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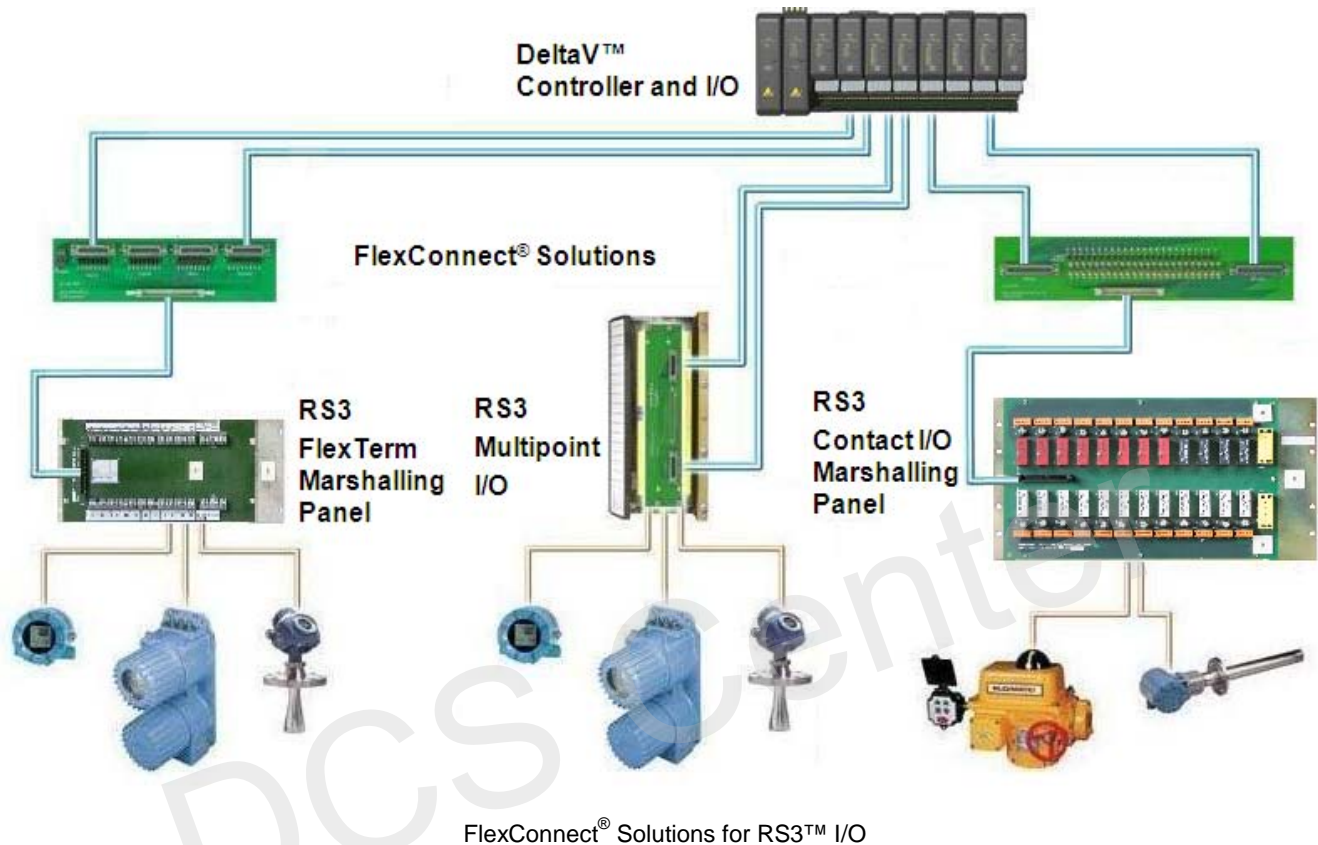
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FlexConnect® Solutions for RS3™ I/O



- Reduce business risks by minimizing process downtime
- Save 75% of installation costs
- Preserve HART® signals

Introduction

If concerns about downtime and wiring costs are preventing you from migrating your RS3™ system to a new DeltaV™ system, then consider FlexConnect® Solutions for RS3 I/O.

Benefits

Reduce business risks by minimizing process downtime. This solution brings device signals to DeltaV I/O from existing RS3 I/O terminations. Keeping device wires intact accelerates the new system startup, enabling you to rapidly resume production.

Save 75% of installation costs. Eliminating new field wiring saves money and reduces risk of errors. Time and materials savings are significant.

Preserve HART signals. Use HART® Pass-through for complete diagnostics at the DeltaV Operator Station.



Product Description and Specification

FlexConnect Solutions provide direct connection from RS3 termination panels to M and S-Series DeltaV IO card terminal blocks. To simplify installation, as an option Emerson can pre-wire the FlexConnect Solutions to DeltaV termination blocks.

The following RS3 point types have FlexConnect Solutions as described here:

RS3 Field Interface Card (FIC) Input / Output (I/O)

■ FlexTerm Analog I/O

Also called 2/1 FIC. Twenty-four RS3 analog inputs or a combination of up to eight analog outputs and sixteen 2-wire analog inputs connect to DeltaV HART AI and AO cards.

■ FlexTerm Contact I/O

Six points per contact I/O card. Twenty-four RS3 digital inputs or outputs connect to 32-channel DeltaV DI or DO cards.

■ FlexTerm Local Contact I/O

Six points per contact I/O card. Twenty-four local RS3 digital inputs or outputs connect to 32-channel DeltaV DI or DO cards.

RS3 Multi-Point Analog I/O (MAIO)

■ Analog Inputs and MTL Intrinsically Safe Analog Inputs

Sixteen RS3 2-wire analog inputs connect to two 8-channel DeltaV HART AI cards.

■ Analog Outputs and MTL Intrinsically Safe Analog Outputs

Sixteen RS3 analog outputs connect to two 8-channel DeltaV HART AO cards.

RS3 Multi-Point Discrete I/O (MDIO)

The Field Interface Module (FIM) discrete family of I/O termination panels includes direct, isolated (A only or A & B) and high density (A only). FIM termination panel A allows mixing I/O and panel B is for inputs only. A ribbon cable jumper connects A & B panels to a single FIM for up to 32 points discrete I/O.

■ Direct Discrete I/O

Thirty-two RS3 digital inputs or 16 DI and 16 DO connect to 32-channel DeltaV DI or 8-channel DO cards. No solid-state relays or OPTO modules are between the field wiring and the FIM.

■ Isolated and MTL Intrinsically Safe Isolated Discrete I/O

Isolated. Thirty-two digital I/O connect to a 32-channel DeltaV DI or DO card. A five volt power supply is required and solid-state relays or OPTO modules are installed between the field wiring and the FIM.

MTL Isolated. Thirty-two digital inputs connect to a 32-channel DeltaV DI card.

A mix of 32 digital inputs and outputs connect to 8-channel DeltaV I/O cards.

Field wiring goes into isolators. Panel A and panel B accommodate 16 DI or 8 DI and 8 DO.

For redundancy, or for >8 outputs, panel B is required.

Panel A output channel numbers are odd. Panel B output channel numbers are even.



Ordering Information

For inquiries and ordering information, please contact your local Emerson sales office. Please specify required cable lengths on your request. FlexConnect Solutions for specific RS3 Termination Panel Models are indicated in the following table: (Note: FlexConnect Solutions drawings are available upon request.)

FlexConnect Solution #	FlexTerm RS3 I/O Type	RS3 Signals	DeltaV I/O Card Type	FlexConnect Solutions Drawings
FC-RS-SOL-1-01	Analog I/O ⁽⁴⁾	24 AIO	16 AI ⁽¹⁾ or 8 AI (two) / 8 AO HART	FC_RS_105_AIO, FC_UC_320
FC-RS-SOL-1-02	Contact I/O - Termination Panel	24 DIO	32 DI / 32 DO	FC_RS_126_DIO, FC_UC_305
FC-RS-SOL-1-03	Contact I/O - Local Termination w/ marshalling connectors ⁽²⁾	24 DIO	32 DI / 32 DO	FC_RS_126_1_DIO, FC_UC_305
FlexConnect Solution #	Multi-Point RS3 I/O Type	RS3 Signals	DeltaV I/O Card Type	FlexConnect Solutions Drawings
FC-RS-SOL-2-04	AI ^(3,4)	16 AI	8 HART AI	FC_RS_102_AI, FC_UC_302
FC-RS-SOL-2-05	AO	16 AO	8 HART AO	FC_RS_102_AO, FC_UC_302
FC-RS-SOL-2-06	MTL AI ⁽⁴⁾	16 AI	8 HART AI	FC_RS_108_MTL_AI, FC_UC_302
FC-RS-SOL-2-07	MTL AO	16 AO	8 HART AO	FC_RS_108_MTL_AO, FC_UC_302
FC-RS-SOL-2-08	Direct Discrete DIO	32 DIO	32 DI / 8 DO	FC_RS_120_DIO, FC_UC_305
FC-RS-SOL-2-09	Isolated MTL DIO	32 DIO	8 DI / 8 DO	FC_RS_122_MTL_DIO, FC_UC_302
FC-RS-SOL-2-10	Isolated MTL DI	32 DI	32 DI	FC_RS_123_MTL_DI, FC_UC_305
FC-RS-SOL-2-11	Isolated DI	32 DI	32 DI	FC_RS_127_OPTO_DI, FC_UC_305
FC-RS-SOL-2-12	Isolated DIO	32 DIO	32 DI / 32 DO	FC_RS_128_OPTO_DIO, FC_UC_305
FC-RS-SOL-2-13	Isolated DO	32 DO	32 DO	FC_RS_129_OPTO_DO, FC_UC_305

Note: ⁽¹⁾ The 16-channel AI card can be used for 2 wire installations only.

For these RS3 I/O types, contact your local Emerson sales office to discuss solution options:

- Multi-Loop Controller / Single Strategy Cards: (**MLC / SSC**) Non-Isolated and Isolated single point Analog I/O
- DORIC Front End Module / Multiplexer (**FEM / MUX**) Twenty Analog Inputs per card
- 32-channel High Density DIO termination panels P/N 01984-4167-000x
- ⁽²⁾ Contact I/O – Local Termination w/o J425 & J226 marshalling connectors
- ⁽³⁾ Multi-Point **Analog Input Only** - Thirty-two Analog Input Field Interface Module (FIM)
- ⁽⁴⁾ Analog Input 4-wire installations

Prerequisites

A preliminary site visit might be required in order to survey installed control system architecture and electrical grounding practices, to document I/O models and numbers of each, and to review schedule constraints and turnaround objectives. Qualified Emerson engineers or technicians perform site reviews.



Services

For help in planning, justifying or implementing your system migration, contact your local Emerson representative. Expert consultants are available to advise you on a variety of concerns, including safety system design, implementation and standards compliance; digital buses, wireless applications, control performance, and process optimization.

To locate a sales office near you, visit our website at: www.EmersonProcess.com/DeltaV

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For large power, water, and wastewater applications contact Power and Water Solutions at:

www.EmersonProcess-powerwater.com

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