

# ***FIRELEC Migration Solution***

***PROVOX™ > DeltaV™***

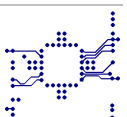
***PIA (PROVOX™ Interface  
Adapters)***

***FMS-PVXCL-DV-2***

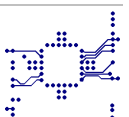
***Discrete Inputs***

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# 1. INTRODUCTION



The purpose of this document is to guide the user of a 20 series I/Os PROVOX™ system within the safe, efficient and easy way to migrate toward a DeltaV™ system.

**FIRELEC** has developed migration solution "**FMS-PVXCL-DV-2**" allowing to protect the existing wiring investment as the user converts from an existing PROVOX™ system (20-series I/Os) to the DeltaV™ system.

The **FMS-PVXCL-DV-2** solution is a set of migration adapters installed in place of the existing 20 series I/O cards into the CP6701 I/O files, allowing to connect easily existing PROVOX™ 20series I/O cables, to the DeltaV™ I/O cards.

The PROVOX™ 20series cables and the PROVOX™ I/O panels are kept in place. The SUBD connectors of this cables are then, through the PIA, connected 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-PVXCL-DV-2 SOLUTION**

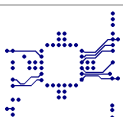
**FMS-PVXCL-DV-2** solution protect your wiring investment as you convert from the PROVOX™ 20series system to the DeltaV™ system of Emerson Process Management with following advantages :

**FMS-PVXCL-DV-2** is a pre-engineered marshalling solution ready to work without any technical rework or limitation regarding the existing capabilities of the PROVOX™ system to be migrated.

As the instrument wiring is not disturbed, the instrument checkout during startup is reduced to the minimum

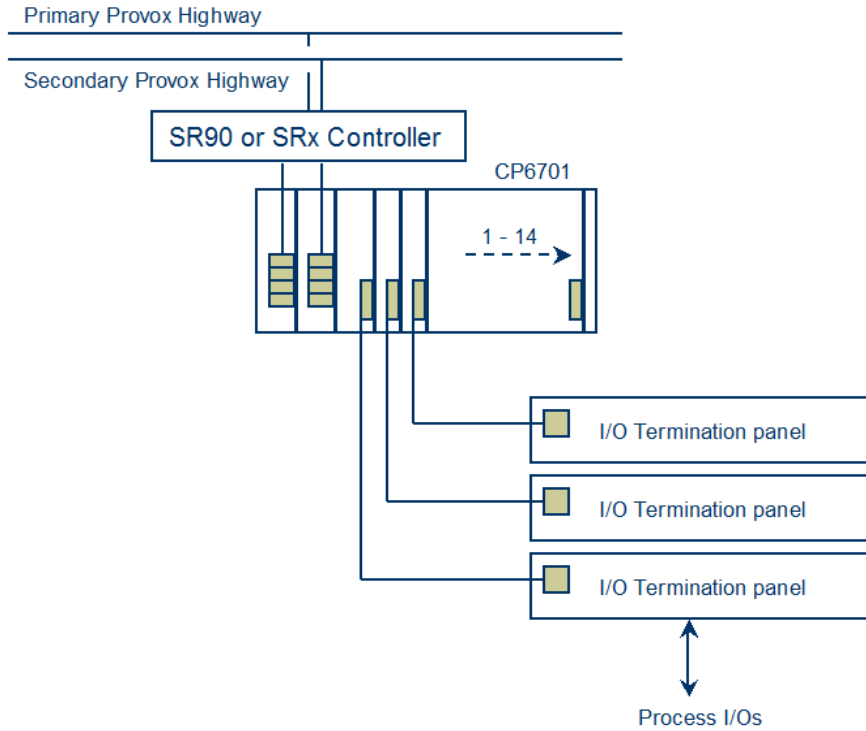
The DeltaV™ system's configuration allows for the engineering conversion to be done efficiently. The speed at which **FMS-PVXCL-DV-2** solution can be implemented ensures to reduce the process downtime to the minimum.

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

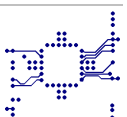
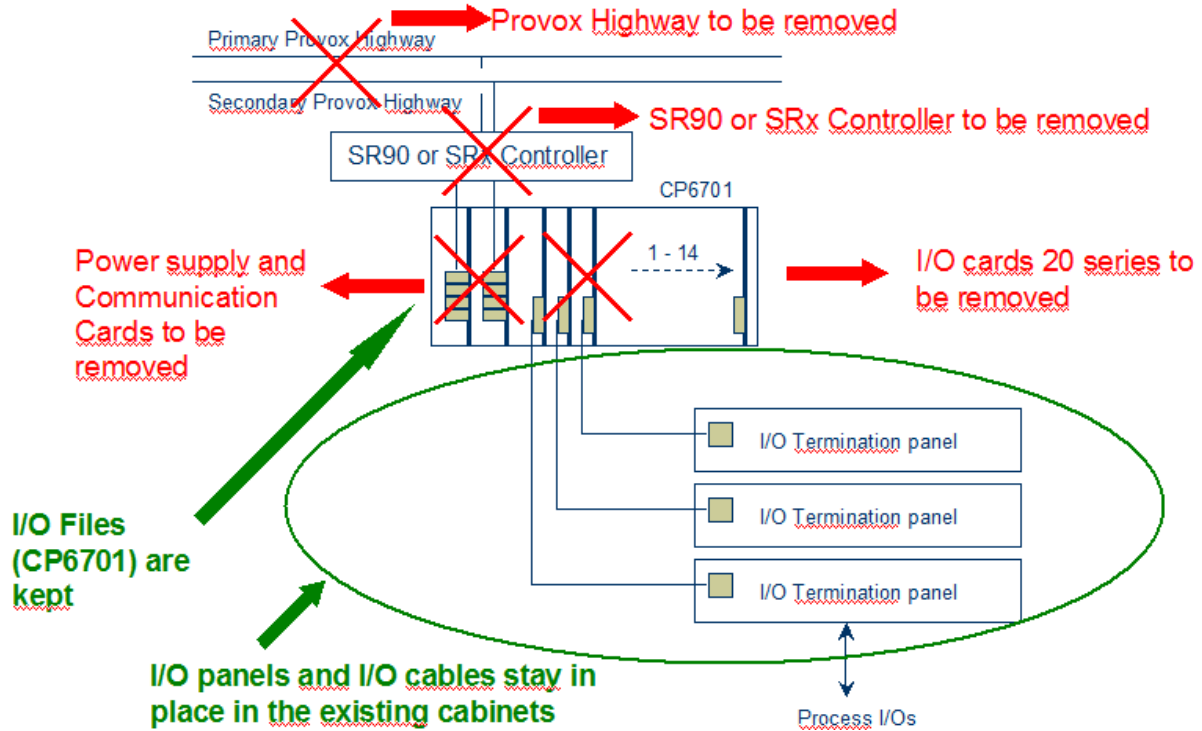


## 1.2. DESCRIPTION OF THE FMS-PVXCL-DV-2 SOLUTION

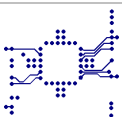
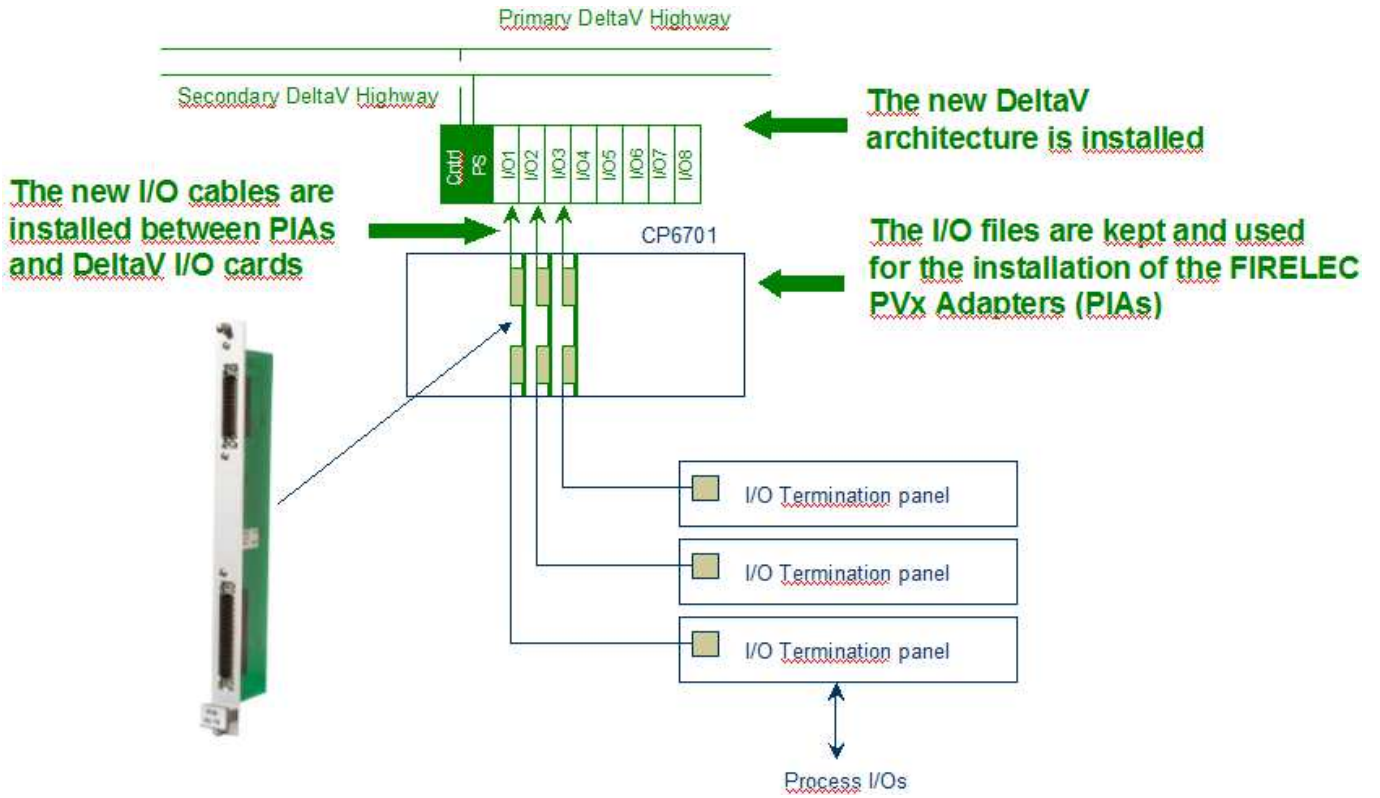
### 1.2.1. Existing PROVOX™ architecture



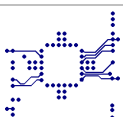
### 1.2.2. Existing PROVOX™ hardware to be removed



1.2.3. New DeltaV™ architecture



## **2. DISCRETE INPUTS**

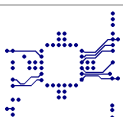


## 2.1. EXISTING CARD TO BE REMOVED : CL6721

### 2.1.1. Standard Discrete Inputs Using Migration Adapters

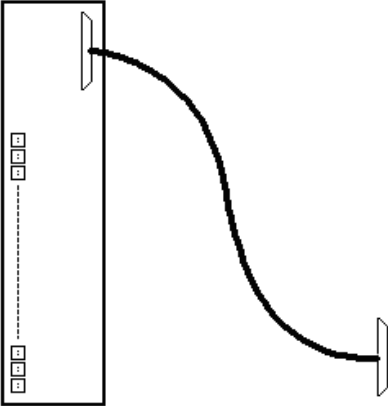

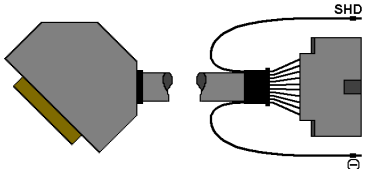

New DeltaV™ architecture - FMS-PVXCL-DV-2-DI1-A1			
Existing Panel	Adapter	Cable	I/O Card
<b>Panel CL6781 or CL6783 or CL6784 or CL6787 or CL6788</b> Simplex or Redundant Discrete Input/Output Panel (used only as Input) + Cable. 16 channels. With CL6753 modules installed. (Panel CL6781 or CL6783 or CL6784) Or with CL6753 modules installed. (Panel CL6787 or CL6788)	<b>PIA-DI-16-PS</b>  Adapter installed in existing file CP6701	<b>CBL-792A (First 16ch) or CBL-792B (Last 16ch)</b>  Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a>	<b>½ Card VE4001S2T2B4/ ½ Card SE4001S2T2B4</b>  Discrete Input card, 32 channels, Screw terminals

New DeltaV™ architecture - FMS-PVXCL-DV-2-DI1-A2			
Existing Panel	Adapter	Cable	I/O Card
<b>Panel CL6781 or CL6783 or CL6784 or CL6787 or CL6788</b> Simplex or Redundant Discrete Input/Output Panel (used only as Input) + Cable. 16 channels. With CL6753 modules installed. (Panel CL6781 or CL6783 or CL6784) Or with CL6753 modules installed. (Panel CL6787 or CL6788)	<b>PIA-2DI-8</b>  Adapter installed in existing file CP6701	<b>2 x CBL-736</b>  Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a>	<b>2xCard VE4031S2T2B1/ 2xCard SE4031S2T2B1</b>  Redundant Discrete Input card, 2 x 8 channels, Screw terminals

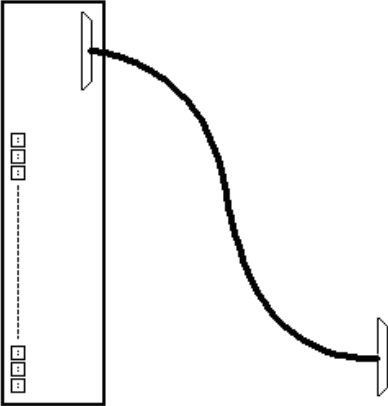

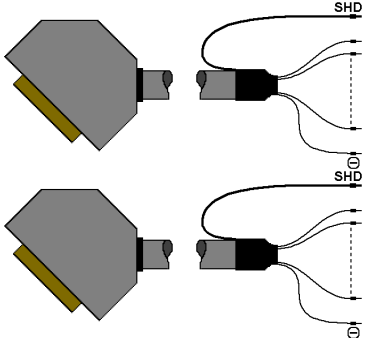



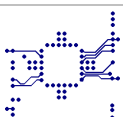


**New DeltaV™ architecture - FMS-PVXCL-DV-2-DI1-A3**

Existing Panel	Adapter	Cable	I/O Card
<p><b>Panel CL6781 or CL6783 or CL6784 or CL6787 or CL6788</b></p> <p>Simplex or Redundant Discrete Input/Output Panel (used only as Input) + Cable. 16 channels.</p> <p>With CL6753 modules installed. (Panel CL6781 or CL6783 or CL6784) Or with CL6753 modules installed. (Panel CL6787 or CL6788)</p> 	<p><b>PIA-DI-16-PS</b></p> <p>Adapter installed in existing file CP6701</p> 	<p><b>CBL-773A (First 16ch) or CBL-773B (Last 16ch)</b></p> <p>Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a></p> 	<p><b>1/2 Card VE4001S2T2B5/ 1/2 Card SE4001S2T2B5</b></p> <p>Discrete Input card, 32 channels, 40 pin Mass Termination</p> 

**New DeltaV™ architecture - FMS-PVXCL-DV-2-DI1-A4**

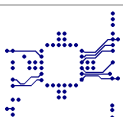
Existing Panel	Adapter	Cable	I/O Card
<p><b>Panel CL6761 or CL6762 or CL6763 or CL6764</b></p> <p>Simplex or Redundant Discrete Input/Output Panel (used only as Input) + Cable. 8 channels.</p> <p>With CL6751 modules installed (Panel CL6761 or CL6762) Or With CL6753 modules installed (Panel CL6763 or CL6764).</p> 	<p><b>PIA-2PULSE-4</b></p> <p>Adapter installed in existing file CP6701</p> 	<p><b>2 x CBL-923</b></p> <p>Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a></p> 	<p><b>2 x VE4015 / 2 x SE4015</b></p> <p>Pulse Input card, 4 channels, Terminal block</p> 



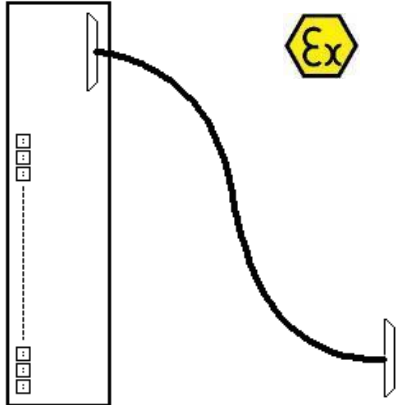

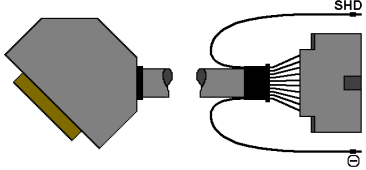

**2.1.2. Intrinsically Safe (Ex) Discrete Inputs Using Migration Adapters**

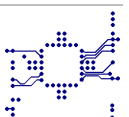
New DeltaV™ architecture - FMS-PVXCL-DV-2-DI2-A1			
Existing Panel	Adapter	Cable	I/O Card
<b>Panel CL6301-3</b> Redundant Discrete Input/Output Panel (used only as Input) + Cable. 16 channels. With CL6302 Intrinsic modules installed .	<b>PIA-DI-16-PS</b> Adapter installed in existing file CP6701	<b>CBL-792A (First 16ch) or CBL-792B (Last 16ch)</b> Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a>	<b>1/2 Card VE4001S2T2B4/ 1/2 Card SE4001S2T2B4</b> Discrete Input card, 32 channels, Screw terminals

New DeltaV™ architecture - FMS-PVXCL-DV-2-DI2-A2			
Existing Panel	Adapter	Cable	I/O Card
<b>Panel CL6301-3</b> Redundant Discrete Input/Output Panel (used only as Input) + Cable. 16 channels. With CL6302 Intrinsic modules installed .	<b>PIA-2DI-8</b> Adapter installed in existing file CP6701	<b>2 x CBL-736</b> Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a>	<b>Card VE4031S2T2B1 / Card SE4031S2T2B1</b> Redundant Discrete Input card, 2 x 8 channels, Screw terminals



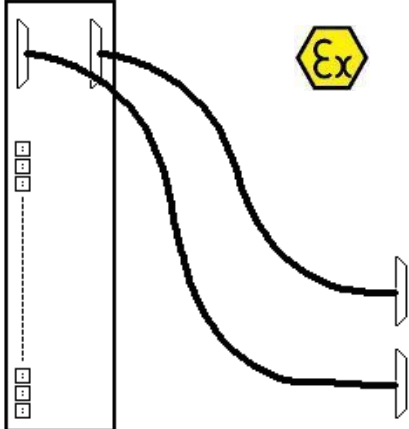

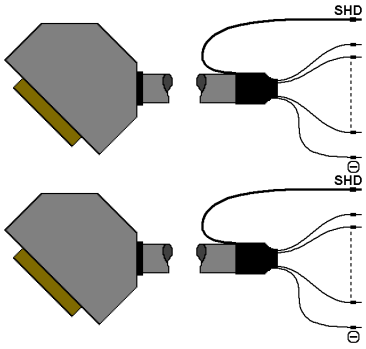

**New DeltaV™ architecture - FMS-PVXCL-DV-2-DI2-A3**

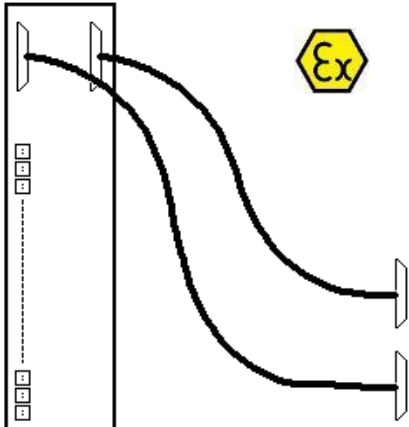

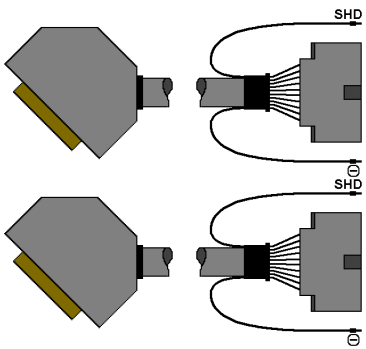

Existing Panel	Adapter	Cable	I/O Card
<p><b>Panel CL6301-3</b></p> <p>Redundant Discrete Input/Output Panel (used only as Input) + Cable. 16 channels.                      With CL6302 Intrinsic modules installed .</p> 	<p><b>PIA-DI-16-PS</b></p> <p>Adapter installed in existing file CP6701</p> 	<p><b>CBL-773A (First 16ch) or CBL-773B (Last 16ch)</b></p> <p>Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a></p> 	<p><b>1/2 Card VE4001S2T2B5/ 1/2 Card SE4001S2T2B5</b></p> <p>Discrete Input card, 32 channels, 40 pin Mass Termination</p> 

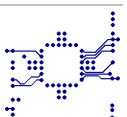


## 2.2. EXISTING CARDS TO BE REMOVED : 2 X CL6721

### 2.2.1. Intrinsic Safe (Ex) Discrete Inputs Using Migration Adapters

New DeltaV™ architecture - FMS-PVXCL-DV-2-DI3-A1			
Existing Panel	Adapter	Cable	I/O Card
<p><b>Panel CL6343</b></p> <p>Redundant Discrete Input/Output Panel (used only as Input) + Cable. 32 channels. With MTL Intrinsic Safety dual-channel modules installed .</p> 	<p><b>2 x PIA-DI-16-PS</b></p> <p>Adapter installed in existing file CP6701</p> 	<p><b>CBL-792A (First 16ch) and CBL-792B (Last 16ch)</b></p> <p>Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a></p> 	<p><b>Card VE4001S2T2B4 / Card SE4001S2T2B4</b></p> <p>Discrete Input card, 32 channels, Screw terminals</p> 

New DeltaV™ architecture - FMS-PVXCL-DV-2-DI3-A3			
Existing Panel	Adapter	Cable	I/O Card
<p><b>Panel CL6343</b></p> <p>Redundant Discrete Input/Output Panel (used only as Input) + Cable. 32 channels. With MTL Intrinsic Safety dual-channel modules installed .</p> 	<p><b>2 x PIA-DI-16-PS</b></p> <p>Adapter installed in existing file CP6701</p> 	<p><b>CBL-792A (First 16ch) and CBL-792B (Last 16ch)</b></p> <p>Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a></p> 	<p><b>Card VE4001S2T2B5 / Card SE4001S2T2B5</b></p> <p>Discrete Input card, 32 channels, 40 pin Mass Termination</p> 



**New DeltaV™ architecture - FMS-PVXCL-DV-2-DI3-A2**

Existing Panel	Adapter	Cable	I/O Card
<b>Panel CL6343</b>  Redundant Discrete Input/Output Panel (used only as Input) + Cable. 32 channels. With MTL Intrinsic Safety dual-channel modules installed .	<b>2 x PIA-2DI-8</b>  Adapter installed in existing file CP6701	<b>4 x CBL-736</b>  Detail of the cable See cable section on <a href="http://www.firelec.com">www.firelec.com</a>	<b>4 X Card VE4031S2T2B1 / 4 X Card SE4031S2T2B1</b>  Redundant Discrete Input card, 4 x 8 channels, Screw terminals

