical transfer operations, including

- Road Loading
- Rail Loading
- Aviation Refueling
- Storage Transfers
- Marine Bunkering
- Pipeline Transfers
- Transport Bunkering
- Mining Reagent Dosing

Precision by Design

Utilising the Fusion4 MSC-A, the MultiPak brings a whole new dimension to the precision of additive injection applications. Precision is as much about knowing when things are going wrong, as it is about controlling when everything is right. MSC-A monitors more critical operational parameters than any other device, meaning that both it, and you, know as soon as the precision of your additive operation is threatened.

The Information Age

If precise control is at the heart of the Fusion4 MultiPak, then information is in its DNA. At every level the MSC-A collates, displays, archives and distributes an unparalleled level of system information, equipping the user to make the right operational and business decisions. Control optimization, transaction traceability, calibration security, and enhanced diagnostic tracking, are all facilitated by this advanced level of data, leaving the user without a shred of doubt about the effectiveness of their additive operation.



Fusion4 MSC-A

Connectivity is Key

The need for seamless integration is a core driver for the Fusion4 portfolio and the MultiPak excels in every aspect. Three Ethernet ports and Seven Serial ports is testimony to that. The library of embedded communications protocols permits plug and play connectivity to other Honeywell systems, such as TAS, Load Computers and Fusion4 Portal software suite, as well as 3rd party systems utilising protocols such as Modbus. Additionally at the wetted end, the pre-installed MonoBlock hardware which controls the physical injection capability, is fully cabled, flow tested and calibrated in the MultiPak Station arrangement, reducing installation costs and pre-commissioning start up time.

Efficient Configuration and Updates

Configure it from new in less than 60 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 EPROMs in the MSC.

Smart Calibration and Diagnostics

The Fusion4 MultiPak also includes a Calibration Wizard which automatically captures every calibration record (including time stamps, calibration volumes, k-factor corrections and even meter serial numbers), for greater traceability and security. Multiple Diagnostics Dashboards for complete hardware and communications monitoring from a single screen, help boost reliability and reduce maintenance time.

Flexible I/O and Interfacing

Assign functions to any input or output with configurable I/O. Flexible interfacing is possible via the LAD, which can copy and paste a configuration files to and from any other MSC device. The LAD also facilitates two way data communications between the Fusion4 MSC, allowing rapid, secure transfer of transaction data, calibration records and firmware upgrades.

Remote Visibility

Fusion4 Portal software package is also supported for remote monitoring and printing of all MSC transactions, alarms and communication status via Ethernet or Serial comms.

Powerful Logging

The MSC can store 120,000 transaction logs, 2000 alarm logs and 1200 calibration records. Advanced alarm handling, meanwhile, monitors nearly twice as many injection control parameters than any other device, while its 8" QVGA full colour screen clearly annunciates and differentiates all alarm conditions across all 12 streams.

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 and monitoring, tank level monitoring, block valve control and system pressure and temperature monitoring.

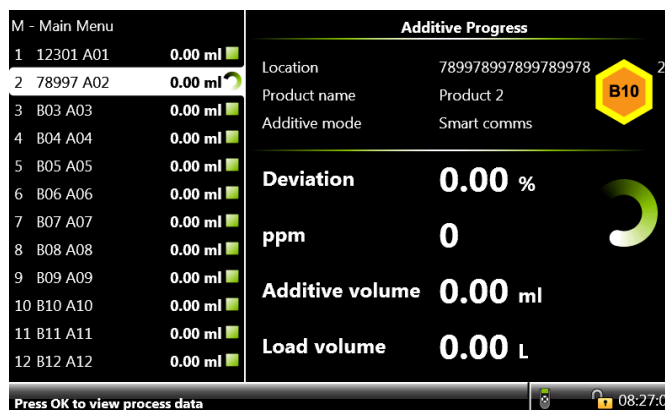
Technical Features

- **Additive Supply:** Suitable for wherever there is a pressurized additive supply with a typical additive supply pressure of 1 MPa (10 bar/145 psi). A minimum 300 kPa (3 bar / 45 psi) differential between the additive supply pressure and main product flow pressure is required.
- **Mounting Arrangements:** The Fusion4 MultiPak is available in 'Station' and 'Modular' formats. The Station consists of pre-integrated additive injector panels with the Fusion4 MSC-A, on a free-standing frame, providing rapid installation and commissioning. Modular arrangement provides the additive injector panels and the MSC-A individually, for flexible field installation. Both systems are available with one or two, 6-way injector panels.



Fusion4 MultiPak Station

- **Expansion Packs (EXP)** enable the modular enhancement of MSC-A functionality. Each EXP consists of a hardware and a licensing element, which incrementally scales up the control capability of the MSC-A. Furthermore each EXP can be upgraded in the field.



Running Screen

- **Injector Mounting:** MonoBlocks mounted on the rear panel of the Fusion4 MultiPak Station will be inverted. This ensures that all injector inlets and outlets are at the same side of the station, for both sets of injectors.
- **Standard flow/ low flow/extended flow injectors:** Standard and low flow injectors are ATEX/IECEx options. Extended flow injectors are the FM/CSA standard. Based on typical loading flow rates of 2400 L/min or 600 gal/min, standard flow and extended flow injectors accommodate applications between 100 and 3000 ppm with a typical shot size of between 15cc and 200cc. Low flow injectors accommodate applications between 20 and 600 ppm, with a typical shot size of between 3cc and 40cc.
- **Ryton (polymer) gears** fitted as standard, with stainless steel available where Ryton is chemically incompatible.
- **Blocking Solenoids** increase the security of any additive operation by providing a secondary isolation capability to every additive stream. This minimizes the potential for large additive losses due to mechanical failures.
- **Inlet and outlet isolation ball valves** are available pre-installed on either side of the MonoBlock, for manual isolation.

- **'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.
- **Field entry plugs:** Exd blanking plugs can be supplied to secure all unused cable entries following installation.
- **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.

Keeping You in Control

The Fusion4 LAD increases functionality of the MSC in the field, allowing intuitive navigation of the device menus. Hazardous area approved, two way data communications between the MSC and the LAD facilitate rapid downloading of transaction data, alarm logs, and calibration records, to the LAD's removable SD card. Calibration records can then be remotely loaded into a dedicated report generator optimum traceability.

The LAD also enables rapid upload of configuration files for super fast set up, or download for copying to other devices or secure system back-up. Firmware upgrading to live devices in the field, uploading of language packs, assignable short cut key, and backlight for nighttime operation are just a few of the many other LAD features.



Fusion4 LAD (Local Access Device)

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