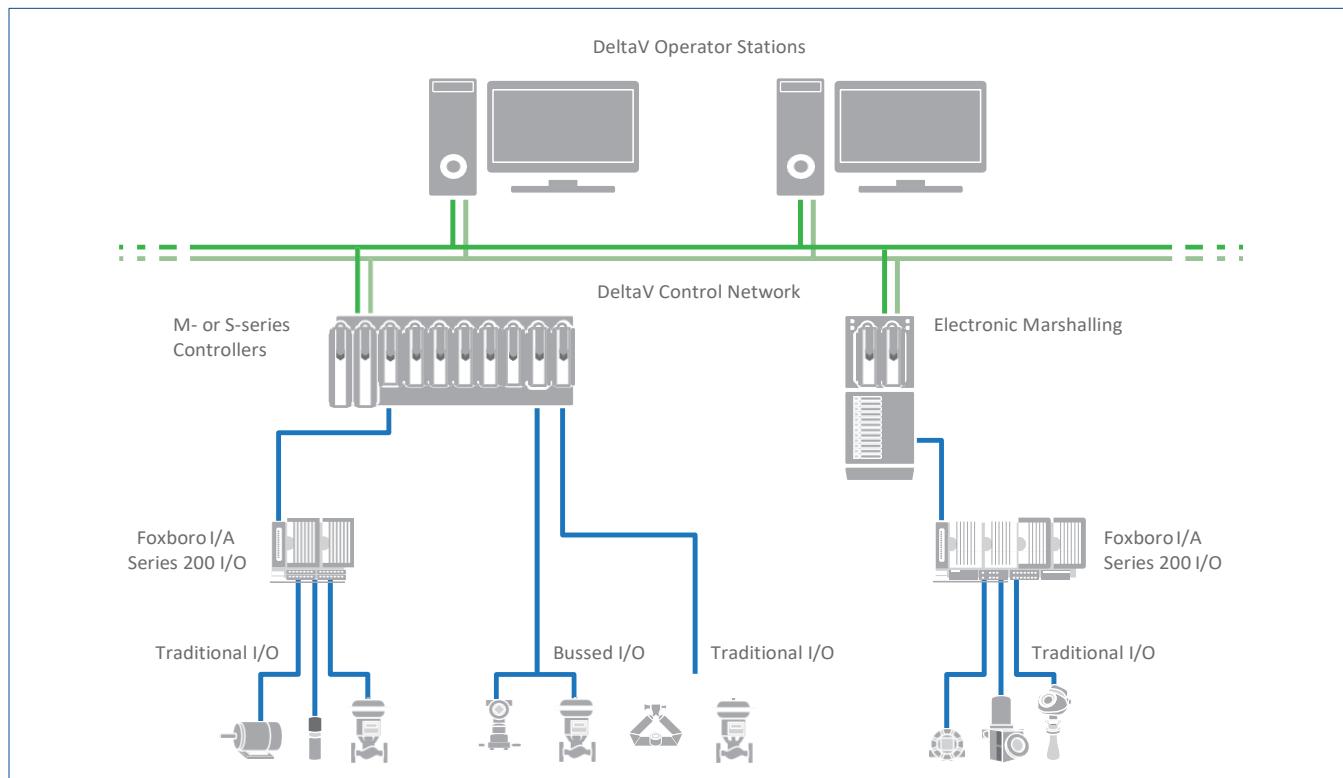


# DeltaV™ Flex.Connect Solutions for Foxboro™ I/A Series 200 I/O



*DeltaV™ Flex.Connect wiring solutions protect your wiring investment as you convert from Foxboro™ I/A Series to the DeltaV™ System*

- Reduce business risks by minimizing process downtime
- Save on installation costs
- Preserve HART® signals

## Introduction

If concerns about downtime and wiring costs are preventing you from migrating your Foxboro™ I/A Series 200 system to a new DeltaV™ system, then consider DeltaV Flex.Connect wiring solutions for Foxboro I/A Series 200 and Compact Series 200 I/O.

## Benefits

**Reduce business risks by minimizing process downtime.** This solution brings device signals to DeltaV I/O from existing Foxboro I/A Series 200 I/O termination assemblies. Keeping device wires intact accelerates the new system startup, enabling you to rapidly resume production.

**Save on 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 direct connection from Foxboro I/A Series 200 and Compact Series 200 I/O termination assemblies to DeltaV CHARM terminal blocks and M- or S-series traditional I/O cards. Foxboro I/A Series 200 I/O termination assemblies have many different I/O types. Passive FBM termination assemblies have been selected for the DeltaV Flex.Connect solutions. These are cable only solutions with no signal conditioning requirements.

### Analog Inputs

Eight Analog Inputs connect to eight DeltaV 4-20mA AI CHARMs – termination assembly model number FBM201 / P0916AA.

Eight \*Thermocouple/mV Analog Inputs connect to eight DeltaV Thermocouple/mV CHARMs – termination assembly model number FBM202 / P0916AC.

Eight RTD Pt/Ni 2 or 3-wire Analog Inputs connect to eight DeltaV RTD CHARMs – termination assembly model number FBM203 / P0916AE.

Four Analog Inputs connect to four DeltaV 4-20mA AI CHARMs – termination assembly model numbers FBM204 / P0916AG and FBM205 / P0916AJ.

Sixteen Analog Inputs connect to sixteen DeltaV 4-20mA AI CHARMs – termination assembly model number FBM211 / P0916JT. (Externally powered, 4-wire setup)

Fourteen \*Thermocouple/mV Analog Inputs connect to fourteen DeltaV Thermocouple/mV CHARMs – termination assembly model number FBM212 / P0916BV.

Note: \*Emerson recommends re-wiring Thermocouple signals directly to DeltaV AI-T/C solutions.

### Analog Outputs

Four Analog Outputs connect to four DeltaV 4-20mA output CHARMs – termination assembly model numbers FBM204 / P0916AG and FBM205 / P0916AJ.

Eight Analog HART® Outputs connect to eight DeltaV 4-20mA output HART CHARMs – termination assembly model number FBM215 / P0917XV.

Eight Analog Outputs connect to eight DeltaV 4-20mA output CHARMs – termination assembly model number FBM237 / P0916CC.

### Discrete Inputs

Sixteen Contact Sense Discrete Inputs connect to sixteen DeltaV DI CHARMs – termination assembly model numbers FBM207b / P0916JS and FBM207c / P0917MF.

Thirty-two Discrete Inputs connect to thirty-two DeltaV DI CHARMs – termination assembly model number FBM217 / P0916PW.

Twenty-four Discrete Inputs connect to twenty-four DeltaV DI CHARMs – termination assembly model numbers FBM219 / P0917LE and FBM219 / P0917LH.

Eight Discrete Inputs connect to eight DeltaV DI CHARMs – termination assembly model numbers FBM241c / P0916AW, FBM241c / P0916JW, FBM241c / P0916QQ, and FBM241 / P0916AQ.

Eight Discrete / Pulse Inputs connect to eight DeltaV DI isolated CHARMs – termination assembly model number FBM206 / P0916JQ.

### Discrete Outputs

Eight Discrete Outputs connect to eight DeltaV DO CHARMs – termination assembly model numbers FBM219 / P0917LE, FBM219 / P0917LH, FBM241c / P0916AW, FBM241c / P0916JW, FBM241c / P0916QQ, and FBM241 / P0916AQ.

Sixteen Discrete Outputs connect to sixteen DeltaV DO CHARMs – termination assembly model number FBM242 / P0916JY.

## Ordering Information

For inquiries and ordering information, please contact your local Emerson sales office. Please specify the required cable lengths on your request. DeltaV Flex.Connect solutions for specific Foxboro FBM Termination Assembly (TA) models are indicated in the following table:

(Note: DeltaV Flex.Connect solutions drawings are available upon request.)

| Flex.Connect<br>Solution # | Foxboro FBM /<br>TA 200 Type         | Foxboro FBM /<br>TA 200 Signals | DeltaV™<br>CHARM Types   | Flex.Connect Solutions Drawing<br>Numbers                                |
|----------------------------|--------------------------------------|---------------------------------|--|--|
| FC-F2-CBL-1-10             | FBM201 / P0916AA                     | 8 AI                            | 8 - AI 4-20 mA<br>HART® SE4303T01  | FC-F2-P0916AA<br>FC-F2-P0916AA-CAB                                       |
| FC-F2-CBL-1-30             | FBM202 / P0916AC                     | 8 AI (*TC/mV)                   | 8 - TC/mV<br>SE4303T02   | FC-F2-P0916AC<br>FC-F2-P0916AC-CAB                                       |
| FC-F2-CBL-1-70             | FBM204 / P0916AG<br>FBM205 / P0916AJ | 4 AI<br>4 AO                    | 4 - AI 4-20 mA<br>HART SE4303T01<br>4 - AO 4-20 mA HART<br>SE4304T01                 | FC-F2-P0916AG<br>FC-F2-P0916AG-CAB<br>FC-F2-P0916AJ<br>FC-F2-P0916AJ-CAB |
| FC-F2-CBL-1-11             | FBM211 / P0916JT                     | 16 AI (Ext. Power)              | 16 - AI 4-20 mA HART<br>SE4303T01 (4-wire)   | FC-F2-P0916JT<br>FC-F2-P0916JT-CAB                                       |
| FC-F2-CBL-4-30             | FBM212 / P0916BV                     | 14 AI (*TC/mV)                  | 14 - TC/mV<br>SE4303T02  | FC-F2-P0916BV<br>FC-F2-P0916BV-CAB                                       |
| FC-F2-CBL-1-40             | FBM203 / P0916AE                     | 8 AI (RTD)                      | 8 - RTD SE4303T03  | FC-F2-P0916AE<br>FC-F2-P0916AE-CAB                                       |
| FC-F2-CBL-1-20             | FBM237 / P0916CC                     | 8 AO                            | 8 - AO 4-20 mA<br>HART SE4304T01   | FC-F2-P0916CC<br>FC-F2-P0916CC-CAB                                       |
| FC-F2-CBL-1-21             | FBM215 / P0917XV                     | 8 AO HART                       | 8 - AO 4-20 mA<br>HART SE4304T01   | FC-F2-P0917XV<br>FC-F2-P0917XV-CAB                                       |
| FC-F2-CBL-1-90             | FBM206 / P0916JQ                     | 8 DI/PCI                        | 8 - DI 24 VDC Isolated<br>SE4301T07  | FC-F2-P0916JQ<br>FC-F2-P0916JQ-CAB                                       |
| FC-F2-CBL-3-50             | FBM217 / P0916PW                     | 32 DI (Contact Sense)           | 32 - DI 24 VDC<br>Low-Side Sense<br>SE4301T02  | FC-F2-P0916PW<br>FC-F2-P0916PW-CAB                                       |
| FC-F2-CBL-5-80             | FBM219 / P0917LE                     | 24 DI<br>8 DO                   | 24 - DI 24 VDC<br>Isolated SE4301T07<br>8 - DO 24 VDC<br>Isolated SE4302T02          | FC-F2-P0917LE<br>FC-F2-P0917LE-CAB                                       |
|                            | FBM219 / P0917LH                     | 24 DI (Contact Sense)<br>8 DO   | 24 - DI 24 VDC<br>Low-Side Sense<br>SE4301T02<br>8 - DO 24 VDC<br>Isolated SE4302T02 | FC-F2-P0917LH<br>FC-F2-P0917LH-CAB                                       |

**Ordering Information (Cont'd)**

| Flex.Connect<br>Solution # | Foxboro FBM /<br>TA 200 Type           | Foxboro FBM /<br>TA 200 Signals    | DeltaV™<br>CHARM Types   | Flex.Connect Solutions Drawing<br>Numbers                                |
|----------------------------|--|------------------------------------|--|--|
| FC-F2-CBL-2-50             | FBM207b / P0916JS<br>FBM207c / P0917MF | 16 DI (Contact Sense)              | 16 - DI 24 VDC<br>Low-Side Sense<br>SE4301T02                                  | FC-F2-P0916JS<br>FC-F2-P0916JS-CAB<br>FC-F2-P0917MF<br>FC-F2-P0917MF-CAB |
| FC-F2-CBL-2-80             | FBM241 / P0916AQ                       | 8 DI<br>8 DO                       | 8 - DI 24 VDC<br>Isolated SE4301T07<br><br>8 - DO 24 VDC<br>Isolated SE4302T02 | FC-F2-P0916AQ<br>FC-F2-P0916AQ-CAB                                       |
|                            | FBM241c / P0916JW                      | 8 DI (Contact Sense)<br>8 DO       | 8 - DI 24 VDC<br>Low-Side Sense<br>SE4301T02                                   | FC-F2-P0916JW<br>FC-F2-P0916JW-CAB                                       |
|                            | FBM241c / P0916QQ<br>FBM241c / P0916AW | 8 DI (Contact Sense)<br>8 DO-Relay | 8 - DO 24 VDC<br>Isolated SE4302T02  | FC-F2-P0916QQ<br>FC-F2-P0916QQ-CAB<br>FC-F2-P0916AW<br>FC-F2-P0916AW-CAB |
| FC-F2-CBL-2-60             | FBM242 / P0916JY                       | 16 DO                              | 16 - DO 24 VDC<br>Isolated SE4302T02   | FC-F2-P0916JY<br>FC-F2-P0916JY-CAB                                       |

For these Foxboro I/A Series 200 I/O types, contact your local Emerson sales office to discuss solution options.

Note: \*Emerson recommends re-wiring Thermocouple signals directly to DeltaV AI-T/C solutions.

## 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.

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