

FIRELEC Migration Solution

RS3™ > DeltaV™

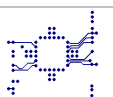
Discrete Inputs/Outputs

RIA (RS3 Interface Adapters)

FMS-RS3FIM-DV-1

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1. INTRODUCTION



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

FIRELEC has developed a migration solution "**FMS-RS3FIM-DV-1**" allowing to protect the existing wiring investment as the user converts from an existing RS3 system (FIM-series I/Os) to the DeltaV™ system.

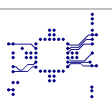
The **FMS-RS3FIM-DV-1** solution is a set of migration adapters installed in place of existing FIM electronic modules onto Input / Output termination panels.

On the front of RIAs, SUBD connectors are used for connection of existing I/Os to the DeltaV I/O cards using dedicated shielded cables with SUBD connectors at one end and numbered wires or suitable connectors (matching with the type of I/O block of the DeltaV card) at the other end.

1.1. KEY ADVANTAGES OF THE FMS-RS3FIM-DV-1 SOLUTION

FMS-RS3FIM-DV-1 solution protect your wiring investment as you convert from the RS3™ FIM series system to the DeltaV™ system of Emerson Process Management with following advantages :

- **FMS-RS3FIM-DV-1** is a pre-engineered marshalling solution ready to work without any technical rework or limitation regarding existing capabilities of the RS3 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™ system's configuration allows for the engineering conversion to be done efficiently. The speed at which **FMS-RS3FIM-DV-1** solution can be implemented ensures to reduce the process downtime to the minimum.
- All existing documentations (electrical schemes, loop drawings, maintenance procedures,) remain unchanged as the existing I/O panels are kept in place.

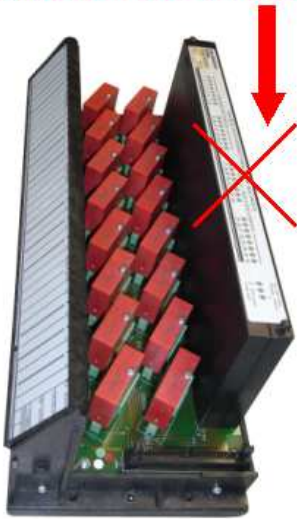


1.2. DESCRIPTION OF THE "FMS-RS3FIM-DV-1" SOLUTION

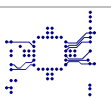
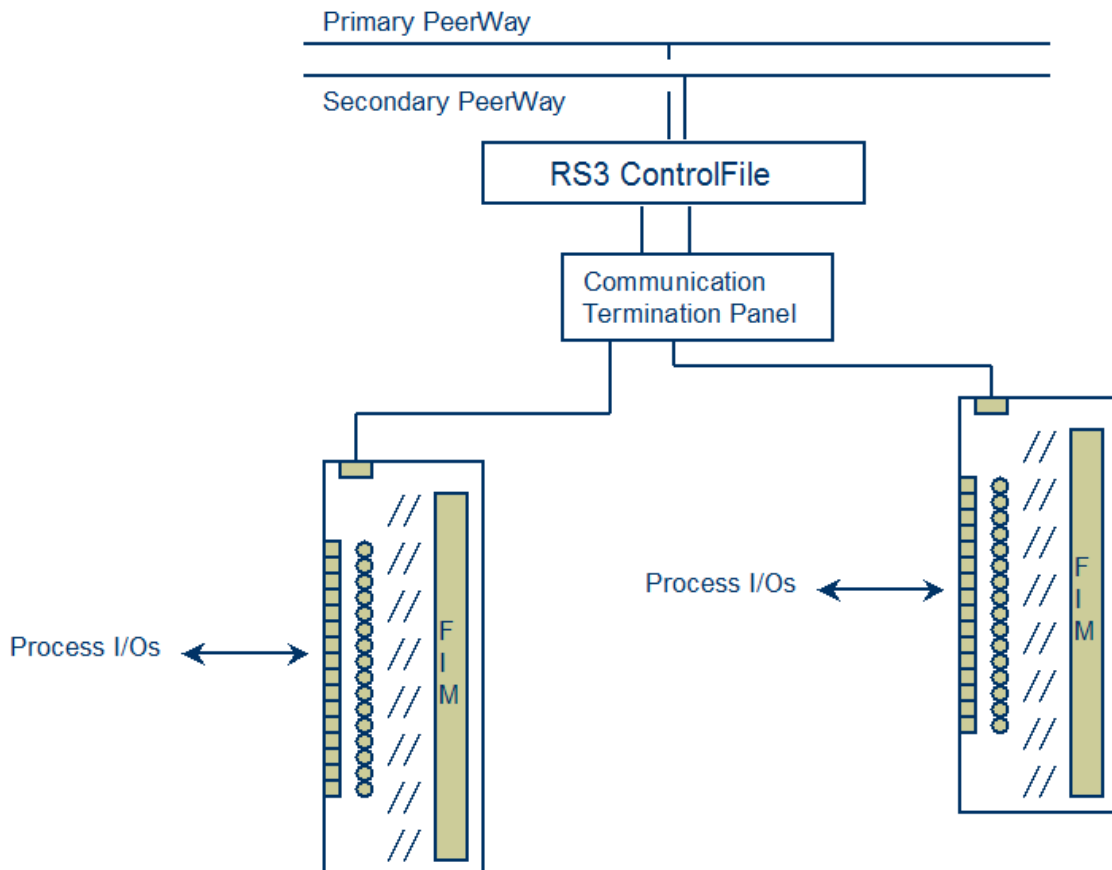
1.2.1. Principle of migration

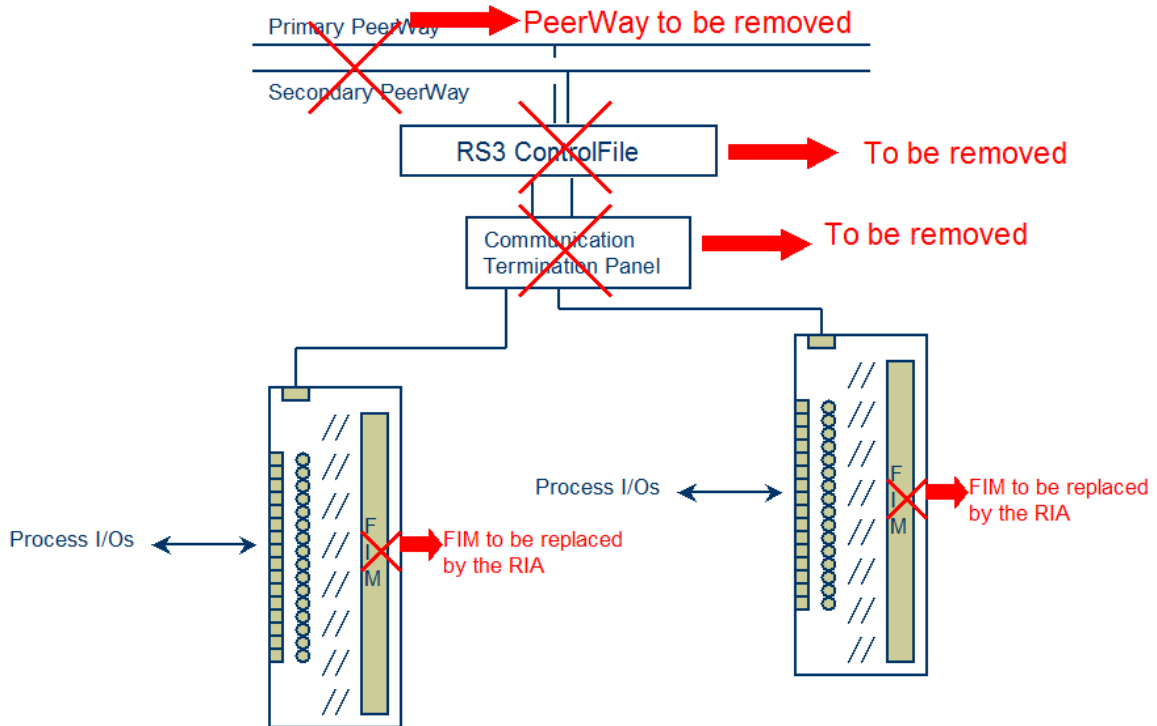
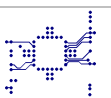
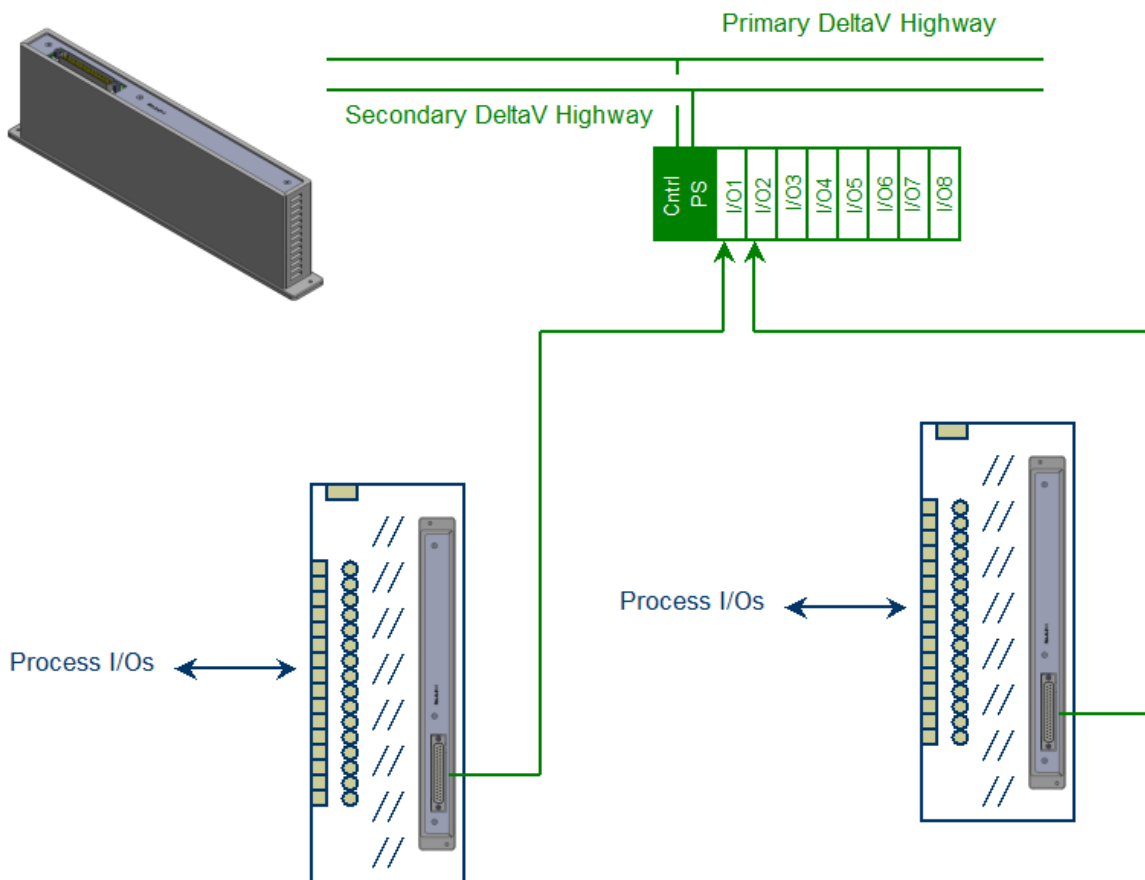
FIM electronic module to be removed

RIA to be plugged in place of existing FIM module

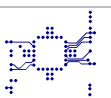


1.2.2. Existing RS3 architecture



1.2.3. Existing RS3 Hardware to be removed

1.2.4. New DeltaV architecture


2. DISCRETE INPUTS/OUTPUTS



2.1. EXISTING RS3 PANEL TO BE KEPT : ISOLATED DISCRETE TERMINATION PANEL (A / B)

2.1.1. MDIO Type : 01984-4121-000X (Panel A) : 16 DI /DO (CH1 - CH16)

Panel A with I/O distribution as follow :

Channels 1 to 16 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO1-A1

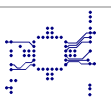
Panel to be kept : Panel A : 01984-4121-000X 01984-4383-0002	RIA-DIDO-01-1	CBL-RS3FIM-DV-1-DIDO1-A1	1/2 x DI Card 32CH VE4001S2T2B5 or SE4001S2T2B5
16 DI or DO (channels 1 - 16) Input frequency limited to 75Hz due to the DeltaV DI card.	Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module (see appendix 1 for compatibility table) RIA-DIDO-01-1 configured by internal jumpers as DI for all 16 channels	DeltaV connector J3 or J4 CH 1 to 16 : Cable option A (> J3) CH 17 to 32 : Cable option B (>J4)	Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block

Panel A with I/O distribution as follow :

Channels 1 to 16 : DO

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO1-B1

Panel to be kept : Panel A : 01984-4121-000X 01984-4383-0002	RIA-DIDO-01-1	CBL-1146 A or B	1/2 x DO Card 32CH VE4002S1T2B6 or SE4002S1T2B6
16 DI or DO (channels 1 - 16)	Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module (see appendix 1 for compatibility table) RIA-DIDO-01-1 configured by internal jumpers as DO for all 16 channels	DeltaV connector J3 or J4 CH 1 to 16 : Cable option A (> J3) CH 17 to 32 : Cable option B (>J4)	Discrete Output card, 32 channels, 24 Vdc, High-side, 40 pin Mass Termination



Panel A with I/O distribution as follow :
Channels 1 to 8 : DI or DO
Channels 9 to 16 : DI

Or

Channels 1 to 8 : DI
Channels 9 to 16 : DI or DO
New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO1-C1
Panel to be kept :

Panel A : 01984-4121-000X

01984-4383-0002

RIA-DIDO-01-1
Cable N°1 :
 CBL-RS3FIM-DV-1-DIDO1-
 C1-1

+

Cable N°2 :
 CBL-RS3FIM-DV-1-DIDO1-
 C1-2

1/2 x DI Card 32CH
 VE4001S2T2B5_ or
 SE4001S2T2B5

1 x DO Card 8CH
 VE4002S1T2B3 or
 SE4002S1T2B3

16 DI or DO (channels 1 - 16)

Input frequency limited to 75Hz due to the DeltaV DI card.

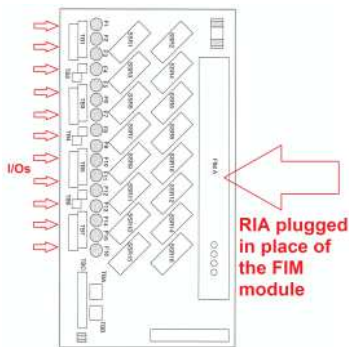
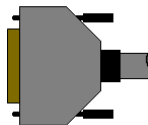
 Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module
 (see appendix 1 for compatibility table)

RIA-DIDO-01-1 configured by internal jumpers in accordance with I/O requirement
Cable N°1 :
 DeltaV connector J3 or J4

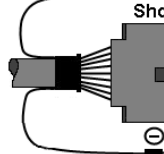
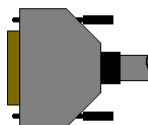
 CH 1 to 16 : Cable option A (> J3)
 CH 17 to 32 : Cable option B (>J4)

Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block

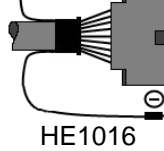
Discrete Output card, 8 channels, 24 Vdc, High-side, 16 pin Mass Termination


 SUBD37
 Pin for DI


HE1020


 SUBD25
 Pin for DO


HE1016



1/2 x DI Card 32CH



DO Card 8CH



Panel A with I/O distribution as follow :
Channels 1 to 8 : DI or DO
Channels 9 to 16 : DO

Or

Channels 1 to 8 : DO
Channels 9 to 16 : DI or DO
New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO1-D1
Panel to be kept :

Panel A : 01984-4121-000X

01984-4383-0002

RIA-DIDO-01-1
Cable N°1 :
CBL-RS3FIM-DV-1-DIDO1-
D1-1

+

Cable N°2 :
CBL-1146 A or B
1 x DI Card 8CH
VE4001S2T2B3 or
SE4001S2T2B3
1/2 x DO Card 32CH
VE4002S1T2B6 or
SE4002S1T2B6

 16 DI or DO (channels 1 - 16)
 Input frequency limited to 75Hz due to the DeltaV DI card.

 Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module
 (see appendix 1 for compatibility table)

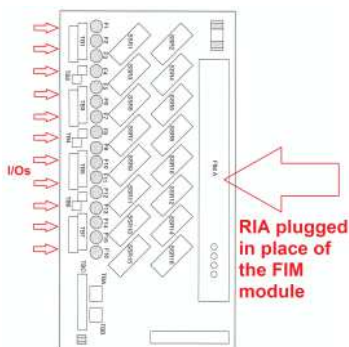
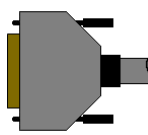
RIA-DIDO-01-1 configured by internal jumpers in accordance with I/O requirement

 Cable N°2 :
 DeltaV connector J3 or J4

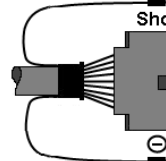
CH 1 to 16 : Cable option A (> J3)
CH 17 to 32 : Cable option B (>J4)

Discrete Input card, 8 channels, 24 Vdc, Dry contact, 16 pin Mass Termination

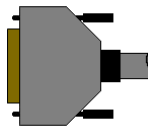
Discrete Output card, 32 channels, 24 Vdc, High-side, 40 pin Mass Termination


 SUBD37
 Pin for DI


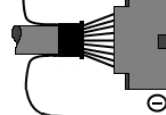
HE1016



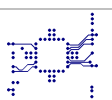
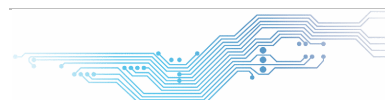
DI Card 8CH


 SUBD25
 Pin for DO


HE1020



1/2 x DO Card 32CH



Panel A with I/O distribution as follow :

Channels 1 to 16 : DI or DO

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO1-E1
Panel to be kept :

 Panel A : 01984-4121-000X
 01984-4383-0002

RIA-DIDO-01-1
Cable N°1 :
CBL-RS3FIM-DV-1-DIDO1-
E1-1
 +
Cable N°2 :
CBL-1146 A or B
1/2 x DI Card 32CH
VE4001S2T2B5_ or
SE4001S2T2B5
1/2 x DO Card 32CH
VE4002S1T2B6 or
SE4002S1T2B6

 16 DI or DO (channels 1 - 16)
 Input frequency limited to 75Hz due to the DeltaV DI card.

Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module

(see appendix 1 for compatibility table)

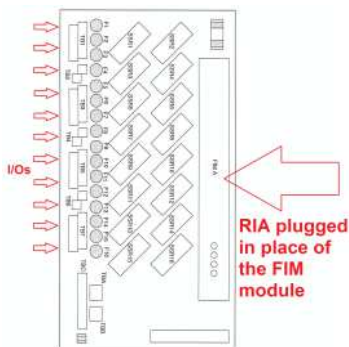
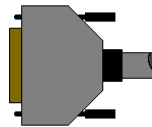
RIA-DIDO-01-1 configured by internal jumpers in accordance with I/O requirement

 Cable N°1 and 2 :
 DeltaV connector J3 or J4

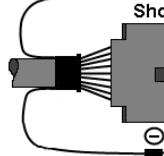
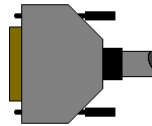
 CH 1 to 16 : Cable option A (> J3)
 CH 17 to 32 : Cable option B (>J4)

Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block

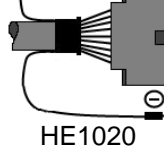
Discrete Output card, 32 channels, 24 Vdc, High-side, 40 pin Mass Termination


 SUBD37
 Pin for DI


HE1020


 SUBD25
 Pin for DO


HE1020



1/2 x DI Card 32CH



1/2 x DO Card 32CH



2.1.2.MDIO Type : 01984-4121-000X (Panel A) : 16 DI /DO (CH1 - CH16) and 01984-4124-000X (Panel B) : 16DI (CH17 - CH32)

Panel A with I/O distribution as follow :

Channels 1 to 16 : DI

Panel B with I/O distribution as follow :

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO2-A1

Panel to be kept :

Panel A : 01984-4121-000X
 01984-4383-0002

RIA-DIDO-01-1

CBL-1145

1 x DI Card 32CH
 VE4001S2T2B5 or
 SE4001S2T2B5

Panel B : 01984-4124-000X
 01984-4383-0002

Panel A :
 16 DI or DO (channels 1 - 16)

Input frequency limited to 75Hz due to the DeltaV DI card.

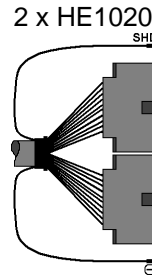
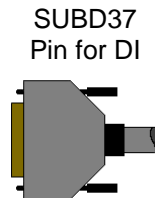
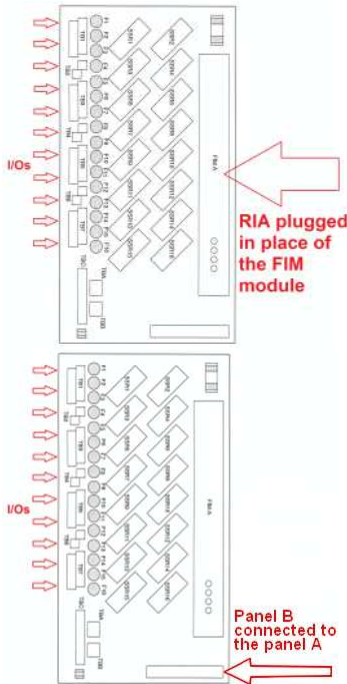
Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module
 (see appendix 1 for compatibility table)

DeltaV connector J3 and J4

Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block

Panel B :
 16 DI (channels 1 - 16)
 Input frequency limited to 75Hz due to the DeltaV DI card.

RIA-DIDO-01-1 configured by internal jumpers as DI for channels 1 to 16



Panel A with I/O distribution as follow :

Channels 1 to 16 : DO

Panel B with I/O distribution as follow :

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO2-B1
Panel to be kept :

 Panel A : 01984-4121-000X
 01984-4383-0002

 Panel B : 01984-4124-000X
 01984-4383-0002

RIA-DIDO-01-1
Cable N°1 :
 CBL-1159 A or B

+

Cable N°2 :
 CBL-1146 A or B

 1/2 x DI Card 32CH
 VE4001S2T2B5_ or
 SE4001S2T2B5

 1/2 x DO Card 32CH
 VE4002S1T2B6 or
 SE4002S1T2B6

 Panel A :
 16 DI or DO (channels 1 - 16)

 Panel B :
 16 DI (channels 1 - 16)
 Input frequency limited to 75Hz due to the DeltaV DI card.

Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module (see appendix 1 for compatibility table)

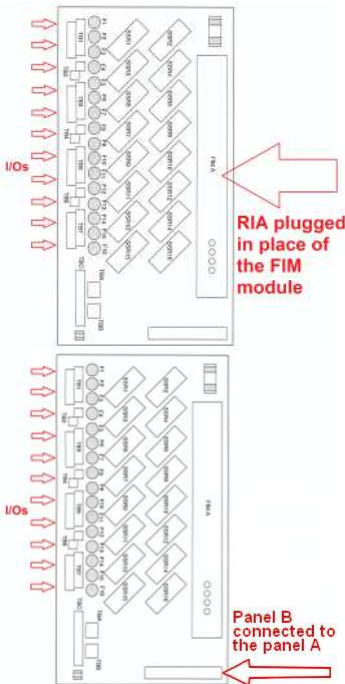
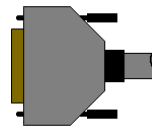
RIA-DIDO-01-1 configured by internal jumpers as DO for channels 1 to 16

 Cable N°1 and 2 :
 DeltaV connector J3 or J4

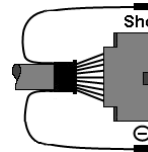
 CH 1 to 16 : Cable option A (> J3)
 CH 17 to 32 : Cable option B (>J4)

Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block

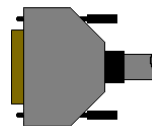
Discrete Output card, 32 channels, 24 Vdc, High-side, 40 pin Mass Termination


 SUBD37
 Pin for DI


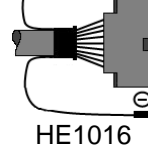
HE1020



1/2 x DI Card 32CH


 SUBD25
 Pin for DO


HE1016



1/2 x DO Card 32CH



New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO2-B2
Panel to be kept :

 Panel A : 01984-4121-000X
 01984-4383-0002

 Panel B : 01984-4124-000X
 01984-4383-0002

RIA-DIDO-01-1
Cable N°1 :
 CBL-1397 A or B

+

Cable N°2 :
 CBL-1396 A or B

1/2 x DI Card 32CH
 VE4001S2T2B4_ or
 SE4001S2T2B4

1/2 x DO Card 32CH
 VE4002S1T2B5 or
 SE4002S1T2B5

 Panel A :
 16 DI or DO (channels 1 - 16)

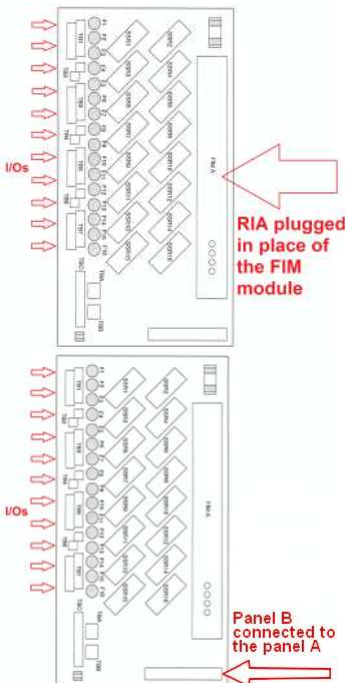
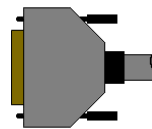
 Panel B :
 16 DI (channels 1 - 16)
 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

 Adapter installed on
 existing Isolated Discrete
 Termination Panel in
 place of the FIM module
 (see appendix 1 for
 compatibility table)

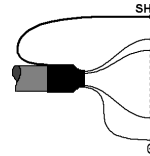
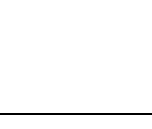
RIA-DIDO-01-1
 configured by internal
 jumpers as DO for
 channels 1 to 16

 CH 1 to 16 : Cable option A
 CH 17 to 32 : Cable option B

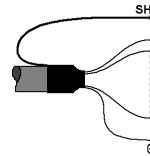
 Discrete Input Card
 32 Channels
 24 Vdc, Dry Contact,
 Terminal Block

 Discrete Output card
 32 channels
 24 Vdc, High-side,
 Terminal Block

 SUBD37
 Pin for DI


18 Wires


 SUBD25
 Pin for DO


18 Wires



1/2 x DI Card 32CH



1/2 x DO Card 32CH



Panel A with I/O distribution as follow :

Channels 1 to 16 : DI or DO

Panel B with I/O distribution as follow :

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO2-C1
Panel to be kept :

 Panel A : 01984-4121-000X
 01984-4383-0002

 Panel B : 01984-4124-000X
 01984-4383-0002

RIA-DIDO-01-1
Cable N°1 :
 CBL-1145

+

Cable N°2 :
 CBL-1146 A or B

 1 x DI Card 32CH
 VE4001S2T2B5_ or
 SE4001S2T2B5

 1/2 x DO Card 32CH
 VE4002S1T2B6 or
 SE4002S1T2B6

 Panel A :
 16 DI or DO (channels 1 - 16)

 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

 Panel B :
 16 DI (channels 1 - 16)
 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

 Adapter installed on
 existing Isolated Discrete
 Termination Panel in
 place of the FIM module

 (see appendix 1 for
 compatibility table)

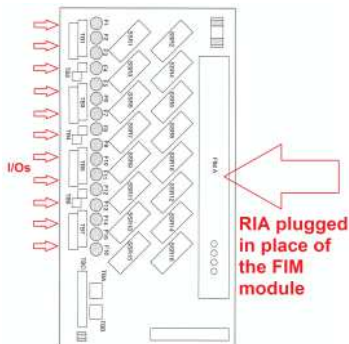
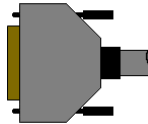
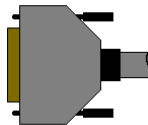
**RIA-DIDO-01-1
 configured by internal
 jumpers in accordance
 with I/O requirement**

 Cable N°1
 DeltaV connector J3 and J4

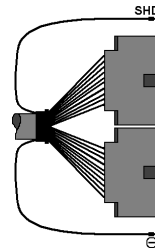
 Cable N°2 :
 DeltaV connector J3 or J4

 CH 1 to 16 : Cable option A (> J3)
 CH 17 to 32 : Cable option B (>J4)

 Discrete Input card, 32
 channels, 24 Vdc, Dry
 contact, 40 pin Mass
 Termination block

 Discrete Output card, 32
 channels, 24 Vdc, High-side,
 40 pin Mass Termination

 SUBD37
 Pin for DI

 SUBD25
 Pin for DO


2 x HE1020



1 x DI Card 32CH



1/2 x DO Card 32CH



2.2. EXISTING RS3 PANEL TO BE KEPT : DIRECT DISCRETE TERMINATION PANEL

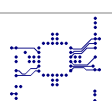
2.2.1. MDIO Low Side Switching (DO) : 01984-4127-000X and 10P52700001(CE) : 16 DI /DO (CH 1 - 16) and 16DI (CH17 - CH32)

With I/O distribution as follow :

- Channels 1 to 8 : DI or DO
- Channels 9 to 16 : DI
- Channels 17 to 32 : DI
- Or
- Channels 1 to 8 : DI
- Channels 9 to 16 : DI or DO
- Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO3-A1

Panel to be kept : 01984-4127-000X or 10P52700001 01984-4383-0002	RIA-DIDO-02-1 (Low Side Version depending on the existing FIM type installed)	Cable N°1 : CBL-1145 & Cable N°2 : CBL-RS3FIM-DV-1-DIDO3- A1-2/A	1 X DI Card 32CH VE4001S2T2B5_ or SE4001S2T2B5 / 1 x DO Card 8CH VE4002S1T2B3 or SE4002S1T2B3
16 DI or DO (channels 1 - 16) and 16 DI (channels 17 - 32) Input frequency limited to 75Hz due to the DeltaV DI card.	Adapter installed on existing Direct Discrete Termination Panel in place of the FIM A or B module (see appendix 1 for compatibility table) 1 x SUBD25M for DO (16 max) 1 x SUBD37M for DI (32 max)	Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block Discrete Output card, 8 channels, 24 Vdc, High-side, 16 pin Mass Termination	
<p style="color: red; font-weight: bold;">RIA plugged in place of the FIM module</p>		<p>SUBD37 Pin for DI</p>	<p>DI Card 32CH</p>
	<p>SUBD25 Pin for DO</p>	<p>DO Card 8CH</p>	



With I/O distribution as follow :

Channels 1 to 16 : DI or DO

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO3-A2

Panel to be kept :

01984-4127-000X
 or
 10P52700001

 01984-4383-0002

RIA-DIDO-02-1
 (Low Side Version
 depending on the
 existing FIM type
 installed)

Cable N°1 :
CBL-1145

Cable N°2 :
CBL-1146 A or B

DeltaV connector J3 or J4
 CH 1 to 16 : Cable option A (> J3)
 CH 17 to 32 : Cable option B (>J4)

1 X DI Card 32CH
VE4001S2T2B5_ or
SE4001S2T2B5
 /
1/2 x DO Card 32CH
VE4002S1T2B6 or
SE4002S1T2B6

16 DI or DO (channels 1 - 16)
 and
 16 DI (channels 17 - 32)
 Input frequency limited to 75Hz due to the DeltaV DI card.

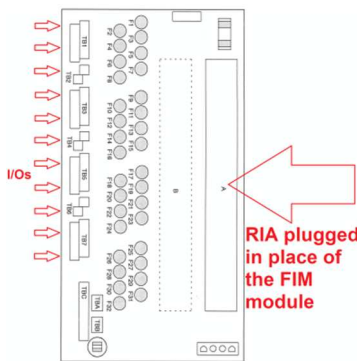
Adapter installed on existing Direct Discrete Termination Panel in place of the FIM A or B module

(see appendix 1 for compatibility table)

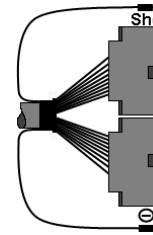
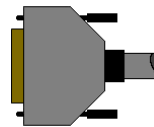
1 x SUBD25M for DO (16 max)
 1 x SUBD37M for DI (32 max)

Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block

Discrete Output card, 32 channels, 24 Vdc, High-side, 40 pin Mass Termination



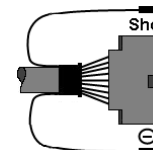
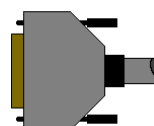
SUBD37 Pin for DI



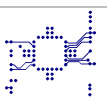
DI Card 32CH



SUBD25 Pin for DO



1/2 x DO Card 32CH



2.2.2.MDIO High Side Switching (DO) : 10P52700001(CE) : 16 DI /DO (CH 1 - 16) and 16DI (CH17 - CH32)

With I/O distribution as follow :

Channels 1 to 8 : DI or DO

Channels 9 to 16 : DI

Channels 17 to 32 : DI

Or

Channels 1 to 8 : DI

Channels 9 to 16 : DI or DO

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO4-A1
Panel to be kept :

10P52700001

01984-4383-0002

RIA-DIDO-02-2
 (High Side Version
 depending on the
 existing FIM type
 installed)

Cable N°1 :
 CBL-1145
 &
Cable N°2 :
 CBL- RS3FIM-DV-1-DIDO4-
 A1-2

1 X DI Card 32CH
 VE4001S2T2B5_ or
 SE4001S2T2B5
 /
1 x DO Card 8CH
 VE4002S1T2B3 or
 SE4002S1T2B3

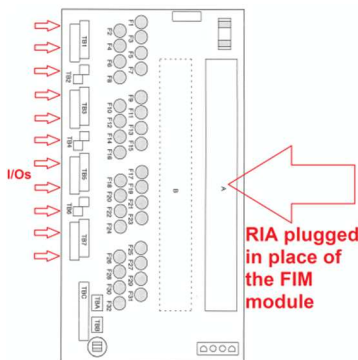
16 DI or DO (channels 1 - 16)
 and
 16 DI (channels 17 - 32)
 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

Adapter installed on
 existing Direct Discrete
 Termination Panel in
 place of the FIM A or B
 module

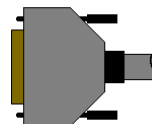
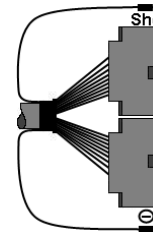
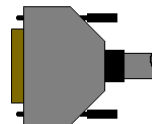
(see appendix 1 for
 compatibility table)

1 x SUBD25M for DO (16
 max)
 1 x SUBD37M for DI (32
 max)

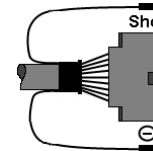
Discrete Input card, 32
 channels, 24 Vdc, Dry
 contact, 40 pin Mass
 Termination block
 Discrete Output card, 8
 channels, 24 Vdc, High-side,
 16 pin Mass Termination



SUBD37
 Pin for DI



SUBD25
 Pin for DO



DI Card 32CH



DO Card 8CH



With I/O distribution as follow :

Channels 1 to 16 : DI or DO

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO3-A2
Panel to be kept :

 10P52700001
 01984-4383-0002

RIA-DIDO-02-2
 (High Side Version
 depending on the
 existing FIM type
 installed)

Cable N°1 :
CBL-1145
 &
Cable N°2 :
CBL-1146 A or B
1 X DI Card 32CH
VE4001S2T2B5_ or
SE4001S2T2B5
 /
1/2 x DO Card 32CH
VE4002S1T2B6 or
SE4002S1T2B6

 16 DI or DO (channels 1 -
 16)
 and
 16 DI (channels 17 - 32)
 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

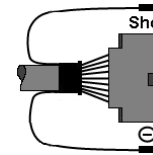
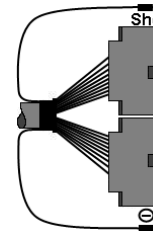
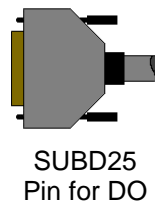
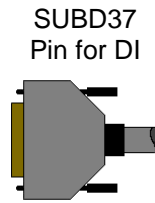
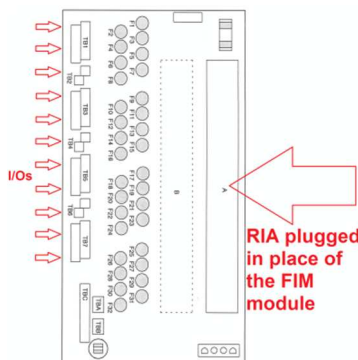
 Adapter installed on
 existing Direct Discrete
 Termination Panel in
 place of the FIM A or B
 module
 (see appendix 1 for
 compatibility table)

 1 x SUBD25M for DO (16 max)
 1 x SUBD37M for DI (32 max)

Cable N°2 :
 DeltaV connector J3 or J4

 CH 1 to 16 : Cable option A (> J3)
 CH 17 to 32 : Cable option B (>J4)

 Discrete Input card, 32
 channels, 24 Vdc, Dry
 contact, 40 pin Mass
 Termination block

 Discrete Output card, 32
 channels, 24 Vdc, High-side,
 40 pin Mass Termination

DI Card 32CH

1/2 x DO Card 32CH


2.3. EXISTING RS3 PANEL TO BE KEPT : HIGH DENSITY ISOLATED DISCRETE TERMINATION PANEL

2.3.1. MDIO Type : 01984-4167-000X : 16 DI /DO (CH1 - 16) and 16DI (CH17 - CH32)

With I/O distribution as follow :

Channels 1 to 8 : DI or DO

Channels 9 to 16 : DI

Channels 17 to 32 : DI

Or

Channels 1 to 8 : DI

Channels 9 to 16 : DI or DO

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO3-A1

Panel to be kept :

01984-4167-000X

01984-4383-0002

RIA-DIDO-03-1

Cable N°1 :

CBL- RS3FIM-DV-1-DIDO5-A1-1

&

Cable N°2 :

CBL- RS3FIM-DV-1-DIDO5-A1-2

1 X DI Card 32CH
VE4001S2T2B5_ or
SE4001S2T2B5

/

1 x DO Card 8CH
VE4002S1T2B3 or
SE4002S1T2B3

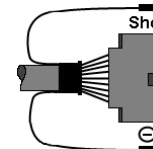
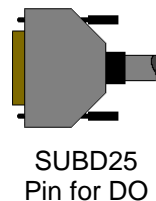
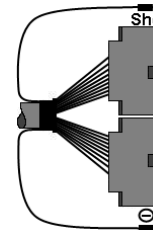
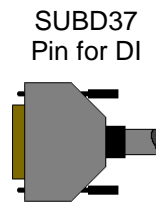
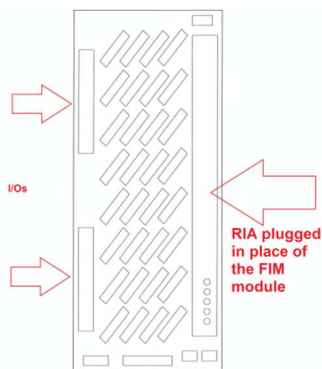
16 DI or DO (channels 1 - 16)
and
16 DI (channels 17 - 32)
Input frequency limited to 75Hz due to the DeltaV DI card.

Adapter installed on existing Direct Discrete Termination Panel in place of the FIM A or B module

(see appendix 1 for compatibility table)

1 x SUBD25M for DO (16 max)
1 x SUBD37M for DI (32 max)

Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block
Discrete Output card, 8 channels, 24 Vdc, High-side, 16 pin Mass Termination



With I/O distribution as follow :

Channels 1 to 16 : DI or DO

Channels 17 to 32 : DI

New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO5-A2
Panel to be kept :
01984-4167-000X
01984-4383-0002
RIA-DIDO-03-1
Cable N°1 :
CBL-RS3FIM-DV-1-DIDO5-
A2-1
&
Cable N°2 :
CBL- RS3FIM-DV-1-DIDO5-
A2-2
1 X DI Card 32CH
VE4001S2T2B5_ or
SE4001S2T2B5
/
1/2 x DO Card 32CH
VE4002S1T2B6 or
SE4002S1T2B6

 16 DI or DO (channels 1 - 16)
 and
 16 DI (channels 17 - 32)
 Input frequency limited to 75Hz due to the DeltaV DI card.

 Adapter installed on existing Direct Discrete Termination Panel in place of the FIM A or B module
 (see appendix 1 for compatibility table)

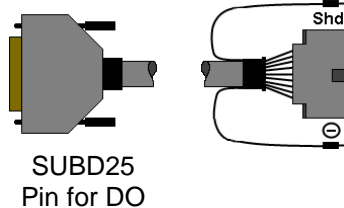
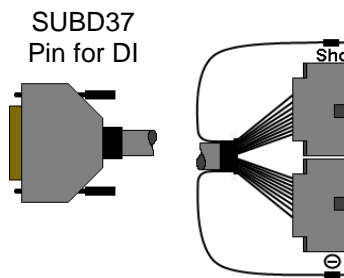
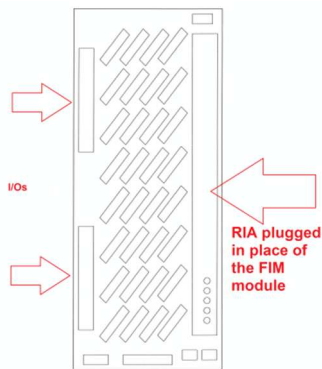
 1 x SUBD25M for DO (16 max)
 1 x SUBD37M for DI (32 max)

Cable N°2 :
 DeltaV connector J3 or J4

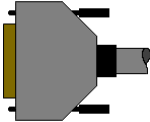
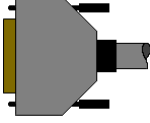
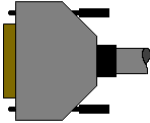
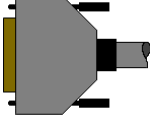
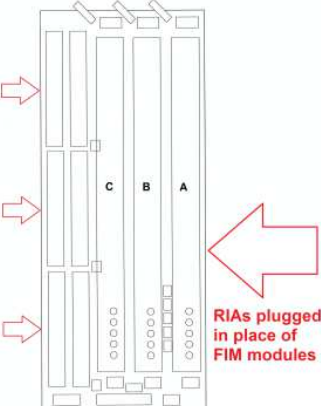

 CH 1 to 16 : Cable option A (> J3)
 CH 17 to 32 : Cable option B (>J4)

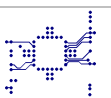
Discrete Input card, 32 channels, 24 Vdc, Dry contact, 40 pin Mass Termination block

Discrete Output card, 32 channels, 24 Vdc, High-side, 40 pin Mass Termination



2.4. EXISTING RS3 PANEL TO BE KEPT : MULTI FIM DISCRETE TERMINATION PANEL
2.4.1. MDIO Type : 01984-4282-000X : [16 DI /DO (CH1 - 16) and 16DI (CH17 - CH32)] x 3
New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO6-A1

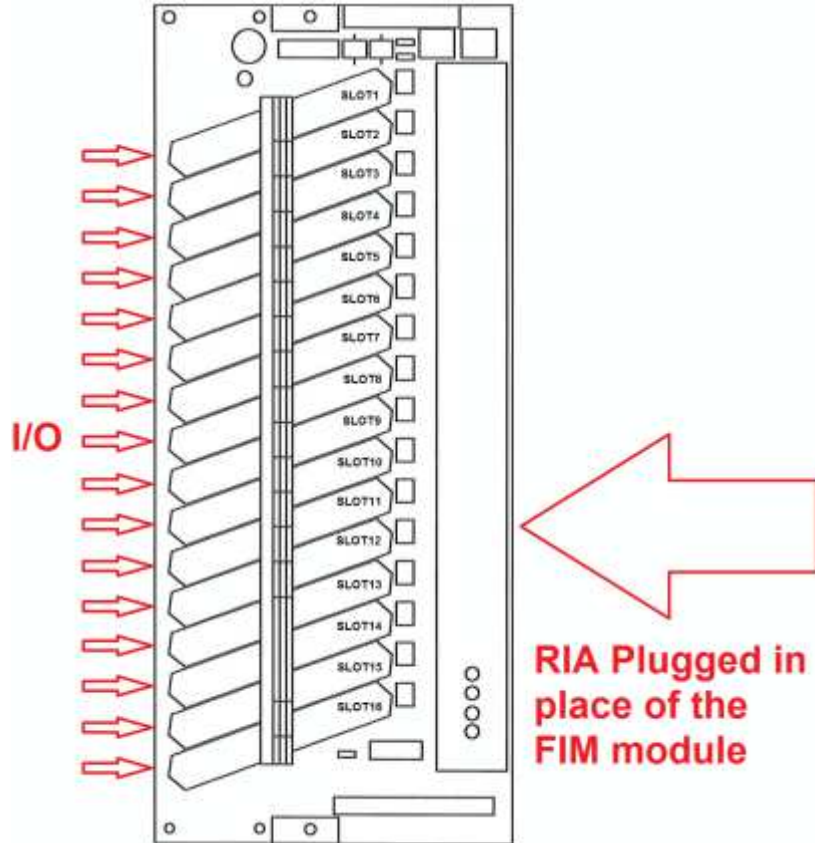
Panel to be kept :		Cables	DeltaV I/O cards
01984-4282-000X	2 x RIA-DIDO-02-1 (Low Side Version)	To be determined depending on the existing field wiring of remote termination panels	To be determined depending on the existing field wiring of remote termination panels
01984-4383-0002			
2 x 16 DI or DO (channels 1 - 16) and 2 x 16 DI (channels 17 - 32) Input frequency limited to 75Hz due to the DeltaV DI card.	Adapter installed on existing Isolated Discrete Termination Panel in place of the FIM module (see appendix 1 for compatibility table)	SUBD37 pin  SUBD25 Pin  SUBD37 pin  SUBD25 Pin 	TBD TBD
 <p style="color: red;">RIAs plugged in place of FIM modules</p>			



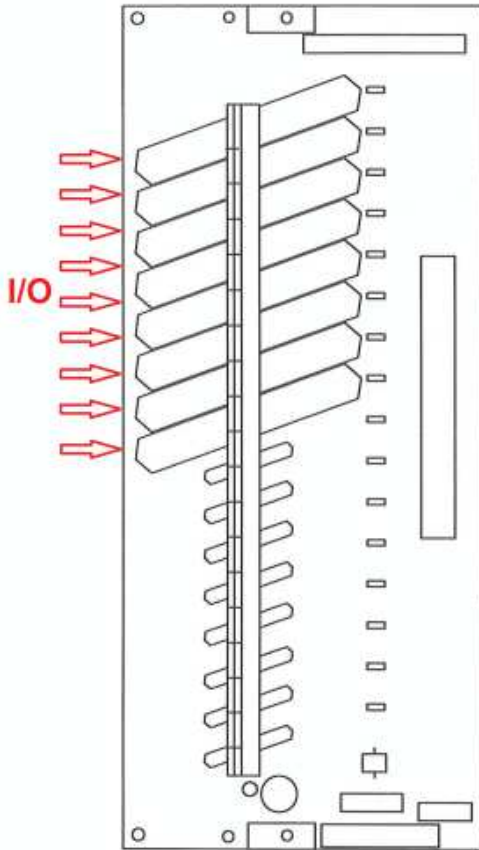
2.5. EXISTING RS3 PANEL TO BE KEPT : IS DISCRETE TERMINATION PANEL (A / B)

2.5.1. MDIO Type : 10P5037000X (Panel A) 10P5049000X (Panel B)

Panel A : Slot 1 to 16



Slot	Input channel	Output channel
1	1 - 2	Or 1
2	3 - 4	Or 3
3	5 - 6	Or 5
4	7 - 8	Or 7
5	9 - 10	Or 9
6	11 - 12	Or 11
7	13 - 14	Or 13
8	15 - 16	Or 15
9	17 - 18	
10	19 - 20	
11	21 - 22	
12	23 - 24	
13	25 - 26	
14	27 - 28	
15	29 - 30	
16	31 - 32	

Panel B : Slot 17 to 32


Slot	Input channel	Output channel available on Panel A with connection between panel A and panel B
17	Not available	2
18	Not available	4
19	Not available	6
20	Not available	8
21	Not available	10
22	Not available	12
23	Not available	14
24	Not available	16

On this panel, I.S. DO modules (1 channel) can be plugged only on slot 1 to 8 corresponding to channels 1, 3, 5, 7, 9, 11, 13, 15. In that case, channels 2, 4, 6, 8, 10, 12, 16 are not available.

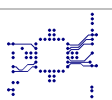
I.S. DI modules (2 channels) can be plugged on all 16 slots available on the panel corresponding to channels 1 to 32.

2.5.2. MDIO Type : 10P5037000X (Panel A) 10P5049000X (Panel B) - Configuration example 1

Table 1 here below, shows an I/O configuration with 8 x DO and 16 x DI.

Panel A : Slot 1 to 16 (Panel B is not used in that case)

Table 1		
Slot	Input channel	Output channel
1 : DO		1
2 : DO		3
3 : DO		5
4 : DO		7
5 : DO		9
6 : DO		11
7 : DO		13
8 : DO		15
9 : DI	17 - 18	
10 : DI	19 - 20	
11 : DI	21 - 22	
12 : DI	23 - 24	
13 : DI	25 - 26	
14 : DI	27 - 28	
15 : DI	29 - 30	
16 : DI	31 - 32	



New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO7-A1
Panel to be kept :

Config 1
 10P5037000X
 With I.S. MTL barriers
 type : MTL4013 MTL 4014
 MTL 4017

01984-4383-0002

RIA-DIDO-04-1
Cable N°1 :
 CBL- RS3FIM-DV-1-DIDO7-
 A1-1

Cable N°2 :
 CBL- RS3FIM-DV-1-DIDO7-
 A1-2

1/2 x DI Card 32CH
 VE4001S2T2B5_ or
 SE4001S2T2B5

1 x DO Card 8CH
 VE4002S1T2B3 or
 SE4002S1T2B3

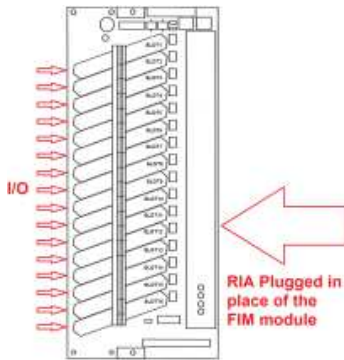
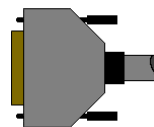
16 DI (channels 17 - 32)
 8 DO (channels 1 to 15 by
 odd step) see table 1
 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

Adapter installed on
 existing IS Discrete
 Termination Panel A in
 place of the FIM

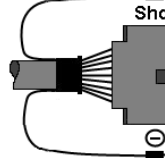
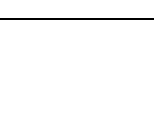
(see appendix 1 for
 compatibility table)

Discrete Input card, 32
 channels, 24 Vdc, Dry
 contact, 40 pin Mass
 Termination block

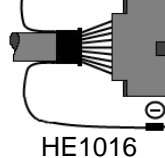
Discrete Output card, 8
 channels, 24 Vdc, High-side,
 16 pin Mass Termination
 1/2 x DI Card 32CH


 SUBD37
 Pin for DI


HE1020


 SUBD25
 Pin for DO


HE1016



2.5.3.MDIO Type : 10P5037000X (Panel A) 10P5049000X (Panel B) - Configuration example 2

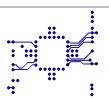
Table 2 here below, shows an I/O configuration with 16 x DO and 16 x DI.

Panel A : Slot 1 to 16

Table 2		
Slot	Input channel	Output channel
1 : DO		1
2 : DO		3
3 : DO		5
4 : DO		7
5 : DO		9
6 : DO		11
7 : DO		13
8 : DO		15
9 : DI	17 - 18	
10 : DI	19 - 20	
11 : DI	21 - 22	
12 : DI	23 - 24	
13 : DI	25 - 26	
14 : DI	27 - 28	
15 :DI	29 - 30	
16 : DI	31 - 32	

Panel B : Slot 17 to 32

Slot	Input channel	Output channel available on Panel A with connection between panel A and panel B
17 : DO	Not available	2
18 : DO	Not available	4
19 : DO	Not available	6
20 : DO	Not available	8
21 : DO	Not available	10
22 : DO	Not available	12
23 :DO	Not available	14
24 : DO	Not available	16



New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO7-A2

Panel to be kept :
 Config 1
 10P5037000X
 With I.S. MTL barriers
 type : MTL4013 MTL 4014
 MTL 4017
 01984-4383-0002

RIA-DIDO-04-1

Cable N°1 :
 CBL- RS3FIM-DV-1-DIDO7-
 A2-1

+

Cable N°2 :
 CBL- RS3FIM-DV-1-DIDO7-
 A2-2

1/2 x DI Card 32CH
 VE4001S2T2B5_ or
 SE4001S2T2B5

1/2 x DO Card 32CH
 VE4002S1T2B6 or
 SE4002S1T2B6

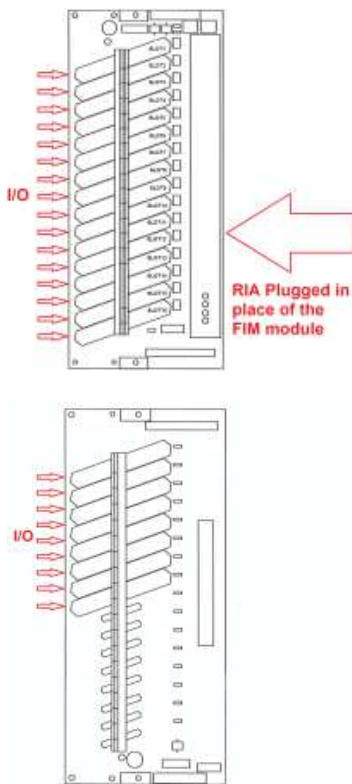
16 DI (channels 17 - 32)
 8 DO (channels 1 to 15 by
 odd step) see table 1
 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

Adapter installed on
 existing IS Discrete
 Termination Panel A in
 place of the FIM

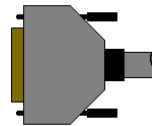
(see appendix 1 for
 compatibility table)

Discrete Input card, 32
 channels, 24 Vdc, Dry
 contact, 40 pin Mass
 Termination block

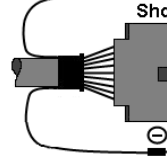
Discrete Output card, 32
 channels, 24 Vdc, High-side,
 40 pin Mass Termination



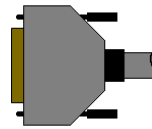
SUBD37
 Pin for DI



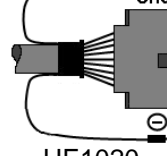
HE1020



SUBD25
 Pin for DO



HE1020



1/2 x DI Card 32CH



1/2 x DO Card 32CH

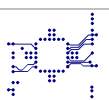


2.5.4.MDIO Type : 10P5037000X (Panel A) 10P5049000X (Panel B) - Configuration example 3

Table 3 here below, shows an I/O configuration with 4 x DO and 24 x DI.

Panel A : Slot 1 to 16 (Panel B is not used in that case)

Table 3		
Slot	Input channel	Output channel
1 : DO		1
2 : DO		3
3 : DO		5
4 : DO		7
5 : DI	9 - 10	
6 : DI	11 - 12	
7 : DI	13 - 14	
8 : DI	15 - 16	
9 : DI	17 - 18	
10 : DI	19 - 20	
11 : DI	21 - 22	
12 : DI	23 - 24	
13 : DI	25 - 26	
14 : DI	27 - 28	
15 : DI	29 - 30	
16 : DI	31 - 32	



New DeltaV architecture - FMS-RS3FIM-DV-1-DIDO7-A3
Panel to be kept :

Config 1
 10P5037000X
 With I.S. MTL barriers
 type : MTL4013 MTL 4014
 MTL 4017

 01984-4383-0002

RIA-DIDO-04-1
Cable N°1 :
CBL- RS3FIM-DV-1-DIDO7-
A3-1
**+
 Cable N°2 :**
CBL- RS3FIM-DV-1-DIDO7-
A3-2
1 x DI Card 32CH
VE4001S2T2B5_ or
SE4001S2T2B5
1 x DO Card 8CH
VE4002S1T2B3 or
SE4002S1T2B3

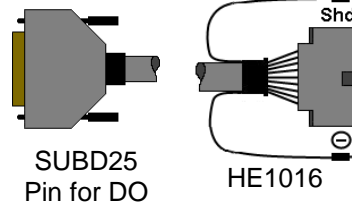
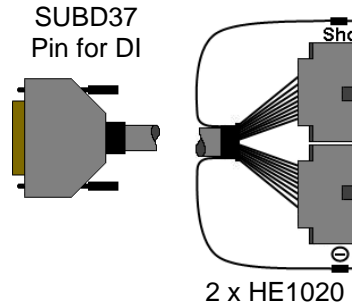
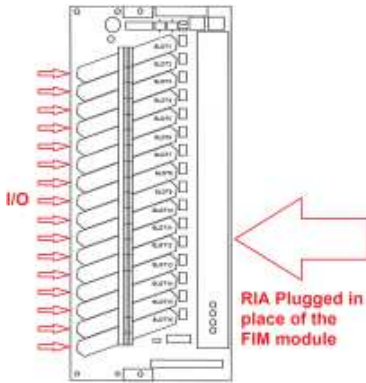
16 DI (channels 17 - 32)
 8 DO (channels 1 to 15 by
 odd step) see table 1
 Input frequency limited to
 75Hz due to the DeltaV DI
 card.

Adapter installed on
 existing IS Discrete
 Termination Panel A in
 place of the FIM

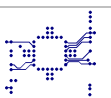
[\(see appendix 1 for
 compatibility table\)](#)

Discrete Input card, 32
 channels, 24 Vdc, Dry
 contact, 40 pin Mass
 Termination block

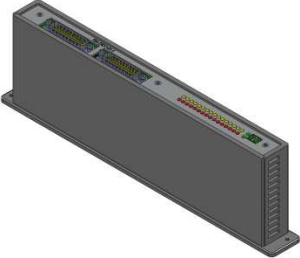
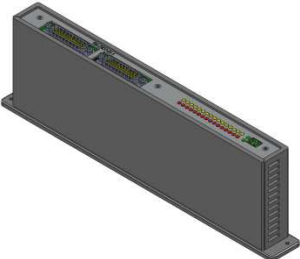

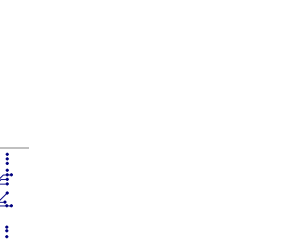
Discrete Output card, 8
 channels, 24 Vdc, High-
 side, 16 pin Mass
 Termination

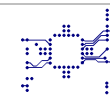



3. APPENDIX 1

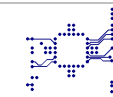


3.1. DISCRETE INPUT / OUTPUT TABLE


Line	RS3 Panel reference	CE	RS3 Panel description	RS3 FIM Reference	CE	RS3 FIM Description	RIA Migration adapter reference	RIA Mechanical signature	RIA Structure
DIDO 1	1984-4121-000X	-	Isolated DIO Termination Panel "A" - 16CH (DI/DO)	1984-4080-000X	-	MDIO : Low Side DO switching FIM	RIA-DIDO-01-1	B	
DIDO 2	1984-4121-000X	-	Isolated DIO Termination Panel "A" - 16CH (DI/DO)	10P53520006	CE	MDIOL : Low Side DO switching FIM	RIA-DIDO-01-1	B	
DIDO 3	1984-4124-000X	-	Isolated DIO Termination Panel "B" - 16CH (DI)	1984-4080-000X	-	MDIO : Low Side DO switching FIM	RIA-DIDO-01-1	B	
DIDO 4	1984-4124-000X	-	Isolated DIO Termination Panel "B" - 16CH (DI)	10P53520006	CE	MDIOL : Low Side switching FIM	RIA-DIDO-01-1	B	
DIDO 5	1984-4127-000X	-	Direct discrete termination panel - 16 DI/DO and 16 DI	1984-4080-000X	-	MDIO : Low Side DO switching FIM	RIA-DIDO-02-1	B	
DIDO 6	1984-4127-000X	-	Direct discrete termination panel - 16 DI/DO and 16 DI	10P53520006	CE	MDIOL : Low Side DO switching FIM	RIA-DIDO-02-1	B	



Line	RS3 Panel reference	CE	RS3 Panel description	RS3 FIM Reference	CE	RS3 FIM Description	RIA Migration adapter reference	RIA Mechanical signature	RIA Structure
DIDO 7	10P52700001	CE	Direct discrete termination panel "II" 16 DI/DO and 16 DI	1984-4080-000X	-	MDIO : Low Side DO switching FIM	RIA-DIDO-02-1	B	
DIDO 8	10P52700001	CE	Direct discrete termination panel "II" 16 DI/DO and 16 DI	10P53520006	CE	MDIOL : Low Side DO switching FIM	RIA-DIDO-02-1	B	
DIDO 9	10P52700001	CE	Direct discrete termination panel "II" 16 DI/DO and 16 DI	10P53550006	CE	MDIOH : High Side DO switching FIM	RIA-DIDO-02-2	B	
DIDO 10	1984-4167-000X	-	High Density Isolated Discrete termination panel 16 DI/DO and 16 DI	1984-4080-000X	-	MDIO : Low Side DO switching FIM	RIA-DIDO-03-1	B	
DIDO 11	1984-4167-000X	-	High Density Isolated Discrete termination panel 16 DI/DO and 16 DI	10P53520006	CE	MDIOL : Low Side DO switching FIM	RIA-DIDO-03-1	B	
DIDO 12	1984-4282-000X	-	Muti-FIM Discrete Termination Panel (3 x 32 CH)	1984-4080-000X	-	MDIO : Low Side DO switching FIM	1 to 3 x RIA-DIDO-02-1	B	
DIDO 13	1984-4282-000X	-	Muti-FIM Discrete Termination Panel (3 x 32 CH)	10P53520006	CE	MDIOL : Low Side DO switching FIM	1 to 3 x RIA-DIDO-02-1	B	



3.2. I.S. DISCRETE INPUT / OUTPUT TABLE

Line	RS3 Panel reference	CE	RS3 Panel description	RS3 FIM Reference	CE	RS3 FIM Description	RIA Migration adapter reference	RIA Mechanical signature	RIA Structure
DIDO -IS 1	10P50370001	CE	MDIO MTL IS Termination panel A - 16 slots	10P53520006	CE	MDIOL : Low Side DO switching FIM	RIA-DIDO-04-1	B	
DIDO -IS 2	10P50490001	CE	MDIO MTL IS Termination panel B - 16 slots - 8 DO only	10P53520006 If redundancy applied	CE	MDIOL : Low Side DO switching FIM	No RIA to be plugged Panel B managed by RIA plugged on panel A	B	

