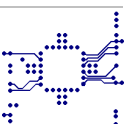


FIRELEC Migration Solution

**Alspa C350 C370™ > B&R X20™
(Or ALSTOM CE1000 / CE1500™)**

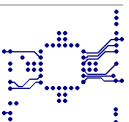
FMS-C350_C370-X20-1

Rev	Date	Subject
01	28/02/2014	First revision
02	31/07/2014	Process connections and cables update (45°)

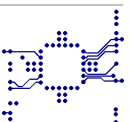


SUMMARY

1. INTRODUCTION	3
1.1. KEY ADVANTAGES OF THE FMS-C350_C370-X20-1 SOLUTION.....	4
2. ANALOG INPUTS.....	5
2.1. EXISTING MODULE TO BE REMOVED S202 :	6
2.2. EXISTING MODULE TO BE REMOVED S215 :	6
3. ANALOG OUTPUTS.....	7
3.1. EXISTING MODULE TO BE REMOVED S234 :	8
4. DISCRETE INPUTS	9
4.1. EXISTING MODULE TO BE REMOVED S105 :	10
5. DISCRETE OUTPUTS	11
5.1. EXISTING MODULE TO BE REMOVED S151 :	12
5.2. EXISTING MODULE TO BE REMOVED S160	13



1. INTRODUCTION



The purpose of this document is to guide the user of ALSPA C350 system within the safe, efficient and easy way to migrate toward a B&R X20™ system (or an ALSTOM CE1000/CE15000 system)

FIRELEC has developed migration solution "**FMS-C350_C370-X20-1**" allowing to protect the existing wiring investment as the user converts from an existing ALSPA C350 system to the B&R X20™ system.

The **FMS-C350_C370-X20-1** solution is a set of migration adapters installed in place of the existing I/O cards, allowing to connect easily existing Alspa C350 I/O cables, to the B&R X20 I/O cards.

The Alspa C350 process cables are kept in place. The DIN E-Type connectors of this cables are then, through the ADP-S, connected to the B&R X20 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 B&R X20 card) at the other end.

1.1. KEY ADVANTAGES OF THE FMS-C350_C370-X20-1 SOLUTION

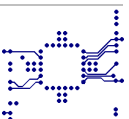
FMS-C350_C370-X20-1 solution protect your wiring investment as you convert from the ALSPA C350™ system to the B&R X20™ system with following advantages :

FMS-C350_C370-X20-1 is a pre-engineered marshalling solution ready to work without any technical rework or limitation regarding the existing capabilities of the Alspa C350™ system to be migrated.

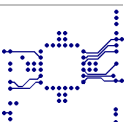
As the instrument wiring is not disturbed, the instrument checkout during startup is reduced to the minimum

The B&R X20™ system's configuration allows for the engineering conversion to be done efficiently. The speed at which **FMS-C350_C370-X20-1** solution can be implemented ensures to reduce the process downtime to the minimum.

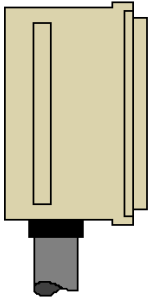

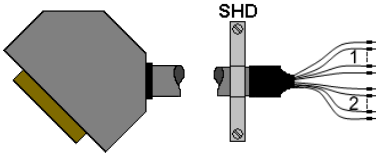

All existing documentations (electrical schemes, loop drawings, maintenance procedures,) remain unchanged as the existing process connections are kept in place.



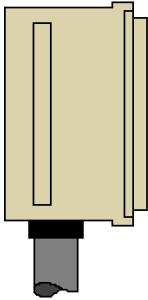

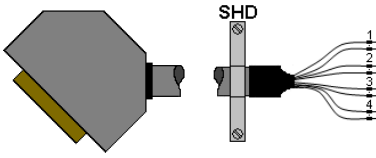

2. ANALOG INPUTS

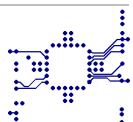


2.1. EXISTING MODULE TO BE REMOVED S202 :

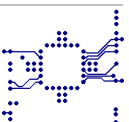
New B&R X20 architecture - FMS-C350_C370-X20-1-AI1-A1			
Process Connection	Adapter	Cable	I/O Card
S202 Cable Existing Cable (DIN E-Type connector)	ADP-S202 8 channels Isolated Analog Inputs	CBL-1165 Detail of the cable See cable section on www.firelec.com	2 x AI4632 X20 analog input module, 4 inputs, ±10 V / 0 to 20 mA, 16 bit resolution, configurable input filter
			

2.2. EXISTING MODULE TO BE REMOVED S215 :

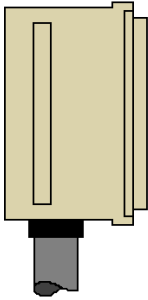

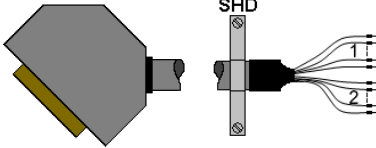

New B&R X20 architecture - FMS-C350_C370-X20-1-AI2-A1			
Process Connection	Adapter	Cable	I/O Card
S215 Cable Existing Cable (DIN E-Type connector)	ADP-S215 16 channels Isolated Analog Inputs	CBL-1164 Detail of the cable See cable section on www.firelec.com	4 x AI4632 X20 analog input module, 4 inputs, ±10 V / 0 to 20 mA, 16 bit resolution, configurable input filter
			

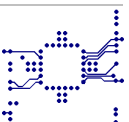


3. ANALOG OUTPUTS

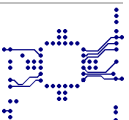


3.1. EXISTING MODULE TO BE REMOVED S234 :

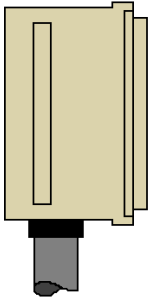

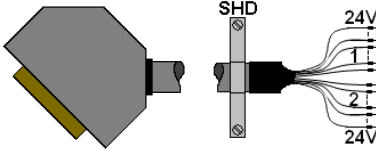

New B&R X20 architecture - FMS-C350_C370-X20-1-AO1-A1			
Process Connection	Adapter	Cable	I/O Card
S234 Cable Existing Cable (DIN E-Type connector)	ADP-S234 8 channels Isolated Analog Inputs	CBL-1162 Detail of the cable See cable section on www.firelec.com	2 x AO4632 X20 analog output module, 4 outputs, ± 10 V / 0 to 20 mA, 16 bit resolution
			

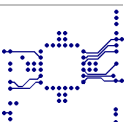


4. DISCRETE INPUTS

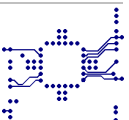


4.1. EXISTING MODULE TO BE REMOVED S105 :

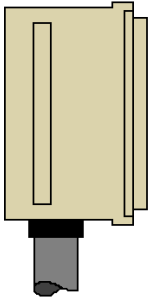

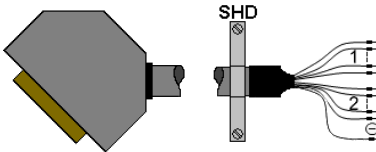

New B&R X20 architecture - FMS-C350_C370-X20-1-DI1-A1			
Process Connection	Adapter	Cable	I/O Card
S105 Cable Existing Cable (DIN E-Type connector)	ADP-S105a 8 channels Discrete Inputs	CBL-1163 Detail of the cable See cable section on www.firelec.com	2 x DI8371 X20 digital input module, 8 inputs, 24 VDC, sink, configurable input filter, 1-wire connections
			

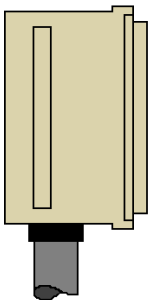

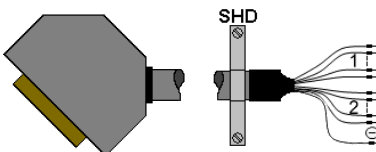



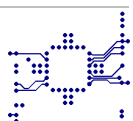
5. DISCRETE OUTPUTS



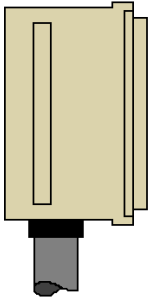

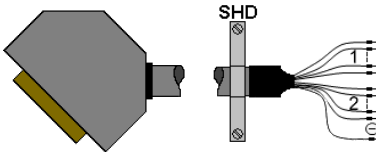

5.1. EXISTING MODULE TO BE REMOVED S151 :

New B&R X20 architecture - FMS-C350_C370-X20-1-DO1-A1			
Process Connection	Adapter	Cable	I/O Card
S151 Cable Existing Cable (DIN E-Type connector)	ADP-S151 16 channels Digital Outputs with electromechanic relays	CBL-1161 Detail of the cable See cable section on www.firelec.com	2 x DO8322 X20 digital output module, 8 outputs, 24 VDC, 0.5 A, source, 1-wire connections
			

New B&R X20 architecture - FMS-C350_C370-X20-1-DO1-A2			
Process Connection	Adapter	Cable	I/O Card
S151 Cable Existing Cable (DIN E-Type connector)	ADP-S151 16 channels Digital Outputs with electromechanic relays	CBL-1161 Detail of the cable See cable section on www.firelec.com	2 x DO8332 X20 digital output module, 8 outputs, 24 VDC, 2.0 A, source, feed directly on module, 1-wire connections
			



5.2. EXISTING MODULE TO BE REMOVED S160
New B&R X20 architecture - FMS-C350_C370-X20-1-DO2-A1

Process Connection	Adapter	Cable	I/O Card
S160 Cable Existing Cable (DIN E-Type connector)	ADP-S160 16 channels Digital Outputs with DC solid state relays	CBL-1161 Detail of the cable See cable section on www.firelec.com	2 x DO8322 X20 digital output module, 8 outputs, 24 VDC, 0.5 A, source, 1-wire connections
			

New B&R X20 architecture - FMS-C350_C370-X20-1-DO2-A2

Process Connection	Adapter	Cable	I/O Card
S160 Cable Existing Cable (DIN E-Type connector)	ADP-S160 16 channels Digital Outputs with DC solid state relays	CBL-1161 Detail of the cable See cable section on www.firelec.com	2 x DO8332 X20 digital output module, 8 outputs, 24 VDC, 2.0 A, source, feed directly on module, 1-wire connections
