

FIRELEC Migration Solution

PROVOX™ > S7-300™

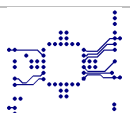
PIA (PROVOX™ Interface Adapters)

FMS-PVXCL-S7-2

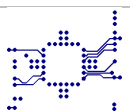
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Summary

1. INTRODUCTION.....	3
1.1. KEY ADVANTAGES OF THE FMS-PVXCL-S7-2 SOLUTION.....	4
1.2. DESCRIPTION OF THE FMS-PVXCL-S7-2 SOLUTION	5
1.2.1. Existing PROVOX™ architecture.....	5
1.2.2. Existing PROVOX™ Hardware to be removed.....	5
1.2.3. New S7-300™ architecture	6
2. ANALOG INPUTS	7
2.1. EXISTING CARD TO BE REMOVED : CL6822 HART OR CL6825 HART	8
2.2. EXISTING CARD TO BE REMOVED : CL6825 HART	8
3. ANALOG OUTPUTS	9
3.1. EXISTING CARD TO BE REMOVED : CL6821	10
3.2. EXISTING CARD TO BE REMOVED : CL6826 HART	10
4. DIGITAL INPUT	11
4.1. EXISTING CARD TO BE REMOVED : CL6721	12
5. DIGITAL OUTPUTS.....	13
5.1. EXISTING CARD TO BE REMOVED : CL6721	14



1. INTRODUCTION



The purpose of this document is to guide the user of an EMERSON 20 series I/Os PROVOX™ system within the safe, efficient and easy way to migrate toward a SIEMENS S7-300™ system.

FIRELEC has developed migration solution "**FMS-PVXCL-S7-2**" allowing to protect the existing wiring investment as the user converts from an existing PROVOX™ system (20-series I/Os) to the S7-300™ system.

The **FMS-PVXCL-S7-2** 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 S7-300™ 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 S7-300™ 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 S7-300™ card) at the other end.

1.1. KEY ADVANTAGES OF THE FMS-PVXCL-S7-2 SOLUTION

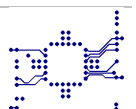
FMS-PVXCL-S7-2 solution protect your wiring investment as you convert from the PROVOX™ 20 series system to the S7-300™ system with following advantages :

FMS-PVXCL-S7-2 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

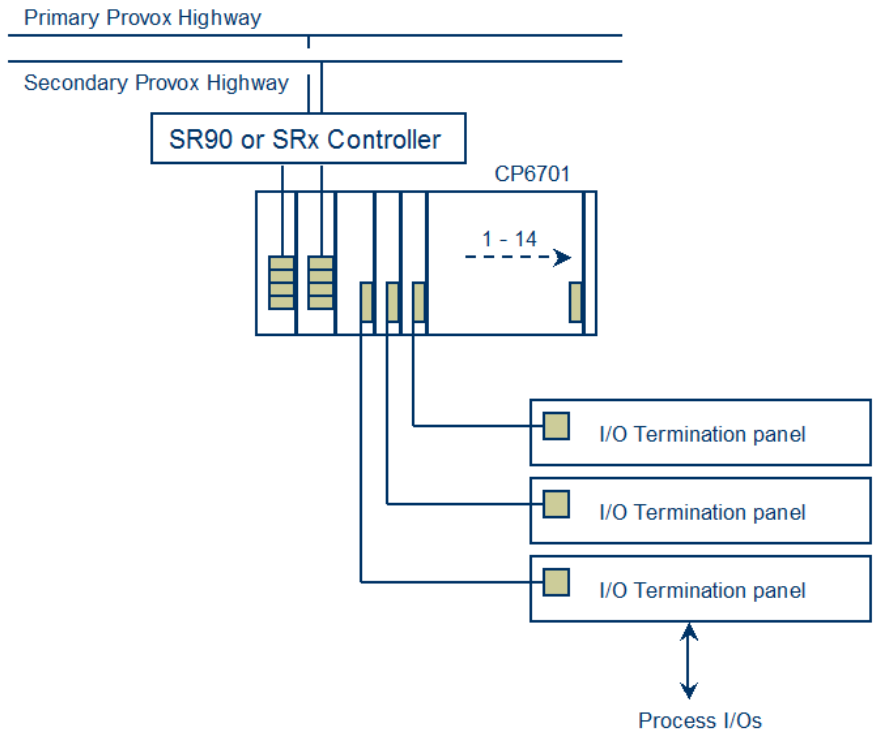
The S7-300™ system's configuration allows for the engineering conversion to be done efficiently. The speed at which **FMS-PVXCL-S7-2** solution can be implemented ensures to reduce the process downtime to the minimum.

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

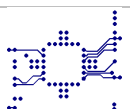
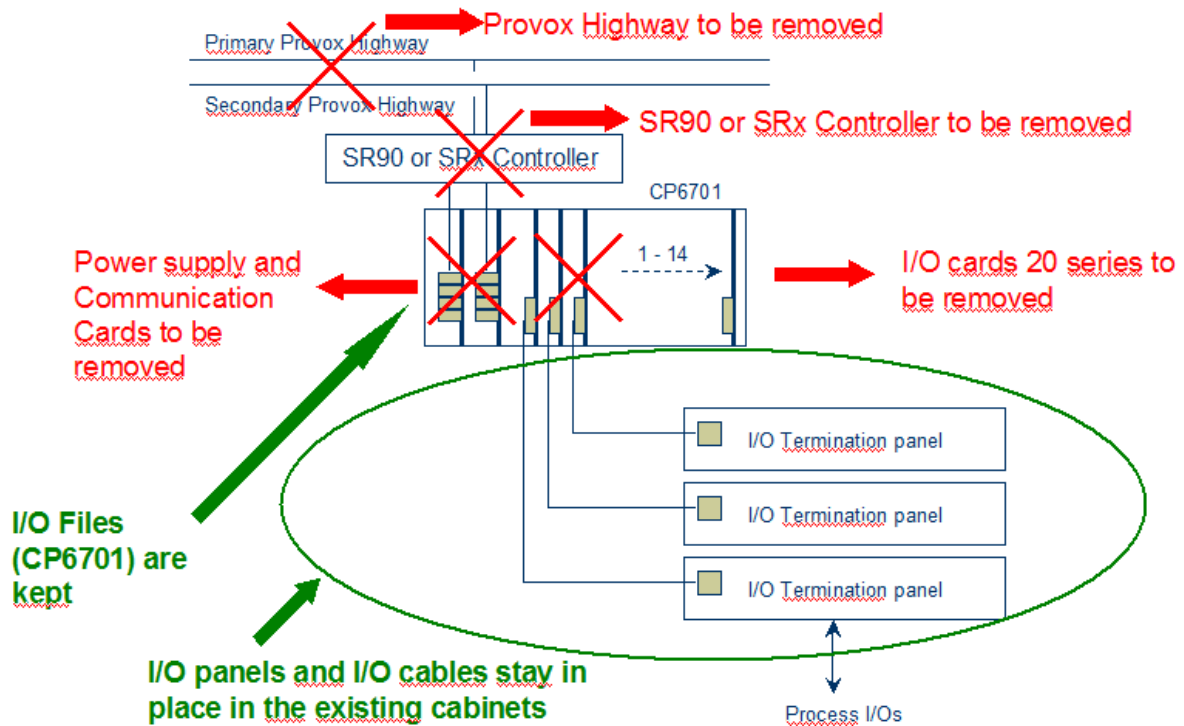


1.2. DESCRIPTION OF THE FMS-PVXCL-S7-2 SOLUTION

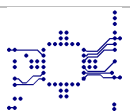
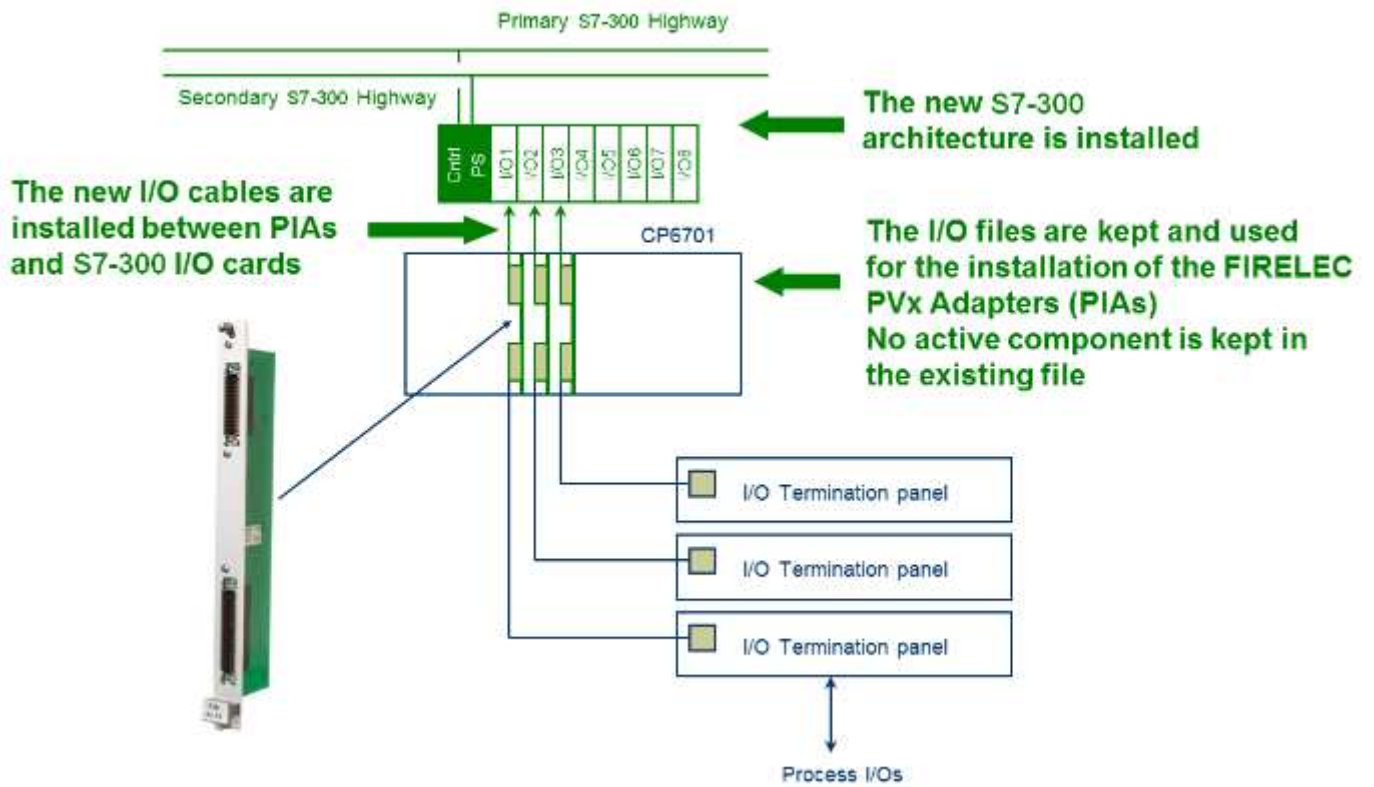
1.2.1. Existing PROVOX™ architecture



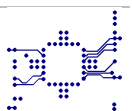
1.2.2. Existing PROVOX™ Hardware to be removed



1.2.3. New S7-300™ architecture

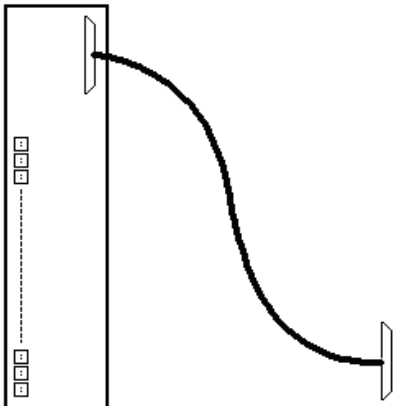

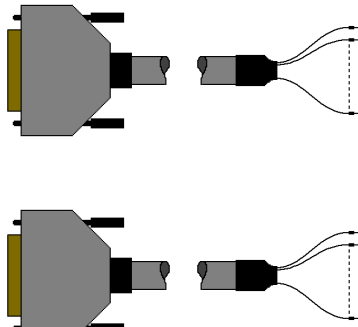



2. ANALOG INPUTS



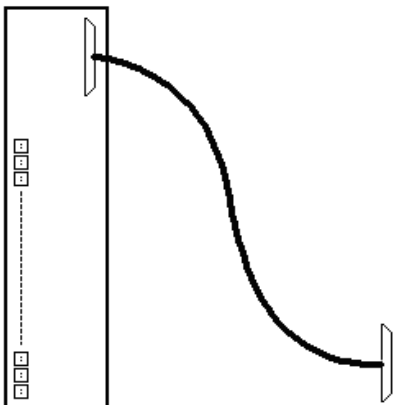

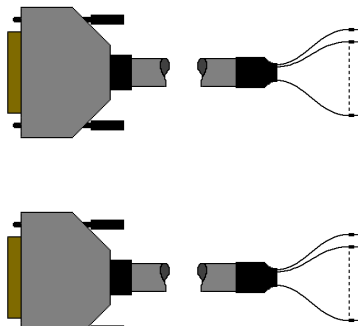

2.1. EXISTING CARD TO BE REMOVED : CL6822 HART OR CL6825 HART

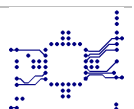
New Siemens S7™ architecture - FMS-PVXCL-S7-2-A1-A1

Existing Panel	Adapter	Cable	I/O Card
Panel CL6345	PIA-2AI-8	2 x Cables CBL-1099	2 x 6ES7331-7TF01-0AB0
<p>Redundant Analog Input Panel + Cable. 16 channels. With HART compatible MTL Intrinsic Safety modules installed. Output 4-20mA HART</p> 	<p>Adapter installed in existing file CP6701</p> 	<p>Detail of the cable See cable section on www.firelec.com</p> 	<p>HART Analog Input SM 331, 8 AI 4 - 20mA HART, Redundant mode 1 X 20-Pin</p> 

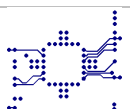
2.2. EXISTING CARD TO BE REMOVED : CL6825 HART

New Siemens S7™ architecture - FMS-PVXCL-S7-2-A1-A1

Existing Panel	Adapter	Cable	I/O Card
Panel CL6895 or CL6896	PIA-2AI-8	2 x Cables CBL-1099	2 x 6ES7331-7TF01-0AB0
<p>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</p> 	<p>Adapter installed in existing file CP6701</p> 	<p>Detail of the cable See cable section on www.firelec.com</p> 	<p>HART Analog Input SM 331, 8 AI 4 - 20mA HART, Redundant mode 1 X 20-Pin</p> 



3. ANALOG OUTPUTS

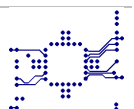


3.1. EXISTING CARD TO BE REMOVED : CL6821

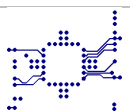
New Siemens S7™ architecture - FMS-PVXCL-S7-2-AO1-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6871 or CL6872 Simplex or Redundant Analog Output Panel + Cable. 8 channels. Output 4-20mA	PIA-AO-8 Adapter installed in existing file CP6701	Cable CBL-1100 Detail of the cable See cable section on www.firelec.com	6ES7332-8TF01-0AB0 HART Analog Output SM 332, 8AO, 4 - 20mA HART, Redundant Mode 20 pin,

3.2. EXISTING CARD TO BE REMOVED : CL6826 HART

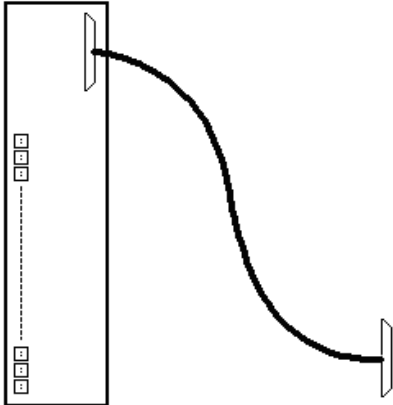

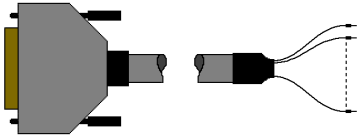
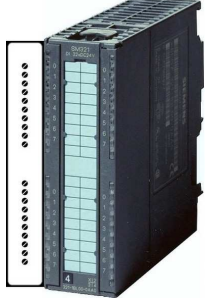
New Siemens S7™ architecture - FMS-PVXCL-S7-2-AO2-A1			
Existing Panel	Adapter	Cable	I/O Card
Panel CL6885 or CL6886 Redundant Analog Output Panel + Cable. 8 channels. Output 4-20mA HART	PIA-AO-8 Adapter installed in existing file CP6701	Cable CBL-1100 Detail of the cable See cable section on www.firelec.com	6ES7332-8TF01-0AB0 HART Analog Output SM 332, 8AO, 4 - 20mA HART, Redundant Mode 20 pin,
PowerSupplyCommon of the panel must be externally linked to the PSC of the S7-300 card			

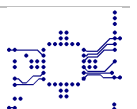


4. DIGITAL INPUT

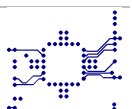


4.1. EXISTING CARD TO BE REMOVED : CL6721
New Siemens S7™ architecture - FMS-PVXCL-S7-2-DI1-A1

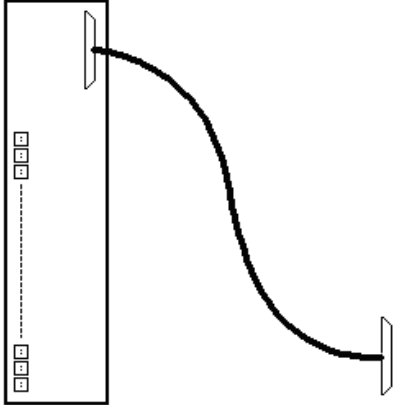

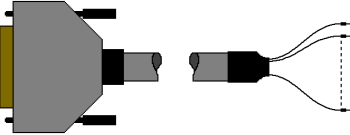
Existing Panel	Adapter	Cable	I/O Card
<p>Panel CL6787 or CL6788</p> <p>Simplex or Redundant Discrete Input/Output Panel (used only as Input) + Cable. 16 channels. With CL6753 modules installed.</p> 	<p>PIA-DI-16</p> <p>Adapter installed in existing file CP6701</p> 	<p>Cable CBL-1098</p> <p>Detail of the cable See cable section on www.firelec.com</p> 	<p>6ES7321-1BH50-0AA0</p> <p>Digital Input SM 321, 16DI, Optically Isolated, 24 V DC, 20 Pin</p> 



5. DIGITAL OUTPUTS



5.1. EXISTING CARD TO BE REMOVED : CL6721
New Siemens S7™ architecture - FMS-PVXCL-S7-2-DO1-A1

Existing Panel	Adapter	Cable	I/O Card
<p>Panel CL6775 or CL6776</p> <p>Simplex or Redundant Discrete Output Panel + Cable. 16 channels. With CL6755 modules installed.</p> 	<p>PIA-DO-16</p> <p>Adapter installed in existing file CP6701</p> 	<p>Cable CBL-1098</p> <p>Detail of the cable See cable section on www.firelec.com</p> 	<p>6ES7322-1BH01-0AA0</p> <p>Digital Output SM 322 16DO, Optically Isolated, 24 V DC, 0.5A, 1 X 20 Pin</p> 