FIRELEC Migration Solution

EMERSON PROVOX™ > DeltaV™

CL Series - Using IOPs

Analog Inputs

FMS-PVXCL-DV-1

Contents

1. INTRODUCTION

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

FIRELEC has developed a migration solution (FMS-PVXCL-DV-1) allowing to protect the existing wiring investment as the user convert from an existing PROVOX™ system toward the DeltaV™ system.

The **FMS-PVXCL-DV-1** solution is a set of new I/O panels installed in place of the existing 20 series PROVOX™ I/O panels, 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 panels are kept in place and connected on a new IOPs 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 new IOP.

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

FMS-PVXCL-DV-1 solution protects the wiring investment as the user converts from the PROVOX™ 20series system toward the DeltaV™ system of Emerson Process Management with following advantages :

1. **FMS-PVXCL-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.

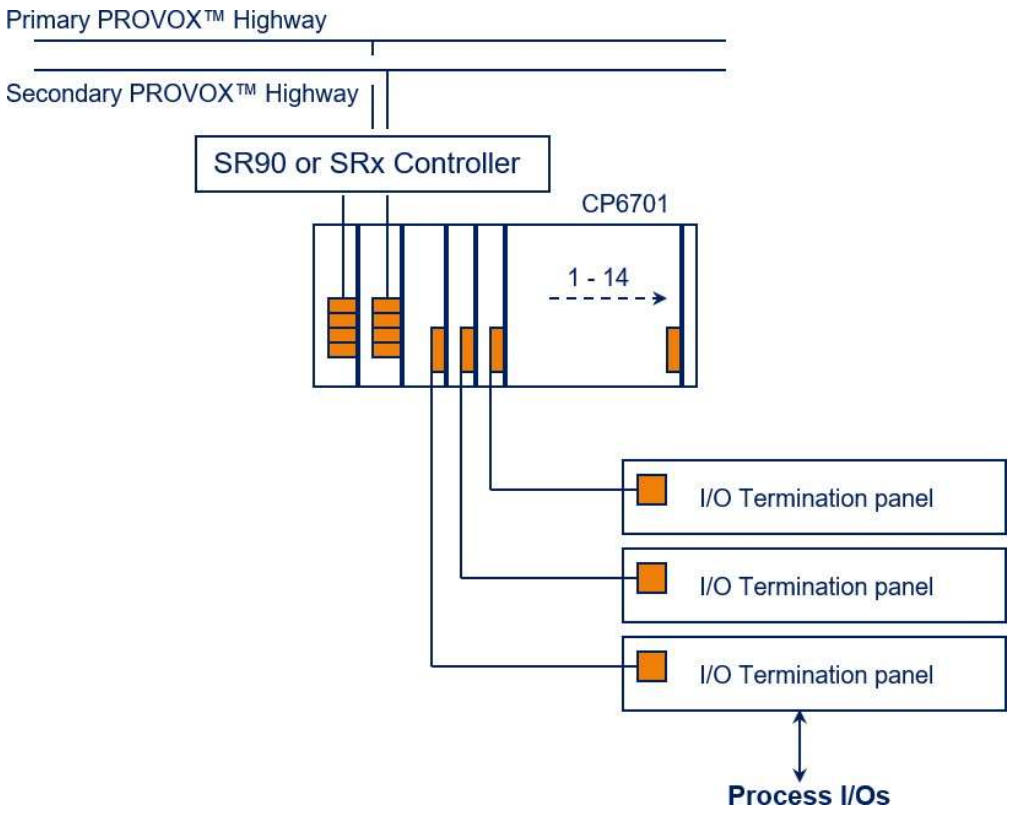
2. As the instrument wiring is not disturbed, the instrument checkout during startup is reduced to the minimum

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

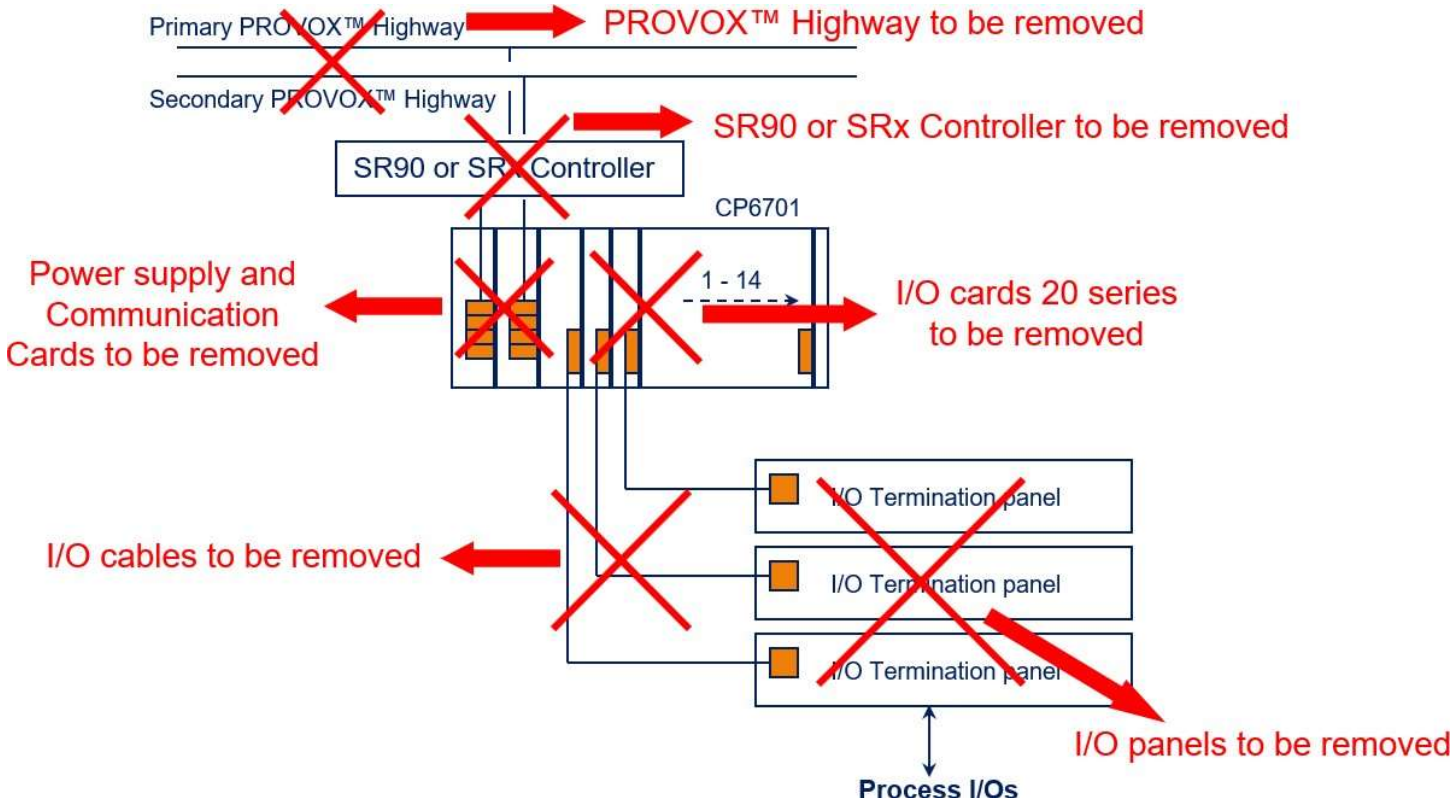
4. All existing documentations (electrical and loop drawings, maintenance procedures, ...) remain unchanged as the I/O labelling is strictly the same on new IOPs than on previous PROVOX™ I/O panels removed

1.2. DESCRIPTION OF THE FMS-PVXCL-DV-1 SOLUTION

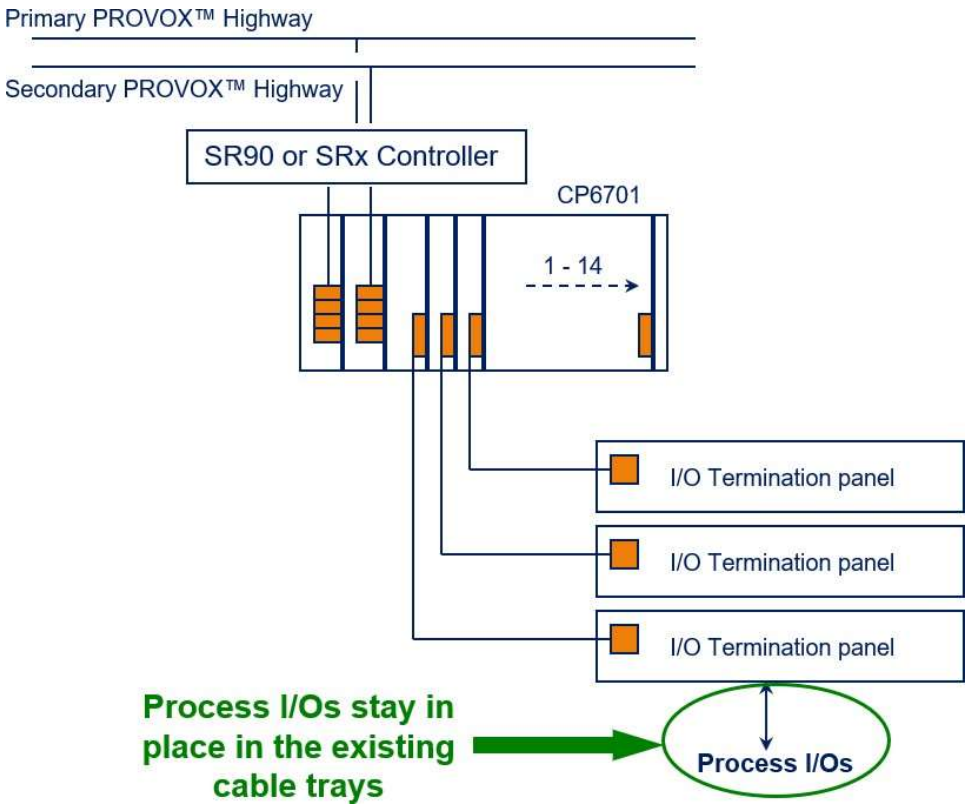
1.2.1. Existing PROVOX™ architecture



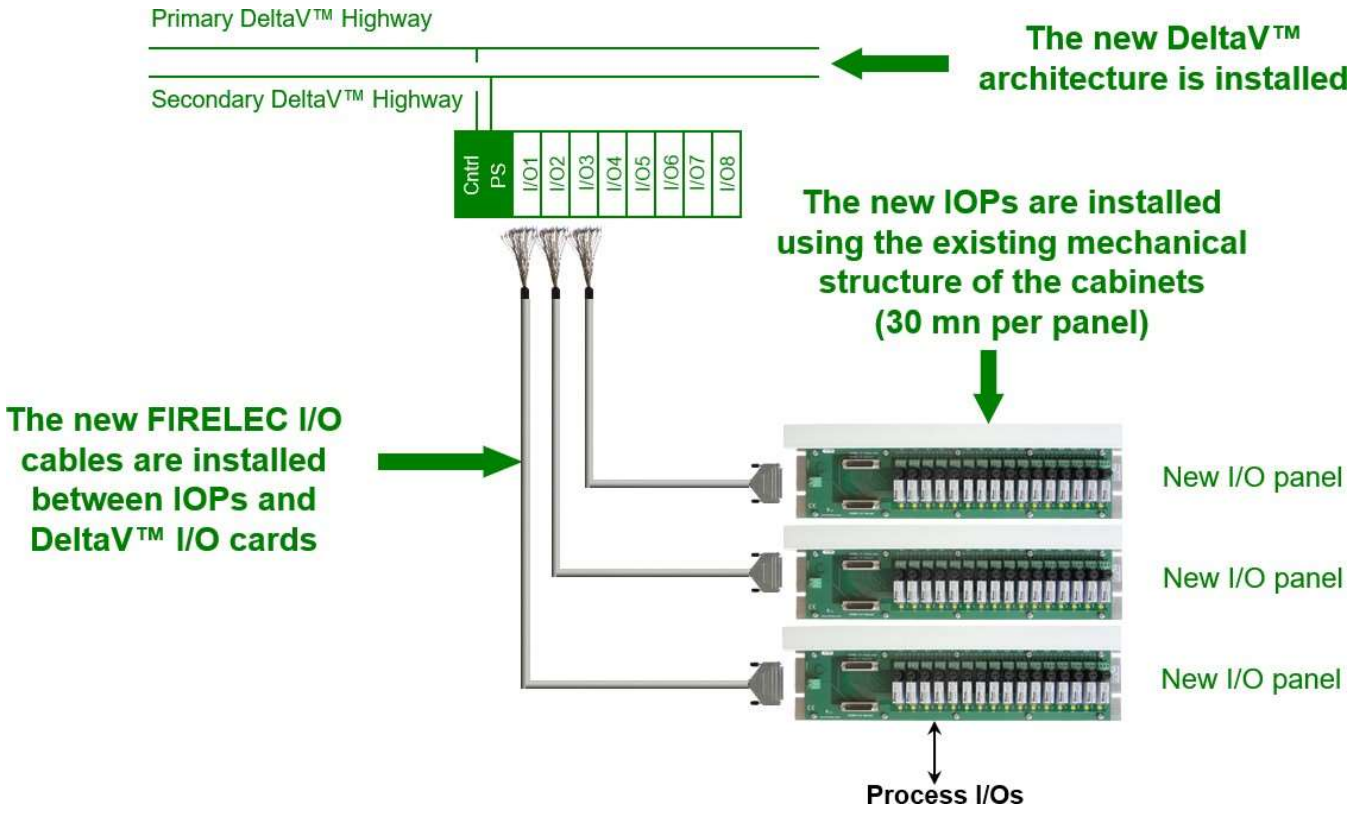
1.2.1. Existing PROVOX™ Hardware to be removed



1.2.2. Process I/Os kept in place



1.2.3. New DeltaV architecture

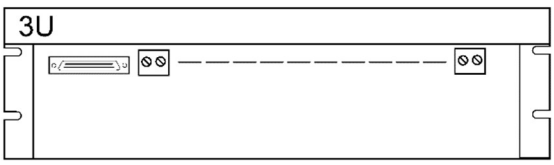
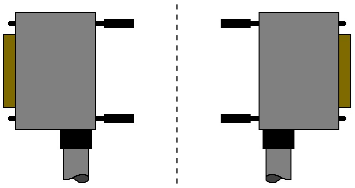


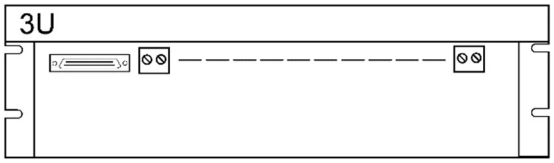
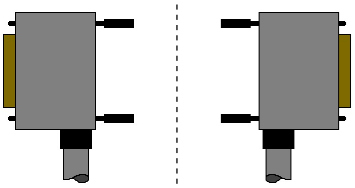
2. ANALOG INPUTS

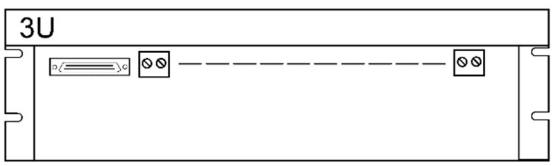
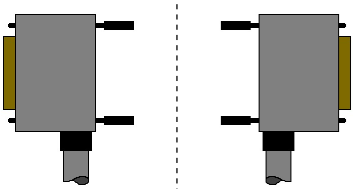
2.1. CL6861 / CL6881 / CL6895(CE) (SIMPLEX) CL6862 / CL6882 / CL6896(CE) (RED.)

2.1.1. Description and connection

16 channels - Analog input non isolated

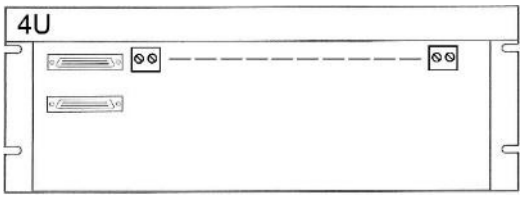
Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
CL6861	CBL-SUBD37/SUBD37	CL6821 / CL6824 (no HART)
		

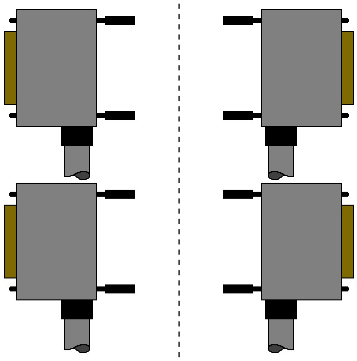
Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
CL6881	CBL-SUBD37/SUBD37	CL6822 (HART)
		

Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
CL6895(CE)	CBL-SUBD37/SUBD37	CL6821 / CL6824 : (no HART) CL6825 / CL6827 : (HART)
		

Existing PROVOX™ architecture

Panel	Cable	PROVOX™ card
CL6862	2 x CBL-SUBD37/SUBD37	2 xCL6821 / 2 x CL6824 (non HART)

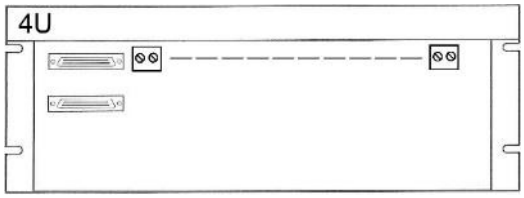


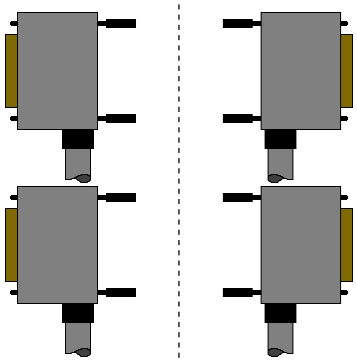


Redundancy 1:1 or 1:N

Existing PROVOX™ architecture

Panel	Cable	PROVOX™ card
CL6882	2 x CBL-SUBD37/SUBD37	2 x CL6822 (HART)

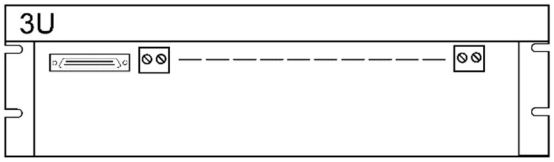


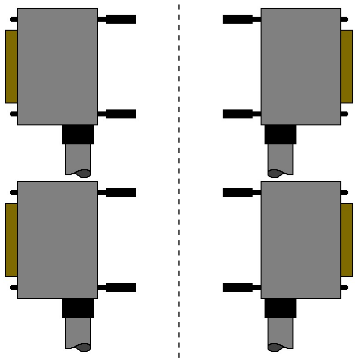


Redundancy 1:1 or 1:N

Existing PROVOX™ architecture

Panel	Cable	PROVOX™ card
CL6896(CE)	2 x CBL-SUBD37/SUBD37	2 x CL6821 / 2 x CL6824 : (no HART) 2 x CL6825 / CL6827 : (HART)





Redundancy 1:1 or 1:N

2.1.2. Solution : FMS-PVXCL-DV-1-AI1-A

Existing PROVOX™ Panel : CL6861 (Simplex) / CL6862 (Redundant)	
Module	**Description**
No pluggable I/O module	Analog Input 4-20mA isolated without HART functionality

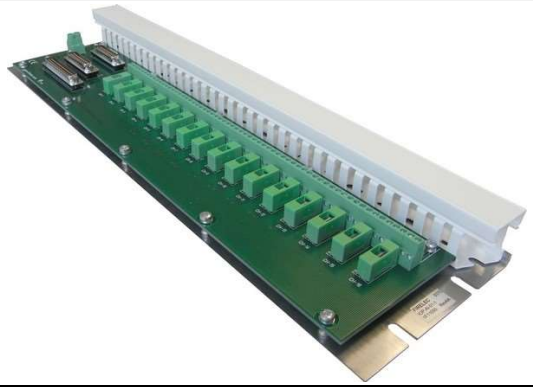
Existing PROVOX™ Panel : CL6881 (Simplex) / CL6882 (Redundant)	
Module	**Description**
No pluggable I/O module	Analog Input 4-20mA with HART functionality

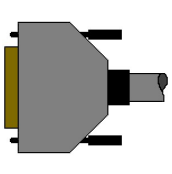
Existing PROVOX™ Panel : CL6895(CE) (Simplex) / CL6896(CE) (Redundant)	
Module	**Description**
CL6859X1-A1	Analog input module – 2 channels - 4-20mA non isolated without HART functionality
CL6859X1-A2	Analog input module – 2 channels - 4-20mA non isolated with HART functionality

New FIRELEC IOP : IOP-AI-01-1 (16 channels)
Description
16 channels - 4-20mA analog input termination panel for 2, 3 or 4 wire transmitter

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI1-A1

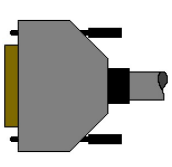
Interface unit	Cable	DeltaV™ card
IOP-AI-01-1	**CBL-1094** (Shielded Round Cable) SUB37F > 34 labeled wires	**VE4003S2B6 / SE4003S2B6 / VE4003S2B9** Analog Input card, 16 channels, 4-20 mA, 2-wire, Terminal Block

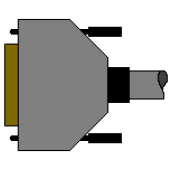




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI1-A2

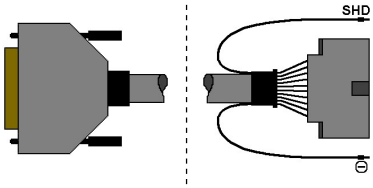
Interface unit	Cable	DeltaV™ card
IOP-AI-01-1	**2 x CBL-PVXCL-DV-1-AI1-A2**	**2 x VE4003S2B1** Analog Input card, 8 channels, 4-20 mA, 2-wire, Hart, Terminal Block

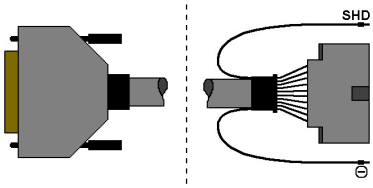




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI1-A3

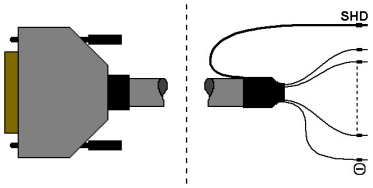
Interface unit	Cable	DeltaV™ card
IOP-AI-01-1	**2 x CBL-PVXCL-DV-1-AI1-A3** (Shielded Round Cable) SUB25F > HE1016	**2 x VE4003S2B4 /** **2 x SE4003S2B4** Analog Input card, 8 channels, 4-20 mA, 2-wire, Hart, 16-Pin Mass Terminal Block

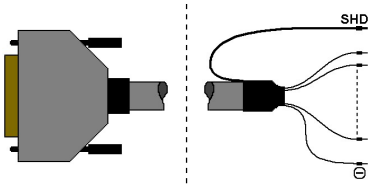




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI1-A4

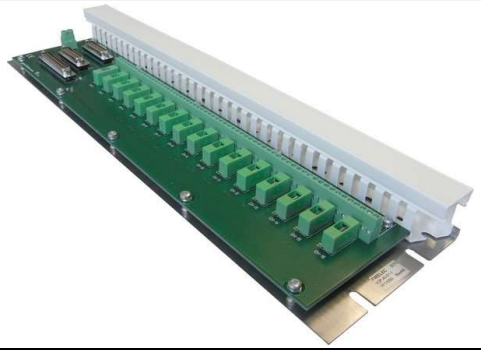
Interface unit	Cable	DeltaV™ card
IOP-AI-01-1	**2 x CBL-PVXCL-DV-1-AI1-A4**	**2 x VE4033S2B1 /** **2 x SE4033S2B1** Analog Input card, 8 channels, 4-20 mA, Redundant, Hart, Terminal Block

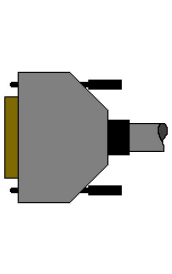




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI1-A5

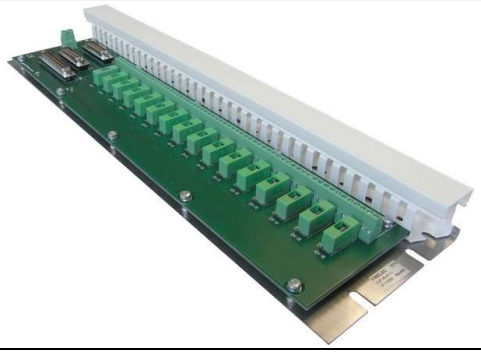
Interface unit	Cable	DeltaV™ card
IOP-AI-01-1	**CBL-1373** (Shielded Round Cable) SUB37F > 2xHE1024	**VE4003S2B11 / SE4003S2B11** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, 48-Pin mass Terminal Block

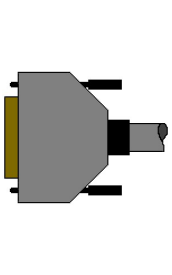




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI1-A6

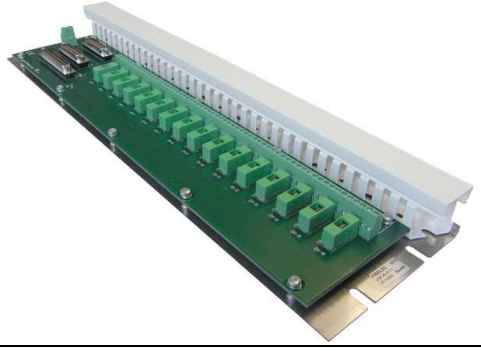
Interface unit	Cable	DeltaV™ card
IOP-AI-01-1	**CBL-1373** (Shielded Round Cable) SUB37F > 2xHE1024	**VE4033S2B11 / SE4033S2B11** Analog Input plus card, 16 channels, 4-20 mA, Redundant, Red. 48-Pin mass Terminal Block

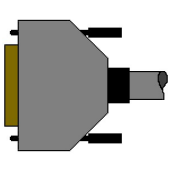




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI1-A7

Interface unit	Cable	DeltaV™ card
IOP-AI-01-1	**CBL-PVXCL-DV-1-AI1-A7**	**VE4033S2B10** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, Redundant, 2&4W AI Terminal Block for Serie 2 plus



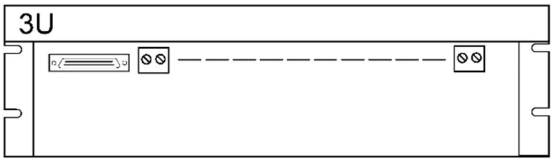


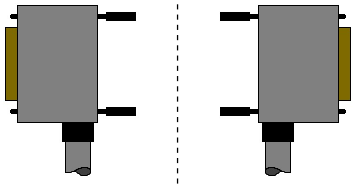
2.2. CL6863 / CL6897(CE) (SIMPLEX) CL6864 / CL6898(CE) (REDUNDANT)

2.2.1. Description and connection

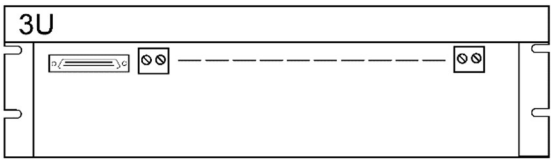
16 channels - Analog input isolated

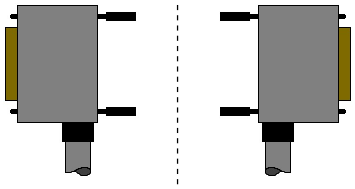
Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
CL6863	CBL-SUBD37/SUBD37	CL6821 / CL6824 : (no HART)



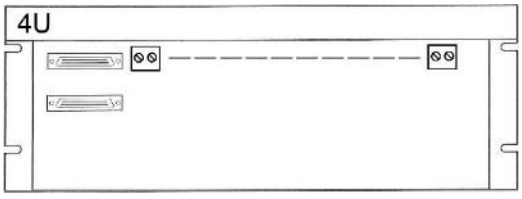


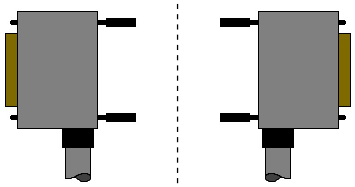
Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
CL6897(CE) / CL6898(CE)	CBL-SUBD37/SUBD37	CL6821 / CL6824 : (no HART) CL6825 / CL6827 : (HART)





Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
CL6864	CBL-SUBD37/SUBD37	CL6821 / CL6824 : (no HART)





2.2.2. Solution : FMS-PVXCL-DV-1-AI2-A

Existing PROVOX™ Panel : CL6863 (Simplex) / CL6864 (Redundant)	
Module	**Description**
CL6851X1-A1	Analog input module – 1 channel 0 - 10V isolated
CL6851X1-A2	Analog input module – 1 channel 1 - 5V isolated
CL6851X1-A3	Analog input module – 1 channel 4 - 20mA isolated
CL6852X1-A1	Analog input module – 1 channel -10mV + 70mV isolated
CL6853X1-A1	Analog input module – 1 channel RTD isolated -270°F +240°F (probe value : 0.00392ohm/°F)
CL6853X1-A2	Analog input module – 1 channel RTD isolated -148°F +211°F (probe value : 0.00392ohm/°F)
CL6853X1-A3	Analog input module – 1 channel RTD isolated -100°F +600°F (probe value : 0.00392ohm/°F)
CL6853X1-A4	Analog input module – 1 channel RTD isolated +32°F +392°F (probe value : 0.00392ohm/°F)
CL6853X1-A5	Analog input module – 1 channel RTD isolated +32°F +1112°F (probe value : 0.00392ohm/°F)
CL6853X1-A6	Analog input module – 1 channel RTD isolated +100°F +500°F (probe value : 0.00392ohm/°F)
CL6853X1-A7	Analog input module – 1 channel RTD isolated -270°F +240°F (probe value : 0.00392ohm/°F)
CL6853X1-A8	Analog input module – 1 channel RTD isolated -148°F +211°F (probe value : 0.00392ohm/°F)
CL6853X1-A9	Analog input module – 1 channel RTD isolated -100°F +600°F (probe value : 0.00392ohm/°F)
CL6853X1-A10	Analog input module – 1 channel RTD isolated +32°F +392°F (probe value : 0.00392ohm/°F
CL6853X1-A11	Analog input module – 1 channel RTD isolated +32°F +1112°F (probe value : 0.00392ohm/°F)
CL6853X1-A12	Analog input module – 1 channel RTD isolated +100°F +500°F (probe value : 0.00392ohm/°F)
CL6853X1-A13	Analog input module – 1 channel RTD isolated +32°F +300°F (cooper probe value : 10 Ohm @ 32°F)
CL6854X1-A1	Analog input module – 1 channel Thermocouple isolated -148°F +1400°F (TC Type J)
CL6854X1-A2	Analog input module – 1 channel Thermocouple isolated -60°F +640°F (TC Type J)
CL6854X1-A3	Analog input module – 1 channel Thermocouple isolated -148°F +2462°F (TC Type K)
CL6854X1-A4	Analog input module – 1 channel Thermocouple isolated 0°F +1000°F (TC Type K)
CL6854X1-A5	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type R)
CL6854X1-A6	Analog input module – 1 channel Thermocouple isolated -300°F +600°F (TC Type T)
CL6854X1-A7	Analog input module – 1 channel Thermocouple isolated -100°F +1600°F (TC Type E)
CL6854X1-A8	Analog input module – 1 channel Thermocouple isolated +32°F +3272°F (TC Type B)
CL6854X1-A9	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type S)

Existing PROVOX™ Panel : CL6897(CE) (Simplex) / CL6898(CE) (Redundant)	
Module	**Description**
CL6855X1-A6	Analog input module – 1 channel 0 - 10V isolated
CL6855X1-A7	Analog input module – 1 channel 1 - 5V isolated
CL6855X1-A8	Analog input module – 1 channel 4 - 20mA isolated
CL6855X1-A2	Analog input module – 1 channel -10mV + 70mV isolated
CL6857X1-A14	Analog input module – 1 channel RTD isolated -270°F +240°F (probe value : 0.00392ohm/°F)
CL6857X1-A15	Analog input module – 1 channel RTD isolated -148°F +211°F (probe value : 0.00392ohm/°F)
CL6857X1-A16	Analog input module – 1 channel RTD isolated -100°F +600°F (probe value : 0.00392ohm/°F)
CL6857X1-A17	Analog input module – 1 channel RTD isolated +32°F +392°F (probe value : 0.00392ohm/°F)
CL6857X1-A18	Analog input module – 1 channel RTD isolated +32°F +1112°F (probe value : 0.00392ohm/°F)
CL6857X1-A19	Analog input module – 1 channel RTD isolated +100°F +500°F (probe value : 0.00392ohm/°F)
CL6857X1-A20	Analog input module – 1 channel RTD isolated -270°F +240°F (probe value : 0.00392ohm/°F)
CL6857X1-A21	Analog input module – 1 channel RTD isolated -148°F +211°F (probe value : 0.00392ohm/°F)
CL6857X1-A22	Analog input module – 1 channel RTD isolated -100°F +600°F (probe value : 0.00392ohm/°F)
CL6857X1-A23	Analog input module – 1 channel RTD isolated +32°F +392°F (probe value : 0.00392ohm/°F
CL6857X1-A24	Analog input module – 1 channel RTD isolated +32°F +1112°F (probe value : 0.00392ohm/°F)
CL6857X1-A25	Analog input module – 1 channel RTD isolated +100°F +500°F (probe value : 0.00392ohm/°F)
CL6857X1-A26	Analog input module – 1 channel RTD isolated +32°F +300°F (cooper probe value : 10 Ohm @ 32°F)

Existing PROVOX™ Panel : CL6897(CE) (Simplex) / CL6898(CE) (Redundant) Modules - Group A19 to A27 : 1500V input / output isolation voltage	
Module	**Description**
CL6858X1-A19	Analog input module – 1 channel Thermocouple isolated -148°F +1400°F (TC Type J)
CL6858X1-A20	Analog input module – 1 channel Thermocouple isolated -60°F +640°F (TC Type J)
CL6858X1-A21	Analog input module – 1 channel Thermocouple isolated -148°F +2462°F (TC Type K)
CL6858X1-A22	Analog input module – 1 channel Thermocouple isolated 0°F +1000°F (TC Type K)
CL6858X1-A23	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type R)
CL6858X1-A24	Analog input module – 1 channel Thermocouple isolated -300°F +600°F (TC Type T)
CL6858X1-A25	Analog input module – 1 channel Thermocouple isolated -100°F +1600°F (TC Type E)
CL6858X1-A26	Analog input module – 1 channel Thermocouple isolated +32°F +3272°F (TC Type B)
CL6858X1-A27	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type S)

Existing PROVOX™ Panel : CL6897(CE) (Simplex) / CL6898(CE) (Redundant) Modules - Group A28 to A36 : 100V input / output isolation voltage	
Module	**Description**
CL6858X1-A28	Analog input module – 1 channel Thermocouple isolated -148°F +1400°F (TC Type J)
CL6858X1-A29	Analog input module – 1 channel Thermocouple isolated -60°F +640°F (TC Type J)
CL6858X1-A30	Analog input module – 1 channel Thermocouple isolated -148°F +2462°F (TC Type K)
CL6858X1-A31	Analog input module – 1 channel Thermocouple isolated 0°F +1000°F (TC Type K)
CL6858X1-A32	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type R)
CL6858X1-A33	Analog input module – 1 channel Thermocouple isolated -300°F +600°F (TC Type T)
CL6858X1-A34	Analog input module – 1 channel Thermocouple isolated -100°F +1600°F (TC Type E)
CL6858X1-A35	Analog input module – 1 channel Thermocouple isolated +32°F +3272°F (TC Type B)
CL6858X1-A36	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type S)

Existing PROVOX™ Panel : CL6321 (Simplex) / (Redundant)	
Module	**Description**
CL6322-1	Analog input module – 1 channel 4 - 20mA isolated with transmitter power supply
CL6322-2	Analog input module – 1 channel 4 - 20mA isolated without transmitter power supply
CL6323-1	Analog input module – 1 channel -10mV + 70mV isolated
CL6324-1	Analog input module – 1 channel RTD isolated -270°F +140°F (probe value : 0.00385ohm/°F)
CL6324-2	Analog input module – 1 channel RTD isolated -148°F +212°F (probe value : 0.00385ohm/°F)
CL6324-3	Analog input module – 1 channel RTD isolated -100°F +600°F (probe value : 0.00385ohm/°F)
CL6324-4	Analog input module – 1 channel RTD isolated -32°F +392°F (probe value : 0.00385ohm/°F)
CL6324-5	Analog input module – 1 channel RTD isolated +32°F +1112°F (probe value : 0.00385ohm/°F)
CL6324-6	Analog input module – 1 channel RTD isolated +100°F +500°F (probe value : 0.00385ohm/°F)
CL6325-1	Analog input module – 1 channel Thermocouple isolated -148°F +1400°F (TC Type J)
CL6325-2	Analog input module – 1 channel Thermocouple isolated -60°F +640°F (TC Type L)
CL6325-3	Analog input module – 1 channel Thermocouple isolated -148°F +2462°F (TC Type K)
CL6325-4	Analog input module – 1 channel Thermocouple isolated 0°F +1000°F (TC Type K)
CL6325-5	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type R)
CL6325-6	Analog input module – 1 channel Thermocouple isolated -300°F +600°F (TC Type T)
CL6325-7	Analog input module – 1 channel Thermocouple isolated -73°F +871°F (TC Type E)
CL6325-8	Analog input module – 1 channel Thermocouple isolated +32°F +3272°F (TC Type B)
CL6325-9	Analog input module – 1 channel Thermocouple isolated +32°F +3182°F (TC Type S)
51184(H)-A1	Analog input module – 1 channel 4 - 20mA isolated with or without transmitter power supply

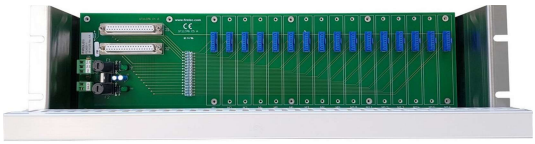
Replacement table : See next page

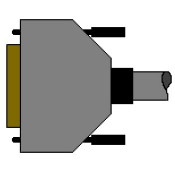
2.2.3.(Table1) : Configuration of the panel FC4521 with FIRELEC modules

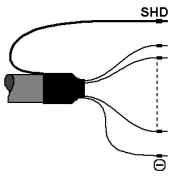
Exiting I/O modules of PROVOX™ Panel	New FIRELEC I/O modules to be installed on panel FC4521-1 (or FC4521-2)
16 x CL6851X1-A1 : Analog input module – 1 channel 0 - 10V isolated	16 x FC0186 : Analog input module – 1 channel 0 - 10V isolated
16 x CL6851X1-A2 : Analog input module – 1 channel 1 - 5V isolated	16 x FC0187 : Analog input module – 1 channel 1 - 5V isolated
16 x CL6851X1-A3 : Analog input module – 1 channel 4 - 20mA isolated	16 x FC0184 : Analog input module – 1 channel 4 - 20mA isolated
16 x CL6852X1-A1 : Analog input module – 1 channel -10mV + 70mV isolated	16 x FC0181 (L) : Analog input module – 1 channel - mV isolated
16 x CL6853X1-A1 > CL6853X1-A13 : Analog input module – 1 channel RTD isolated	16 x FC0182 : Analog input module – 1 channel RTD isolated
16 x CL6854X1-A1 > CL6854X1-A9 : Analog input module – 1 channel Thermocouple isolated	16 x FC0181 (L) : Analog input module – 1 channel - Thermocouple isolated
(CE Version) 16 x CL6855X1-A6 : Analog input module – 1 channel 0 - 10V isolated	16 x FC0186 : Analog input module – 1 channel 0 - 10V isolated
(CE Version) 16 x CL6855X1-A7 : Analog input module – 1 channel 1 - 5V isolated	16 x FC0187 : Analog input module – 1 channel 1 - 5V isolated
(CE Version) 16 x CL6855X1-A8 : Analog input module – 1 channel 4 - 20mA isolated	16 x FC0184 : Analog input module – 1 channel 4 - 20mA isolated
(CE Version) 16 x CL6855X1-A2 : Analog input module – 1 channel -10mV + 70mV isolated	16 x FC0181 (L) : Analog input module – 1 channel - mV isolated
(CE Version) 16 x CL6857X1-A14 > CL6853X1-A26 : Analog input module – 1 channel RTD isolated	16 x FC0182 : Analog input module – 1 channel RTD isolated
(CE Version) 16 x CL6858X1-A19 > CL6858X1-A36 : Analog input module – 1 channel Thermocouple isolated	16 x FC0181 (L) : Analog input module – 1 channel - Thermocouple isolated

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A1

Interface unit	Cable	DeltaV™ card
FC4521-1 Equiped with 16 conversion modules See table (1)	**CBL-1086** (Shielded Round Cable) SUBD37M > 18 labeled wires	**VE4003S2B6 / SE4003S2B6 / VE4003S2B9** Analog Input card, 16 channels, 4-20 mA, 2-wire, Terminal Block

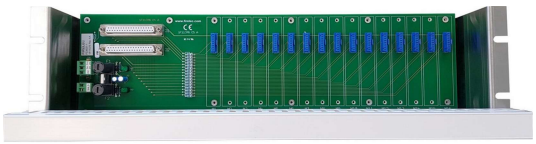


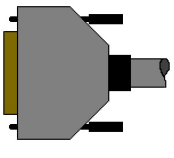


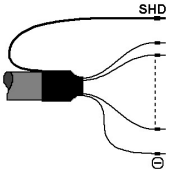


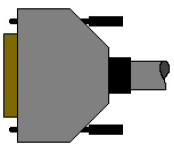
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A2

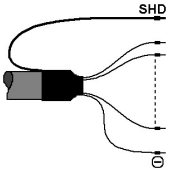
Interface unit	Cable	DeltaV™ card
FC4521-1 Equiped with 16 conversion modules See table (1)	**2xCBL-PVXCL-DV-1-AI2-A2**	**2 x VE4003S2B1** Analog Input card, 8 channels, 4-20 mA, Hart, Terminal Block

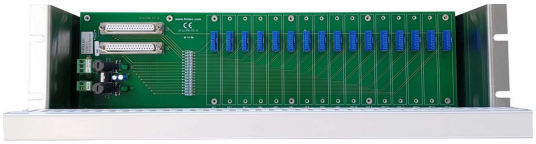
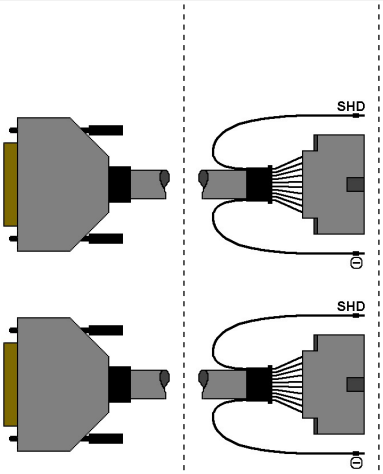


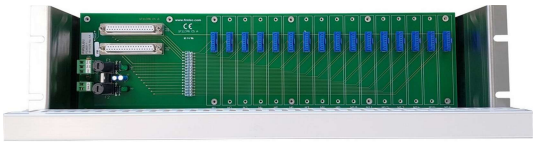
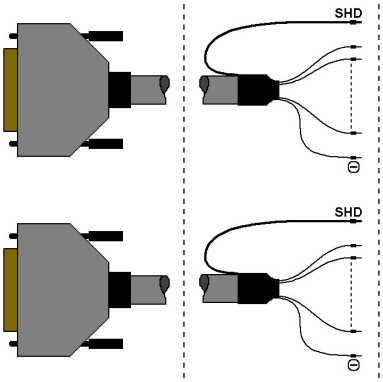


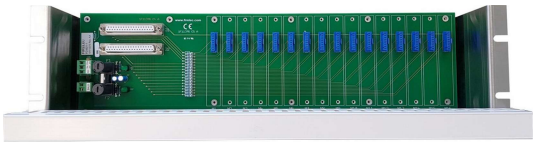
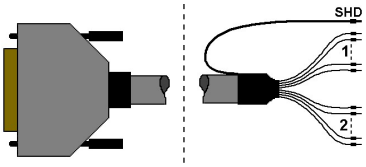


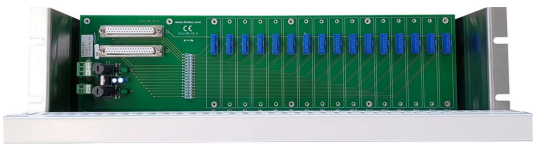
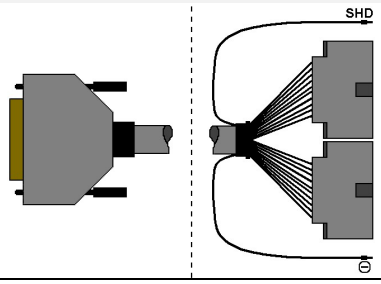


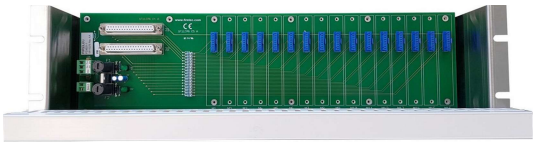
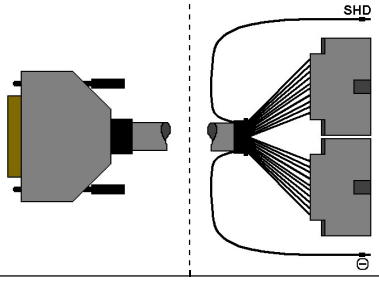


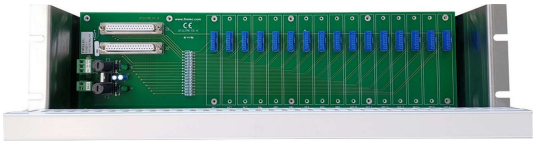
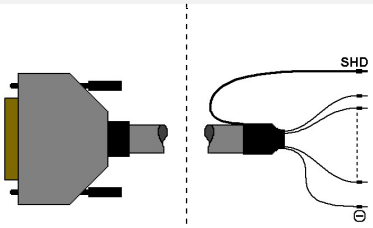
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A3		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-1 Equiped with 16 conversion modules See table (1)	**2xCBL-PVXCL-DV-1-AI2-A3**	**2 x VE4003S2B4 /** **2 x SE4003S2B4** Analog Input card, 8 channels, 4-20 mA, 2-wire, Hart, 16 pin Mass Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A4		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-1 Equiped with 16 conversion modules See table (1)	**2 x CBL-PVXCL-DV-1-AI2-A4**	**2 x VE4033S2B1 /** **2 x SE4033S2B1** Analog Input card, 8 channels, 4-20 mA, Redundant, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A5		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-1 Equiped with 16 conversion modules See table (1)	**CBL-1284** (Shielded Round Cable) SUBD37M > 32 labeled wires	**2 x VE4003S2B3** Analog Input card, 8 channels, 4-20 mA, 4-Wire, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A6		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-1 Equiped with 16 conversion modules See table (1)	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024	**VE4003S2B11 / SE4003S2B11** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, 48-Pin mass Terminal Block
		

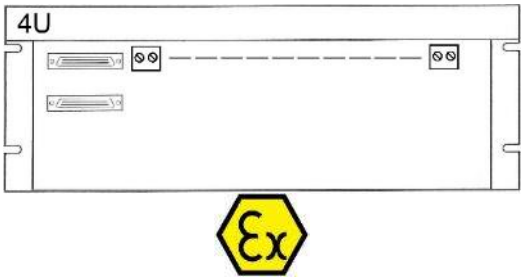
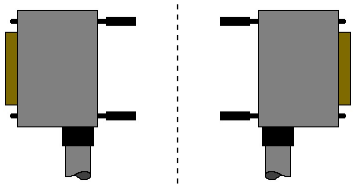
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A7		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-1 Equiped with 16 conversion modules See table (1)	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024pin	**VE4033S2B11 / SE4033S2B11** Analog Input plus card, 16 channels, 4-20 mA, Redundant, Red. 48-Pin mass Terminal Block
		

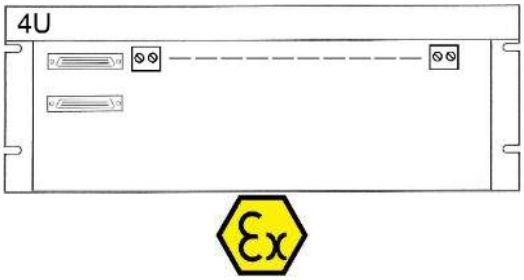
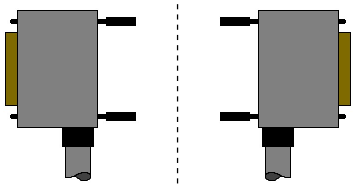
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI2-A8		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-1 Equiped with 16 conversion modules See table (1)	**CBL-PVXCL-DV-1-AI1-A8**	**VE4033S2B10** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, Redundant, 2&4W AI Terminal Block for Serie 2 plus
		

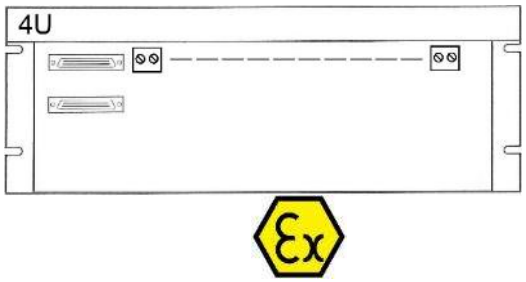
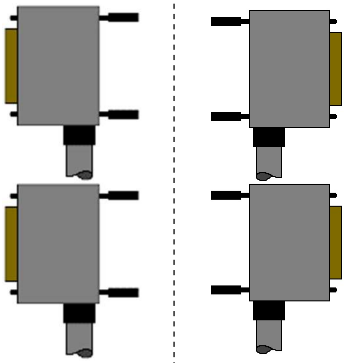
2.3. CL6341 / CL6345 (CE) (SIMPLEX / REDUNDANT) - IS (EX) 4-20MA

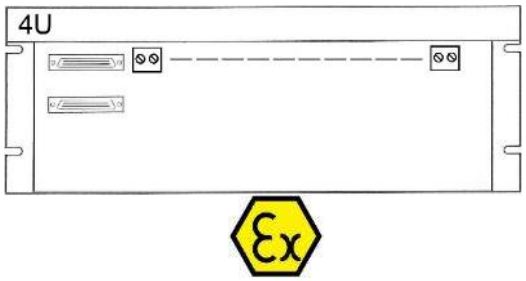
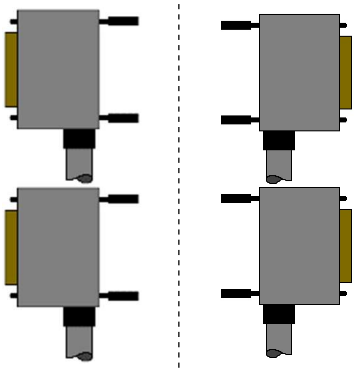
2.3.1. Description and connection

16 channels - IS (Ex) Analog inputs 4-20mA
CL6341 : non HART
CL6345 : HART

Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6341 (SIMPLEX) (no HART)	CBL-SUBD37/SUBD37	CL6821 / CL6824 : (no HART)
		

Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6345(CE) (SIMPLEX) (HART)	CBL-SUBD37/SUBD37	CL6825 / CL6827 : (HART)
		

Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6341 (REDUNDANT) (non HART)	2 x CBL-SUBD37/SUBD37	CL6821 / CL6824 (no HART)
		 Redundancy 1:1 or 1:N

Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6345(CE) (REDUNDANT) (HART)	2 x CBL-SUBD37/SUBD37	CL6825 / CL6827 : (HART)
		 Redundancy 1:1 or 1:N

2.3.2. Solution : FMS-PVXCL-DV-1-AI3-A

Existing PROVOX™ Panel : CL6341 (Simplex) / (Redundant) (no HART)	
Module	**Description**
CL6351	IS (Ex) Analog input module – 1 channel 4 - 20mA isolated with transmitter power supply

Existing PROVOX™ Panel : CL6345 (Simplex) / (Redundant) (HART)	
Module	**Description**
CL6351	IS (Ex) Analog input module – 1 channel 4 - 20mA isolated with transmitter power supply

New FIRELEC IOP : FC4521 / (Simplex) and (Redundant) (16 slots) (HART)	
Module	**Description**
CL6351	IS (Ex) Analog input module – 1 channel 4 - 20mA isolated with transmitter power supply

Keeping the existing CL6351 modules installed on the new panel FC4521-3 (or FC4521-4)

FC4521-3 + 16 x CL6351 modules

Loop agreement remains unchanged and still in use

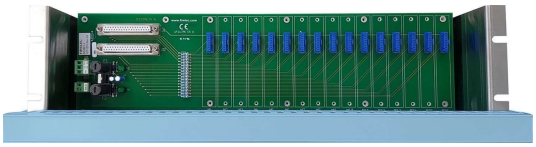
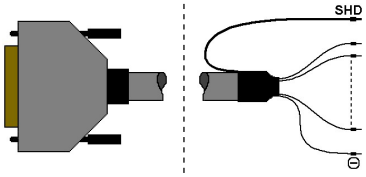
2.3.1. Maintenance

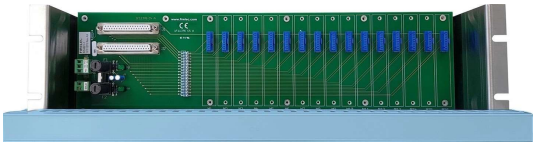
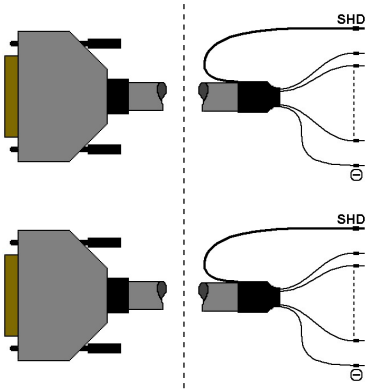
For maintenance the CL modules can be replaced by MTL modules.

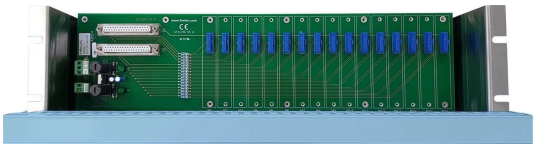
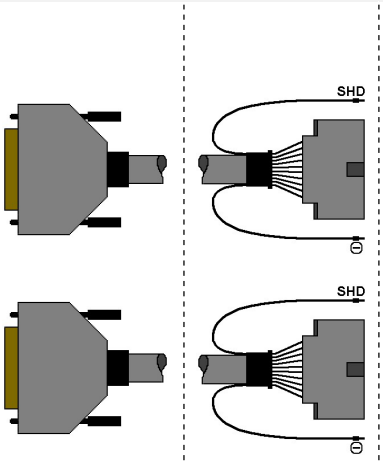
The MTL modules have to be mounted on the FC4521-3 using the MCK45 adapter kit

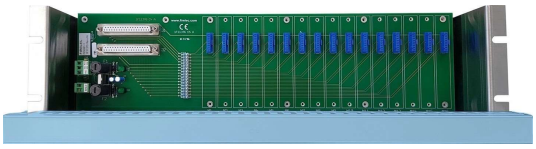
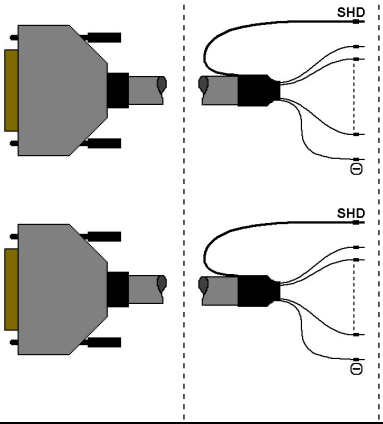
Exiting I/O modules of PROVOX™ Panel		New MTL I/O modules to be installed on panel FC4521-3 for maintenance
CL6351	IS (Ex) Analog input module 1 channel, 4-20mA isolated with transmitter power supply	MTL4541B + MCK45

Loop agreement remains unchanged and still in use

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A1		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**CBL-1086** (Shielded Round Cable) SUBD37M > 18 labeled wires	**VE4003S2B6 / SE4003S2B6 / VE4003S2B9** Analog Input card, 16 channels, 4-20 mA, 2-wire, Terminal Block
		

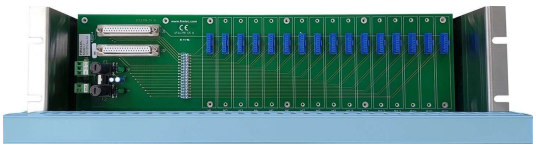
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A2		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**2 x CBL-PVXCL-DV-1-AI3-A2**	**2 x VE4003S2B1** Analog Input card, 8 channels, 4-20 mA, Hart, Terminal Block
		

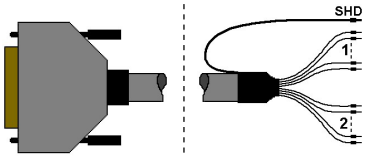
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A3		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**2 x CBL-PVXCL-DV-1-AI3-A3**	**2 x VE4003S2B4 /** **2 x SE4003S2B4** Analog Input card, 8 channels, 4-20 mA, 2-wire, Hart, 16 pin Mass Termination
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A4		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**2 x CBL-PVXCL-DV-1-AI3-A4**	**2 x VE4033S2B1 /** **2 x SE4033S2B1** Analog Input card, 8 channels, 4-20 mA, Redundant, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A5

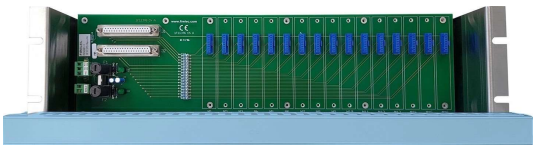
Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**CBL-1284** (Shielded Round Cable) SUBD37M > 32 labeled wires	**2 x VE4003S2B3** Analog Input card, 8 channels, 4-20 mA, 4-Wire, Hart, Terminal Block

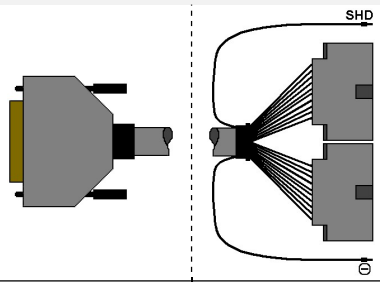


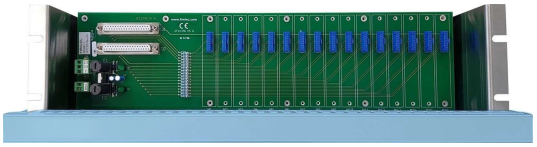
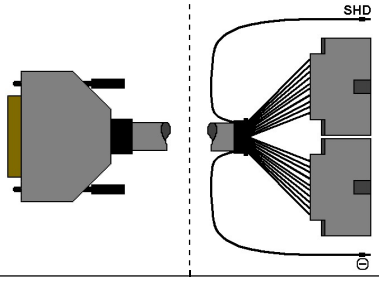


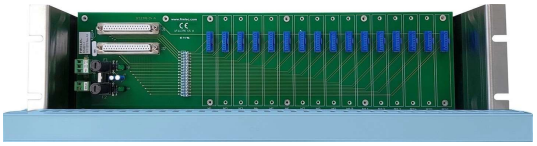
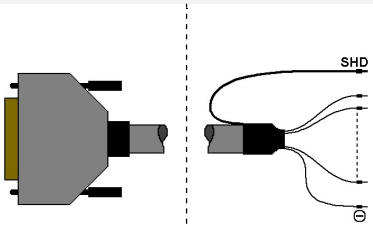
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A6

Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024	**VE4003S2B11 / SE4003S2B11** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, 48-Pin mass Terminal Block





New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A7		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024pin	**VE4033S2B11 / SE4033S2B11** Analog Input plus card, 16 channels, 4-20 mA, Redundant, Red. 48-Pin mass Terminal Block
		

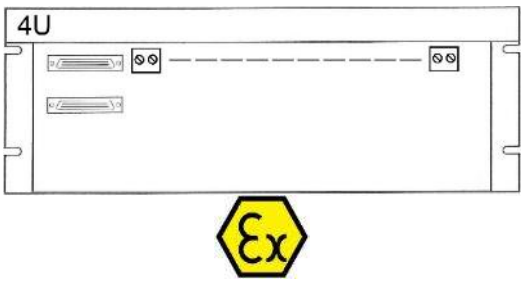
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI3-A8		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6351 or MTL4541B + MCK45	**CBL-PVXCL-DV-1-AI3-A8**	**VE4033S2B10** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, Redundant, 2&4W AI Terminal Block for Serie 2 plus
		

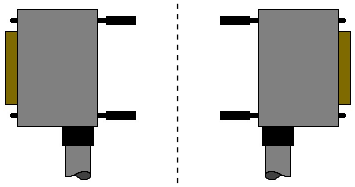
2.4. CL6341 / CL6345 (CE) (SIMPLEX / REDUNDANT) - IS (EX) MV, THERMOCOUPLE OR RTD

2.4.1. Description and connection

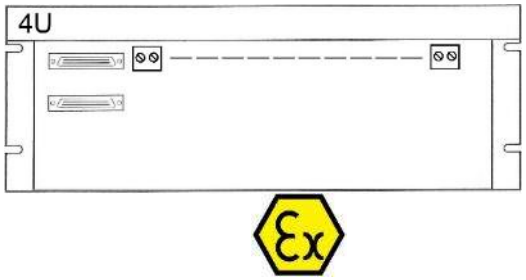
16 channels - IS (Ex) Analog inputs mV, Tc or RTD

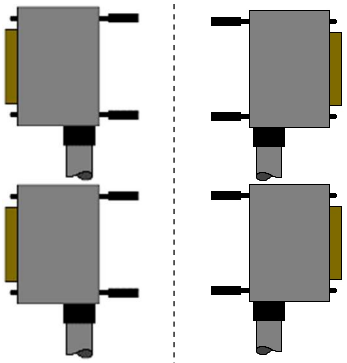
Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6341 (SIMPLEX) (no HART)	CBL-SUBD37/SUBD37	CL6821 / CL6824 : (no HART)





Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6341 (REDUNDANT) (non HART)	2 x CBL-SUBD37/SUBD37	CL6821 / CL6824 (no HART)





Redundancy 1:1 or 1:N

2.4.2.Solution : FMS-PVXCL-DV-1-AI4-A

Existing PROVOX™ Panel : CL6341 (Simplex) / (Redundant) (no HART)	
Module	**Description**
CL6352	Analog input module – 1 channel (-10mV to 70mV) isolated
CL6354 (TCJ-1)	Analog input module – 1 channel Thermocouple isolated -100°C +760°C (TC Type J)
CL6354 (TCJ-2)	Analog input module – 1 channel Thermocouple isolated -51°C +338°C (TC Type J)
CL6354 (TCK-1)	Analog input module – 1 channel Thermocouple isolated -100°C +1350°C (TC Type K)
CL6354 (TCK-2)	Analog input module – 1 channel Thermocouple isolated -18°C +538°C (TC Type K)
CL6354 (TCR-1)	Analog input module – 1 channel Thermocouple isolated 0°C +1750°C (TC Type R)
CL6354 (TCT-1)	Analog input module – 1 channel Thermocouple isolated -184°C +315°C (TC Type T)
CL6354 (TCE-1)	Analog input module – 1 channel Thermocouple isolated -73°C +871°C (TC Type E)
CL6354 (TCB-1)	Analog input module – 1 channel Thermocouple isolated 0°C +1800°C (TC Type B)
CL6354 (TCS-1)	Analog input module – 1 channel Thermocouple isolated 0°C +1750°C (TC Type S)
CL6353 (RTD-1)	Analog input module – 1 channel RTD isolated -168°C +60°C
CL6353 (RTD-2)	Analog input module – 1 channel RTD isolated -100°C +100°C
CL6353 (RTD-3)	Analog input module – 1 channel RTD isolated -73°C +315°C
CL6353 (RTD-4)	Analog input module – 1 channel RTD isolated 0°C +200°C
CL6353 (RTD-5)	Analog input module – 1 channel RTD isolated 0°C +600°C
CL6353 (RTD-6)	Analog input module – 1 channel RTD isolated 38°C +260°C

New FIRELEC IOP : FC4521 / (Simplex) and (Redundant) (16 slots) (HART)	
Module	**Description**
CL6352	IS (Ex) Analog input module – 1 channel (-10mV to 70mV) isolated
CL6354 (TCJ-1)	IS (Ex) Analog input module – 1 channel Thermocouple isolated -100°C +760°C (TC Type J)
CL6354 (TCJ-2)	IS (Ex) Analog input module – 1 channel Thermocouple isolated -51°C +338°C (TC Type J)
CL6354 (TCK-1)	IS (Ex) Analog input module – 1 channel Thermocouple isolated -100°C +1350°C (TC Type K)
CL6354 (TCK-2)	IS (Ex) Analog input module – 1 channel Thermocouple isolated -18°C +538°C (TC Type K)
CL6354 (TCR-1)	IS (Ex) Analog input module – 1 channel Thermocouple isolated 0°C +1750°C (TC Type R)
CL6354 (TCT-1)	IS (Ex) Analog input module – 1 channel Thermocouple isolated -184°C +315°C (TC Type T)
CL6354 (TCE-1)	IS (Ex) Analog input module – 1 channel Thermocouple isolated -73°C +871°C (TC Type E)
CL6354 (TCB-1)	IS (Ex) Analog input module – 1 channel Thermocouple isolated 0°C +1800°C (TC Type B)
CL6354 (TCS-1)	IS (Ex) Analog input module – 1 channel Thermocouple isolated 0°C +1750°C (TC Type S)
CL6353 (RTD-1)	IS (Ex) Analog input module – 1 channel RTD isolated -168°C +60°C
CL6353 (RTD-2)	IS (Ex) Analog input module – 1 channel RTD isolated -100°C +100°C
CL6353 (RTD-3)	IS (Ex) Analog input module – 1 channel RTD isolated -73°C +315°C
CL6353 (RTD-4)	IS (Ex) Analog input module – 1 channel RTD isolated 0°C +200°C
CL6353 (RTD-5)	IS (Ex) Analog input module – 1 channel RTD isolated 0°C +600°C
CL6353 (RTD-6)	IS (Ex) Analog input module – 1 channel RTD isolated 38°C +260°C

Keeping the existing CL modules installed on the new panel FC4521-3

FC4521-3 + 16 x CL modules

Loop agreement remains unchanged and still in use

2.4.3. Maintenance

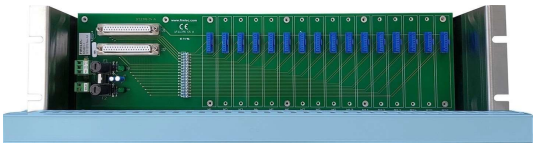
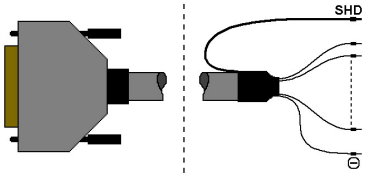
For maintenance the CL modules can be replaced by MTL modules.

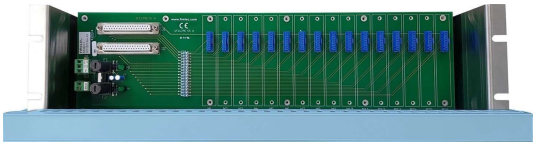
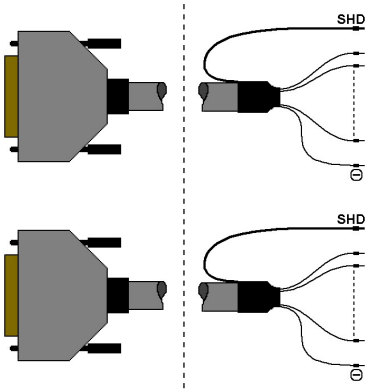
The MTL modules have to be mounted on the FC4521-3 using the MCK45 adapter kit

Exiting I/O modules of PROVOX™ Panel		New MTL I/O modules to be installed on panel FC4521-3 for maintenance
CL6352	IS (Ex) Analog input module 1 channel (-10mV to 70mV) isolated	MTL4573 + MCK45
CL6353	IS (Ex) Analog input module 1 channel RTD isolated	MTL4573 + MCK45
CL6354	IS (Ex) Analog input module 1 channel Thermocouple isolated	MTL4573 + MCK45

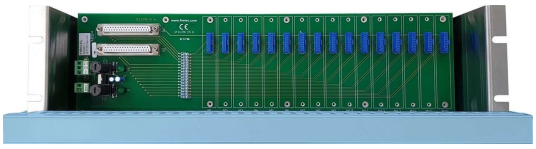
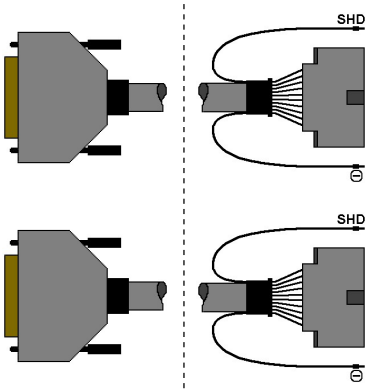
In case of the replacement of a mV, RTD or Tc by a MTL4573, the MTL PCS45/PCL45USB software and configuration module are required to define the temperature range.

Loop agreement remains unchanged and still in use

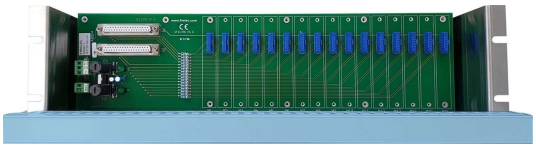
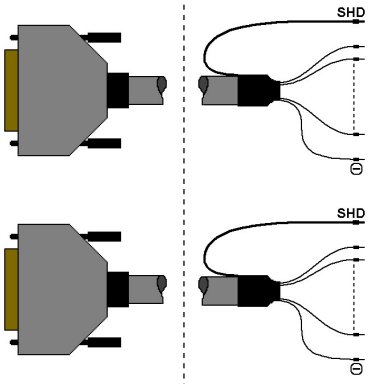
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A1		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**CBL-1086** (Shielded Round Cable) SUBD37M > 18 labeled wires	**VE4003S2B6 / SE4003S2B6 / VE4003S2B9** Analog Input card, 16 channels, 4-20 mA, 2-wire, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A2		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**2 x CBL-PVXCL-DV-1-AI4-A2**	**2 x VE4003S2B1** Analog Input card, 8 channels, 4-20 mA, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A3

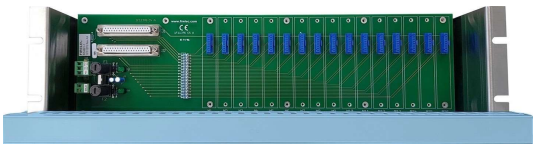
Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**2 x CBL-PVXCL-DV-1-AI4-A3**	**2 x VE4003S2B4 / 2 x SE4003S2B4** Analog Input card, 8 channels, 4-20 mA, 2-wire, Hart, 16 pin Mass Termination
		

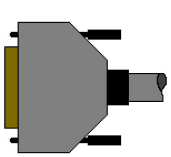
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A4

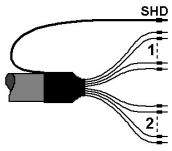
Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**2 x CBL-PVXCL-DV-1-AI4-A4**	**2 x VE4033S2B1 / 2 x SE4033S2B1** Analog Input card, 8 channels, 4-20 mA, Redundant, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A5

Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**CBL-1284** (Shielded Round Cable) SUBD37M > 32 labeled wires	**2 x VE4003S2B3** Analog Input card, 8 channels, 4-20 mA, 4-Wire, Hart, Terminal Block

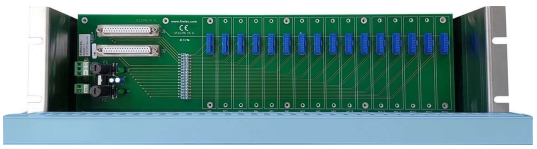


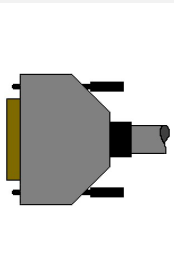


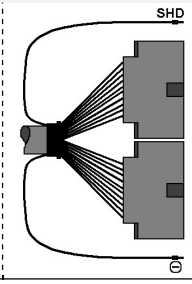


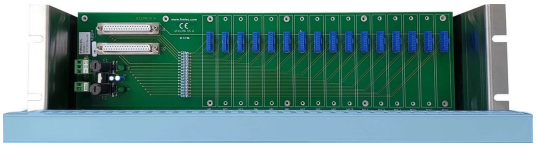
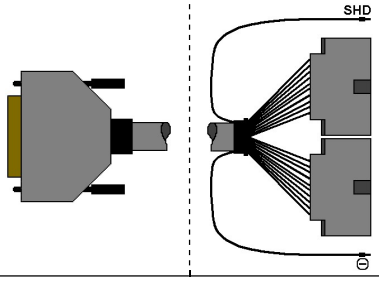
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A6

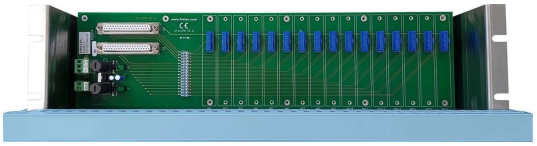
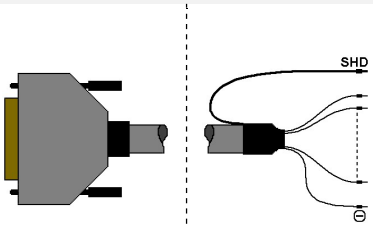
Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024	**VE4003S2B11 / SE4003S2B11** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, 48-Pin mass Terminal Block







New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A7		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024pin	**VE4033S2B11 / SE4033S2B11** Analog Input plus card, 16 channels, 4-20 mA, Redundant, Red. 48-Pin mass Terminal Block
		

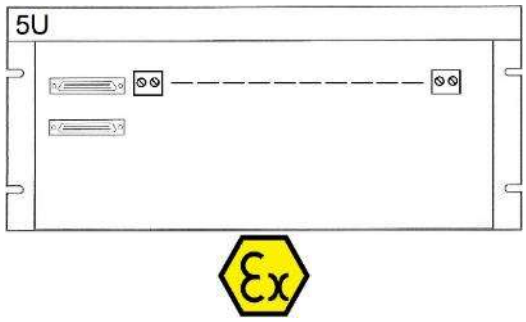
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI4-A8		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules : CL6350 Series or MTL4573 + MCK45	**CBL-PVXCL-DV-1-AI4-A8**	**VE4033S2B10** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, Redundant, 2&4W AI Terminal Block for Serie 2 plus
		

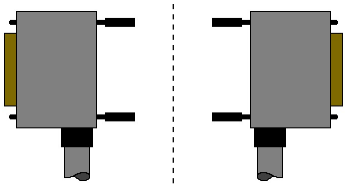
2.1. CL6321-1 / CL6321-2 (SIMPLEX / REDUNDANT) - IS (EX) - 4-20MA

2.1.1. Description and connection

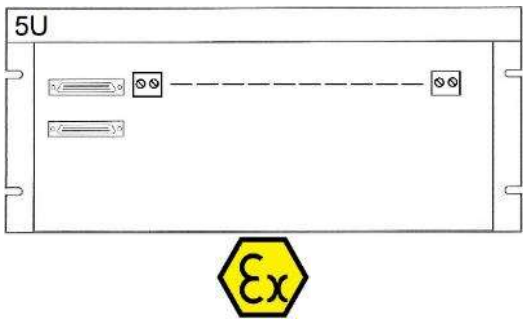
16 channels - IS (Ex) Analog inputs 4-20mA
CL6321-1 and CL6321-2 : Same functionality (hardware revision)

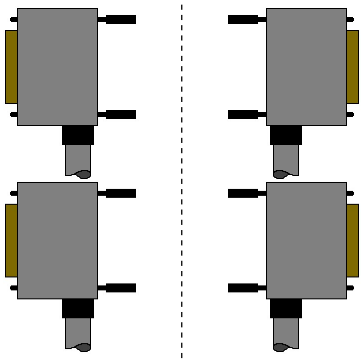
Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6321 (SIMPLEX)	CBL-SUBD37/SUBD37	CL6821 / CL6824 CL6825 / CL6827 : (HART)





Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6321 (REDUNDANT)	2 x CBL-SUBD37/SUBD37	2 x CL6821 / CL6824 2 x CL6825 / CL6827 : (HART)





Redundancy 1:1 or 1:N

2.1.2. Solution : FMS-PVXCL-DV-1-AI5-A

Existing PROVOX™ Panel : CL6321 (Simplex) / (Redundant) (no HART) With PROVOX™ I/O cards CL6821 or CL6824	
Module	**Description**
CL6322-1	Analog input module – 1 channel 4 - 20mA isolated **with** transmitter power supply
CL6322-2	Analog input module – 1 channel 4 - 20mA isolated **without** transmitter power supply
51184(H)-A1-C2-F2 A1 : PS = 24Vdc C2 : Input 4 - 20mA F2 : Output 1 - 5Vdc	Analog input module – 1 channel 4 - 20mA isolated **with and without** transmitter power supply

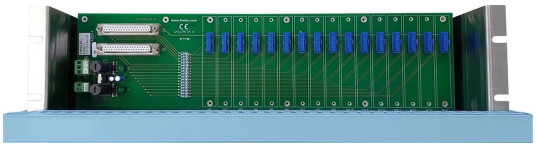
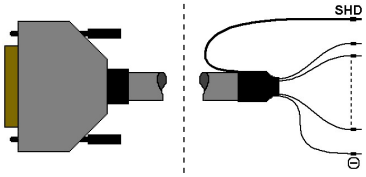
Existing PROVOX™ Panel : CL6321 (Simplex) / (Redundant) (HART) With PROVOX™ I/O cards CL6825 or CL6827	
Module	**Description**
51184(H)-A1-C2-F3 A1 : PS = 24Vdc C2 : Input 4 - 20mA F3 : Output 4 - 20mA	Analog input module – 1 channel 4 - 20mA isolated **with and without** transmitter power supply

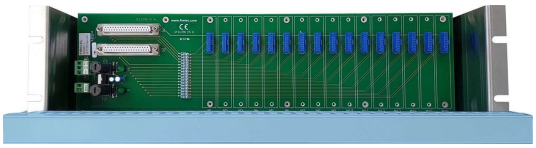
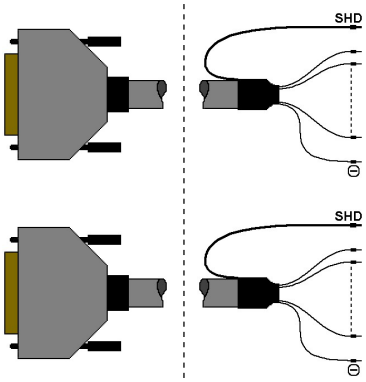
New FIRELEC IOP : FC4521 / (Simplex) and (Redundant) (16 slots)	
Module	**Description**
MTL4541B + MCK45 Kit	1 channel – I.S. repeater power supply 4/20mA for 2, 3, or 4-wire transmitter

New modules MTL4541B installed on the new panel FC4521-3 using MCK45 Kit

FC4521 + 16 x (MTL4541B + MCK45 Kit)

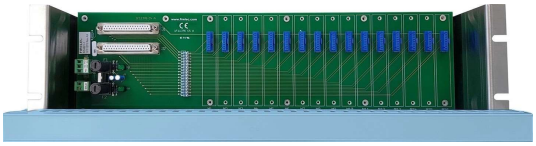
Input IS parameters have to be checked for compatibility with new MTL4541B barriers.

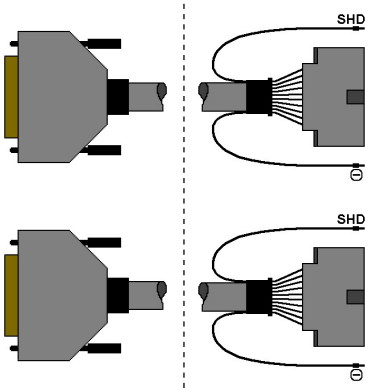
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A1		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4541B + MCK45 Kit	**CBL-1086** (Shielded Round Cable) SUBD37M > 18 labeled wires	**VE4003S2B6 / SE4003S2B6 / VE4003S2B9** Analog Input card, 16 channels, 4-20 mA, 2-wire, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A2		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4541B + MCK45 Kit	**2 x CBL-PVXCL-DV-1-AI5-A2**	**2 x VE4003S2B1** Analog Input card, 8 channels, 4-20 mA, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A3

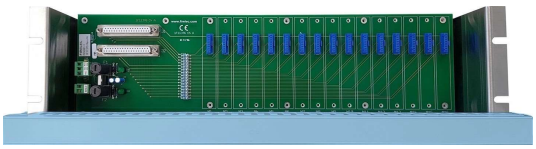
Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules MTL4541B + MCK45 Kit	**2 x CBL-PVXCL-DV-1-AI5-A3**	**2 x VE4003S2B4 /** **2 x SE4003S2B4** Analog Input card, 8 channels, 4-20 mA, 2-wire, Hart, 16 pin Mass Termination

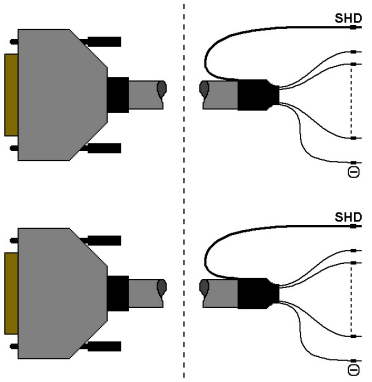




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A4

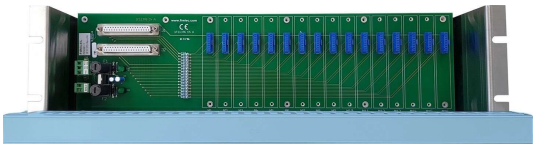
Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules MTL4541B + MCK45 Kit	**2 x CBL-PVXCL-DV-1-AI5-A4**	**2 x VE4033S2B1 /** **2 x SE4033S2B1** Analog Input card, 8 channels, 4-20 mA, (switch pos : 2-wire), Redundant, Hart, Terminal Block

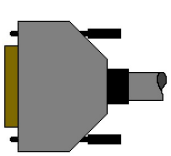




New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A5

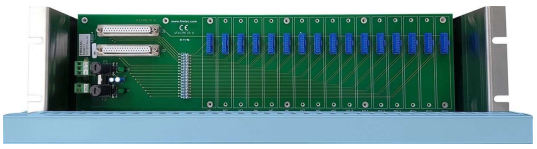
Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules MTL4541B + MCK45 Kit	**CBL-1284** (Shielded Round Cable) SUBD37M > 32 labeled wires	**2 x VE4003S2B3** Analog Input card, 8 channels, 4-20 mA, 4-Wire, Hart, Terminal Block

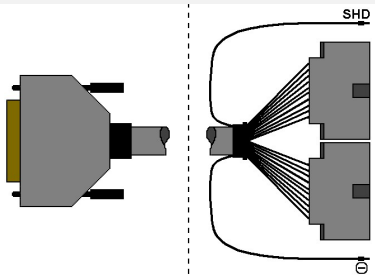


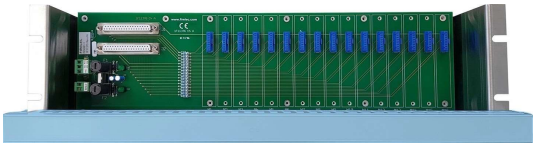
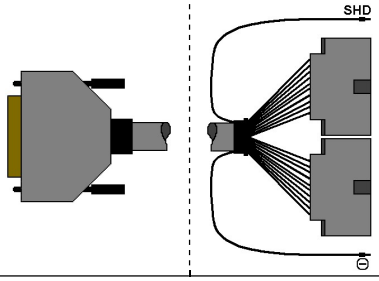


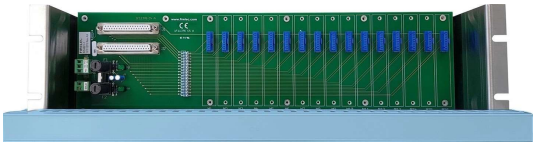
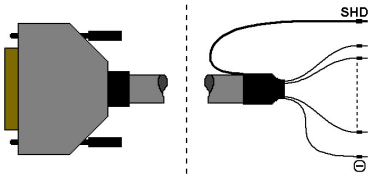
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A6

Interface unit	Cable	DeltaV™ card
FC4521-3 Equiped with 16 conversion modules MTL4541B + MCK45 Kit	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024	**VE4003S2B11 / SE4003S2B11** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, 48-Pin mass Terminal Block





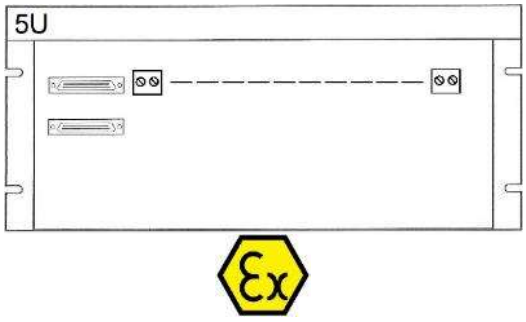
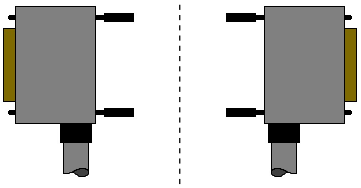
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A7		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equipped with 16 conversion modules MTL4541B + MCK45 Kit	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024pin	**VE4033S2B11 / SE4033S2B11** Analog Input plus card, 16 channels, 4-20 mA, Redundant, Red. 48-Pin mass Terminal Block
		

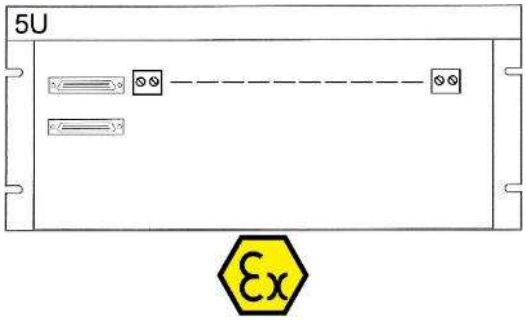
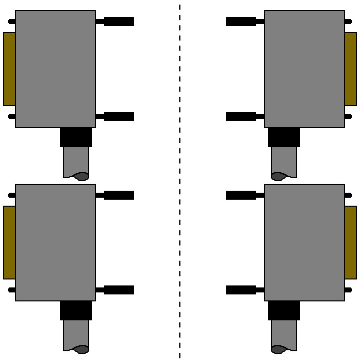
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI5-A8		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equipped with 16 conversion modules MTL4541B + MCK45 Kit	**CBL-PVXCL-DV-1-AI5-A8**	**VE4033S2B10** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, Redundant, 2&4W AI Terminal Block for Serie 2 plus
		

2.2. CL6321-1 / CL6321-2 (SIMPLEX / REDUNDANT) - IS (EX) – MV, THERMOCOUPLE OR RTD

2.2.1. Description and connection

16 channels - IS (Ex) Analog inputs – mV, Thermocouple or RTD
CL6321-1 and CL6321-2 : Same functionality (hardware revision)

Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6321 (SIMPLEX)	CBL-SUBD37/SUBD37	CL6821 / CL6824
		

Existing PROVOX™ architecture		
Panel	**Cable**	**PROVOX™ card**
IS (Ex) CL6321 (REDUNDANT)	2 x CBL-SUBD37/SUBD37	2 x CL6821 / 2 x CL6824
		 Redundancy 1:1 or 1:N

2.2.2. Solution : FMS-PVXCL-DV-1-AI6-A

Existing PROVOX™ Panel : CL6321 (Simplex) / (Redundant)	
Module	**Description**
CL6323-1	Analog input module – 1 channel (-10mV to 70mV) isolated
CL6325-1	Analog input module – 1 channel Thermocouple isolated -100°C +760°C (TC Type J)
CL6325-2	Analog input module – 1 channel Thermocouple isolated -51°C +338°C (TC Type J)
CL6325-3	Analog input module – 1 channel Thermocouple isolated -100°C +1350°C (TC Type K)
CL6325-4	Analog input module – 1 channel Thermocouple isolated -18°C +538°C (TC Type K)
CL6325-5	Analog input module – 1 channel Thermocouple isolated 0°C +1750°C (TC Type R)
CL6325-6	Analog input module – 1 channel Thermocouple isolated -184°C +315°C (TC Type T)
CL6325-7	Analog input module – 1 channel Thermocouple isolated -73°C +871°C (TC Type E)
CL6325-7	Analog input module – 1 channel Thermocouple isolated 0°C +1800°C (TC Type B)
CL6325-8	Analog input module – 1 channel Thermocouple isolated 0°C +1750°C (TC Type S)
CL6324-1	Analog input module – 1 channel RTD isolated -168°C +60°C
CL6324-2	Analog input module – 1 channel RTD isolated -100°C +100°C
CL6324-3	Analog input module – 1 channel RTD isolated -73°C +315°C
CL6324-4	Analog input module – 1 channel RTD isolated 0°C +200°C
CL6324-5	Analog input module – 1 channel RTD isolated 0°C +600°C
CL6324-6	Analog input module – 1 channel RTD isolated 38°C +260°C

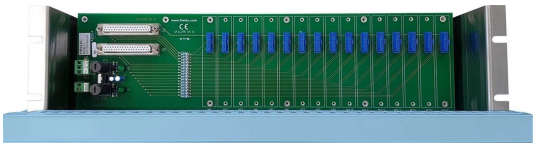
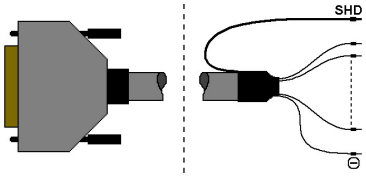
New FIRELEC IOP : FC4521 / (Simplex) and (Redundant) (16 slots)	
Module	**Description**
MTL4573 + MCK45 Kit	1 channel – I.S. temperature converter. Thermocouple, RTD or mV input

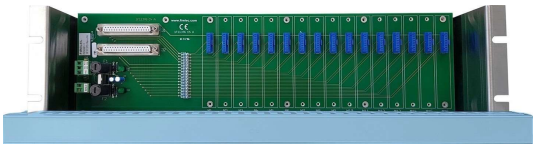
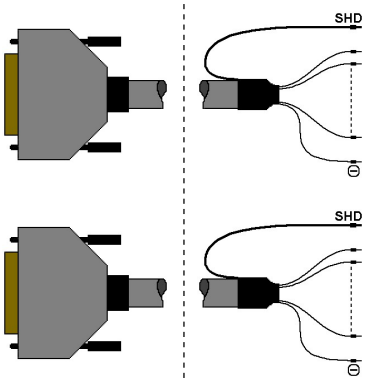
New modules type MTL4573 installed on the new panel FC4521-3 using MCK45 Kit

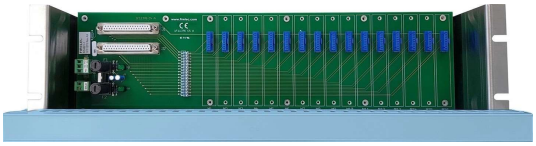
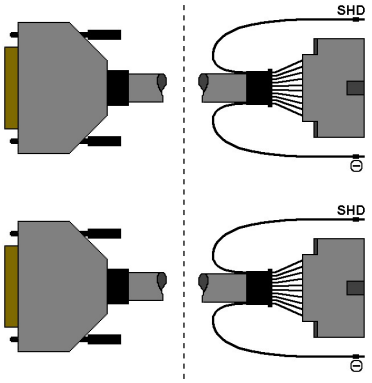
FC4521-3 + 16 x MTL4573 + MCK45 Kit

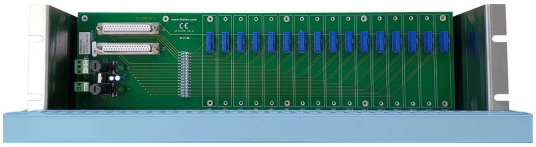
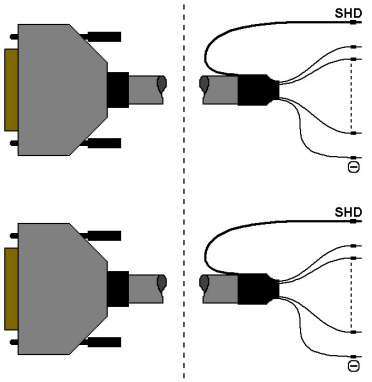
The MTL PCS45/PCL45USB software and configuration module are required to define the temperature range.

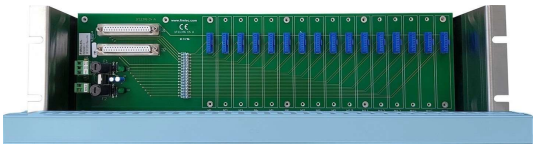
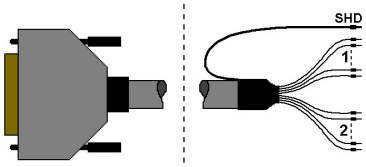
Input IS parameters have to be checked for compatibility with new MTL4573 barriers.

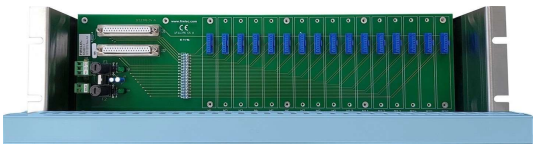
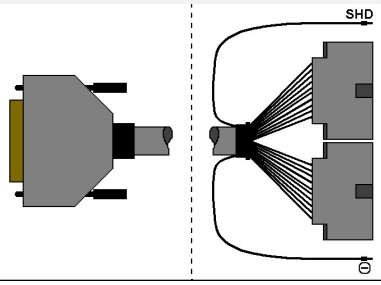
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A1		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**CBL-1086** (Shielded Round Cable) SUBD37M > 18 labeled wires	**VE4003S2B6 / SE4003S2B6 / VE4003S2B9** Analog Input card, 16 channels, 4-20 mA, 2-wire, Terminal Block
		

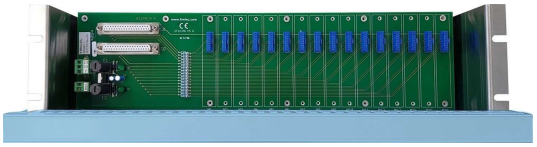
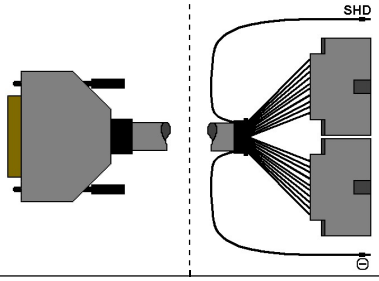
New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A2		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**2 x CBL-PVXCL-DV-1-AI6-A2**	**2 x VE4003S2B1** Analog Input card, 8 channels, 4-20 mA, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A3		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**2 x CBL-PVXCL-DV-1-AI6-A3**	**2 x VE4003S2B4 /** **2 x SE4003S2B4** Analog Input card, 8 channels, 4-20 mA, 2-wire, Hart, 16 pin Mass Termination
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A4		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**2 x CBL-PVXCL-DV-1-AI6-A4**	**2 x VE4033S2B1 /** **2 x SE4033S2B1** Analog Input card, 8 channels, 4-20 mA, Redundant, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A5		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**CBL-1284** (Shielded Round Cable) SUBD37M > 32 labeled wires	**2 x VE4003S2B3** Analog Input card, 8 channels, 4-20 mA, 4-Wire, Hart, Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A6		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024	**VE4003S2B11 / SE4003S2B11** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, 48-Pin mass Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A7		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**CBL-1615** (Shielded Round Cable) SUB37F > 2xHE1024pin	**VE4033S2B11 / SE4033S2B11** Analog Input plus card, 16 channels, 4-20 mA, Redundant, Red. 48-Pin mass Terminal Block
		

New DeltaV™ architecture - FMS-PVXCL-DV-1-AI6-A8		
Interface unit	**Cable**	**DeltaV™ card**
FC4521-3 Equiped with 16 conversion modules MTL4573 + MCK45 Kit	**CBL-PVXCL-DV-1-AI6-A8**	**VE4033S2B10** Analog Input plus card, 16 channels, 4-20 mA, 2-wire, Redundant, 2&4W AI Terminal Block for Serie 2 plus