Power Supply System ~ Telecom

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ELTEK VALERE
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FP2 288kW 48V 3x400V
Step by step installation guide

Index

General

This guide describes how to install FP2 4x72kW PRS 48VDC 3x400V system.

Note:
Refer to Quick start guide.

The system consists of the following cabinets:

Part number	Description
Master C32442.001	FP2 72kW 48V 3x400V 1xTPS2 G1
Slave no.1 C32442.002	FP2 72kW 48V 3x400V 2xTPS2 G1
Slave no.2 C32442.002	FP2 72kW 48V 3x400V 2xTPS2 G1
Slave no.3 C32442.003	FP2 72kW 48V 3x400V 1xTPS2 G1

List of all parts packed separately:

Part number	Quantity	Description
219119	**3 pcs**	**Mech:Insul.cover part1 FP2 96kW G1**
219120	**3 pcs**	**Mech:Insul.cover part2 FP2 96kW G1**
28891.508	**15 pcs**	**SCREW Torx M5X8 DIN7500 PAN G1**
28624.006	**48 pcs**	**SCREW Hex M10X35 DIN933 8.8 Elzn G1**
828009/06	**96 pcs**	**WASHERplain M10=zinc DIN125A G1**
201826	**48 pcs**	**NUT:M10=zinc DIN934/8 G1**
201848	**48 pcs**	**WASHERspring:M10 DIN137B Elzn G1**
219050	**6 pcs**	**Mech Busbar link1 FP2 96kW sys G1**
219051	**6 pcs**	**Mech Busbar link2 FP2 96kW sys G1**
202073	**3pcs**	**Cable; USB A-B 4m G1**

Recommended tools

Standard equipment to be used by an authorized electrician. NOTE: All tools have to be insulated.

Safety precautions

Follow these precautions during installation and general handling of systems and related parts.


Qualified personnel

CAUTION: For safety reasons, the **installation of the equipment is only to be performed** by Eltek Valere's personnel or by authorized and qualified persons; otherwise the warranty may be invalidated.
Please, **read the user documentation carefully** before installing and using the equipment, as installation and operation is to be performed as described in it.


Electric shock

WARNING: The batteries represent a major energy hazard. To avoid short-circuit of battery poles, always remove metallic objects — uninsulated tools, rings, watches, etc. — from the vicinity of the batteries.


Electric shock

WARNING: The systems C32442.001, C32442.002 and C32442.003 represent major energy hazard. To avoid serious health injuries linking MUST NOT be performed while any of the systems is powered up.

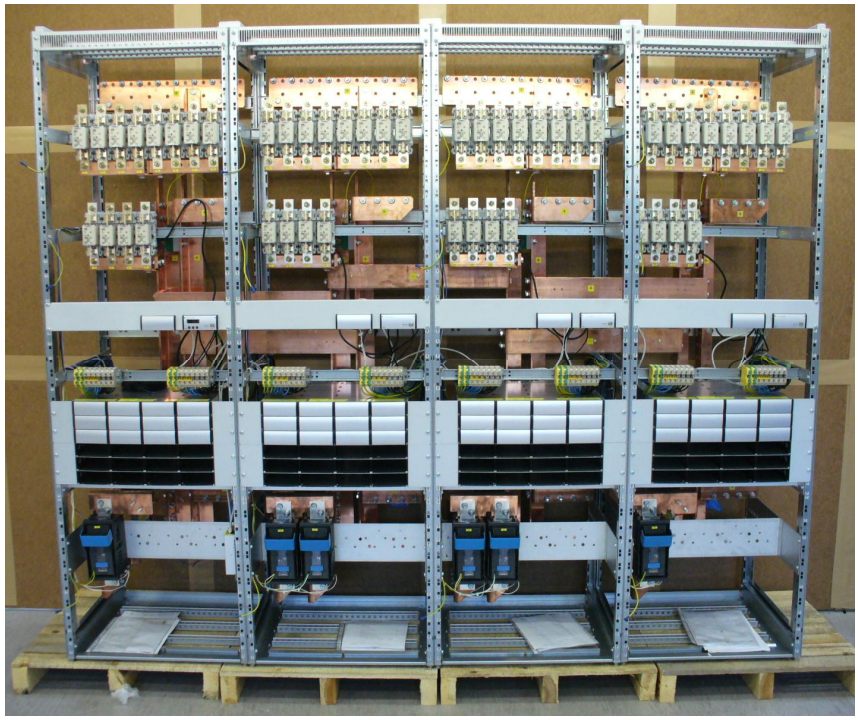
Installation

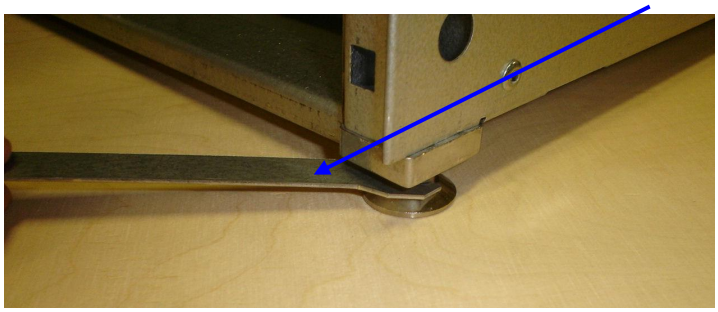
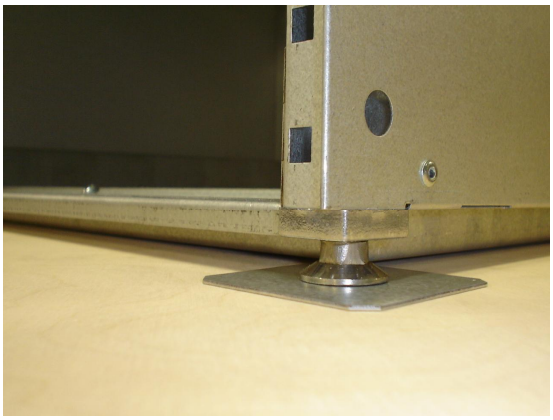
- Installation must be done by authorized personnel only.

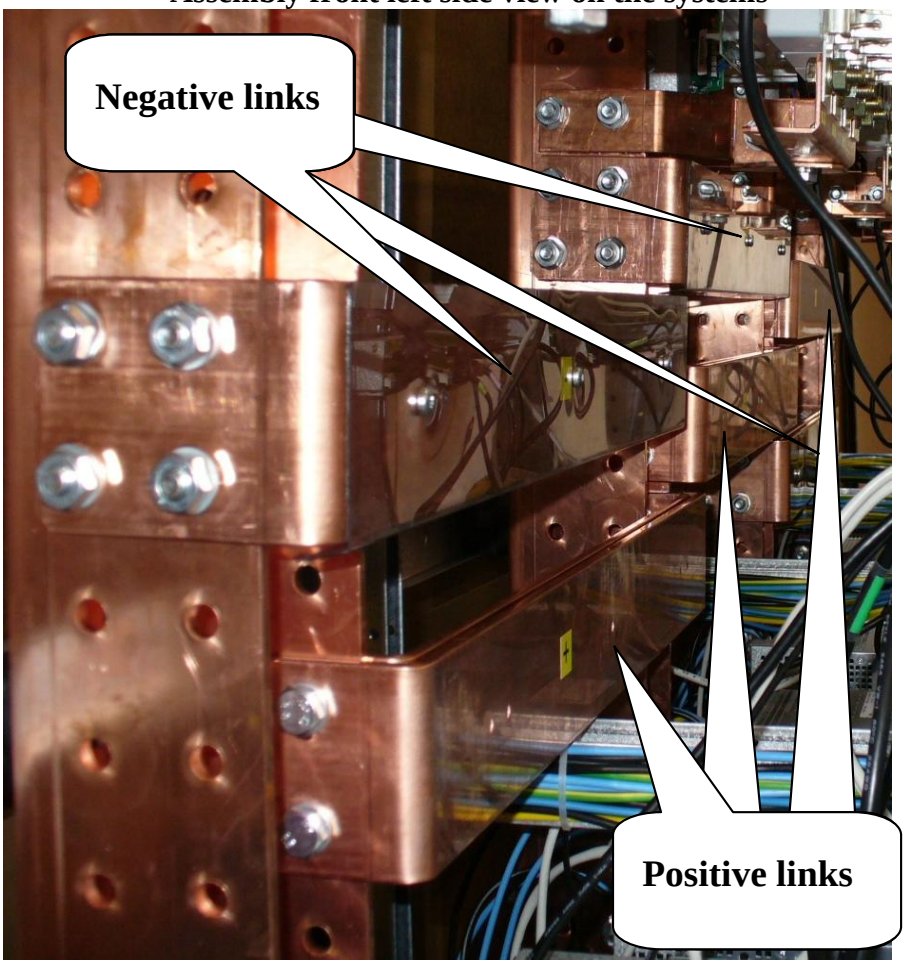
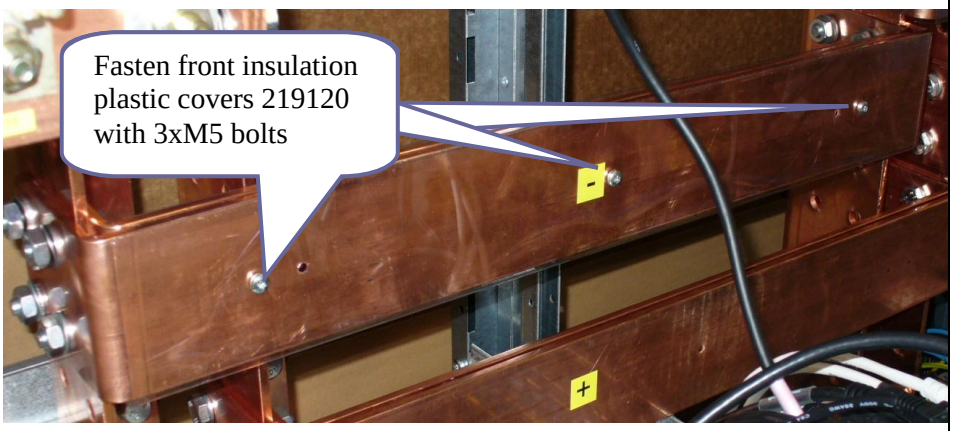
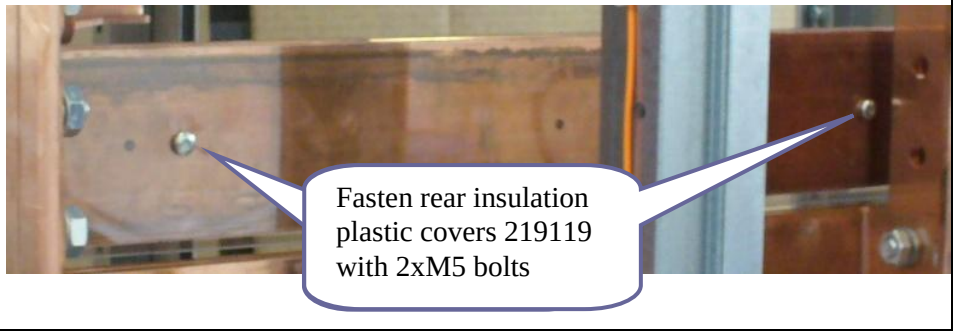
Eltek Valere recommends that the AC mains are powered down before installation of the system.

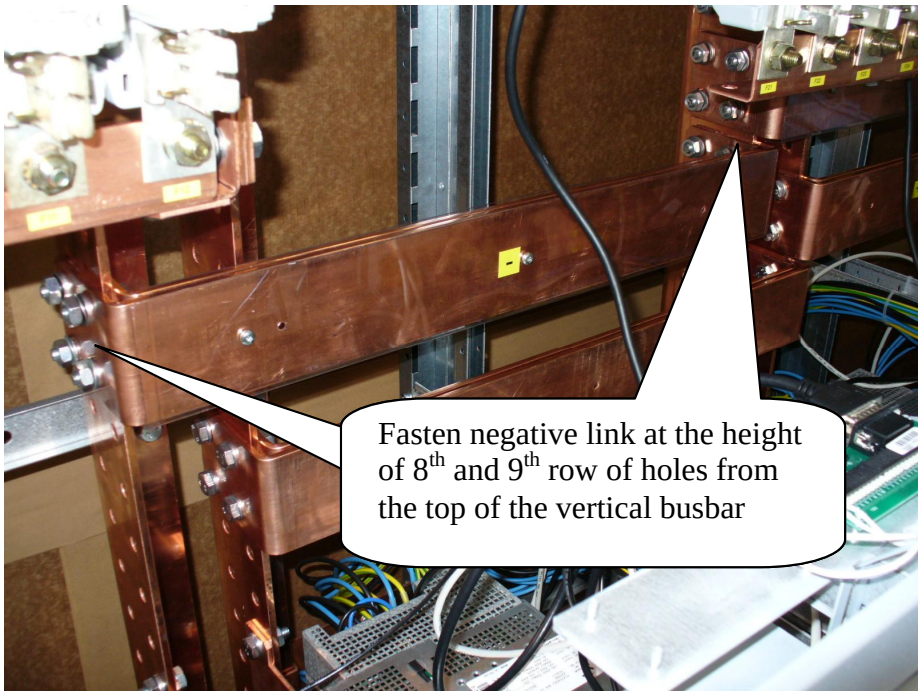
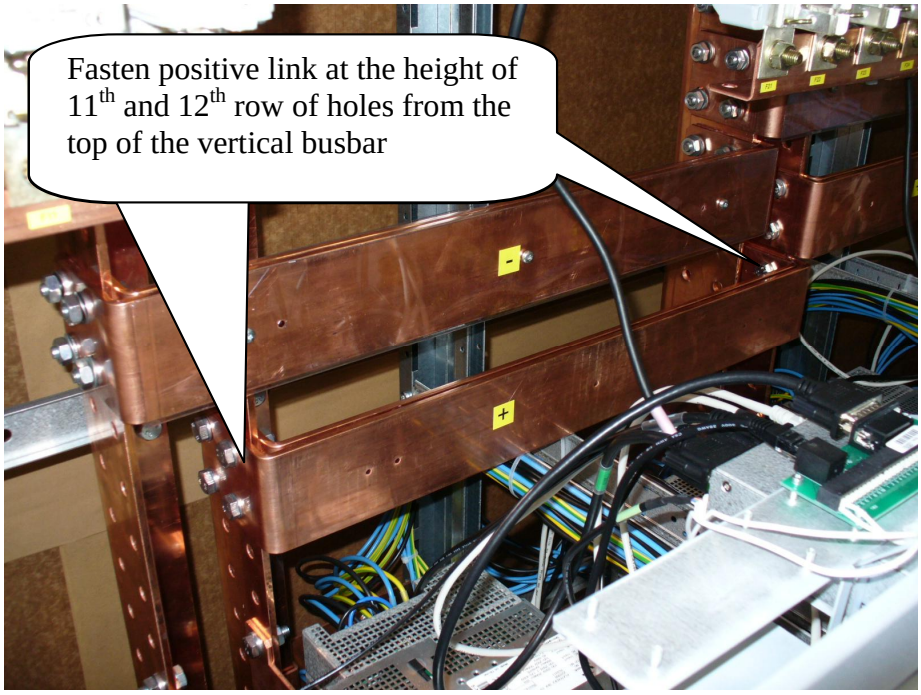
For proper connection see schematic diagrams no 2053745, 2053746, 2053748, 2053751 and General arrangement 2053735, 2053749, 2053741, 2053744, 2053747.

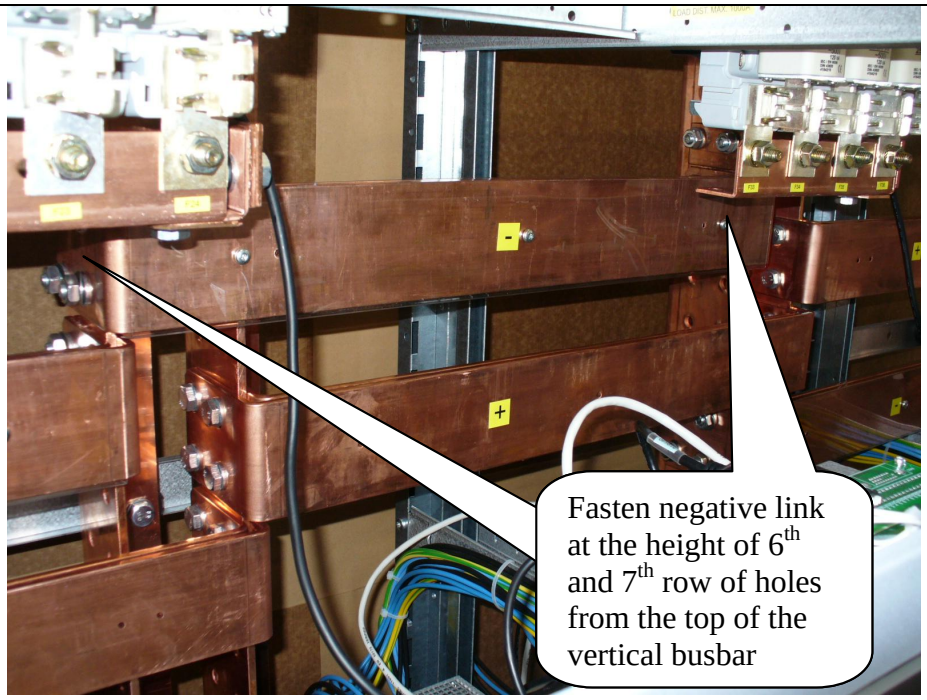
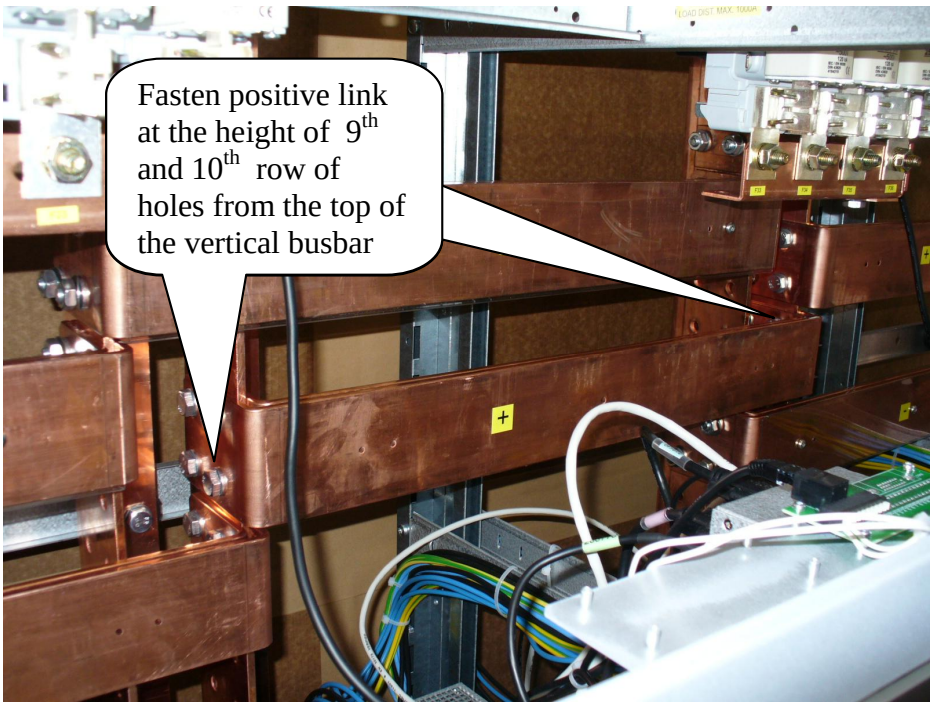
1. Install positive and negative busbar links between cabinets according to the pictures.

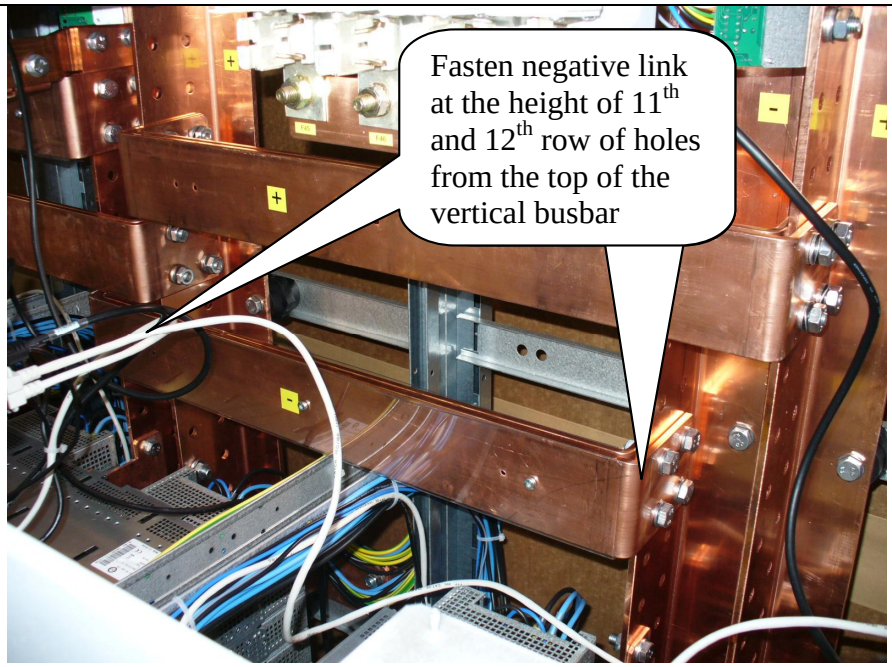
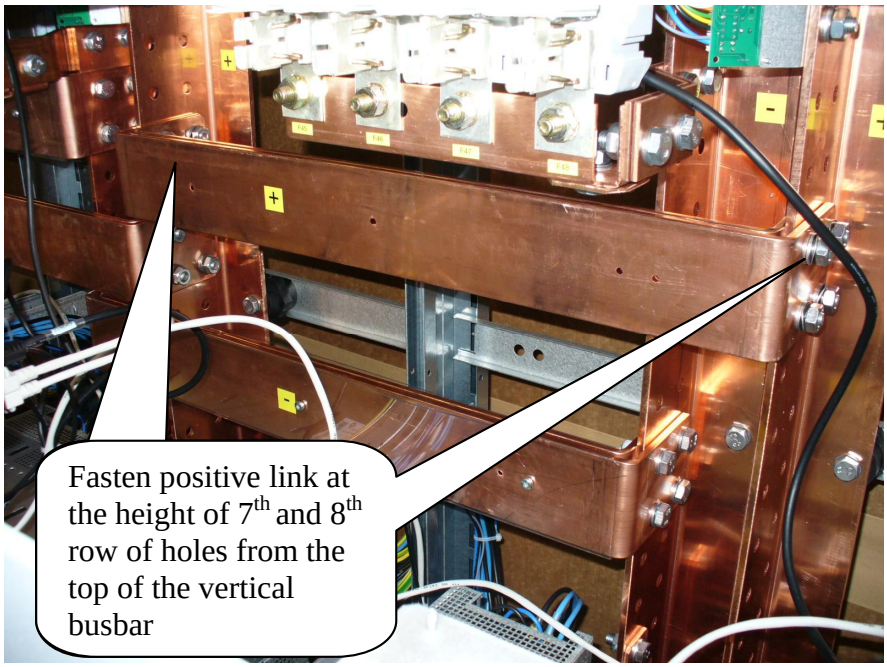
Step	Description	Comment
1.1	Remove all front, rear and side covers. Put all four cabinets together in following order from the left: **Master** **C32442.001** **Slave no.1** **C32442.002** **Slave no.2** **C32442.002** **Slave no.3** **C32442.003**	  - All cabinets will be removed from the pallets.

Step	Description	Comment
1.2	It is possible to adjust the feet if the floor is uneven. (see pictures)	**Leveling** The tool for the cabinet feet can be used to easily adjust the cabinet feet and level the cabinet:  **Floor plates** The floor load plates can be placed under the cabinet feet. The floorplates protect the floor and even out the weight. 

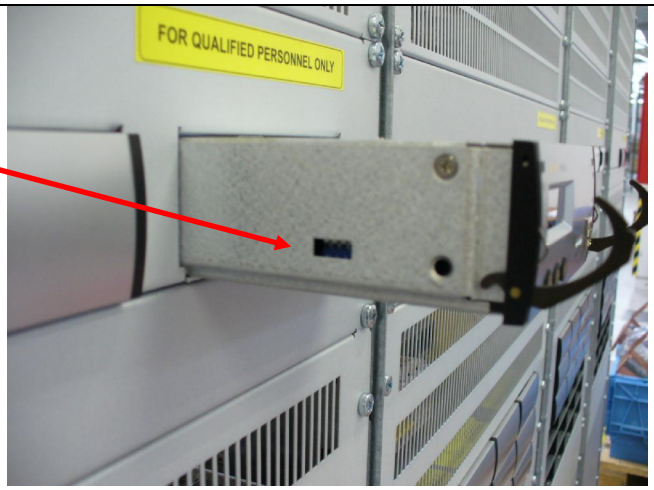
1.3	Insert inside systems 3x p/n 219050 and 3x p/n 219051 For one Common+ use busbars p/n 219050 1 pc and 219051 1pc and for one Common- use busbars p/n 219050 1pc and 219051 1pc	**Assembly front left side view on the systems** 
1.4	As the system is positively grounded negative distribution links need insulation to prevent shortcut between them and cabinets.	 

Links between Master C32442.001 and Slave No.1 C32442.002		
1.5	Install double negative link with plastic covers between negative vertical busbars in Master C32442.001 and Slave No.1 C32442.002 using 8x M10X35 screws, washers and nuts as shown in the picture.	
	Install double positive link between positive vertical busbars in Master C32442.001 and Slave No.1 C32442.002 using 8x M10X35 screws, washers and nuts as shown in the picture.	

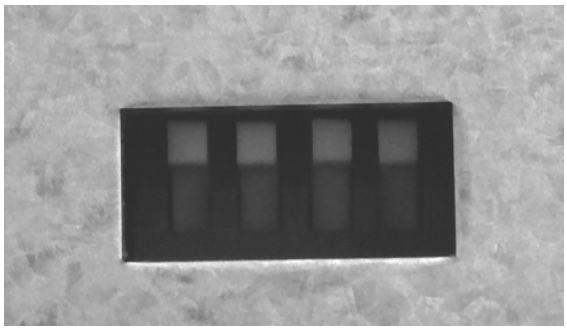
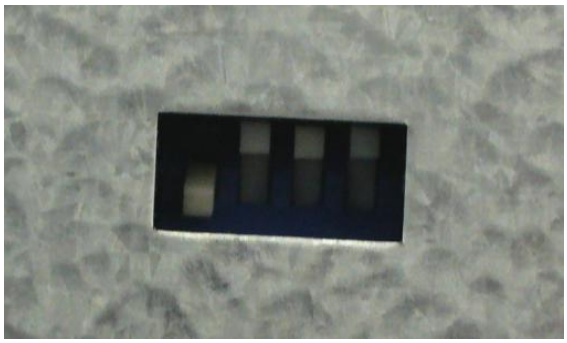
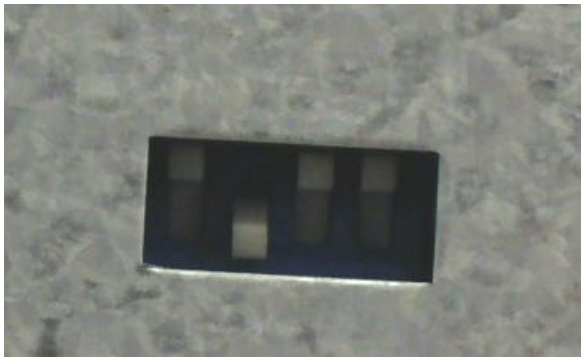
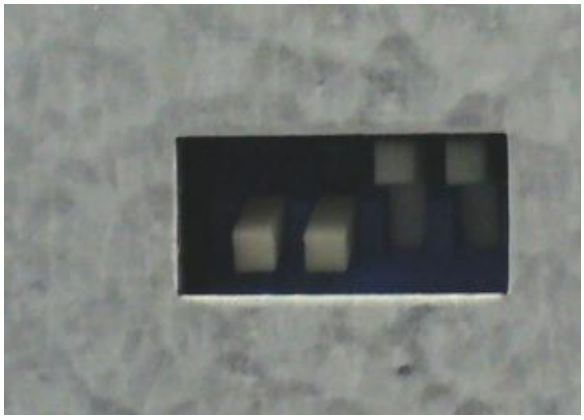
Links between Slave No.1 C32442.002 and Slave No.2 C32442.002		
1.6	Install double negative link with plastic covers between negative vertical busbars in Slave No.1 C32442.002 and Slave No.2 C32442.002 using 8x M10X35 screws, washers and nuts as shown in the picture.	
	Install double positive link between positive vertical busbars in Slave No.1 C32442.002 and Slave No.2 C32442.002 using 8x M10X35 screws, washers and nuts as shown on the picture.	

Links between Slave No.2 C32442.002 and Slave No.3 C32442.003		
1.7	Install double negative link with plastic covers between negative vertical busbars in Slave No.2 C32442.002 and Slave No.3 C32442.003 using 8x M10X35 screws, washers and nuts as shown on the picture.	
	Install double positive link between positive vertical busbars in Slave No.2 C32442.002 and Slave No.3 C32442.003 using 8x M10X35 screws, washers and nuts as shown on the picture.	

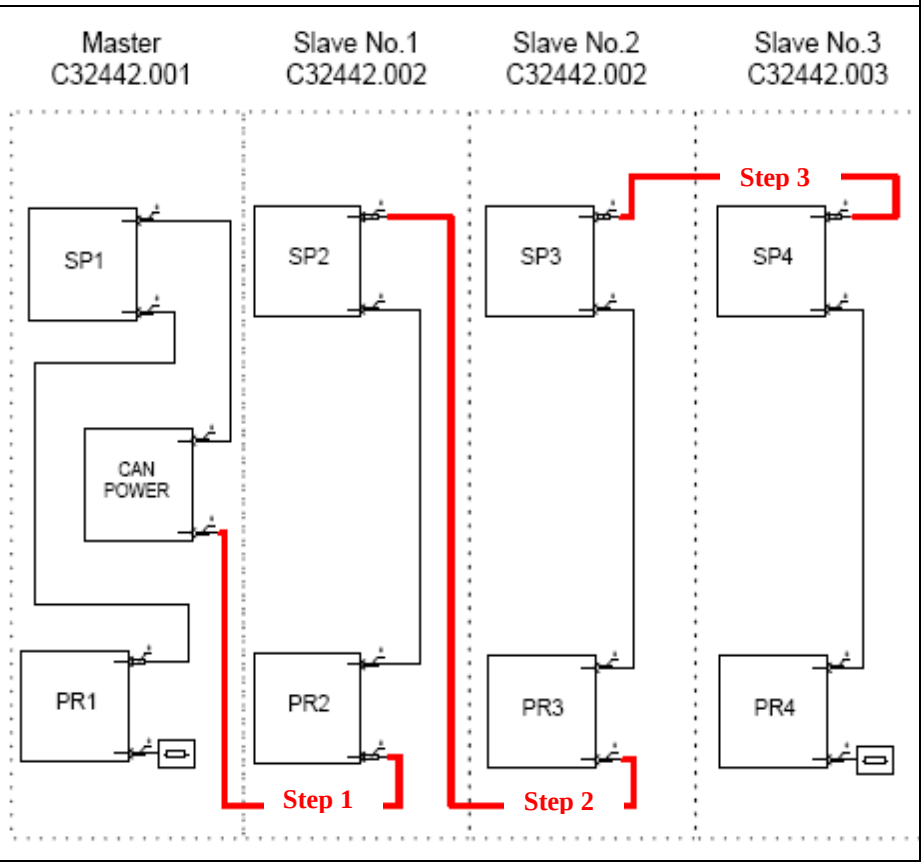
2. Configure Smartpack controllers according to the pictures.

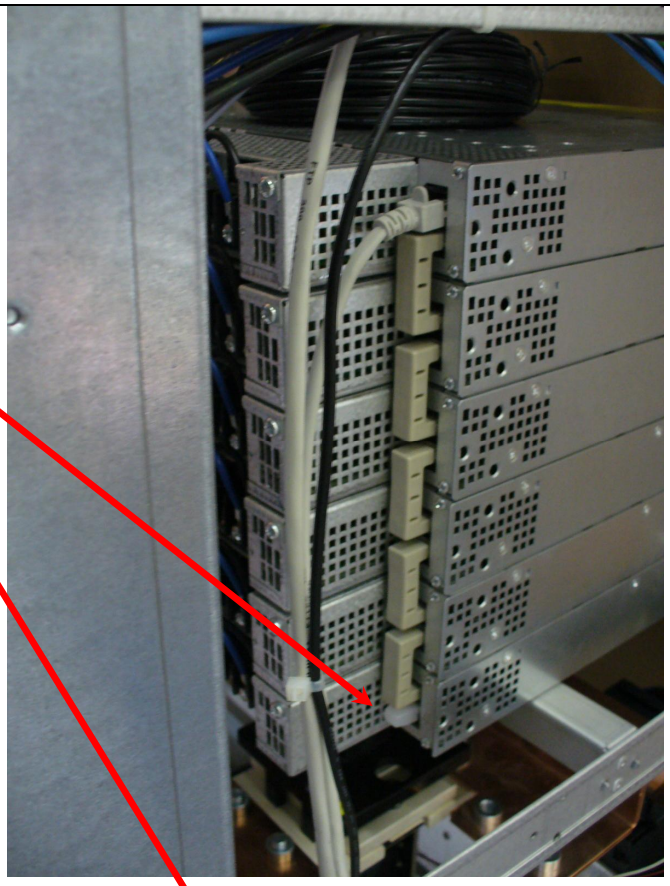
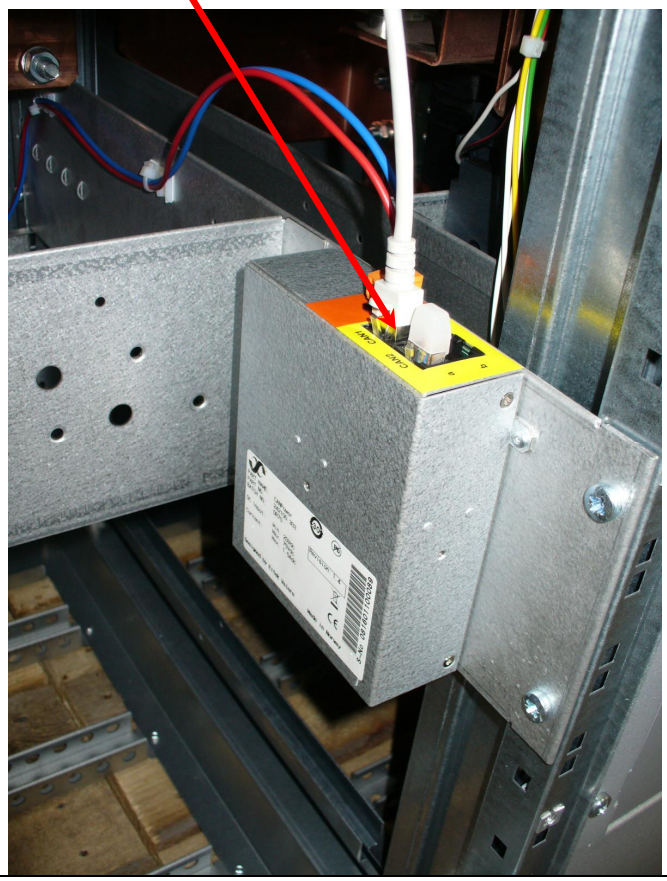
<table>
<tr><th colspan="3">Assembly instruction – DIP Switch configuration of Smartpacks</th></tr>
<tr><td>Step</td><td>Description</td><td>Comment</td></tr>
<tr><td>2.1</td><td>Unlock the handles by inserting a screwdriver into the holes to release the spring mechanism and take Smartpack out by pulling two hooks</td><td> 
</td></tr>
<tr><td>2.2</td><td>DIP switches can be found on the left side of each Smartpack controller and should be configured as follows according to the configuration list</td><td> 

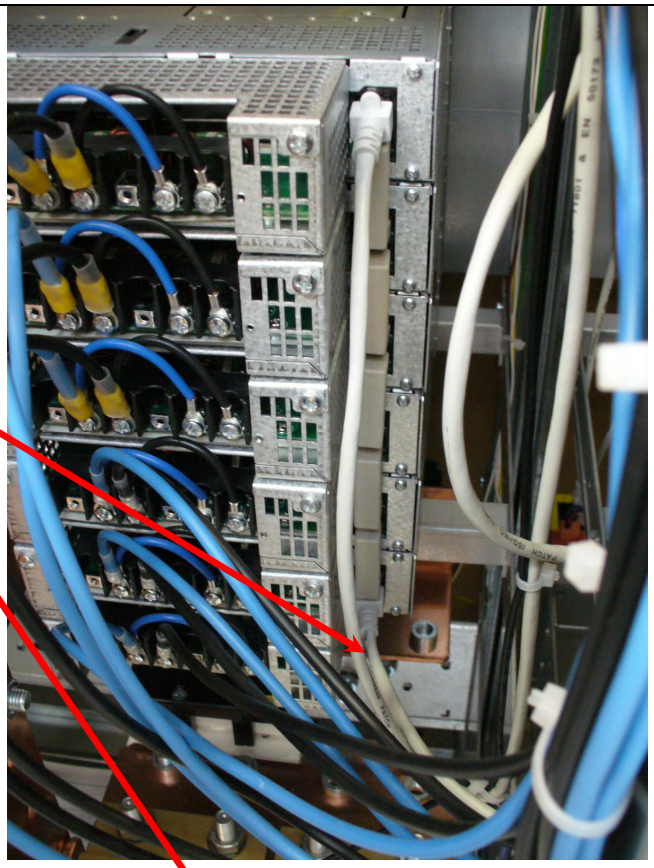
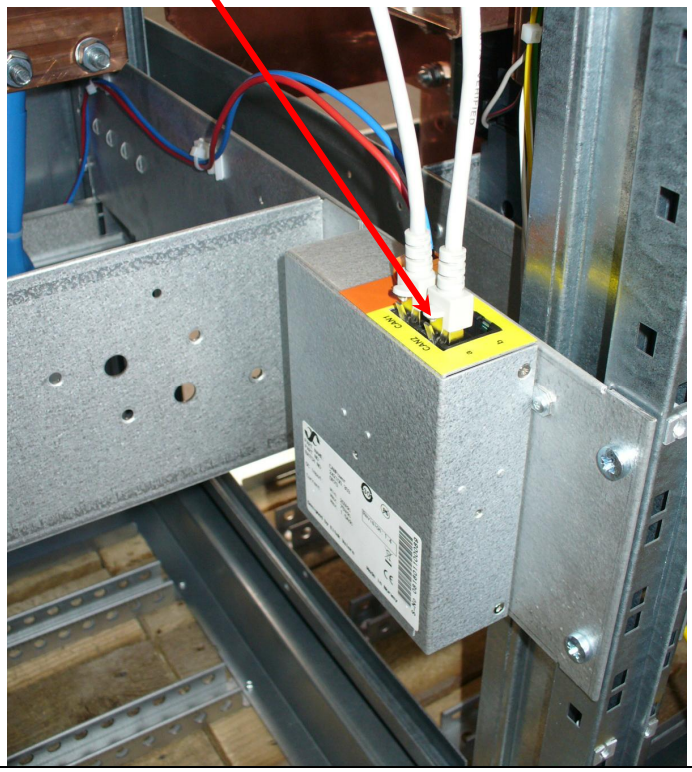
<table>
<tr><th>Smartpack Controller</th><th>ID #</th><th>DIP Switch Position 1 -- 2 -- 3 -- 4</th></tr>
<tr><td>(Master) Controller 1</td><td>1</td><td>OFF--OFF--OFF--OFF</td></tr>
<tr><td>(Slave) Controller 2</td><td>2</td><td>ON--OFF--OFF--OFF</td></tr>
<tr><td>(Slave) Controller 3</td><td>3</td><td>OFF-- ON--OFF--OFF</td></tr>
<tr><td>(Slave) Controller 4</td><td>4</td><td>ON-- ON--OFF--OFF</td></tr>
</table></td></tr>
</table>

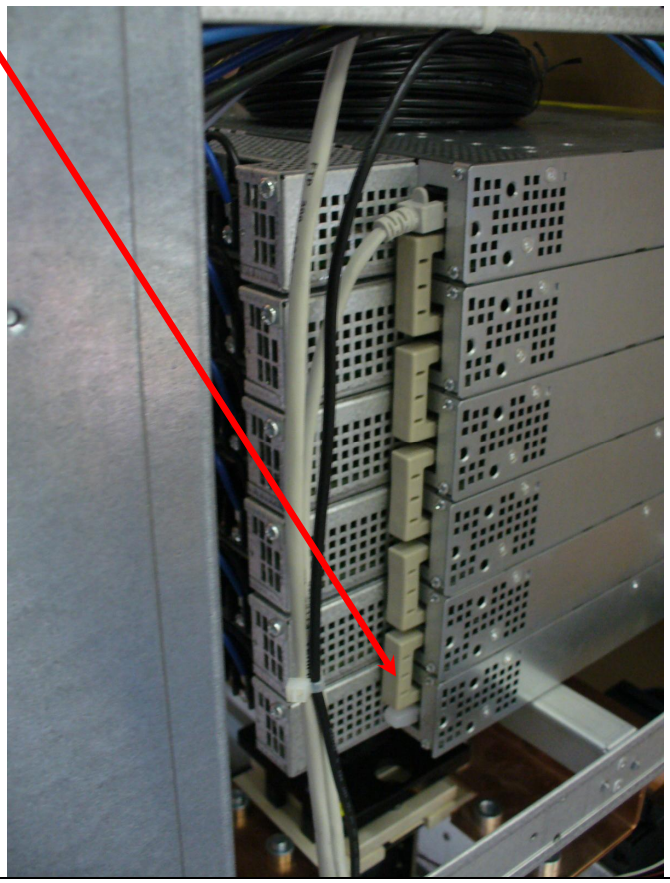
2.3	Master Smartpack C32442.001 should be configured according to the list above as shown in the picture	
2.4	Slave No.1 Smartpack C32442.002 should be configured according to the list above as shown in the picture	
2.5	Slave No.2 Smartpack C32442.002 should be configured according to the list above as shown in the picture	
2.6	Slave No.3 Smartpack C32442.003 should be configured according to the list above as shown in the picture	

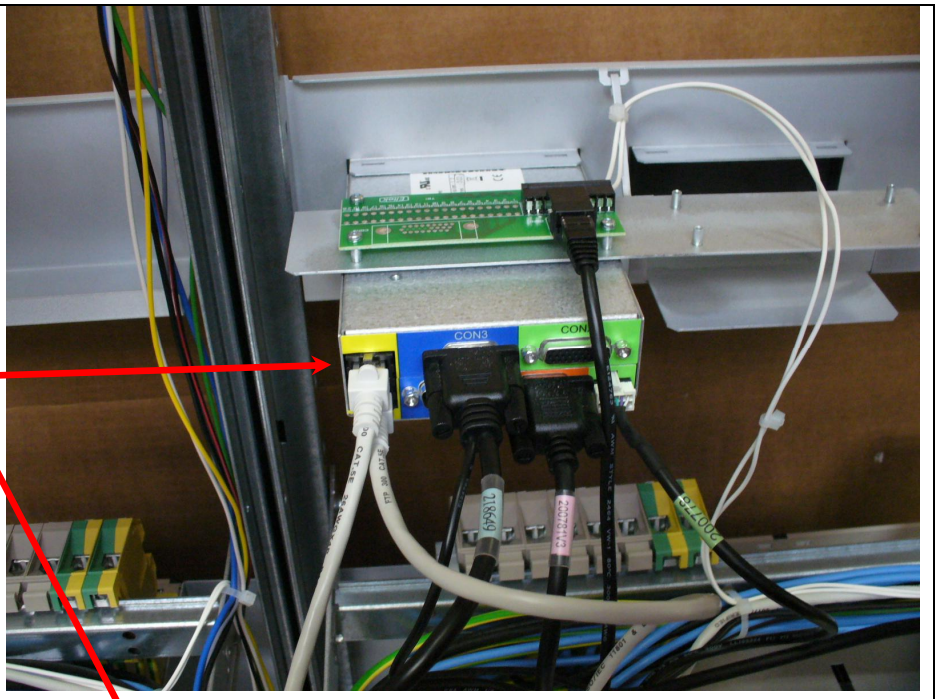
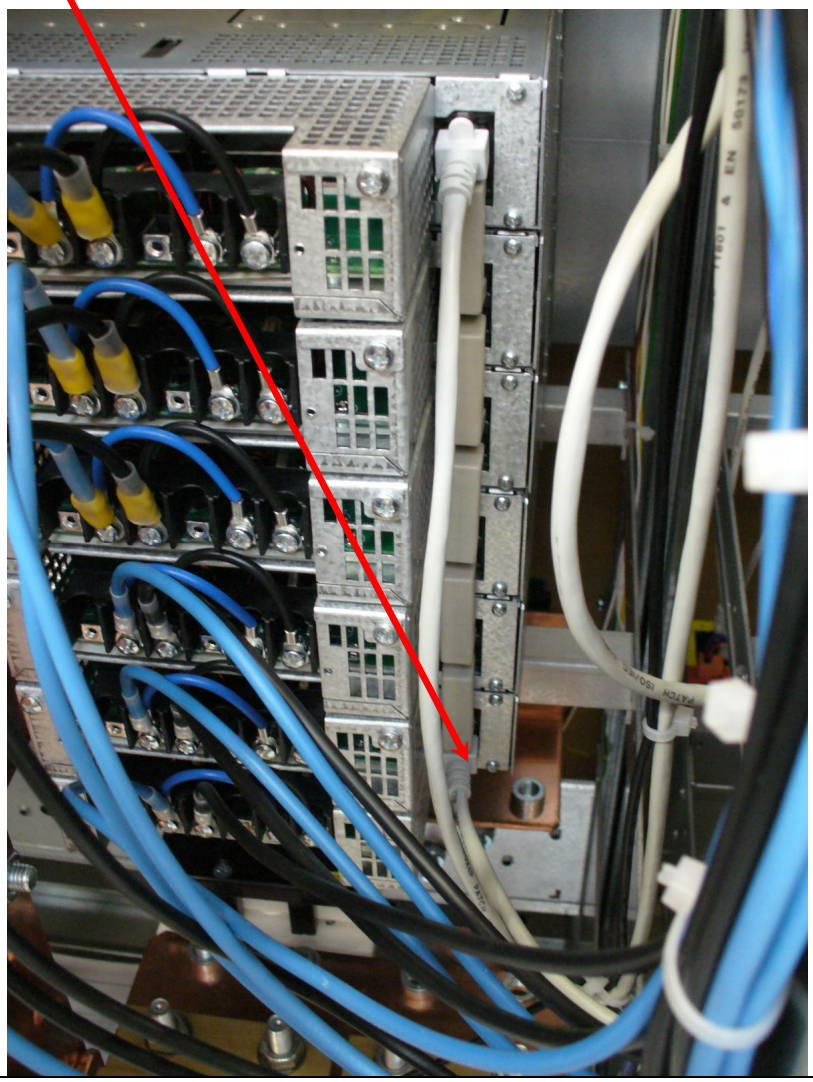
3. Install CAN BUS connection cables between cabinets according to the pictures

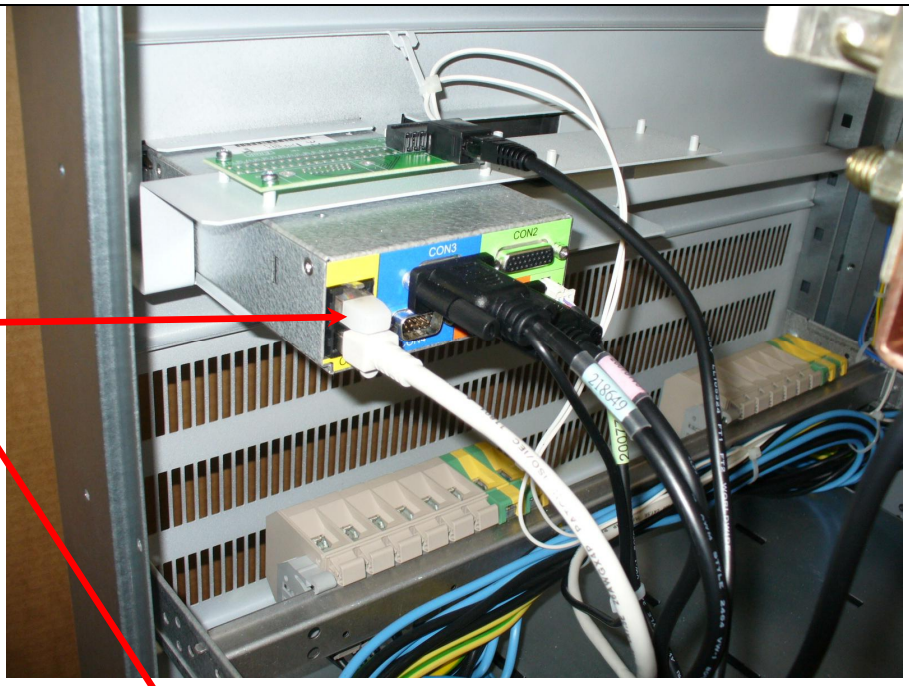
Assembly instruction of CAN BUS cable		
Step	Description	Comment
3.1	General schematic of CAN BUS connection between cabinets (for detailed information see schematic drawing 2053745, 2053746, 2053748, 2053751)	

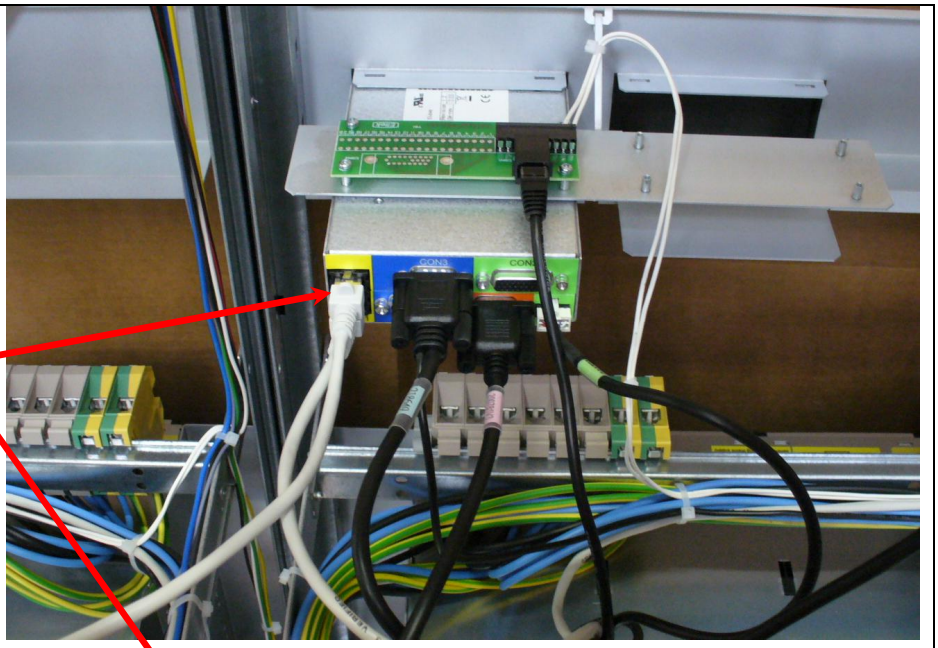
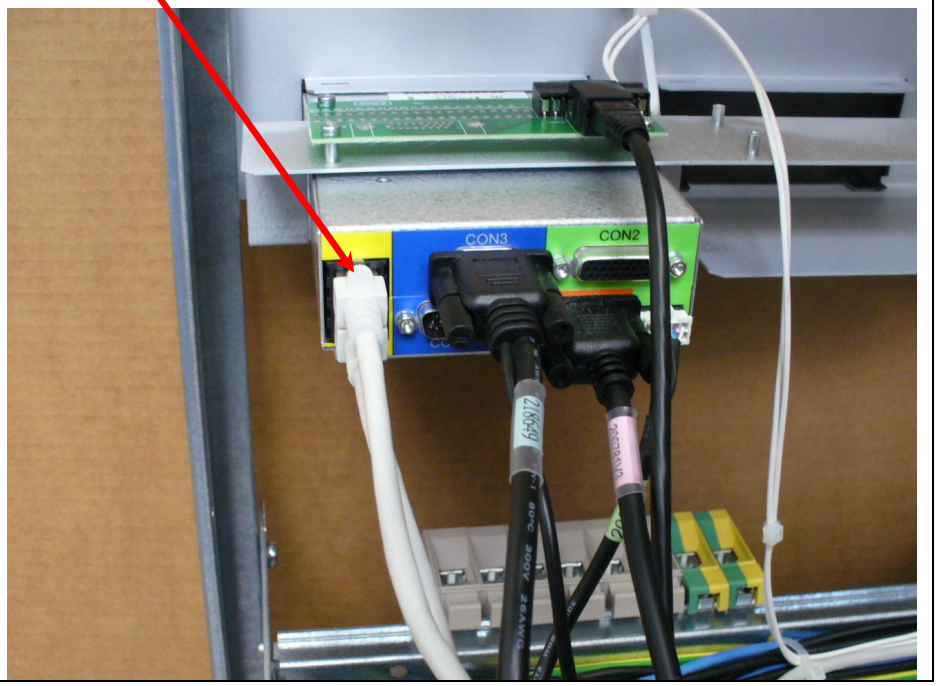
Step	Description	Comment
3.1	Remove End termination plugs from bottom of the PowerRack CAN BUS connection in Slave No.1	 

3.2	Connect CAN 2 in CAN POWER in Master C32442.001 to bottom CAN BUS connection in PowerRacks in Slave No.1 C32442.002	 

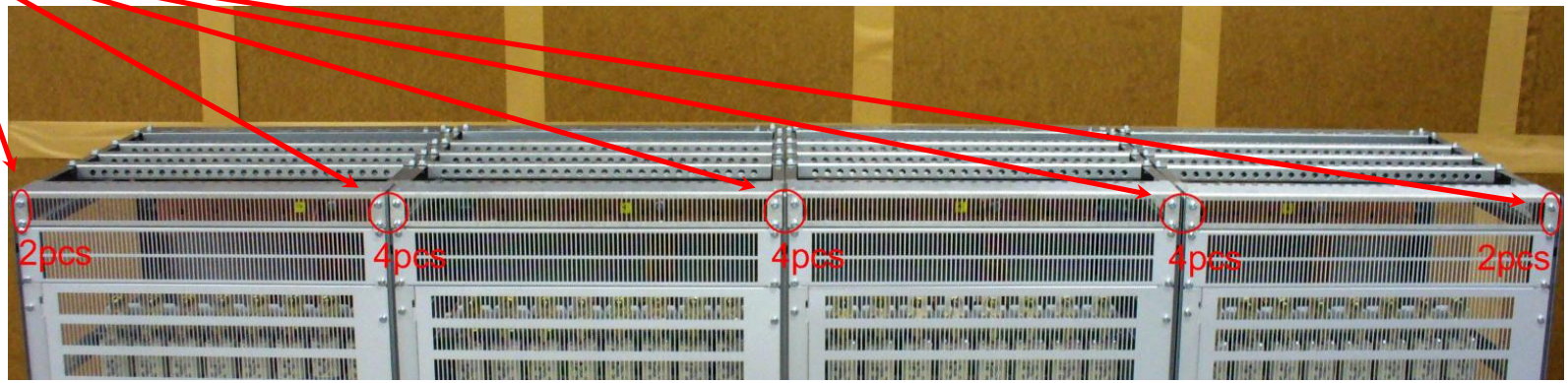
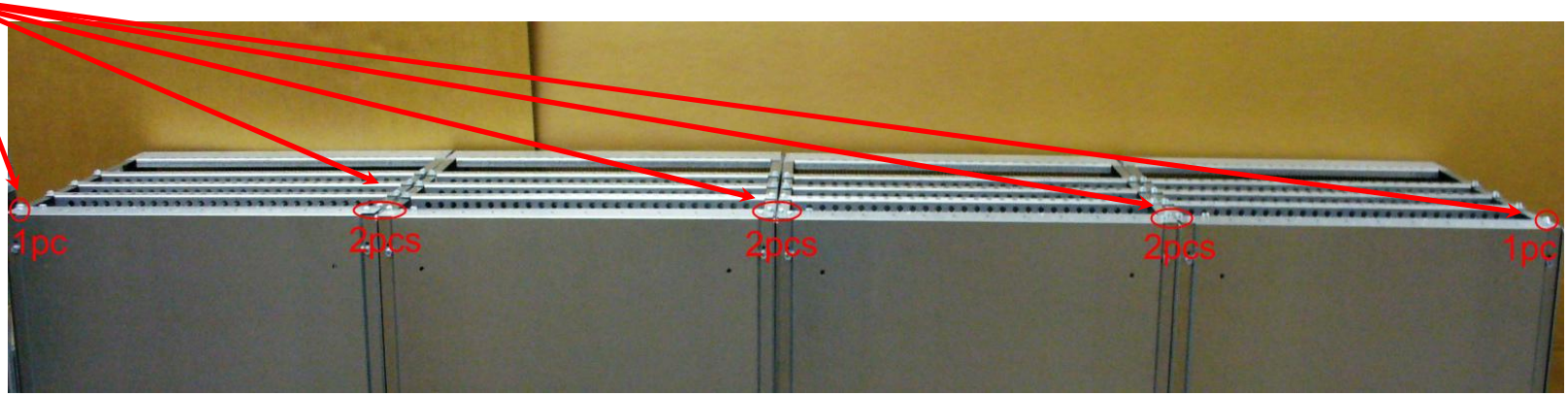
3.3	Remove End termination plugs from bottom CAN BUS connection in the PowerRack in Slave No.2 C32442.002 and from CAN BUS connection in Smartpack in Slave No.1 C32442.002	 

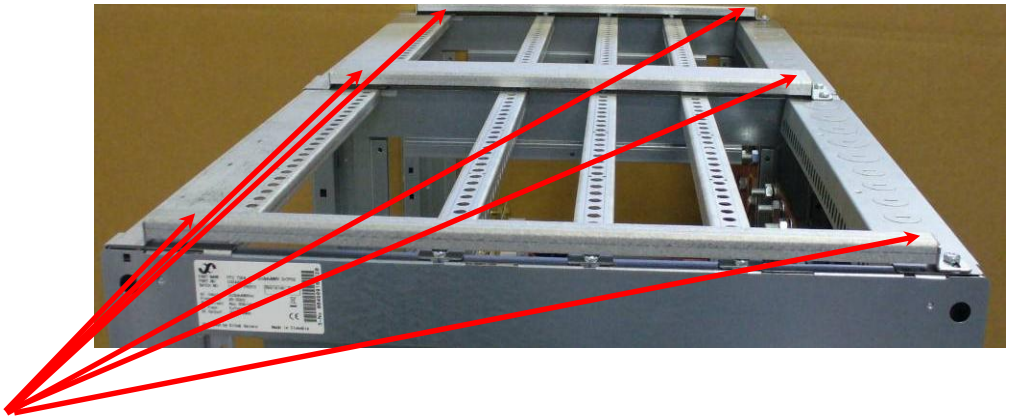
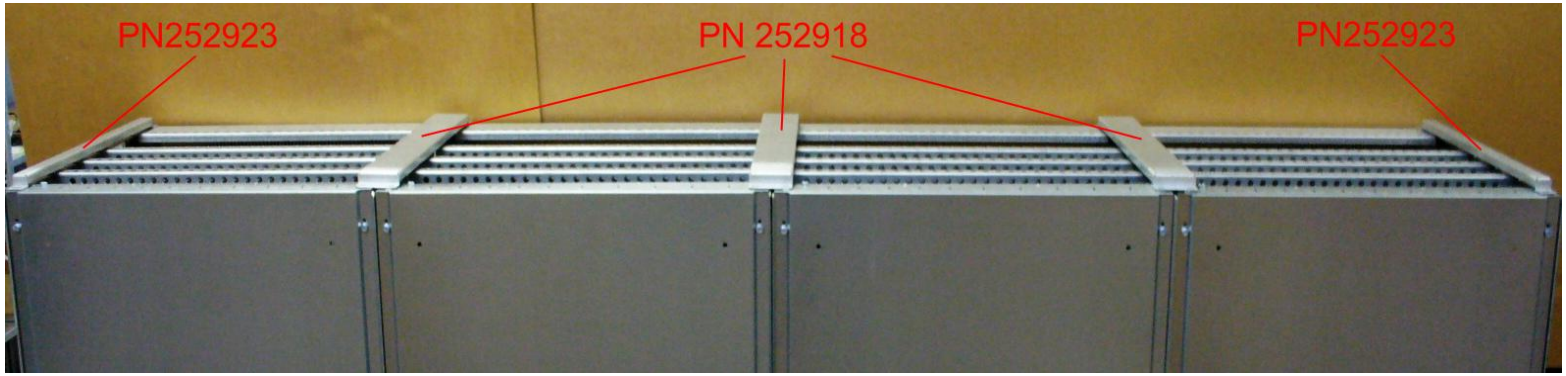
3.4	Connect top CAN BUS connection in Smartpack in Slave No.1 C32442.002 to bottom CAN BUS connection in PowerRacks in Slave No.2 C32442.002	 

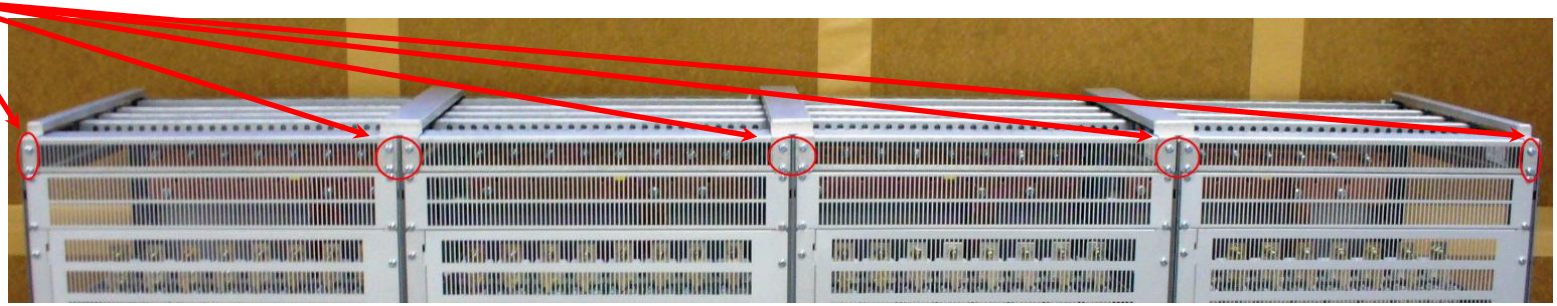
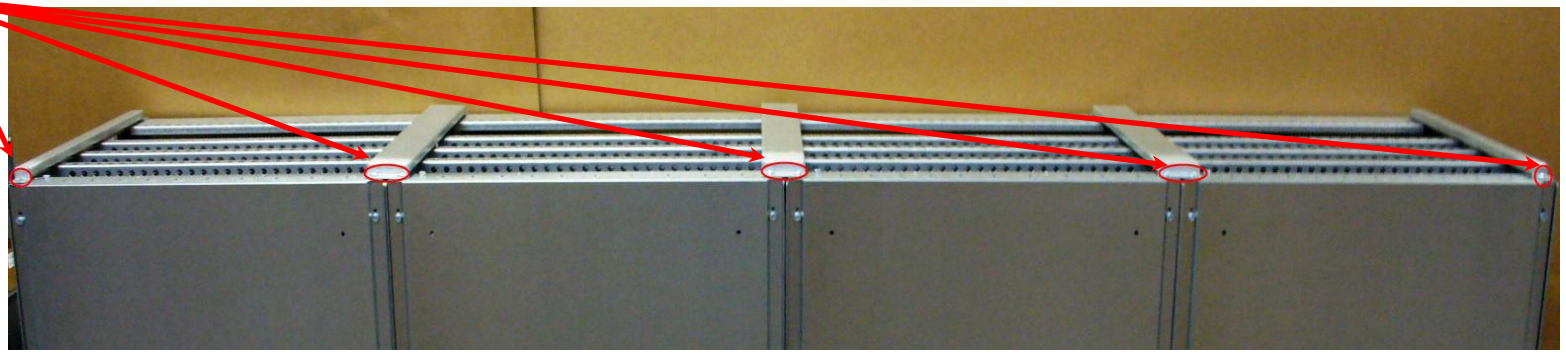
3.5	Remove End termination plugs from CAN BUS connections in Smartpacks in Slave No.2 C32442.002 and Slave No.3 C32442.003	 

3.6	Connect top CAN BUS connection in Smartpack in Slave No.2 C32442.002 to top CAN BUS connection in Smartpack in Slave No.3 C32442.003	 

4. Installation of top brackets for cable tray

Step	Description	Comment
4.1	Remove 16pcs screws from top front cover according to the pictures.	
4.2	Remove 8pcs screws from rear wall cover according to the pictures.	

Step	Description	Comment
4.3		 **OUR RECOMMENDATION!** Drill holes on the top brackets for support struts. Fix the support struts to the drilled holes of top brackets and then fix top brackets with mounted support struts to the cabinet. Install support struts at the ends of all top brackets according to red pointer on the picture, not in the middle for better stability of the cabinet!
4.4	Put 2 pcs of the bracket PN 252923 on the edge of the cabinet and 3 pcs of the bracket PN 252918 between the neighbouring cabinets.	

Step	Description	Comment
4.5	Screw 16 pcs screws back.	
4.6	Screw 8 pcs screws back.	

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