

FIRELEC Migration Solution

PROVOX™ > DeltaV™

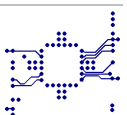
***PIA (PROVOX™ Interface
Adapters)***

FMS-PVXCL-DV-2

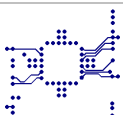
Analog Inputs

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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

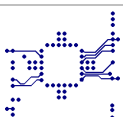
FMS-PVXCL-DV-2 solution protect your wiring investment as you convert from the PROVOX™ 20series system to the DeltaV™ system of Emerson Process Management with following advantages :

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

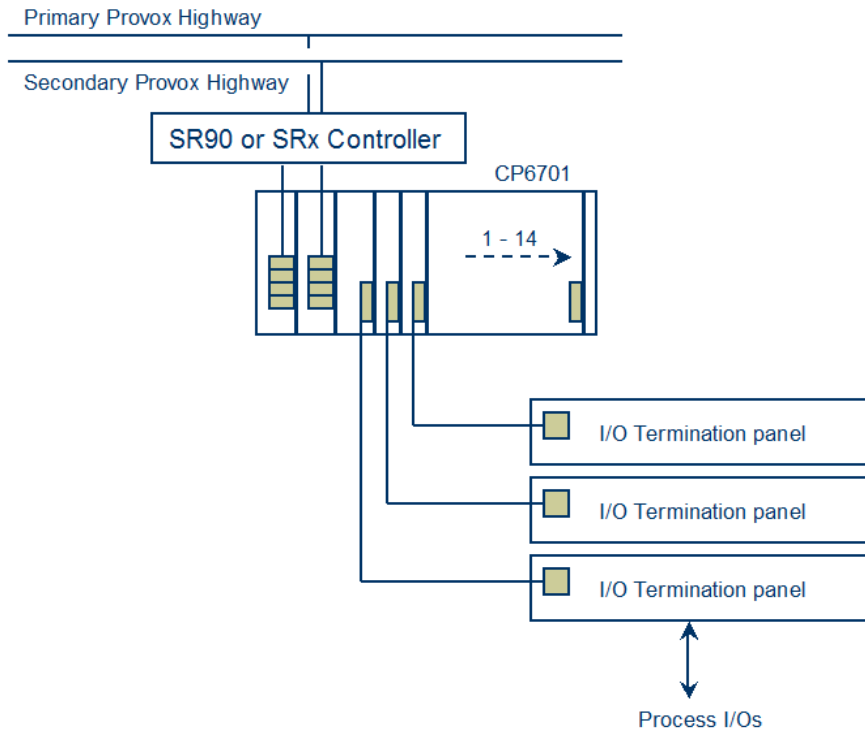
The DeltaV™ system's configuration allows for the engineering conversion to be done efficiently. The speed at which **FMS-PVXCL-DV-2** solution can be implemented ensures to reduce the process downtime to the minimum.

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

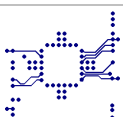
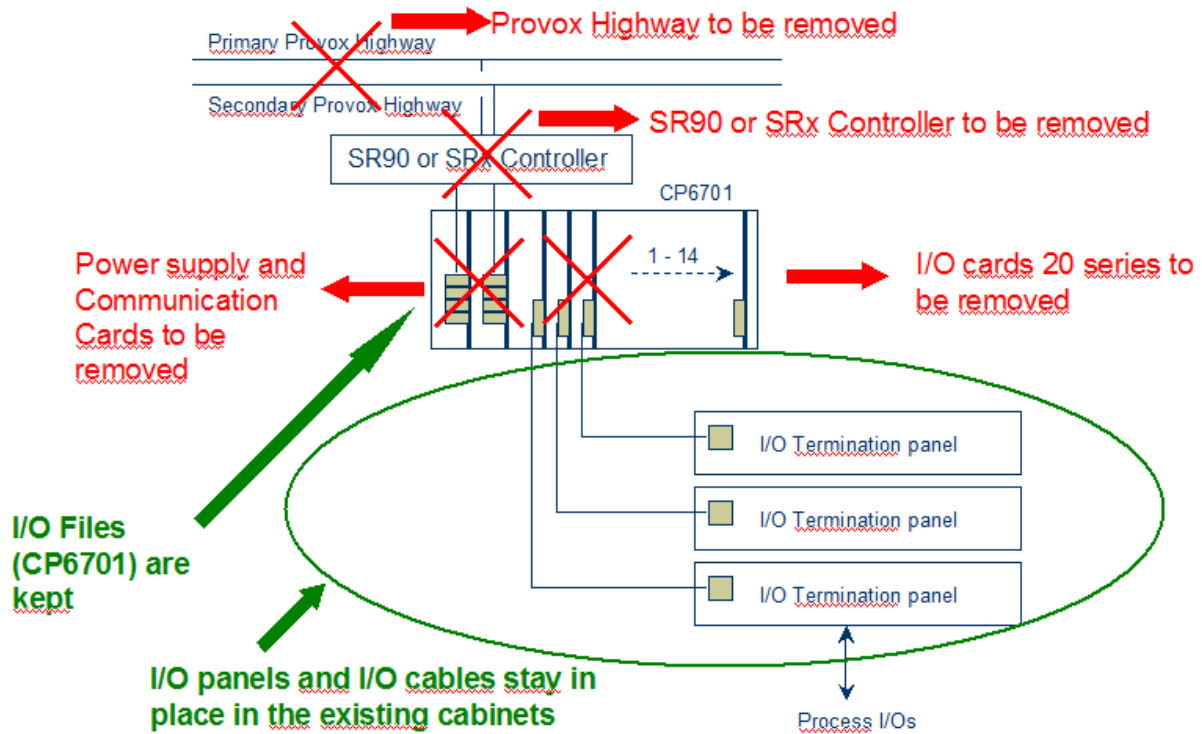


1.2. DESCRIPTION OF THE FMS-PVXCL-DV-2 SOLUTION

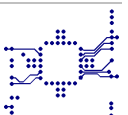
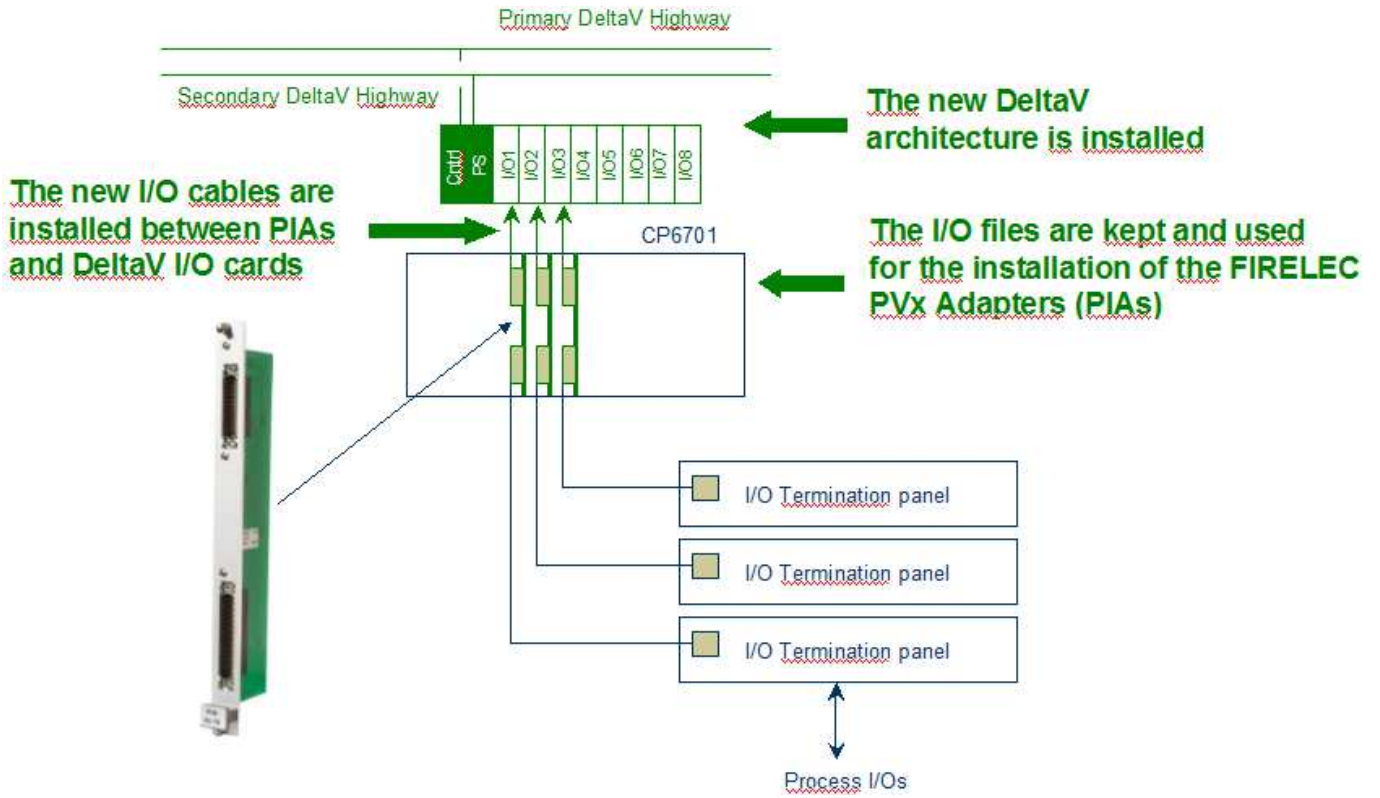
1.2.1. Existing PROVOX™ architecture



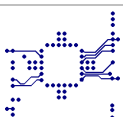
1.2.2. Existing PROVOX™ hardware to be removed



1.2.3. New DeltaV™ architecture

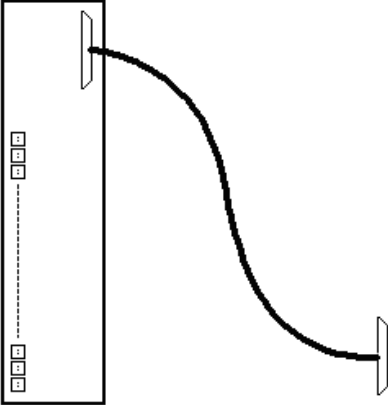

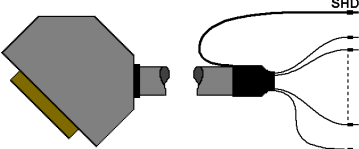



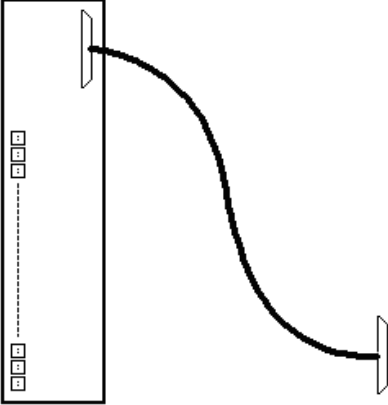

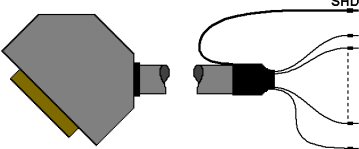

2. ANALOG INPUTS

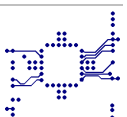


2.1. EXISTING CARD TO BE REMOVED : CL6821 OR CL6824

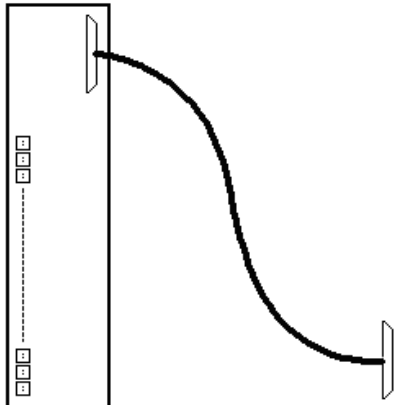

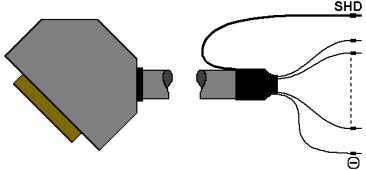

2.1.1. Standard Analog Inputs Using Migration Adapters

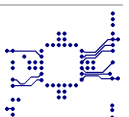
New DeltaV™ architecture - FMS-PVXCL-DV-2-A1-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6861 or CL6862 Simplex or Redundant Analog Input Panel + Cable. 16 channels. With filter and 250 ohm resistor installed. Output 1-5V 	PIA-AI-16-C Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 

New DeltaV™ architecture - FMS-PVXCL-DV-2-A1-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6895 or CL6896 Simplex or Redundant Analog Input Panel + Cable. 16 channels. With filter and 250 ohm resistor and CL6859-A1 Modules installed. Output 1-5V 	PIA-AI-16-C1 Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 

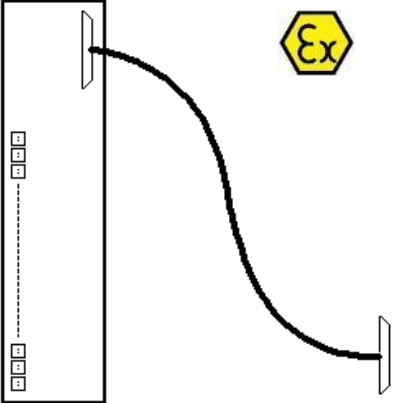

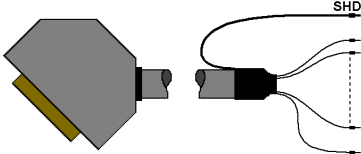



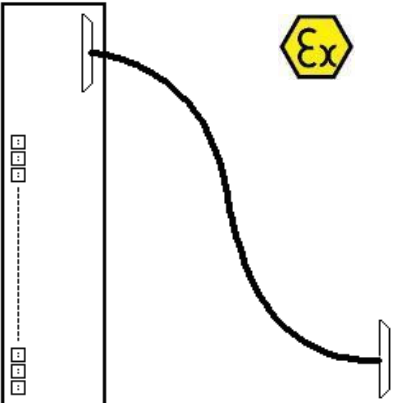

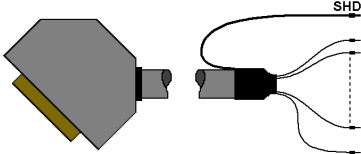

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI3-A1

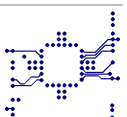
Existing Panel	Adapter	Cable	I/O Card
<p>Panel CL6897 or CL6898</p> <p>Simplex or Redundant Analog Input Panel + Cable. 16 channels. CL6855 Modules installed. Output 1-5V</p> 	<p>PIA-AI-16-C1</p> <p>Adapter installed in existing file CP6701</p> 	<p>CBL-734</p> <p>Detail of the cable See cable section on www.firelec.com</p> 	<p>Card VE4003S2B6 / Card SE4003S2B6</p> <p>Analog Input card, 16 channels, 4-20mA HART, Screw terminals.</p> 



2.1.2. Intrinsically Safe (Ex) Analog Inputs Using Migration Adapters

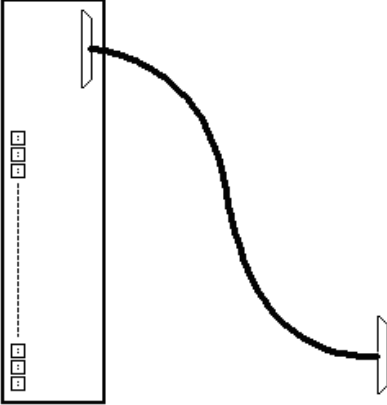

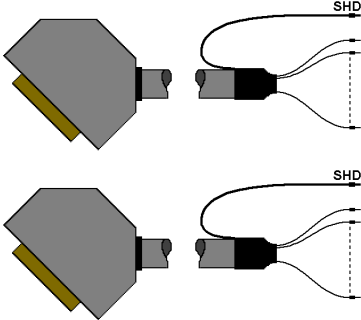

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI4-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6341 Redundant Analog Input Panel + Cable. 16 channels. With MTL Intrinsic Safety modules installed. Output 1-5V 	PIA-AI-16-C Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 

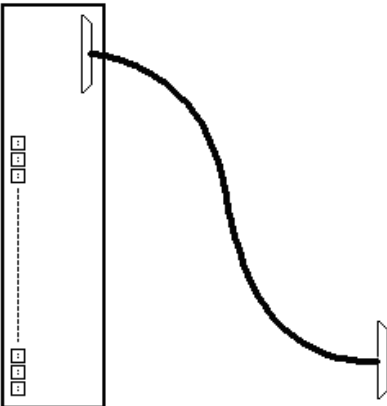

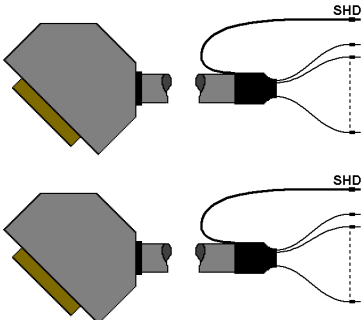

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI5-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6321-2 Redundant Analog Input Panel + Cable. 16 channels. With CL632x Intrinsic Safety modules installed. Output 1-5V 	PIA-AI-16-C1 Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 

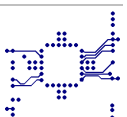


2.2. EXISTING CARD TO BE REMOVED : CL6825 HART

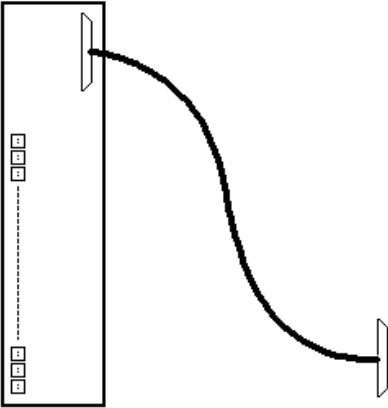

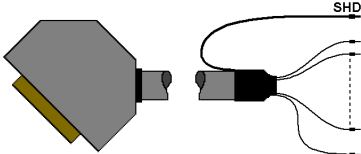

2.2.1. Standard Analog Inputs Using Migration Adapters

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI6-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6895 or CL6896 Simplex or Redundant Analog Input Panel + Cable. 16 channels. <u>Without</u> filter and 250 ohm resistor and CL6859-A5 Modules installed. Output 4-20mA HART 	PIA-2AI-8 Adapter installed in existing file CP6701 	2 x Cables CBL-736 Detail of the cable See cable section on www.firelec.com 	2 x Card VE4033S2B1 / 2 x Card SE4033S2B1 Redundant Analog Input card, 8 channels, 4-20mA HART, Screw terminals. 

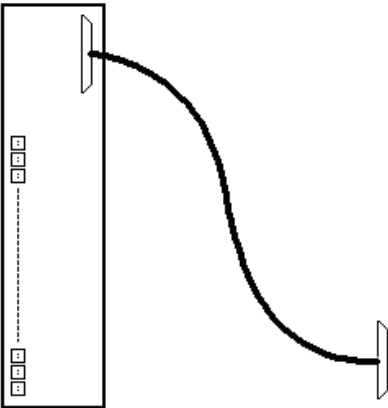

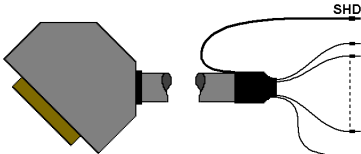

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI7-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6861 or CL6862 Simplex or Redundant Analog Input Panel + Cable. 16 channels. <u>Without</u> filter and 250 ohm resistor. Output 4-20mA HART 	PIA-2AI-8 Adapter installed in existing file CP6701 	2 x Cables CBL-736 Detail of the cable See cable section on www.firelec.com 	2 x Card VE4033S2B1 / 2 x Card SE4033S2B1 Redundant Analog Input card, 8 channels, 4-20mA HART, Screw terminals. 

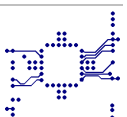


New DeltaV™ architecture - FMS-PVXCL-DV-2-AI8-A1

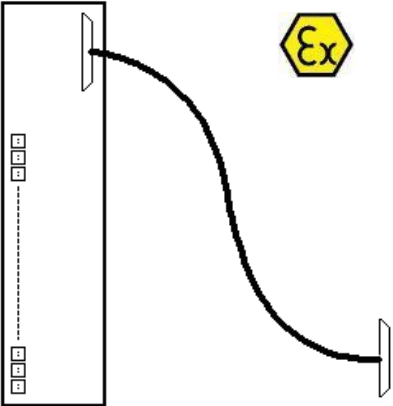

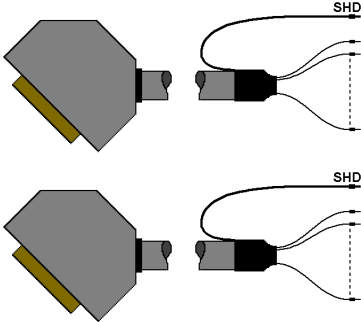

Existing Panel	Adapter	Cable	I/O Card
Panel CL6895 or CL6896 Simplex or Redundant Analog Input Panel + Cable. 16 channels. <u>Without filter and 250 ohm resistor and CL6859-A5 Modules installed.</u> Output 4-20mA HART 	PIA-AI-16 Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 

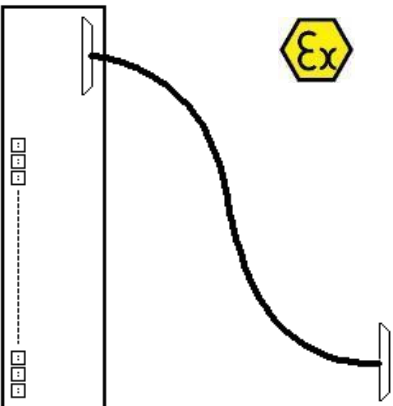

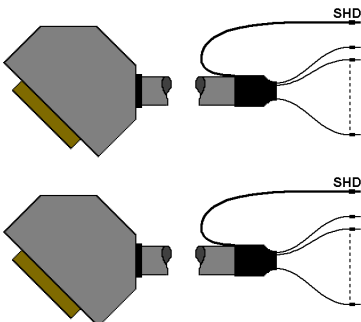

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI9-A2

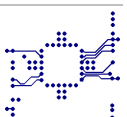
Existing Panel	Adapter	Cable	I/O Card
Panel CL6861 or CL6862 Simplex or Redundant Analog Input Panel + Cable. 16 channels. <u>Without filter and 250 ohm resistor.</u> Output 4-20mA HART 	PIA-AI-16 Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 



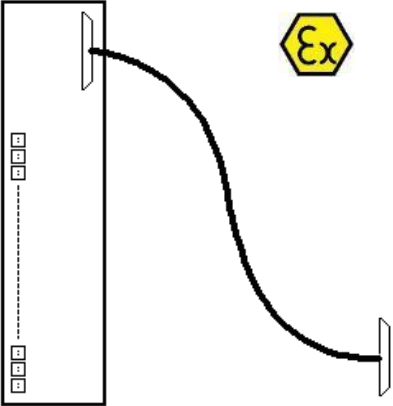

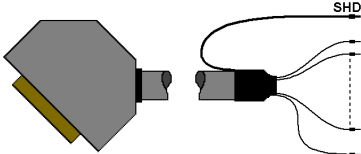

2.2.2. Intrinsic Safe (Ex) Analog Inputs Using Migration Adapters

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI10-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6345 Redundant Analog Input Panel + Cable. 16 channels. With HART compatible MTL Intrinsic Safety modules installed. Output 4-20mA HART 	PIA-2AI-8 Adapter installed in existing file CP6701 	2 x Cables CBL-736 Detail of the cable See cable section on www.firelec.com 	2 x Card VE4033S2B1 / 2 x Card SE4033S2B1 Redundant Analog Input card, 8 channels, 4-20mA HART, Screw terminals. 

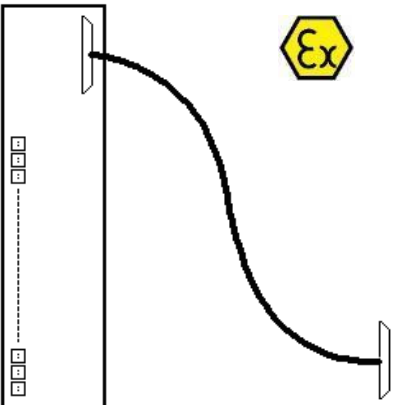

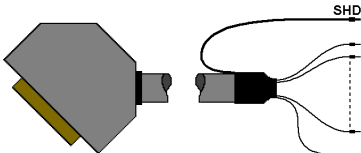
New DeltaV™ architecture - FMS-PVXCL-DV-2-AI11-A2			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6321-2 Redundant Analog Input Panel + Cable. 16 channels. With HART compatible 51184 (D1-F3) intrinsic Safety modules installed. Output 4-20mA HART 	PIA-2AI-8 Adapter installed in existing file CP6701 	2 x Cables CBL-736 Detail of the cable See cable section on www.firelec.com 	2 x Card VE4033S2B1 / 2 x Card SE4033S2B1 Redundant Analog Input card, 8 channels, 4-20mA HART, Screw terminals. 



New DeltaV™ architecture - FMS-PVXCL-DV-2-AI12-A1

Existing Panel	Adapter	Cable	I/O Card
Panel CL6345 Redundant Analog Input Panel + Cable. 16 channels. With HART compatible MTL Intrinsic Safety modules installed. Output 4-20mA HART 	PIA-AI-16 Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 

New DeltaV™ architecture - FMS-PVXCL-DV-2-AI13-A1

Existing Panel	Adapter	Cable	I/O Card
Panel CL6321-2 Redundant Analog Input Panel + Cable. 16 channels. With HART compatible 51184(D1-F3) intrinsic Safety modules installed. Output 4-20mA HART 	PIA-AI-16 Adapter installed in existing file CP6701 	CBL-734 Detail of the cable See cable section on www.firelec.com 	Card VE4003S2B6 / Card SE4003S2B6 Analog Input card, 16 channels, 4-20mA HART, Screw terminals. 