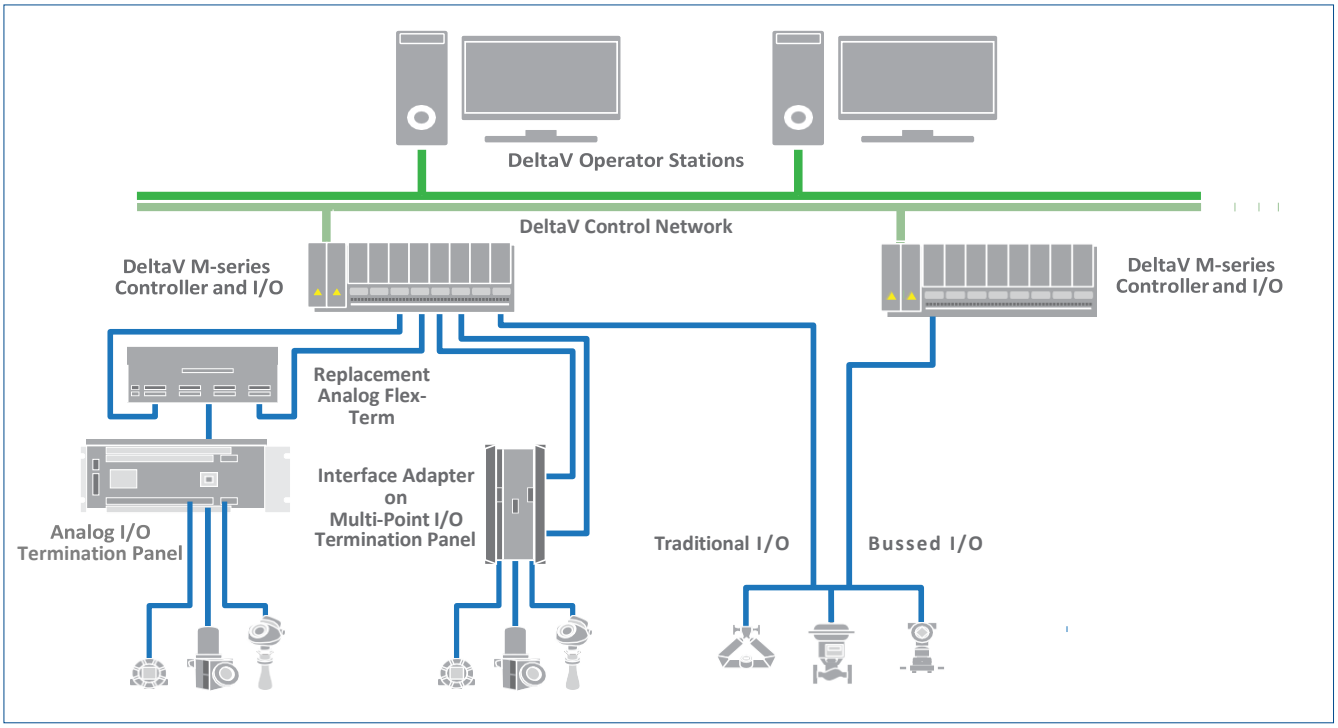
DeltaV™ Flex.Connect Solutions for RS3™ I/O



DeltaV™ Flex.Connect 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 DeltaV Flex.Connect wiring 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 analog & discrete FIC and Multi-Point analog and discrete 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 the 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

DeltaV Flex.Connect wiring solutions provide a direct connection from the existing RS3 I/O termination assemblies to M-series DeltaV I/O cards or Electronic Marshalling – CHARMs terminal blocks.

A replacement FlexTerm is available for the RS3 Analog & Discrete FICs, and replacement FIMs, called interface adapters, are available for the RS3 Multi-Point I/O, leaving the field wiring untouched.

The following RS3 point types have DeltaV Flex.Connect wiring solutions as described here:

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

■ FlexTerm Analog I/O

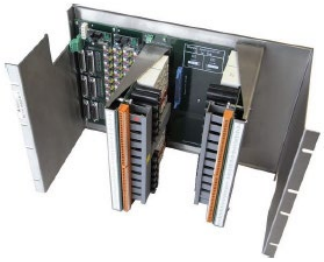
Also, called the 2/1 FIC. Twenty-four RS3 4-20mA analog inputs or a combination of up to eight analog outputs and sixteen 2- and 4-wire analog inputs connect to DeltaV 4-20mA HART AI & AO cards.

The Analog FIC FlexTerm can also accommodate the RS3 3-channel Pulse input/output, and 2-channel 3-wire RTD / TC card.

There are 2 options for this replacement FlexTerm solution:

- Option -01: BC-FIC-AIAO-01-**01**: Without a power supply for the Pulse Count Inputs.
- Option -02: BC-FIC-AIAO-01-**02**: With redundant power supplies for the Pulse Count Inputs.

■ FlexTerm Discrete I/O – Local Terminations



A replacement Contact FIC DI/DO FlexTerm is available to re-seat the Qty 2 24-channel local termination panels.

RS3 Multi-Point Analog I/O (MAIO)

■ Analog Inputs

Sixteen RS3 4-20mA 2 analog inputs connects to one 16-channel or two 8-channel DeltaV HART AI cards.

■ Analog Outputs

Sixteen RS3 4-20mA analog outputs connects to one 16-channel or 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.

■ Isolated & High-Density Discrete I/O

Thirty-two RS3 digital inputs or 16 DI and 16 DO signals connect to 8 or 32-channel DeltaV DI or DO cards. Channels 1 through 16 are DI/DO, and channels 17 through 32 are DI only. A NC contact is available for monitoring the redundant power supplies.

■ Direct Discrete I/O

Thirty-two digital I/O, high- or low-side switching, connect to 8 or 32-channel DeltaV DI or DO cards. Channels 1 through 16 are DI/DO, and channels 17 through 32 are DI only. There are two options for low- or high-side switching with this interface adapter.

Ordering Information

For inquiries and ordering information, please contact your local Emerson sales office. Please specify required cable lengths on your request. For reference, DeltaV Flex.Connect solutions for specific RS3 Flex-Term termination / marshalling panel models are indicated in the following table: (Note: DeltaV Flex.Connect solutions drawings are available upon request.)

Flex.Connect Solution #	FlexTerm RS3 I/O Type	Compatible RS3 Termination Panels	RS3 Signals	DeltaV I/O Card Types	Flex.Connect Solutions Drawings
FC-RS-SOL-1-01a	Analog 4-20mA FIC I/O[3]	10P54590001/0002 01984-2412-000x 01984-2415-0001 01984-2448-000x	24 AI/AO	16-ch AI[1] or 8 AI / 8 AO HART[4]	BC-FIC-AIAO-01
FC-RS-SOL-1-01b	Analog 4-20mA FIC I/O[3]		24 AI/AO	16-ch AI[1] or 8 AI / 8 AO HART[4]	BC-FIC-AIAO-02
FC-RS-SOL-1-03	Discrete FIC I/O Local Terminations	01984-1288-000x	24 DI/DO	32-ch DI 24 VDC Dry 32-ch DO 24 VDC High-side	BC-FIC-DIDO CBL-864
Flex.Connect Solution #	**Multi-Point RS3 I/O Type**	**Compatible RS3 Termination Panels**	**RS3 Signals**	**DeltaV I/O Card Types**	**Flex.Connect Solutions Drawings**
FC-RS-SOL-2-04	AI[2,3] 4-20mA	10P5477001/0002 01984-4383-0001	16 AI	16 AI or 8-ch HART AI (two)	RIA-AI-01
FC-RS-SOL-2-05	AO 4-20mA		16 AO	16 AO or 8-ch HART AO (two)	RIA-AO-01
FC-RS-SOL-2-09	Isolated DI/DO	A: 01984-4121-000x B: 01984-4124-000x	32 DI/DO	8 or 32-ch DI 24 VDC Dry 8 or 32-ch DO 24 VDC High-side	RIA-DIDO-01
FC-RS-SOL-2-08a	Direct DI/DO, Low-side Switching	10P52700001 01984-4127-000x	32 DI/DO	8 or 32-ch DI 24 VDC Dry 8 or 32-ch DO 24 VDC High-side	RIA-DIDO-02-1
FC-RS-SOL-2-08b	Direct DI/DO, High-side Switching		32 DI/DO	8 or 32-ch DI 24 VDC Dry 8 or 32-ch DO 24 VDC High-side	RIA-DIDO-02-2

Notes:

[1] The DeltaV 16-channel AI Series 2 Plus card can be used for 2- and 4-wire installations
[2] Multi-Point Analog Input Only, 16-Channel Analog Input Field Interface Module (FIM)
[3] Analog Input 2- and 4-wire installations
[4] DeltaV 8-channel Pulse Count Input (PCI), Thermocouple, and RTD cards as required.

For the following RS3 I/O types, contact your local Emerson sales office to discuss modernization 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

Prerequisites

A preliminary site visit is required 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.

Emerson
North America, Latin America:
1100 W. Louis Henna Blvd. Round Rock, TX 78681-7430
+1 800 833 8314 or
+1 512 832 3774

Asia Pacific:
+65 6777 8211

Europe, Middle East:
+41 41 768 6111
www.emerson.com/deltav

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