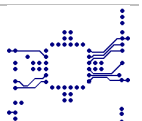


# ***Migration***

***PROVOX™ > DeltaV™***

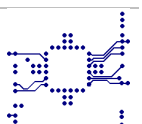
***Discrete Outputs***

***DM Series - Using ADP-DM***

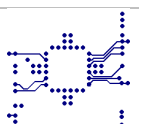


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# 1. INTRODUCTION



The purpose of this document is to guide the user of a 10 series I/Os PROVOX™ system with the safe, efficient and easy way to migrate toward a DeltaV™ system.

**FIRELEC** has developed an economical migration solution (FMS-PVXDM-DV) allowing to protect the existing wiring investment as the user convert from an existing PROVOX™ system toward the DeltaV™ system.

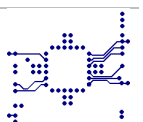
The **FMS-PVXDM-DV-1** solution is a set of migration adapters installed in place of the existing 10 series PROVOX™ I/O files, allowing to migrate easily the existing PROVOX™ I/Os toward a new DeltaV™ system, keeping the I/O wiring in place.

The PROVOX™ I/Os connected on the existing I/O field termination assemblies are kept in place and connected on adapters electrically and mechanically fully compatible with existing I/Os and the new DeltaV™ I/O cards linked using suitable cables provided with each type of migration adapter.

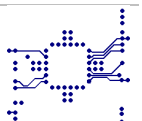
### 1.1. KEY ADVANTAGES OF THE FMS-PVXDM-DV-1 SOLUTION

**FMS-PVXDM-DV-1** solution protects the wiring investment as the user converts from the PROVOX™ 10series system toward the DeltaV™ system of Emerson Process Management with following advantages :

1. **FMS-PVXDM-DV-1** is a pre-engineered solution, ready to work without any technical rework or limitation regarding the existing capabilities of the PROVOX™ system to be migrated.
2. As the instrument wiring is not disturbed, the instrument checkout during start-up is reduced to the minimum
3. The DeltaV™ system's configuration allows for the engineering conversion to be done efficiently. The speed at which **FMS-PVXDM-DV-1** solution can be implemented ensures to reduce the process downtime to the minimum.
4. All existing documentations (electrical and loop drawings, maintenance procedures, .....) remain unchanged as the I/O labelling is strictly the same on new migration adapters than on previous PROVOX™ I/O field termination assemblies removed.






## **2. DISCRETE OUTPUTS**



**2.1. DM6461**

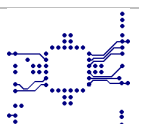
**2.1.1. Description and connection**

8 channels - Discrete outputs - Low voltage - 24Vdc - 0.1A (Solid State)

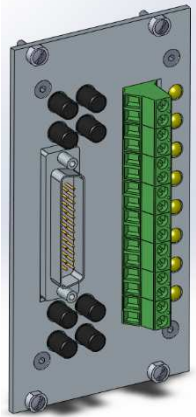
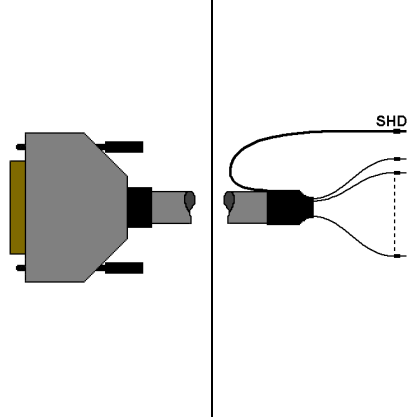

<b>Existing PROVOX™ architecture</b>	
<b>I/O file and communication card</b>	
<b>I/O file</b>	
DM6003	
	
<b>I/O Card</b>	<b>Field Termination Assembly</b>
<b>DM6461-A3 and -A4</b> - PN : 39A1173XXXX	PN : 36A3885XXXX
-A3 : Discrete Output - 8 channels - Low voltage momentary -A4 : Discrete Output - 8 channels - Low voltage latching	DO Low voltage
	



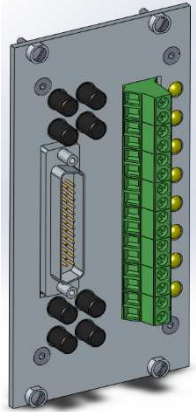
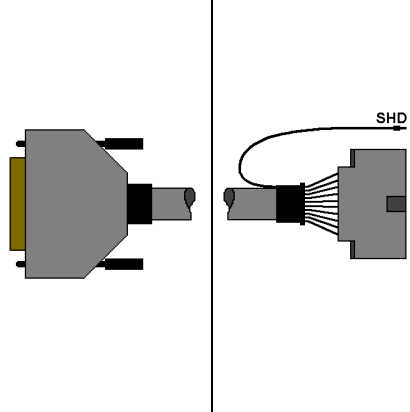

<b>New FIRELEC ADP-DM : ADP-DM-DO-01 (8 channels)</b>
<b>Description</b>
8 channels - Discrete output adapter

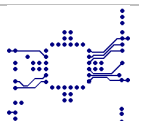


**2.1.2. Solution : FMS-PVXDM-DV-DO1-A1**

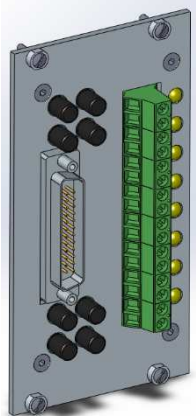
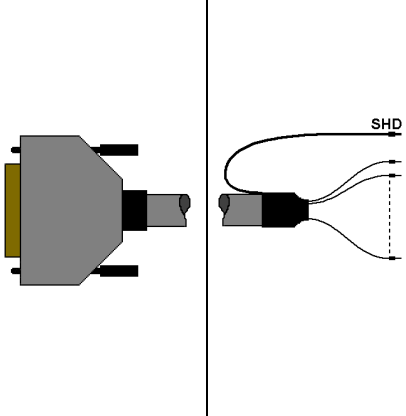

New DeltaV™ architecture - FMS-PVXDM-DV-DO1-A1		
Interface unit	Cable	DeltaV™ card
<p><b>ADP-DM-DO-01</b> installed in I/O file type BC11008 with 1U cable tray type CT11068</p> 	<p>CBL-PVXDM-DV-DO1-A1</p> 	<p>VE4002S1T2B1 SE4002S1T2B1 Discrete Output card, 8 channels, 24 Vdc, High-side, Terminal block</p> 

**2.1.3. Solution : FMS-PVXDM-DV-DO1-A2**

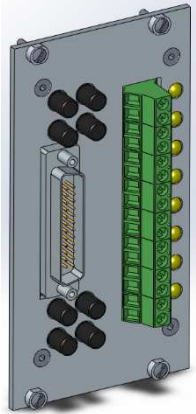
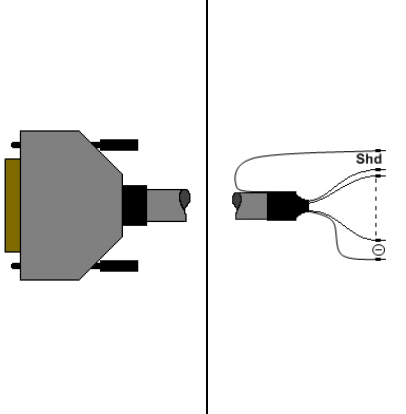

New DeltaV™ architecture - FMS-PVXDM-DV-DO1-A2		
Interface unit	Cable	DeltaV™ card
<p><b>ADP-DM-DO-01</b> installed in I/O file type BC11008 with 1U cable tray type CT11068</p> 	<p>CBL-PVXDM-DV-DO1-A2</p> 	<p>VE4002S1T2B3 SE4002S1T2B3 Discrete Output card, 8 channels, 24 Vdc, High-side, 16 pin Mass Termination</p> 

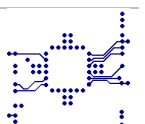


**2.1.4. Solution : FMS-PVXDM-DV-DO1-A3**

New DeltaV™ architecture - FMS-PVXDM-DV-DO1-A3		
Interface unit	Cable	DeltaV™ card
<p><b>ADP-DM-DO-01</b> installed in I/O file type BC11008 with 1U cable tray type CT11068</p> 	<p>CBL-PVXDM-DV-DO1-A3</p> 	<p>VE4032S1T2B1 SE4032S1T2B1 Discrete Output card, 8 channels, 24 Vdc, High-side, Redundant, Terminal block</p> 

**2.1.5. Solution : FMS-PVXDM-DV-DO1-A4**

New DeltaV™ architecture - FMS-PVXDM-DV-DO1-A4		
Interface unit	Cable	DeltaV™ card
<p><b>ADP-DM-DO-03</b> installed in I/O file type BC11008 with 1U cable tray type CT11068</p> 	<p>CBL-1243A, B, C or D CH 1 to 8 : Cable option A CH 9 to 16 : Cable option B CH 17 to 24 : Cable option C CH 25 to 32 : Cable option D</p> 	<p>1/4 x VE4002S1T2B5 1/4 x SE4002S1T2B5 Discrete Output card, 32 channels, 24 Vdc, High-side, Terminal block</p> 



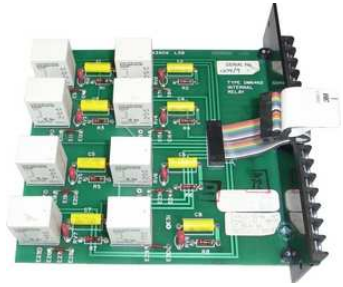




**2.2. DM6462**

**2.2.1. Description and connection**

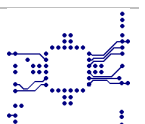
8 channels - Discrete outputs - Relay output - 2A @240Vac

Existing PROVOX™ architecture	
I/O file and communication card	
I/O file	
DM6003	
	
I/O Card	Field Termination Assembly
<b>DM6462-A3 and -A4</b> - PN : 39A1173X032 and 39A1173X042	PN : 35A5316X012 (NO) PN : 35A5316X022 (NC)
-A3 : Discrete Output - 8 channels - Relay output momentary -A4 : Discrete Output - 8 channels - Relay output latching	DO Relay output
	



New FIRELEC ADP-DM : ADP-DM-DO-02-1 (8 channels)
Description
8 channels - Discrete output adapter - Relay Output with Normally Open contacts (NO)

New FIRELEC ADP-DM : ADP-DM-DO-02-2 (8 channels)
Description
8 channels - Discrete output adapter - Relay Output with Normally Closed contacts (NC)

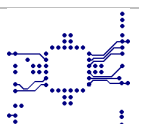


2.2.2. Solution : FMS-PVXDM-DV-DO2-A1

New DeltaV™ architecture - FMS-PVXDM-DV-DO2-A1		
Interface unit	Cable	DeltaV™ card
<p>ADP-DM-DO-02-1 (for NO contacts) or ADP-DM-DO-02-2 (for NC contacts)</p> <p>installed in I/O file type BC11008 with 1U cable tray type CT11068</p>	<p>CBL-PVXDM-DV-DO2-A1</p>	<p>VE4002S1T2B1 SE4002S1T2B1</p> <p>Discrete Output card, 8 channels, 24 Vdc, High-side, Terminal block</p>

2.2.3. Solution : FMS-PVXDM-DV-DO2-A2

New DeltaV™ architecture - FMS-PVXDM-DV-DO2-A2		
Interface unit	Cable	DeltaV™ card
<p>ADP-DM-DO-02-1 (for NO contacts) or ADP-DM-DO-02-2 (for NC contacts)</p> <p>installed in I/O file type BC11008 with 1U cable tray type CT11068</p>	<p>CBL-PVXDM-DV-DO2-A2</p>	<p>VE4002S1T2B3 SE4002S1T2B3</p> <p>Discrete Output card, 8 channels, 24 Vdc, High-side, 16 pin Mass Termination</p>



**2.2.4. Solution : FMS-PVXDM-DV-DO2-A3**




New DeltaV™ architecture - FMS-PVXDM-DV-DO2-A3		
Interface unit	Cable	DeltaV™ card
<p>ADP-DM-DO-02-1 (for NO contacts) or ADP-DM-DO-02-2 (for NC contacts)</p> <p>installed in I/O file type BC11008 with 1U cable tray type CT11068</p>	<p>CBL-PVXDM-DV-DO2-A3</p>	<p>VE4032S1T2B1 SE4032S1T2B1</p> <p>Discrete Output card, 8 channels, 24 Vdc, High-side, Redundant, Terminal block</p>

**2.2.5. Solution : FMS-PVXDM-DV-DO2-A4**

New DeltaV™ architecture - FMS-PVXDM-DV-DO2-A4		
Interface unit	Cable	DeltaV™ card
<p>ADP-DM-DO-02-1 (for NO contacts) or ADP-DM-DO-02-2 (for NC contacts)</p> <p>installed in I/O file type BC11008 with 1U cable tray type CT11068</p>	<p>CBL-PVXDM-DV-DO2-A4</p> <p>CH 1 to 8 : Cable option A CH 9 to 16 : Cable option B CH 17 to 24 : Cable option C CH 25 to 32 : Cable option D</p>	<p>1/4 x VE4002S1T2B5 1/4 x SE4002S1T2B5</p> <p>Discrete Output card, 32 channels, 24 Vdc, High-side, Terminal block</p>

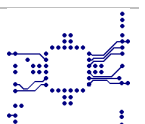
**2.3. DM6463**
**2.3.1. Description and connection**

8 channels - Discrete outputs - Relay output on external panel - 10A @240Vac


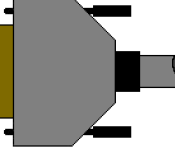
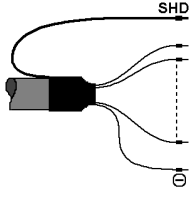

<b>Existing PROVOX™ architecture</b>	
<b>I/O file and communication card</b>	
<b>I/O file</b>	
DM6003	
	
<b>I/O Card</b>	<b>Field Termination Assembly</b>
<b>DM6463-A3 and -A4</b> - PN : 39A1173XXXX	PN : CY7001
-A3 : Discrete Output - 8 channels - Relay output momentary -A4 : Discrete Output - 8 channels - Relay output latching	DO Relay output on external panel
	



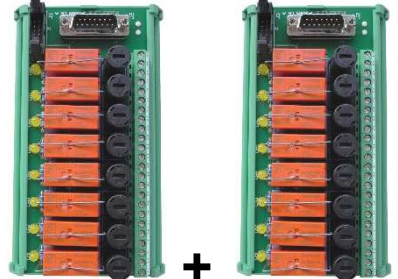
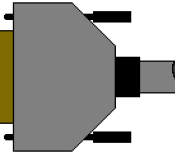
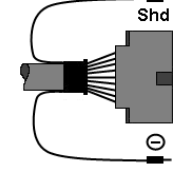

<b>New FIRELEC ADP-DM : ADP-DM-DO-01 (8 channels) + INT-DO-8R</b>	
<b>Description</b>	
8 channels - Discrete output adapter and INT-DO-8R interface unit	

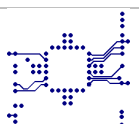


**2.3.2. Solution : FMS-PVXDM-DV-DO3-A1**

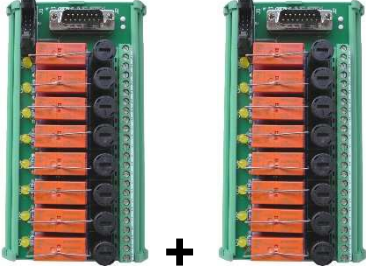
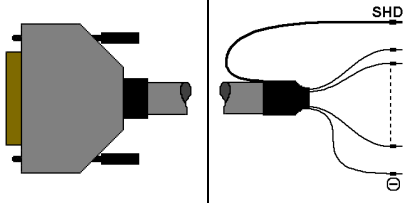

New DeltaV™ architecture - FMS-PVXDM-DV-DO3-A1			
Interface unit	Cable		DeltaV™ card
<b>INT-DO8-R-F interface unit and associated cable</b>	<b>CBL-PVXDM-DV-DO3-A1</b>		VE4002S1T2B1 SE4002S1T2B1 Discrete Output card, 8 channels, 24 Vdc, High-side, Terminal block
 <p>Second interface unit has to be added, if double NO/NC contacts per channel are required</p>			

**2.3.3. Solution : FMS-PVXDM-DV-DO3-A2**

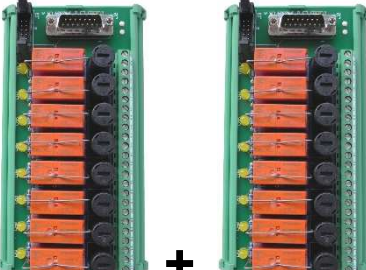
New DeltaV™ architecture - FMS-PVXDM-DV-DO3-A2			
Interface unit	Cable		DeltaV™ card
<b>INT-DO8-R-F interface unit and associated cable</b>	<b>CBL-PVXDM-DV-DO3-A2</b>		VE4002S1T2B3 SE4002S1T2B3 Discrete Output card, 8 channels, 24 Vdc, High-side, 16 pin Mass Termination
 <p>Second interface unit has to be added, if double NO/NC contacts per channel are required</p>			



**2.3.4. Solution : FMS-PVXDM-DV-DO3-A3**

New DeltaV™ architecture - FMS-PVXDM-DV-DO3-A3		
Interface unit	Cable	DeltaV™ card
<b>INT-DO8-R-F interface unit and associated cable</b>	<b>CBL-PVXDM-DV-DO3-A3</b>	VE4032S1T2B1 SE4032S1T2B1 Discrete Output card, 8 channels, 24 Vdc, High-side, Redundant, Terminal block
 <p>Second interface unit has to be added, if double NO/NC contacts per channel are required</p>		

**2.3.5. Solution : FMS-PVXDM-DV-DO3-A4**

New DeltaV™ architecture - FMS-PVXDM-DV-DO3-A4		
Interface unit	Cable	DeltaV™ card
<b>INT-DO8-R-F interface unit and associated cable</b>	<b>CBL-PVXDM-DV-DO3-A4</b> CH 1 to 8 : Cable option A CH 9 to 16 : Cable option B CH 17 to 24 : Cable option C CH 25 to 32 : Cable option D	1/4 x VE4002S1T2B5 1/4 x SE4002S1T2B5 Discrete Output card, 32 channels, 24 Vdc, High-side, Terminal block
 <p>Second interface unit has to be added, if double NO/NC contacts per channel are required</p>	