RS3™ > DeltaV™

**BC-FIC** 

FMS-RS3FIC-DV-1





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# 1. INTRODUCTION

FIC Series – Using BC-FICs







#### EMERSON RS3™ > EMERSON DeltaV™

FIC Series – Using BC-FICs

FMS-RS3FIC-DV-1

Rev:2025\_03

The purpose of this document is to guide the user of a FIC series I/Os RS3<sup>TM</sup> system within the safe, efficient and easy way to migrate toward a DeltaV<sup>TM</sup> system.

FIRELEC has developed a migration solution "FMS-RS3FIC-DV-1" allowing to protect the existing wiring investment as the user converts from an existing RS3 system (FIC-series I/Os) to the DeltaV<sup>TM</sup> system.

The **FMS-RS3FIC-DV-1** solution is a set of migration files and adapters installed in place of existing FIC controller files. The Input / Output termination panels are kept in place or plugged on the BC-FIC files. The module configuration on the panels remains unchanged.

#### 1.1. KEY ADVANTAGES OF THE FMS-RS3FIC-DV-1 SOLUTION

**FMS-RS3FIC-DV-1** solution protects your wiring investment as you convert from the RS3<sup>™</sup> FIC series system to the DeltaV<sup>™</sup> system of Emerson Process Management with following advantages :

**FMS-RS3FIC-DV-1** is a pre-engineered marshalling solution ready to work without any technical rework or limitation regarding existing capabilities of the RS3<sup>™</sup> system to be migrated.

The system migration can be done gradually, step by step with reduced risk for the process unit

As the instrument wiring is not disturbed, the instrument checkout during start-up is reduced to the minimum

The DeltaV<sup>TM</sup> system's configuration allows for the engineering conversion to be done efficiently. The speed at which **FMS-RS3FIC-DV-1** solution can be implemented ensures to reduce the process downtime to the minimum.

All existing documentation (electrical schemes, loop drawings, maintenance procedures, ...) remain unchanged as the existing I/O panels are kept in place.



FMS-RS3FIC-DV-1

### 2. ANALOG INPUTS/OUTPUTS





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## FIRELEC Migration Solution Rev :2025\_03 EMERSON RS3™ > EMERSON DeltaV™ FIC Series – Using BC-FICs FMS-RS3FIC-DV-1

#### 2.1. EXISTING RS3 PANEL TO BE KEPT: 01810-0054-0002

The existing HE1050 cable coming from the Analog Marshalling Panel is simply disconnected from the RS3 controller file and connected to the BC-FIC-AIAO.

Existing Panel	Cable	Adapter	Cables	I/O Cards
Analog Marshalling Panel 01810-0054-0002 10P54620001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)		
Training to the second of the			CBL-348 (Shielded Round Cable) SUB37F > 34 labeled wires	VE4003S2B6 / SE4003S2B6 Analog Input Card: 16 Channel: 4-20 mA, HART, Al 16-Channel Terminal Block
			SHD	•••••••••••••••••••••••••••••••••••••••
			CBL-435 (Shielded Round Cable) SUB25F > HE1016 Connector	VE4003S2B4 / SE4003S2E Analog Input Card : 8 Channe 4-20 mA, HART, 16-Pin Mass I/O Terminal Bloo
			SHD	







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New DeltaV™ architecture - FMS-RS3FIC-DV-1-AIAO1-A2					
Existing Panel	Cable	Adapter	Cables	I/O Cards	
Analog Marshalling Panel 01810-0054-0002 10P54620001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)	4 x CBL-920 (Shielded Round Cable) SUB9F > 8 labeled wires	4 x VE4015 / 4 x SE4015  Multifunction card (AI-AO-DI or PCI Card) 4 Channels, 24 VDC Dry Contact Discrete 32 Channel Terminal Block	
Total and total	The state of the s		SHD		
			SHD		
			SHD		
ROSEMOUNT STATEMENT STATEM			SHD		







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New DeltaV™ architecture - FMS-RS3FIC-DV-1-AIAO1-A3								
Existing Panel	Existing Panel Cable Adapter Cables I/O Cards							
Analog Marshalling Panel 01810-0054-0002 10P54620001	HE1050	BC-FIC-AIAO File (19 inches) for RS3™ FIC I/Os (AI/AO)	CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	1/2 VE4002S1T2B6 / 1/2 VE4002S1T2B6  DO Card, 32 Channels, 24Vdc, High Side, 40-Pin Mass I/O Terminal Block				
TOTAL STATE OF THE PROPERTY OF			SHD					

	New DeltaV™ architecture - FMS-RS3FIM-DV-1-AIAO1-A4						
Existing Panel	Cable	Adapter	Cables	I/O Cards			
Analog Marshalling Panel 01810-0054-0002 10P54620001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)	CBL-350 (Shielded Round Cable) SUB25F > HE1016 Connector	VE4005S2B3 / SE4005S2B3 Analog Output Card : 8 Channels 4-20 mA, HART, 16-Pin Mass Terminal Block			
Theoremson			SHD				







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#### 2.1. EXISTING RS3 PANEL TO BE KEPT: 01984-2415-0001

The existing HE1050 cable coming from the Analog Marshalling Panel is simply disconnected from the RS3 controller file and connected to the BC-FIC-AIAO.

New DeltaV™ architecture - FMS-RS3FIC-DV-1-AIAO2-A1					
Existing Panel	Cable	Adapter	Cables	I/O Cards	
Analog Marshalling Panel 01984-2415-0001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)			
The state of the s			CBL-348 (Shielded Round Cable) SUB37F > 34 labeled wires	VE4003S2B6 / SE4003S2B6 Analog Input Card: 16 Channels 4-20 mA, HART, Al 16-Channel Terminal Block	
			SHD	0000000 0000000 0000000 0000000 0000000	
			CBL-435 (Shielded Round Cable) SUB25F > HE1016 Connector	VE4003S2B4 / SE4003S2B4 Analog Input Card : 8 Channels 4-20 mA, HART, 16-Pin Mass I/O Terminal Block	
			SHD		







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New DeltaV™ architecture - FMS-RS3FIC-DV-1-AIAO2-A2						
Existing Panel	Cable	Adapter	Cables	I/O Cards		
Analog Marshalling Panel 01984-2415-0001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)	4 x CBL-920 (Shielded Round Cable) SUB9F > 8 labeled wires	4 x VE4015 / 4 x SE4015  Multifunction card (Al-AO-DI or PCI Card) 4 Channels, 24 VDC Dry Contact Discrete 32 Channel Terminal Block		
			SHD			
			SHD			
			SHD			
			SHD			







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New DeltaV™ architecture - FMS-RS3FIC-DV-1-AIAO2-A3						
Existing Panel	Cable	Adapter	Cables	I/O Cards		
Analog Marshalling Panel 01984-2415-0001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)	CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	1/2 VE4002S1T2B6 / 1/2 VE4002S1T2B6  DO Card, 32 Channels, 24Vdc, High Side, 40-Pin Mass I/O Terminal Block		
			SHD			







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New DeltaV™ architecture - FMS-RS3FIM-DV-1-AIAO2-A4					
Existing Panel	Cable	Adapter	Cables	I/O Cards	
Analog Marshalling Panel 01984-2415-0001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)	CBL-350 (Shielded Round Cable) SUB25F > HE1016 Connector	VE4005S2B3 / SE4005S2B3 Analog Output Card : 8 Channels 4-20 mA, HART, 16-Pin Mass Terminal Block	
			SHD		







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		New DeltaV™ architecture - FMS-R	S3FIM-DV-1-AIAO2-A5	
Existing Panel	Cable	Adapter	Cables	I/O Cards
Analog Marshalling Panel 01984-2415-0001	HE1050	<b>BC-FIC-AIAO</b> File (19 inches) for RS3™ FIC I/Os (AI/AO)	2 x CBL-1247 (Shielded Round Cable) SUB9F > 24 labeled wires	2 x VE4003S6B1 2 x VE4003S6B1 RTD Card: 8 Channels RTD/ Resistance Terminal Block
			SHD	0000000
			SHD	0000000





### 3. DISCRETE INPUTS/OUTPUTS





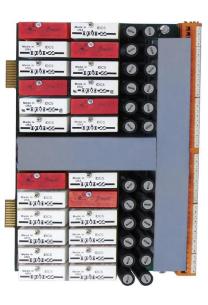
**FIRELEC Migration Solution** RS3™ FIC Series > DeltaV™ Using BC-FICs

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#### 3.1. EXISTING RS3 PANEL TO BE KEPT: DIGITAL MARSHALLING PANEL 01984-1287-0001

Contact Termination Boards are simply removed from the RS3 controller files and plugged into the BC-FIC-DIDO.

The 48 channels of the two Contact Termination Boards are divided into three groups of 16 channels. Each channel can be configured as a DI or DO using a jumper.

Depending on the type of signal per group, three to six I/O cards will be needed to cover the 48 channels. Example:

If a group of 16 channels consists of mixed DI and DO signals, one DI card and one DO card are needed.

If a group of 16 channels consists exclusively of DI or DO signals, only one DI or DO card will be required.

New DeltaV™ architecture - FMS-RS3FIC-DV-1-DIDO1-A1						
Existing Cards	Adapter	Cables	I/O Cards			
2 x Contact Termination Board 01984-1287-0001 To be removed from the RS3 file and re-plugged into the BC-FIC-DIDO file	<b>BC-FIC-DIDO</b> File (19 inches) for RS3™ FIC I/Os (DI/DO)					
		CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	VE4001S2T2B5 / SE4001S2T2B5 Discrete Input Card : 32 Channels, 24 Vdc, Dry Contact, 40-pin Mass Terminal Block			
O CONTROL CONT		SHD				
		CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	VE4002S1T2B6 / SE4002S1T2B6 DO Card, 32 Channels, 24Vdc, High Side, 40- Pin Mass I/O Terminal Block			
Control of the contro		SHD				







FIRELEC Migration Solution FMS-RS3FIC-DV-1

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#### 3.2. EXISTING RS3 PANEL TO BE KEPT: DIGITAL MARSHALLING PANEL 01984-2454-0001

The existing HE1050 cables coming from the Digital Marshalling Panels are simply disconnected from the controller files and connected to the BC-FIC-DIDO. The 48 channels of the two Digital Marshalling Panels are divided into three groups of 16 channels. Each channel can be configured as a DI or DO using a jumper. Depending on the type of signal per group, three to six I/O cards will be needed to cover the 48 channels.

If a group of 16 channels consists of mixed DI and DO signals, one DI card and one DO card are needed.

If a group of 16 channels consists exclusively of DI or DO signals, only one DI or DO card will be required.

New DeltaV™ architecture - FMS-RS3FIC-DV-1-DIDO2-A1  Existing pannel Cable Adapter Cables I/O Cards						
Existing pannel  2 x Digital Marshalling Panel  01984-2454-0001	Cable HE1050	Adapter  BC-FIC-DIDO  File (19 inches) for RS3™ FIC I/Os (DI/DO)	Caples	I/O Cards		
			CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	VE4001S2T2B5 / SE4001S2T2B5 Discrete Input Card : 32 Channels, 24 Vdc, Dry Contact, 40-pin Mass Termini Block		
The state of the s			SHD			
Table of the control			CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	VE4002S1T2B6 / SE4002S1T2B DO Card, 32 Channels, 24Vdc, High Side, 40-Pin Mass I/O Terminal Bloc		
Constitution of the consti			SHD			







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#### 3.3. EXISTING RS3 PANEL TO BE KEPT: DIGITAL MARSHALLING PANEL 01985-1810-0762

The existing HE1050 cable coming from the Digital Marshalling Panels are simply disconnected from the controller files and connected to the BC-FIC-DIDO. The 48 channels of the two Digital Marshalling Panels are divided into three groups of 16 channels. Each channel can be configured as a DI or DO using a jumper. Depending on the type of signal per group, three to six I/O cards will be needed to cover the 48 channels.

If a group of 16 channels consists of mixed DI and DO signals, one DI card and one DO card are needed.

If a group of 16 channels consists exclusively of DI or DO signals, only one DI or DO card will be required.

New DeltaV™ architecture - FMS-RS3FIC-DV-1-DIDO3-A1							
Existing pannel	Cable	Adapter	Cables	I/O Cards			
2 x Digital Marshalling Panel 01985-1810-0762	HE1050	<b>BC-FIC-DIDO</b> File (19 inches) for RS3™ FIC I/Os (DI/DO)					
			CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	VE4001S2T2B5 / SE4001S2T2B5 Discrete Input Card: 32 Channels, 24 Vdc, Dry Contact, 40-pin Mass Terminal Block			
			SHP O				
			CBL-864 (Shielded Round Cable) SUB25F > HE1020 Connector CH 1 to 16: Cable option A CH 17 to 32: Cable option B	VE4002S1T2B6 / SE4002S1T2B6 DO Card, 32 Channels, 24Vdc, High Side, 40-Pin Mass I/O Terminal Block			
			SHD O				



