

**MegaProektStroy LLC**

Russia, 394006, Voronezh, 20th Anniversary of October Str., Bldg 103, of. 424a

OGRN 1123668038273, TIN 3664120580

Certificate SRO-P-168-22112011 of Permit to Certain Type or Types of Work Affecting Safety of Capital Construction Projects

**Mobile Data Processing Center**

## DETAILED DESIGN DOCUMENTATION

Main Set of Design Drawings

MDPC-12/17

Voronezh, 2017

Agreed by				
Orig. Inv. No.	Signature and date	Repl. Inv. No.		

*Contents of Sections of the Detailed Design Documentation on the Mobile  
Data Processing Center*

<i>Item No.</i>	<i>Designation</i>	<i>Description of</i>	<i>Remark</i>
		<i>Power Supply System</i>	
1	<i>MDPC-12/17-EL</i>	<i>Indoor Electrical Equipment &amp; Lighting</i>	
		<i>Fire Suppression System</i>	
2	<i>MDPC-12/17-PT</i>	<i>Fire Suppression</i>	

Repl. Inv. No.

Signature and date

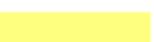
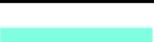
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						<b>MDPC-12/17</b>			
						<b>Mobile Data Processing Center</b>			
<b>Rev.</b>	<b>Qty of areas</b>	<b>Sheet</b>	<b>Doc. No.</b>	<b>Sign.</b>	<b>Date</b>				
CPE		Rozhnov		/Sign./	12/17		Stage	Sheet	Sheets
Standrds verified by		Sidneva		/Sign./	12/17		<b>P</b>	<b>1</b>	<b>1</b>
Checked by		Rozhnov		/Sign./	12/17				
Prepared by		Kirillova		/Sign./	12/17				
						<b>Deliverables List</b>			
						 MegaProektStroy LLC, Voronezh, 2017			

List of Main Set Detailed Drawings

Sheet	Description	Remark
1-2	General Information	
3	Functional Diagram	
4	Equipotential Bonding System	
5	LID P1 Electrical Schematic Diagram (Input #1, 2)	8 sheets
6	LID P2 Electrical Schematic Diagram (Input #3, 4)	8 sheets
7	LID P3 Electrical Schematic Diagram (Input #5, 6)	9 sheets
8	DP Center. Elev. +0.000. Layout of Lighting Equipment & Grounding	
9	DP Center. Elev. +0.000. Electrical Power Equipment Layout	
10	DP Center. Elev. +0.000. Layout of Equipment and Cable Lines	
11	View A-A, B-B	
12	DP Center. Elev. +0.000. Tray Layout and Mounting Plan	
13	LID Cable List (Input #1)	7 sheets
14	LID Cable List (Input #2)	7 sheets
15	LID Cable List (Input #3)	7 sheets
16	LID Cable List (Input #4)	7 sheets
17	LID Cable List (Input #5)	7 sheets
18	LID Cable List (Input #6)	7 sheets

Legend

Designation	Description	Remark
	LID Cabinet	
	Wireless Hygrostat	
	Single-Pole Socket Outlet with Protective Contact	
	Single-Pole Flush Switch	
	LED Ceiling/Wall Luminaire	
	Cables Laid Open in Cable Trays	
	Ground Line	
	Equipment Group Supplied from LID (Input #1)	
	Equipment Group Supplied from LID (Input #2)	
	Equipment Group Supplied from LID (Input #3)	
	Equipment Group Supplied from LID (Input #4)	
	Equipment Group Supplied from LID (Input #5)	
	Equipment Group Supplied from LID (Input #6)	

List of Reference and Attached Documents

Designation	Description	Remark
	Attachments	
MDPC-12/17-EL.SO	Equipment, Goods and Materials Specification	2 sheets
MDPC-12/17-EL.PZ	Explanatory Note	9 sheets

						MDPC-12/17-EL				
						Mobile Data Processing Center				
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Indoor Electrical Equipment & Lighting		Stage	Sheet	Sheets
CPE		Rozhnov		/Sign./	12/17			P	1	18
Stndrs verified by		Sidneva		/Sign./	12/17					
Checked by		Rozhnov		/Sign./	12/17					
Prepared by		Kirillova		/Sign./	12/17	General Information (Beginning)		 MegaProektStroy LLC, Voronezh, 2017		

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## General

- 1 The detailed design is based on:
  - GOST 21.210-2014. Graphic Symbols of Electrical Equipment and Wiring on Plans. (EIC, 7th edition). Electrical Installations Code.
  - GOST 21.613-2014. System of Design Documents for Construction. Power Electrical Equipment. Detailed Drawings.
  - GOST 31565-2012. Cable Products. Requirements of Fire Safety.
  - SP 31-110-2003. Design and Erection of Electrical Equipment in Residential and Public Buildings.
  - GOST R 50571.5.52-2011. Low-Voltage Electrical Installations. Part 5-52. Selection and Installation of Electrical Equipment. Wiring Systems.
  - GOST R 50571.5.54-2013. Low-Voltage Electrical Installations. Part 5-54. Selection and Erection of Electrical Equipment. Earthing Arrangements, Protective Conductors and Protective Bonding Conductors.
- 2 The detailed design documentation is allowed for the performance of works after it has been checked and agreed with the Customer.
- 3 The detailed design drawings have been developed in accordance with the current norms, rules and standards on the basis of the terms of reference, the basis of design provided by the Customer, as well as the specifications.
  - The facility falls under category III of electric reliability.
  - The mains voltage is 230/400 V.
  - The grounding system is TN-C-S.
- 4 The detailed design resolves the internal power supply of the Mobile Data Processing Center. The equipment is supplied from the ABB lead-in distributors equipped with six inputs. The electric power metering is provided by the transformer operated meters installed in the lead-in distributor cabinets.
- 5 The lighting control is provided by individual switches installed at the entrances to the premises. The type and number of luminaires in the premises are taken in accordance with the standardized lighting performance specified in SP 52.13330.2011 "Daylighting and Artificial Lighting", SP 31-110-2003 "Design and Erection of Electrical Equipment in Residential and Public Buildings" subject to safety, durability and reliability of lighting performance in the given environment.
- 6 The LiYY cable is used for power distribution and group networks and is laid open in cable trays and HDPE pipes.
- 7 For server equipment power supply lines, the Li YY 3x1.5 cable should be used according to the customer's special request.
- 8 The lead-in cables to be covered with fire-resistant paint in accordance with SP 6.13130.2009, p. 4.1, EIC (7th ed.).
- 9 The building entrance facility shall have an equipotential bonding system. For this purpose, the structural steelwork and the metal sheathing of the building, the protective conductors of the supply mains shall be connected to the main grounding bus within the lead-in distributor. According to EIC, p. 1.7.61, the detailed design provides for the main grounding bus double earthing at the building entrance facility.
- 10 To ensure protection of maintenance personnel from electrocution, provision should be made for neutral earthing by connecting to the network zero protective conductor in accordance with EIC

of all normally non-conducting elements of electrical equipment, trays and other equipment that can become live in the event of damage to insulation.

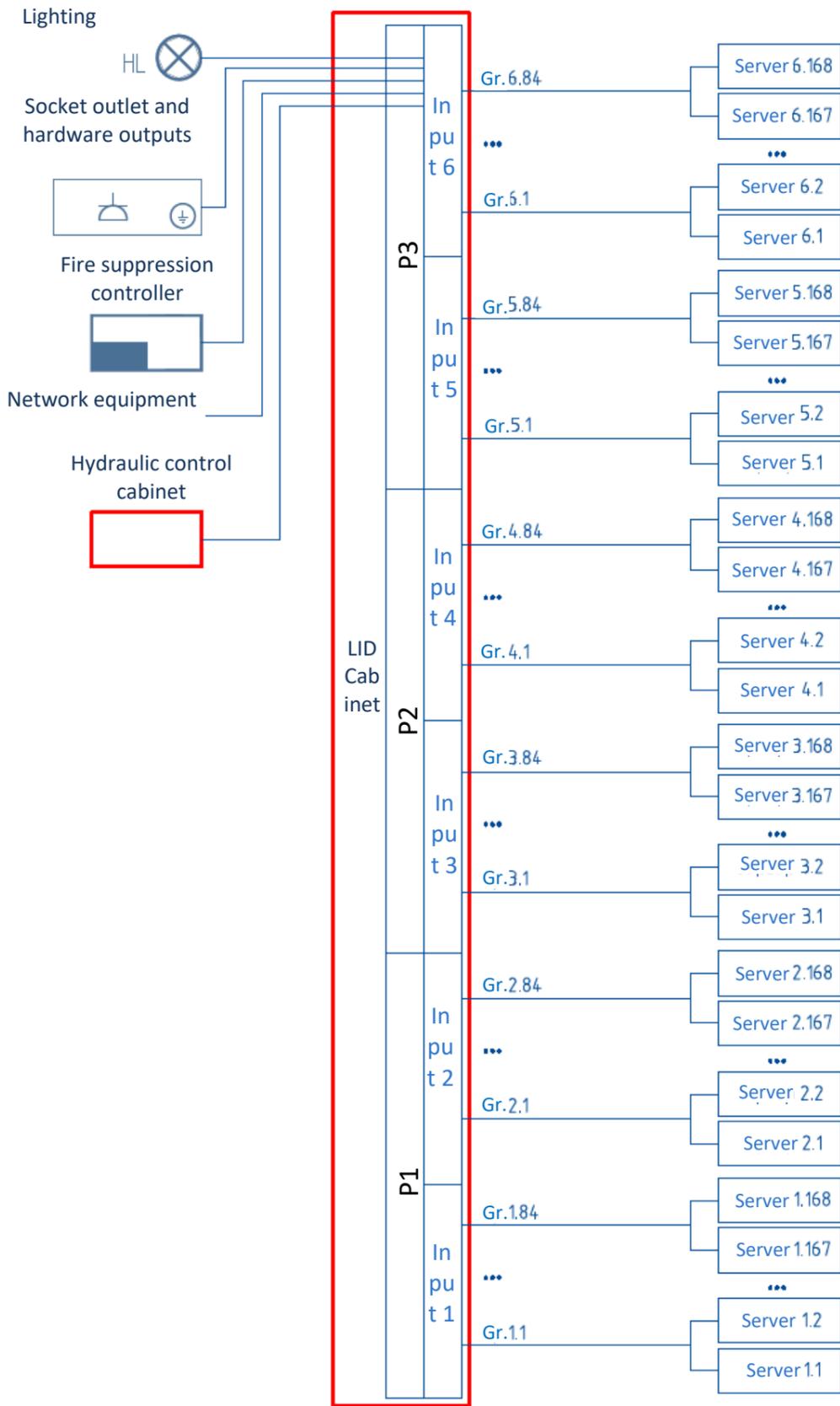
Description		Qty
Electrical power supply category		III
Mains voltage,	V	380/220V
Power consumption,	kW	1023.21
Max. loss of voltage,	%	1.0

The engineering solutions adopted in the detailed design comply with the environmental, sanitary and hygiene, fire safety and other rules and regulations in force in the Russian Federation to ensure life and health friendly operation of the system subject to the planned activities.

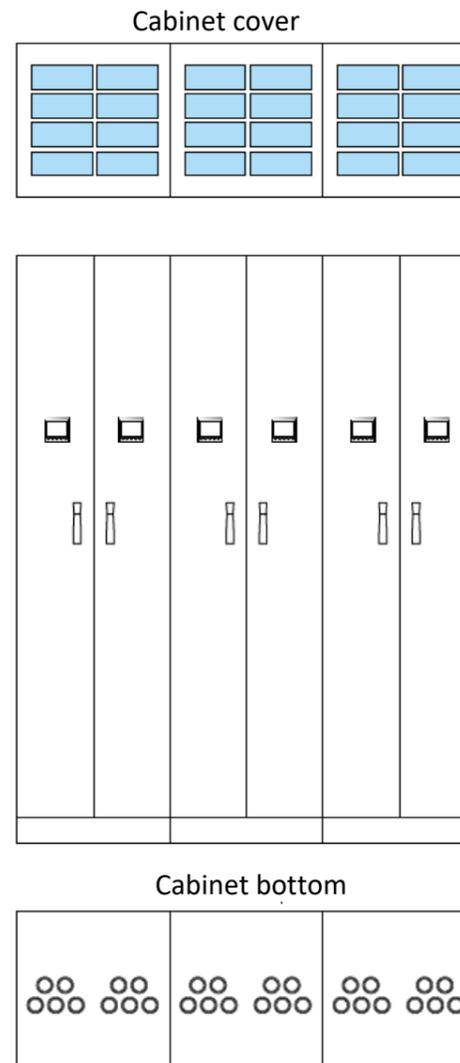
Chief Project Engineer \_\_\_\_\_

						<b>MDPC-12/17-EL</b>				
						<b>Mobile Data Processing Center</b>				
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Stndrds verified by		Sidneva		/Sign./	12/17					
Checked by		Rozhnov		/Sign./	12/17					
Prepared by		Kirillova		/Sign./	12/17	General Information (End)		 MegaProektStroy LLC, Voronezh, 2017		

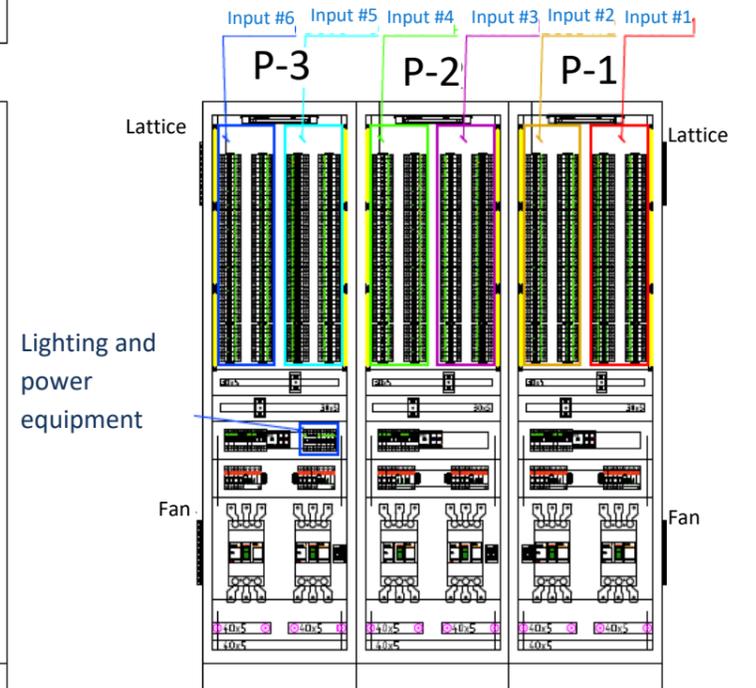
# Functional Diagram



## LID Cabinet Outside View



## LID Cabinet Equipment Layout

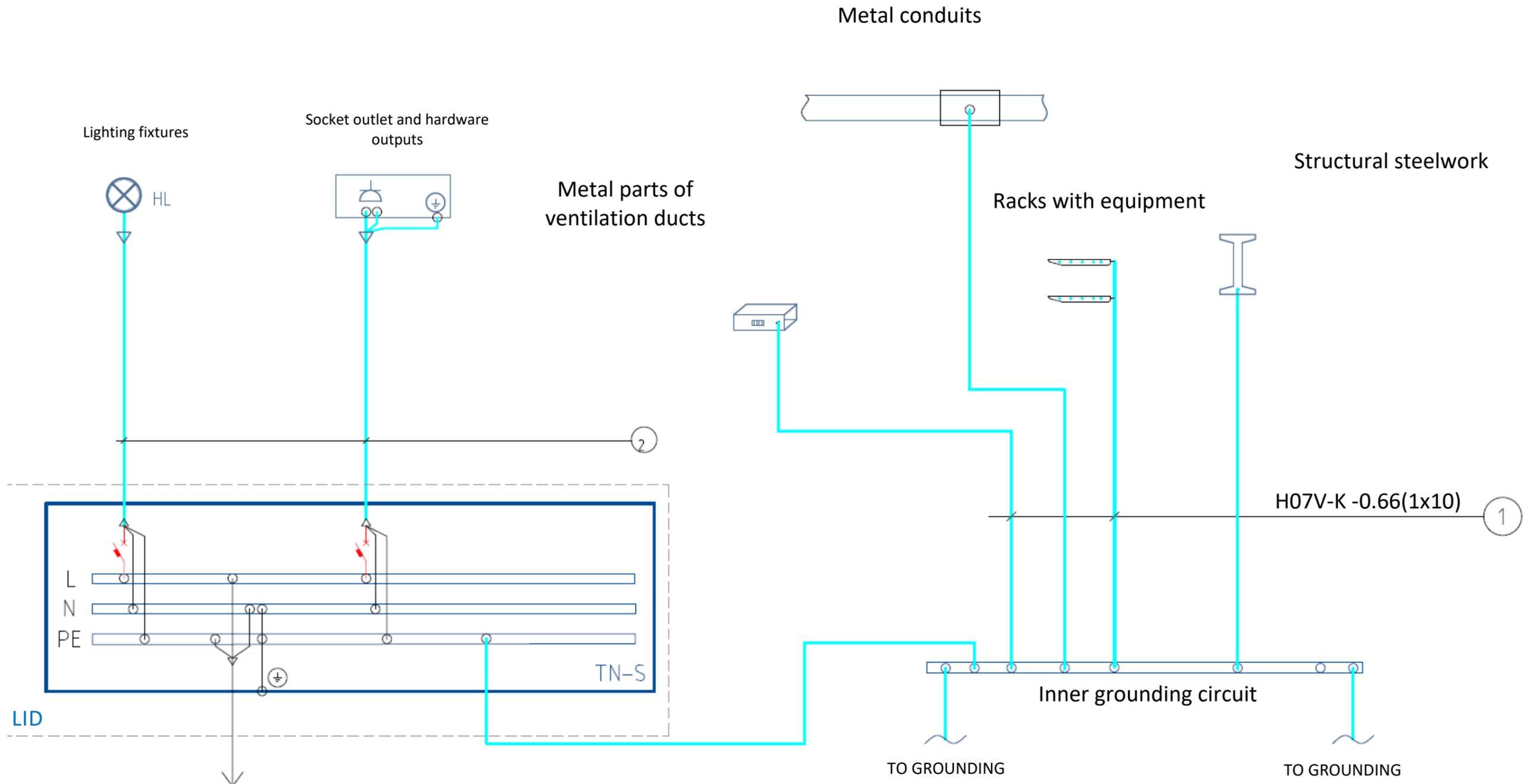


Note:  
Connectivity of 5x300 sq.mm supply cables (6 pcs).  
Outgoing LiYY 3x1.5 (1008 pcs) cables.

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						MDPC-12/17-EL			
						Mobile Data Processing Center			
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data				
CPE		Rozhnov		/Sign./	12/17	Indoor Electrical Equipment & Lighting	Stage	Sheet	Sheets
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Checked by		Rozhnov		/Sign./	12/17				
Prepared by		Kirillova		/Sign./	12/17				
Functional Diagram									



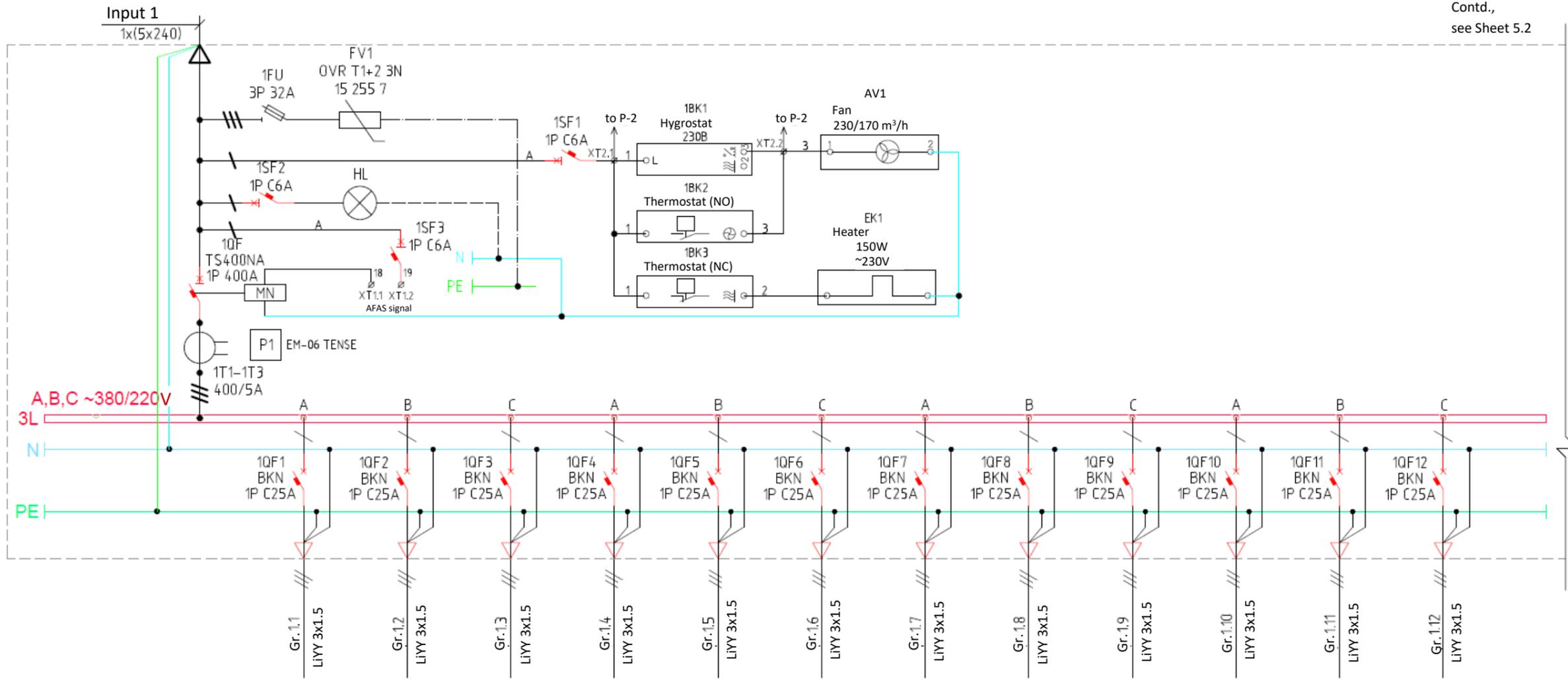
Note:  
 1. In the equipotential bonding & grounding system, all contact connections must comply with the requirements of GOST 10434-82 for Class 2 contact connections.

- Legend:
- ① - Main equipotential bonding conductor;
  - ② - Zero protective conductor (PE core of corresponding cables)

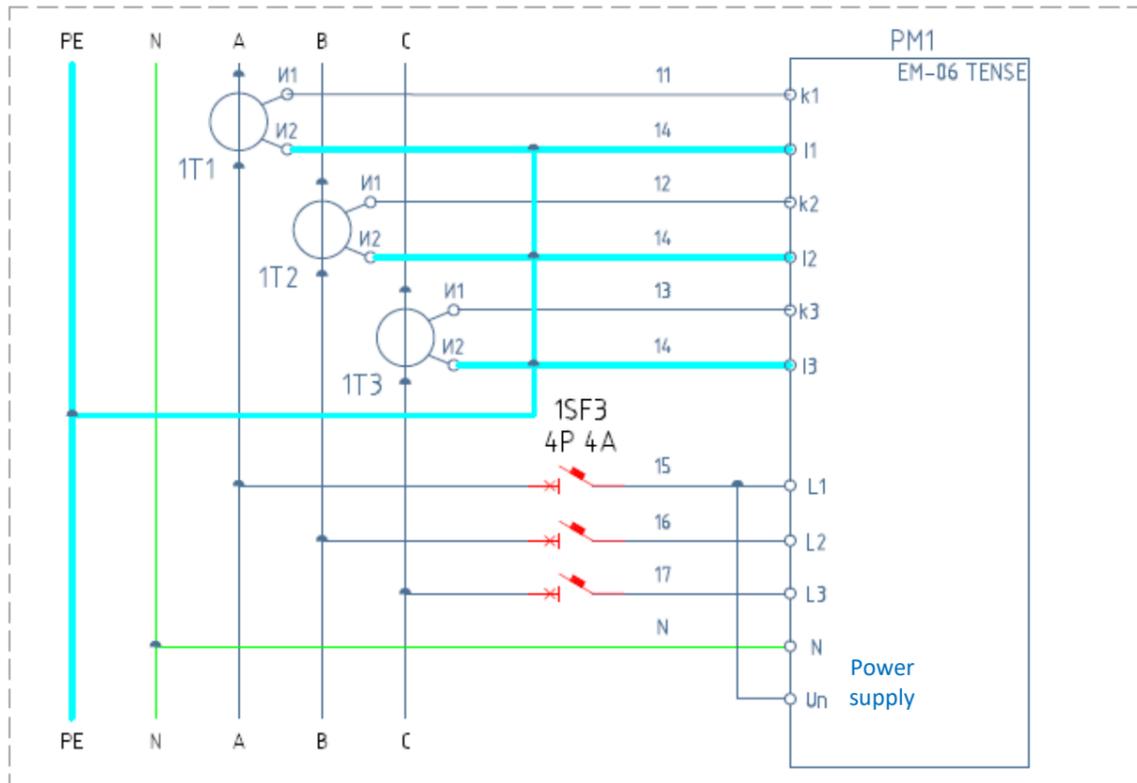
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						<b>Mobile Data Processing Center</b>			
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Stndrds verified by		Sidneva		/Sign./	12/17				
Checked by		Rozhnov		/Sign./	12/17				
Prepared by		Kirillova		/Sign./	12/17	Equipotential Bonding System	 MegaProektStroy LLC, Voronezh, 2017		

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 Orig. Inv. No.

Contd.,  
see Sheet 5.2



EM-06 TENSE (PM1) Connection Diagram



MDPC-12/17-EL					
Mobile Data Processing Center					
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data
CPE		Rozhnov		/Sign./	12/17
Stndrs verified by		Sidneva		/Sign./	12/17
Checked by		Rozhnov		/Sign./	12/17
Prepared by		Kirillova		/Sign./	12/17
Indoor Electrical Equipment & Lighting				Stage	Sheet
LID P1 Electrical Schematic Diagram (Input #1, 2)				P	5.1

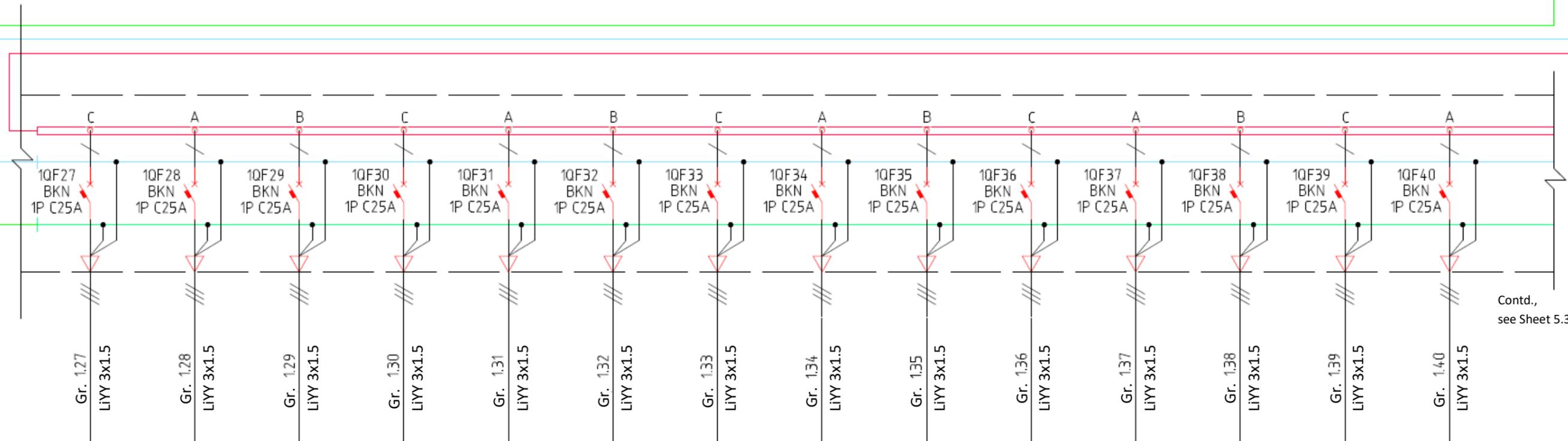
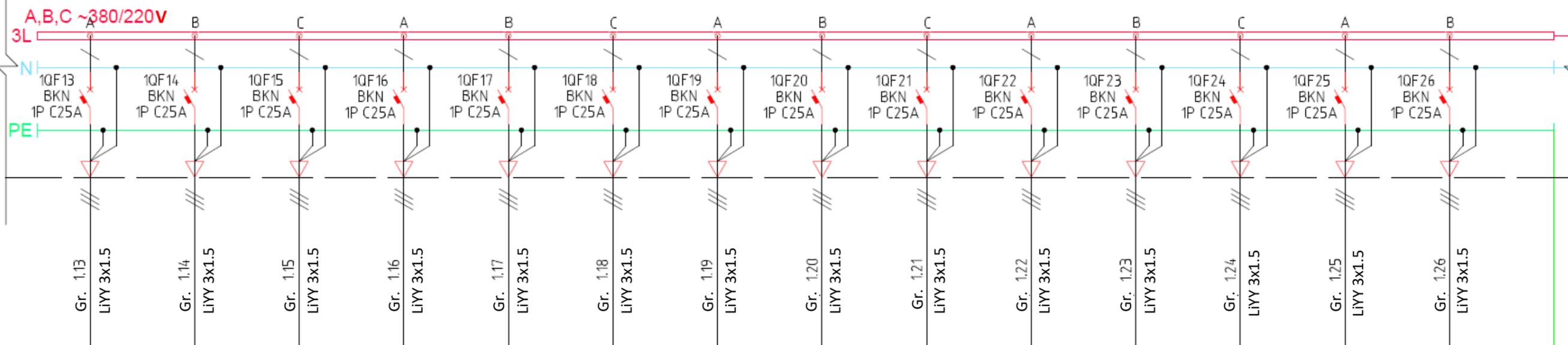
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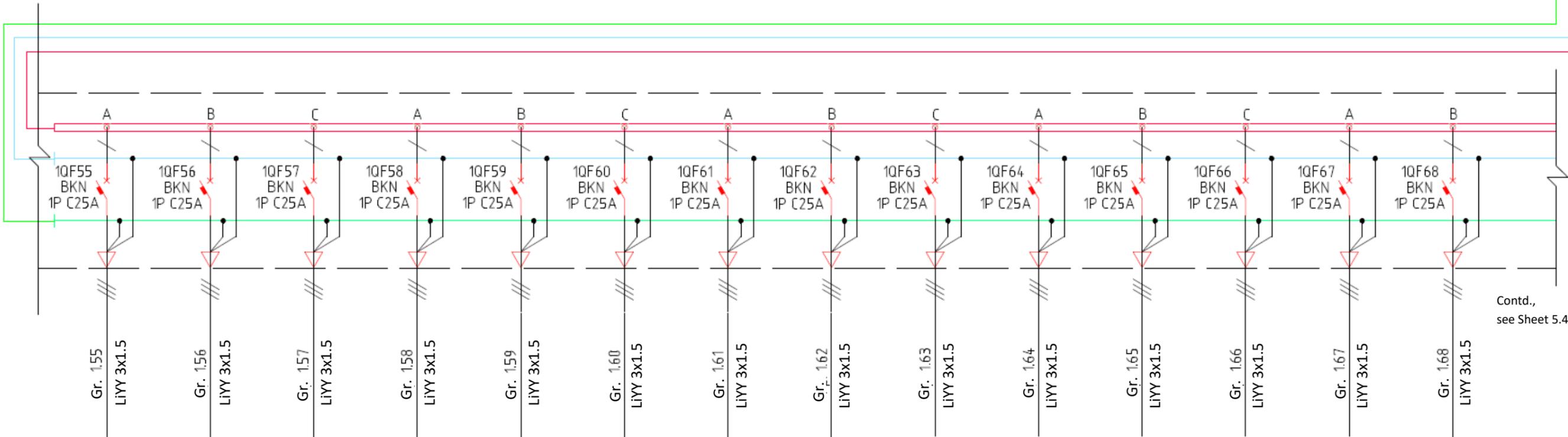
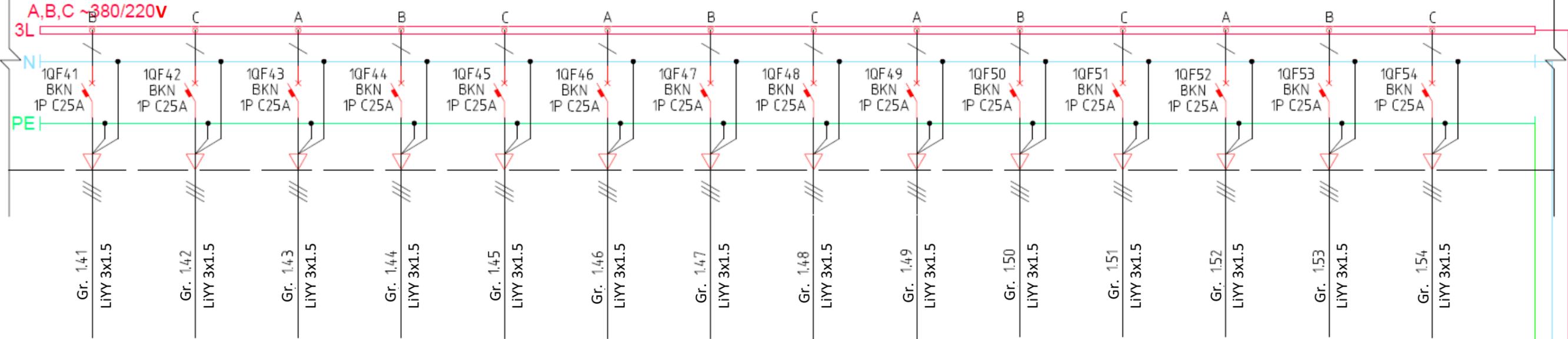
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MDPC-12/17-EL

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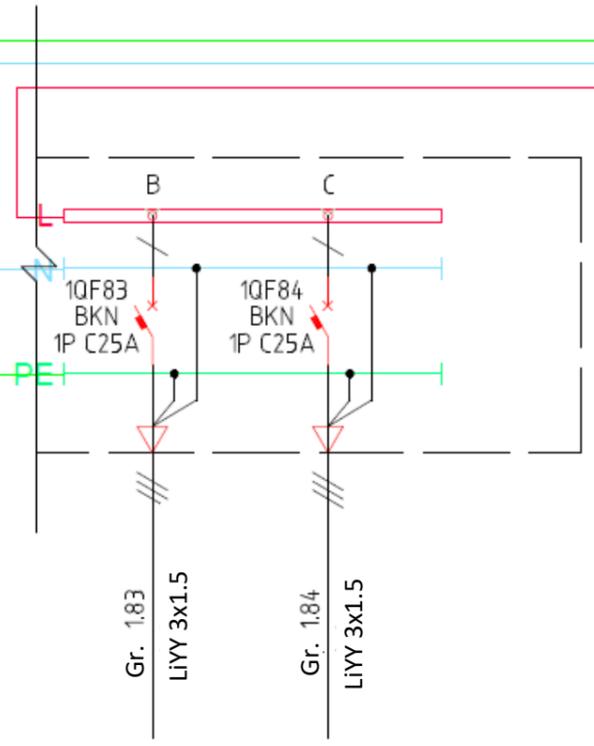
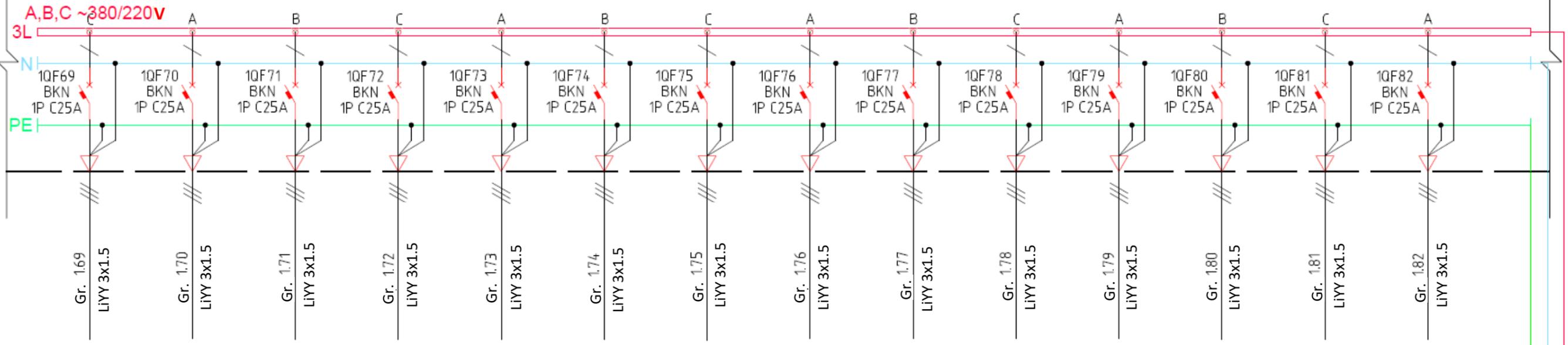
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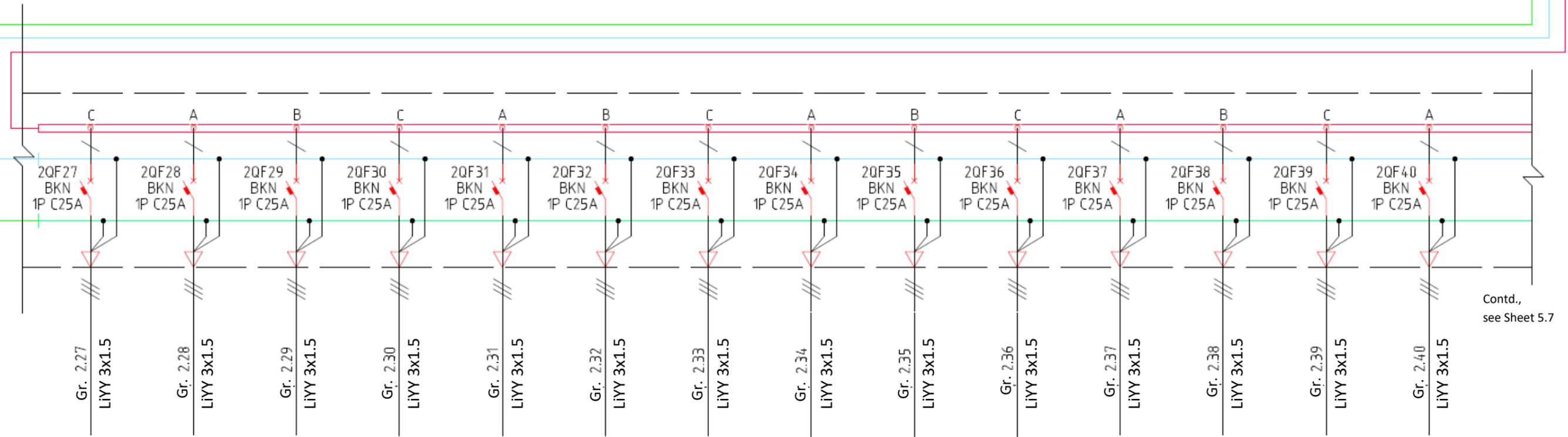
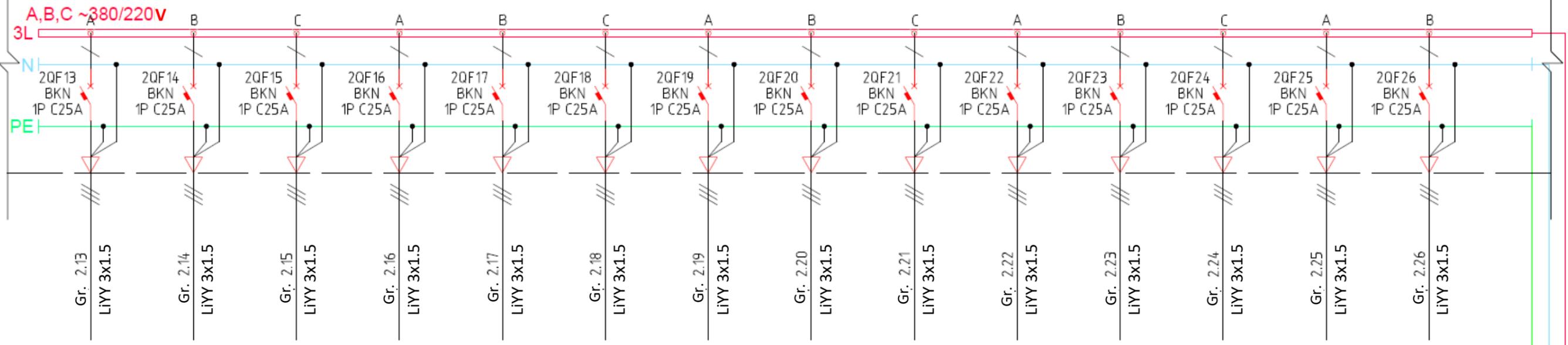
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MDPC-12/17-EL

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see Sheet 5.5



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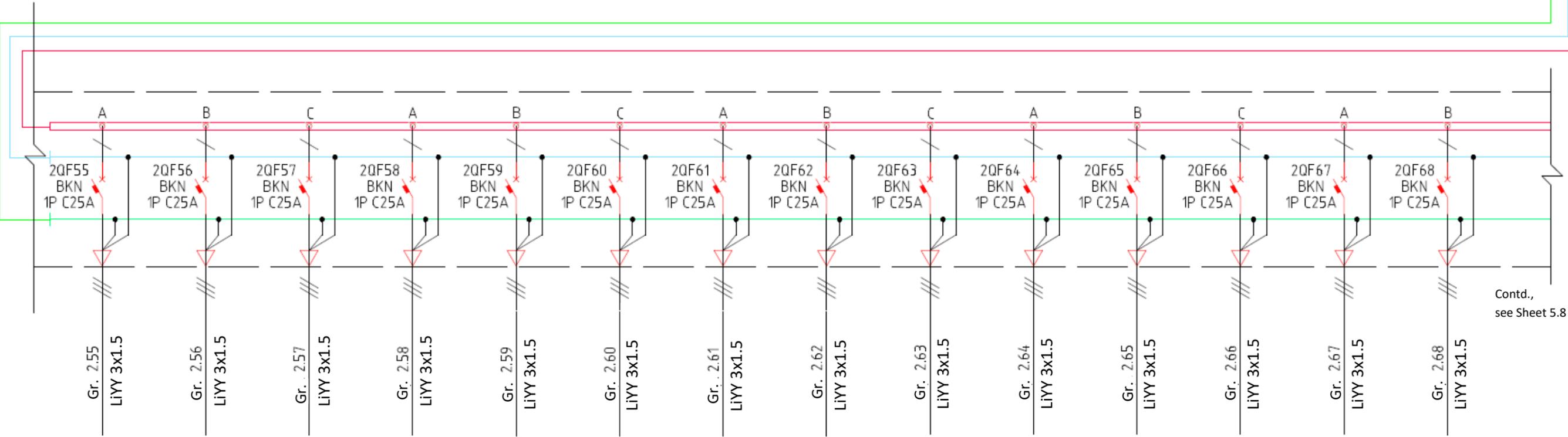
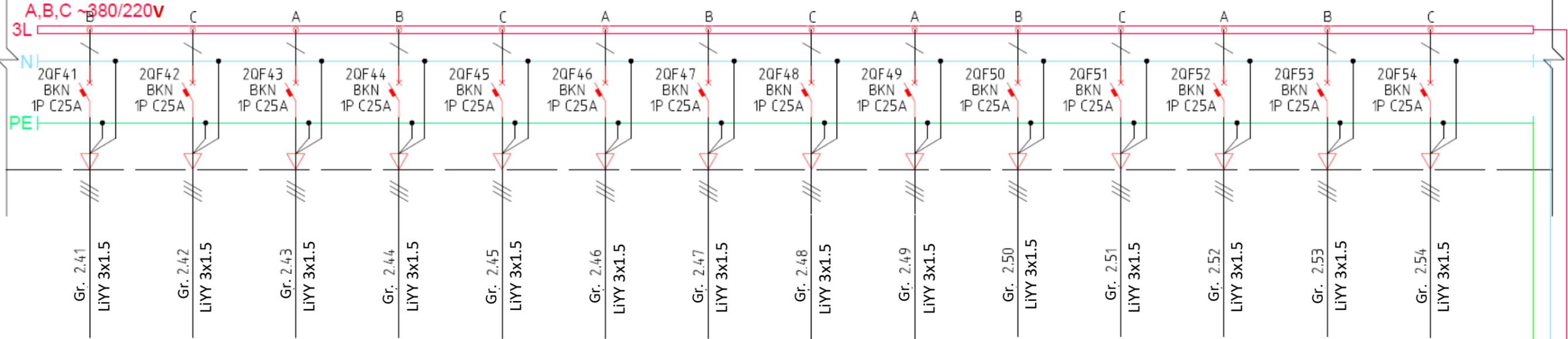
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MDPC-12/17-EL

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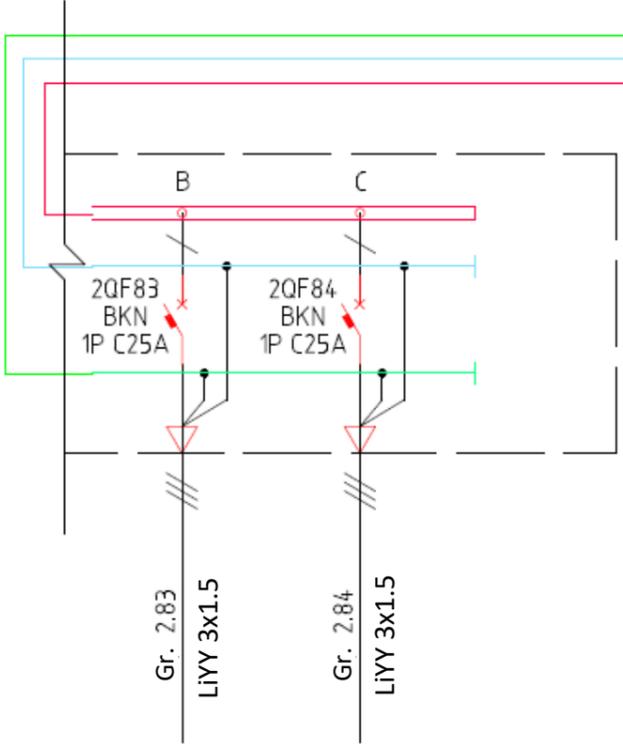
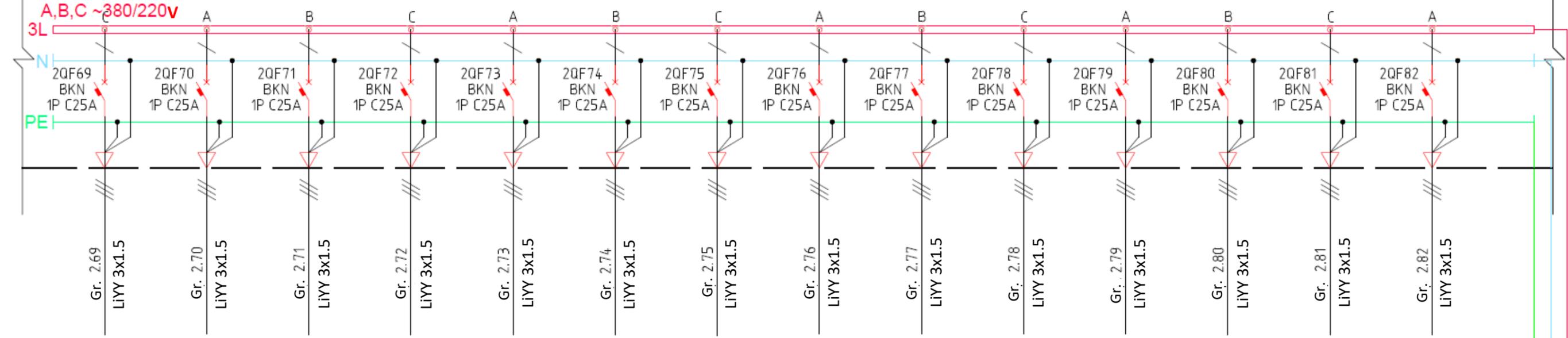
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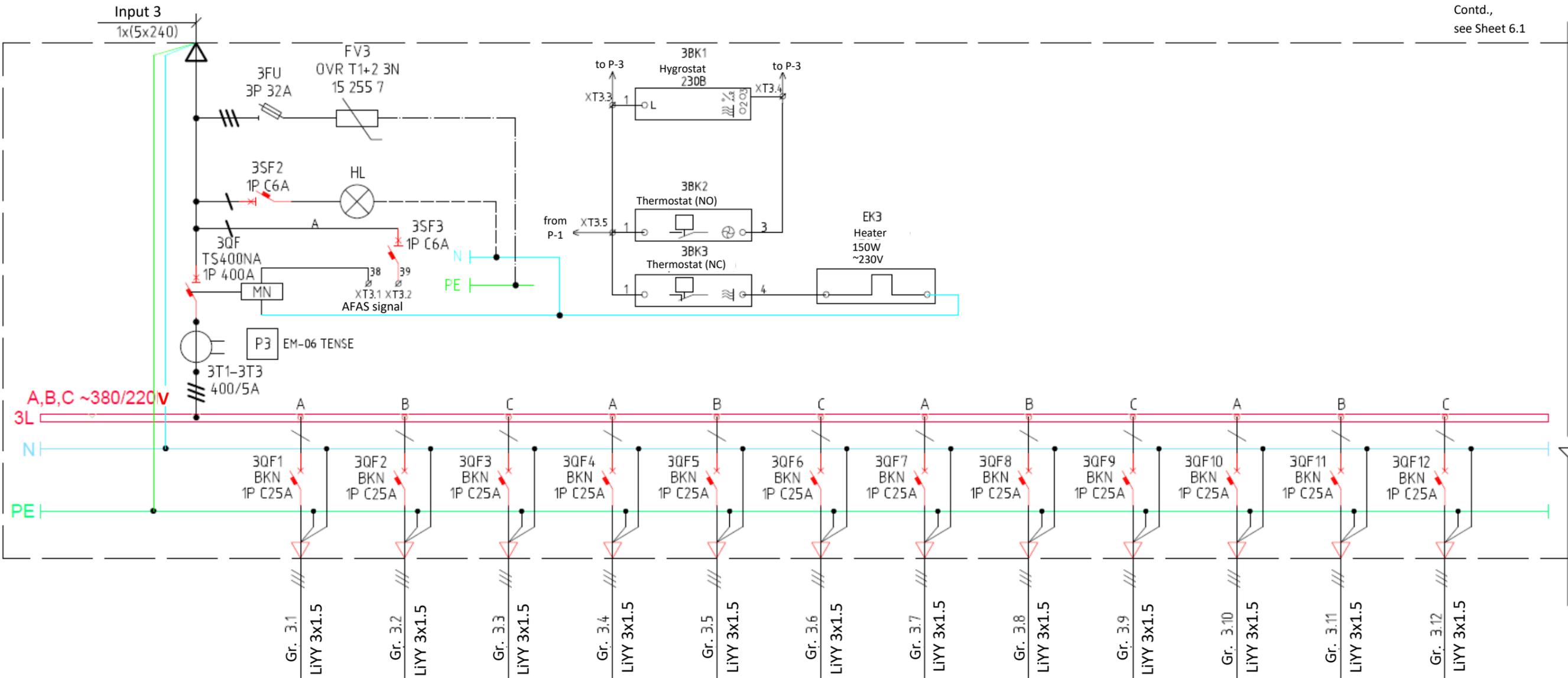
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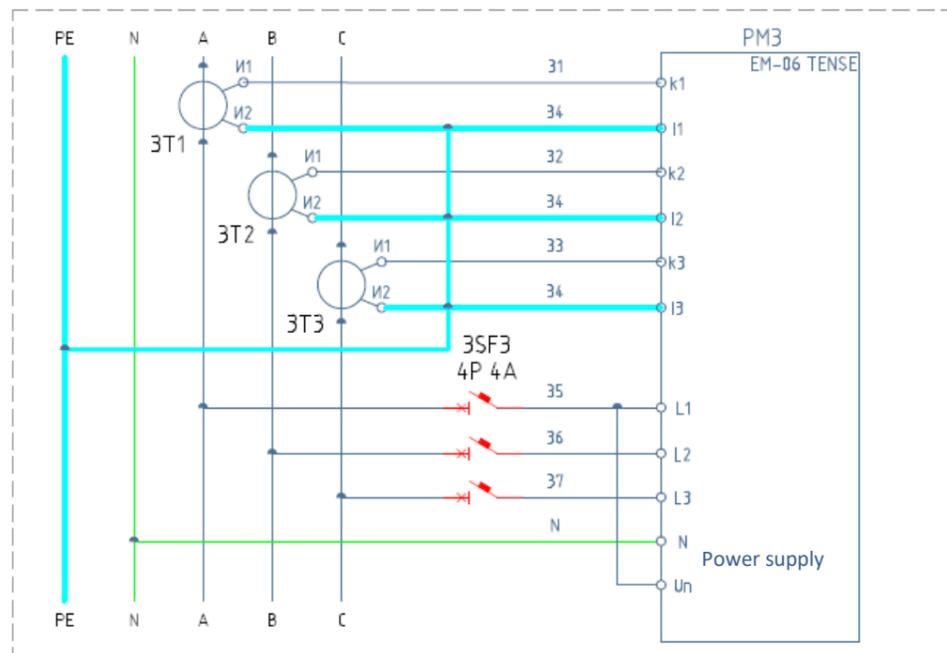
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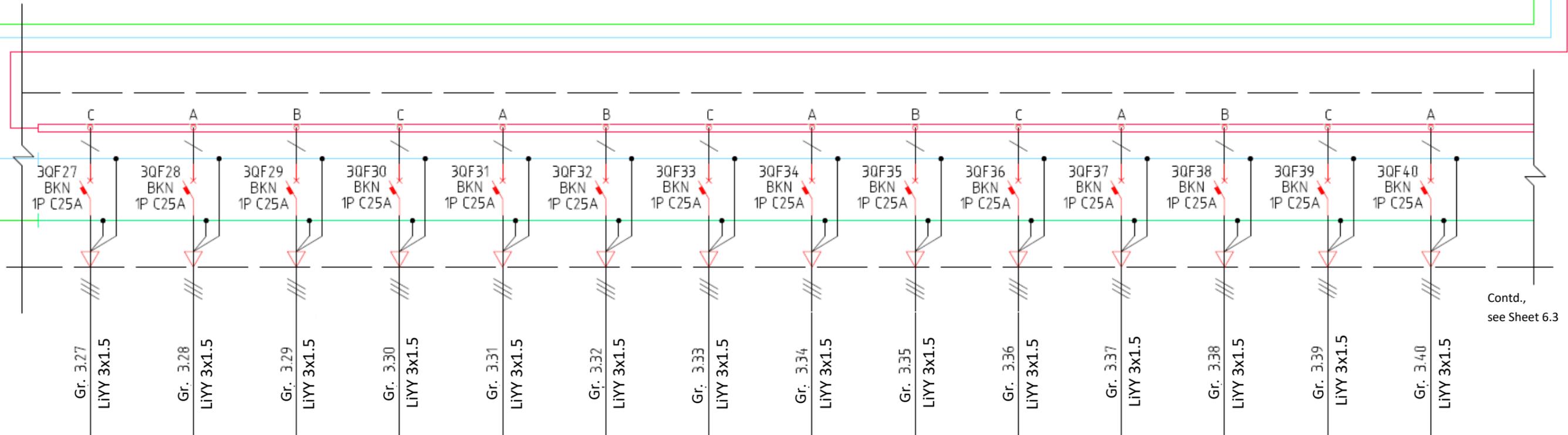
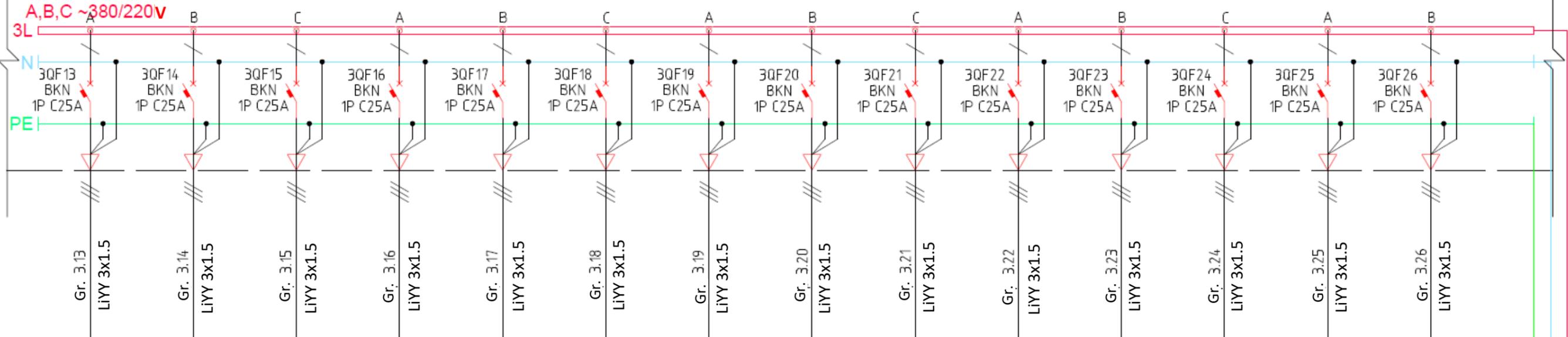


EM-06 TENSE (PM3) Connection Diagram



MDPC-12/17-EL								
Mobile Data Processing Center								
Indoor Electrical Equipment & Lighting					Stage	Sheet	Sheets	
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	P	6.1	
CPE		Rozhnov		/Sign./	12/17			
Stndrds verified by		Sidneva		/Sign./	12/17			
Checked by		Rozhnov		/Sign./	12/17			
Prepared by		Kirillova		/Sign./	12/17	LID P2 Electrical Schematic Diagram (Input #3, 4)		

Beginning,  
see Sheet 6.1



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see Sheet 6.3

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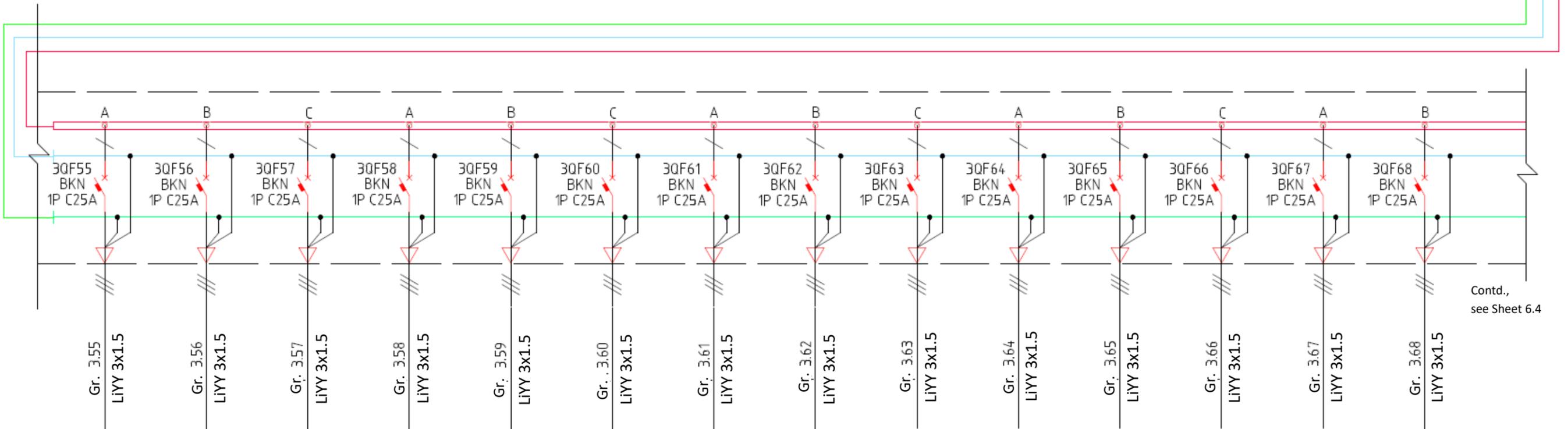
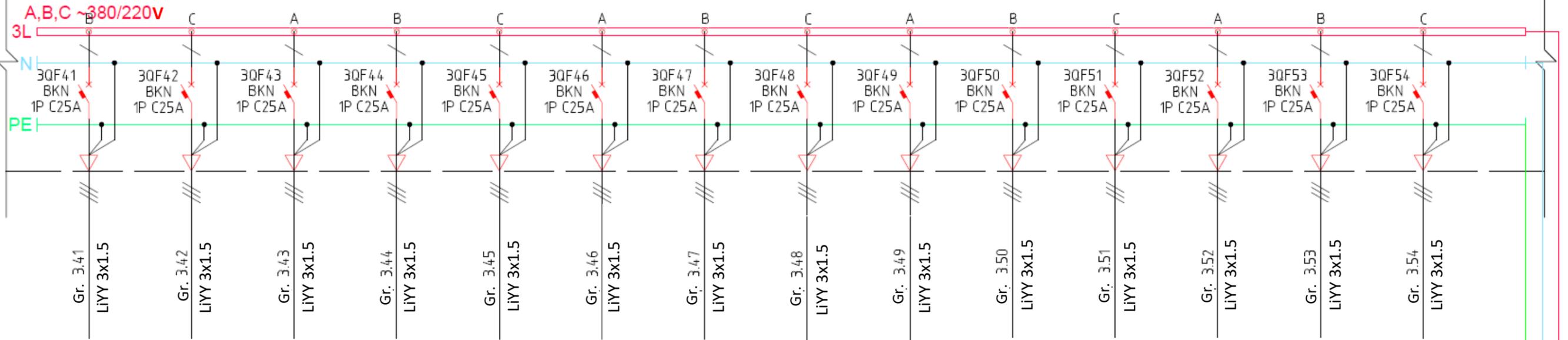
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6.2

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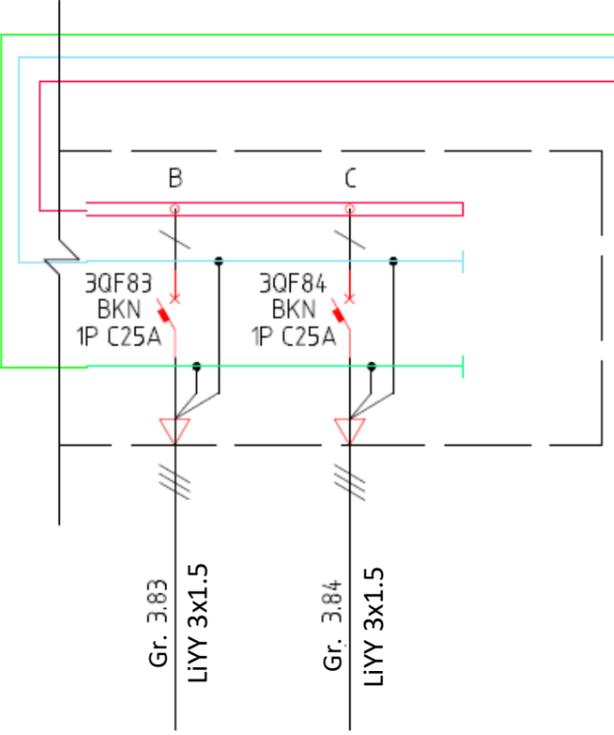
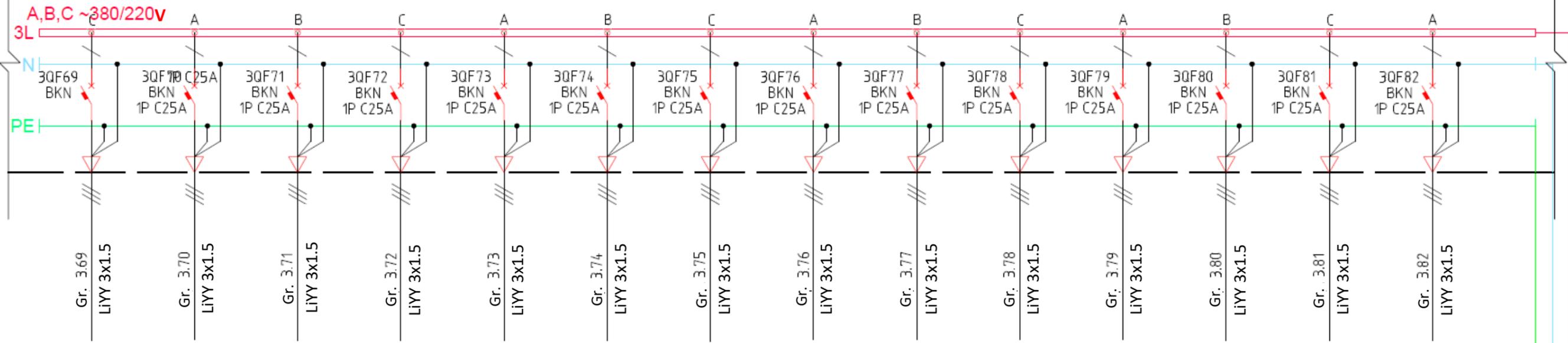
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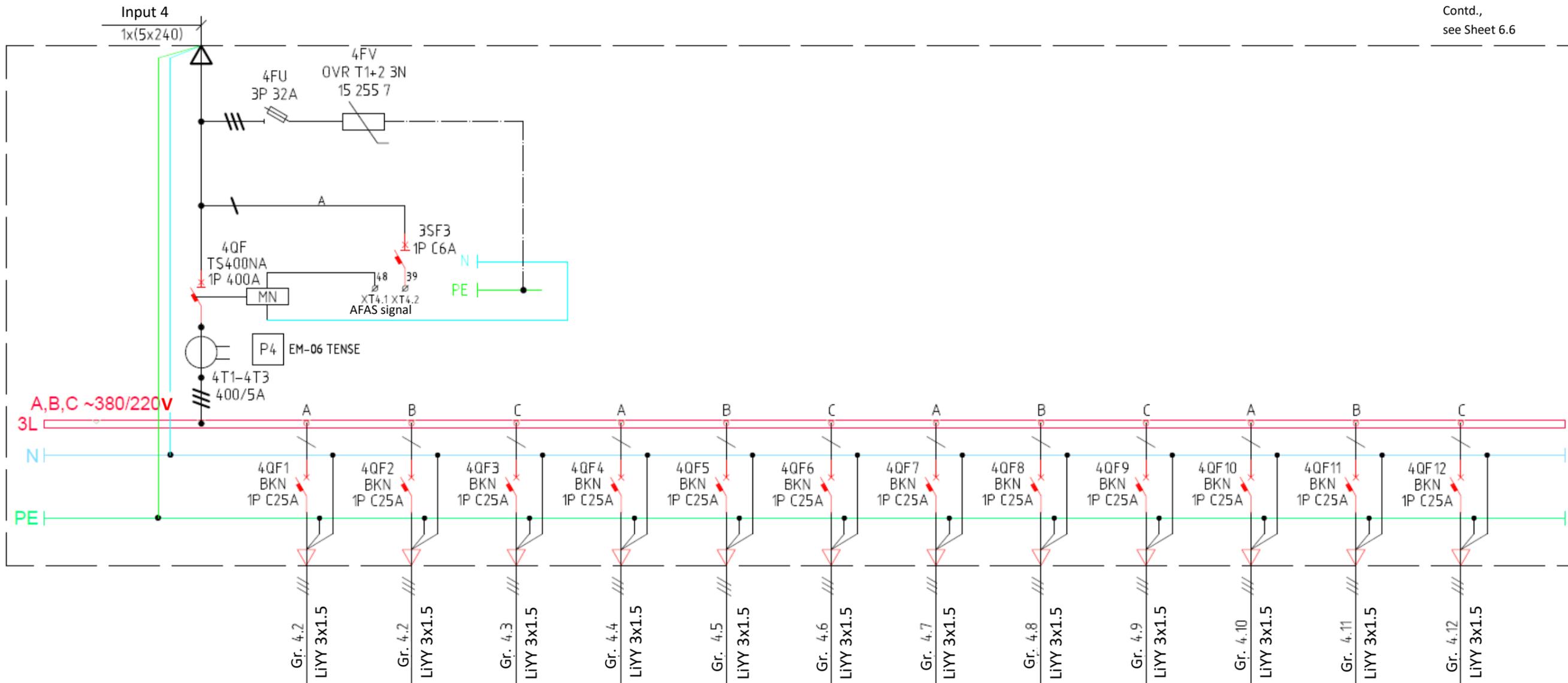
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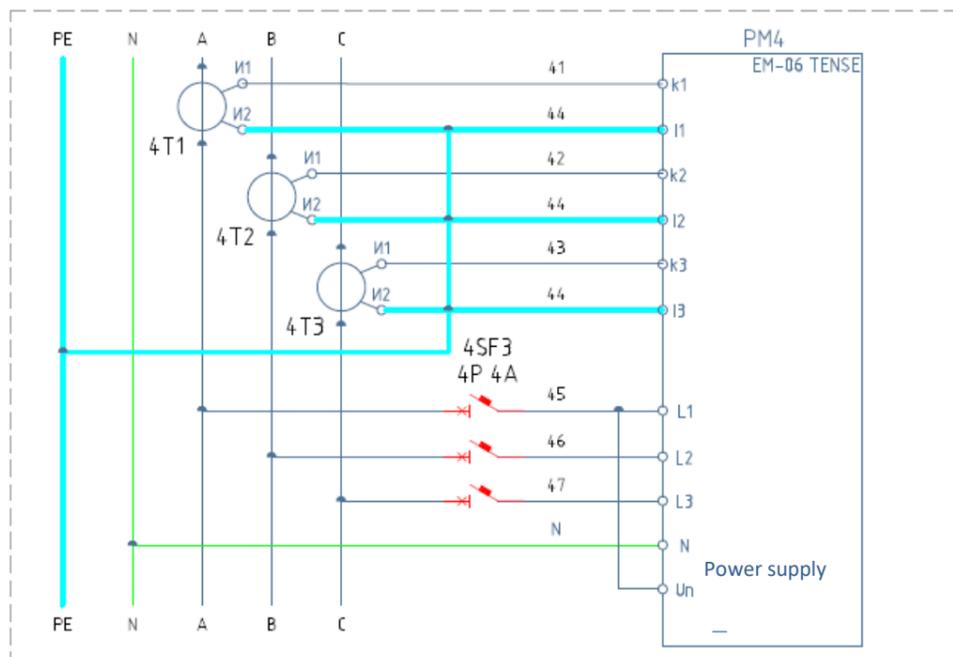
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EM-06 TENSE (PM4) Connection Diagram



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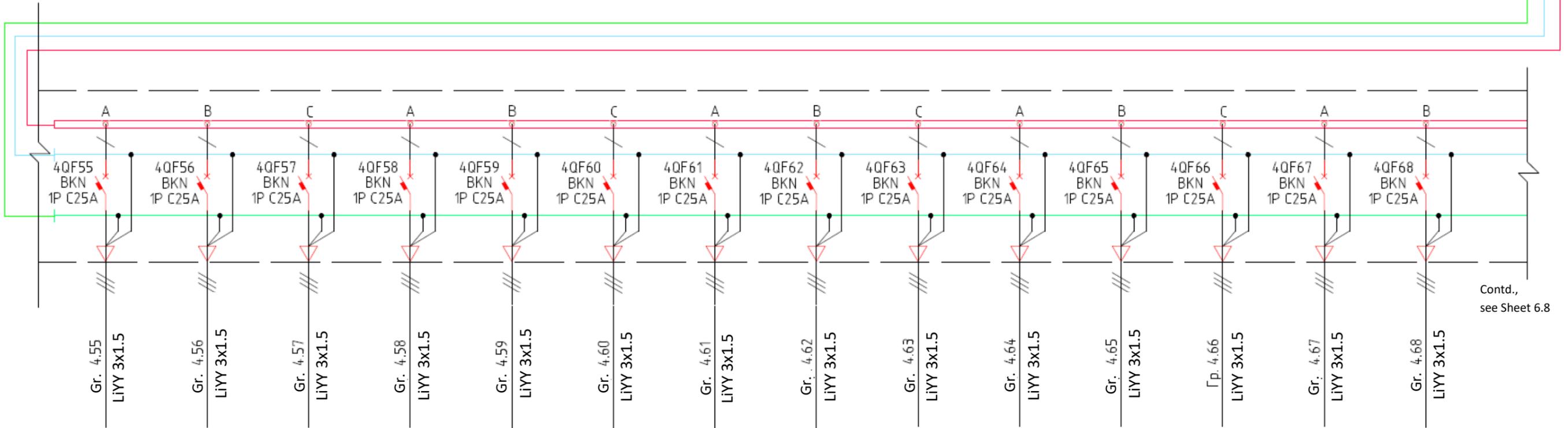
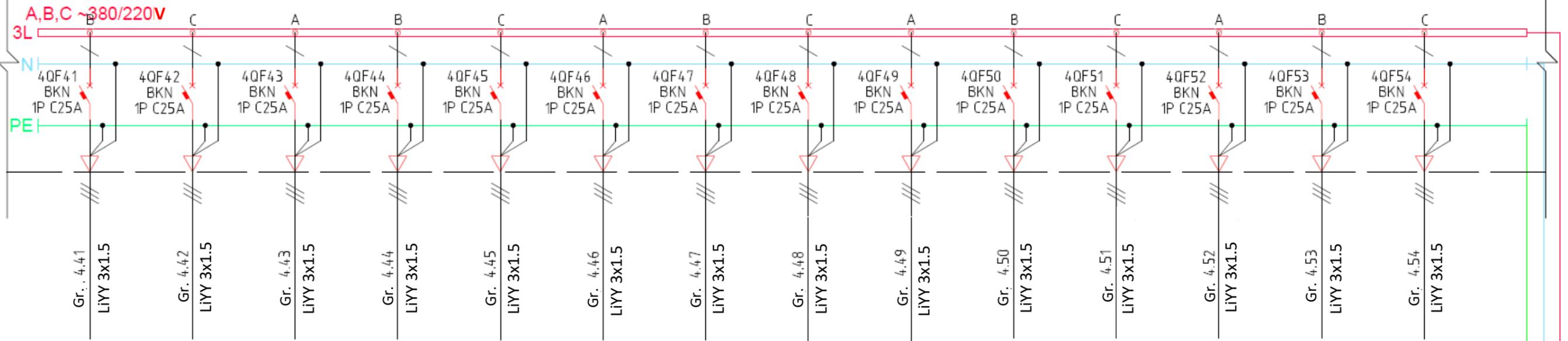
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see Sheet 6.8

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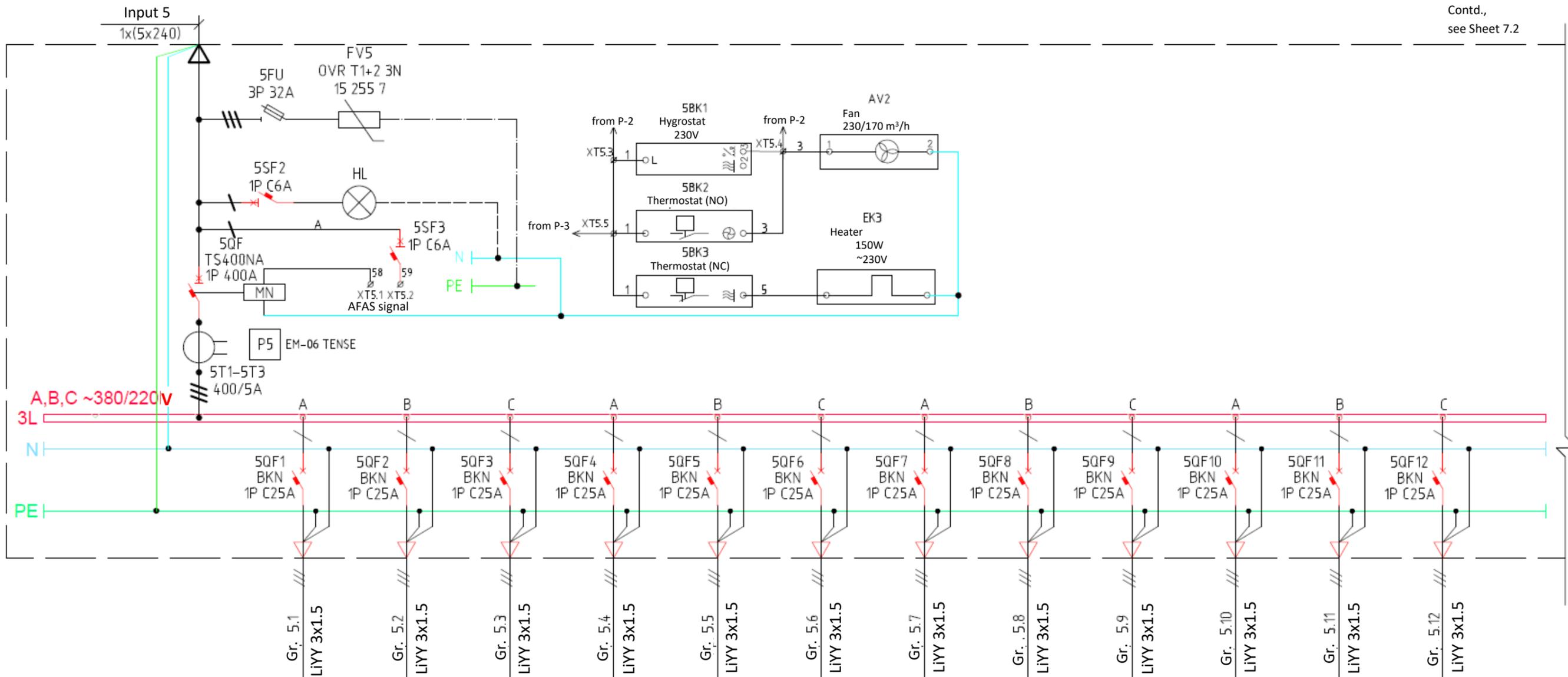
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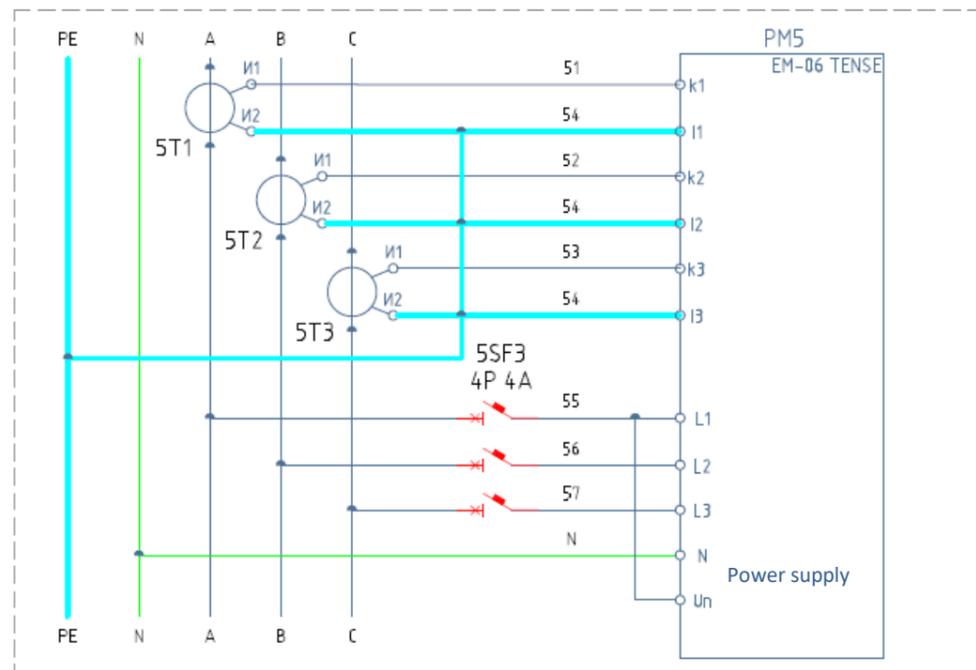
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EM-06 TENSE (PM5) Connection Diagram

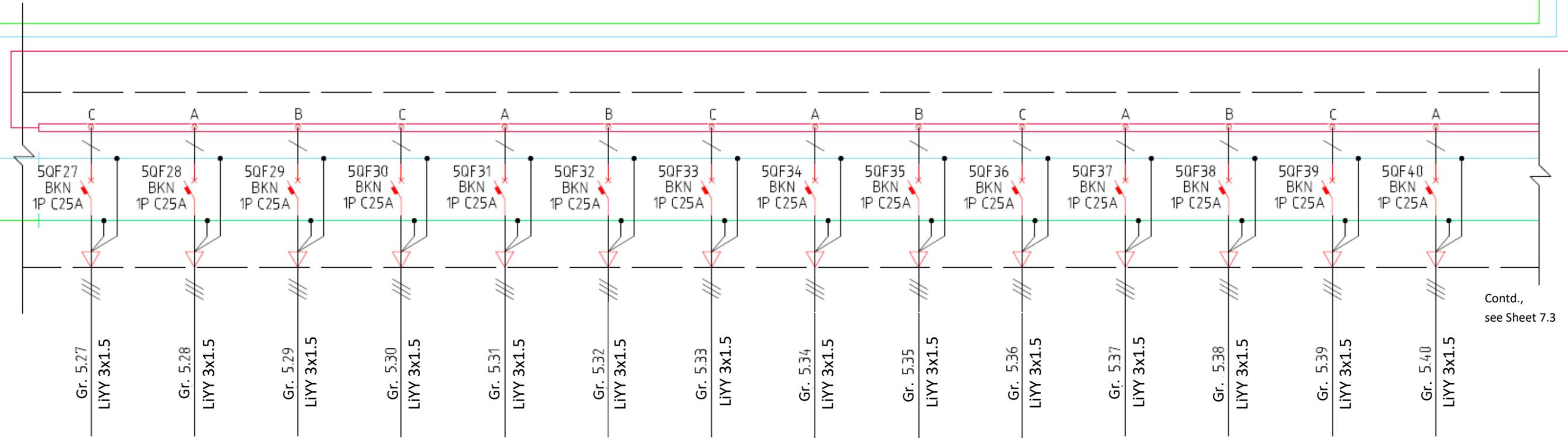
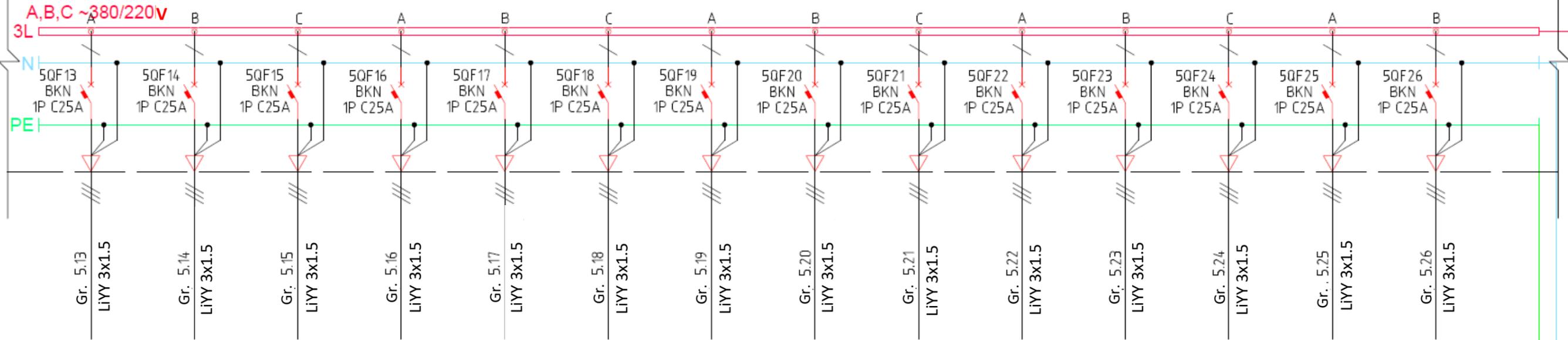


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<b>MDPC-12/17-EL</b>							
<b>Mobile Data Processing Center</b>							
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data		
CPE		Rozhnov	/Sign./	12/17			
Stndrds verified by		Sidneva	/Sign./	12/17			
Checked by		Rozhnov	/Sign./	12/17			
Prepared by		Kirillova	/Sign./	12/17			
Indoor Electrical Equipment & Lighting					Stage	Sheet	Sheets
LID P3 Electrical Schematic Diagram (Input #5, 6)					P	7.1	
MegaProektStroy LLC, Voronezh, 2017							

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see Sheet 7.1



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see Sheet 7.3

Agreed by

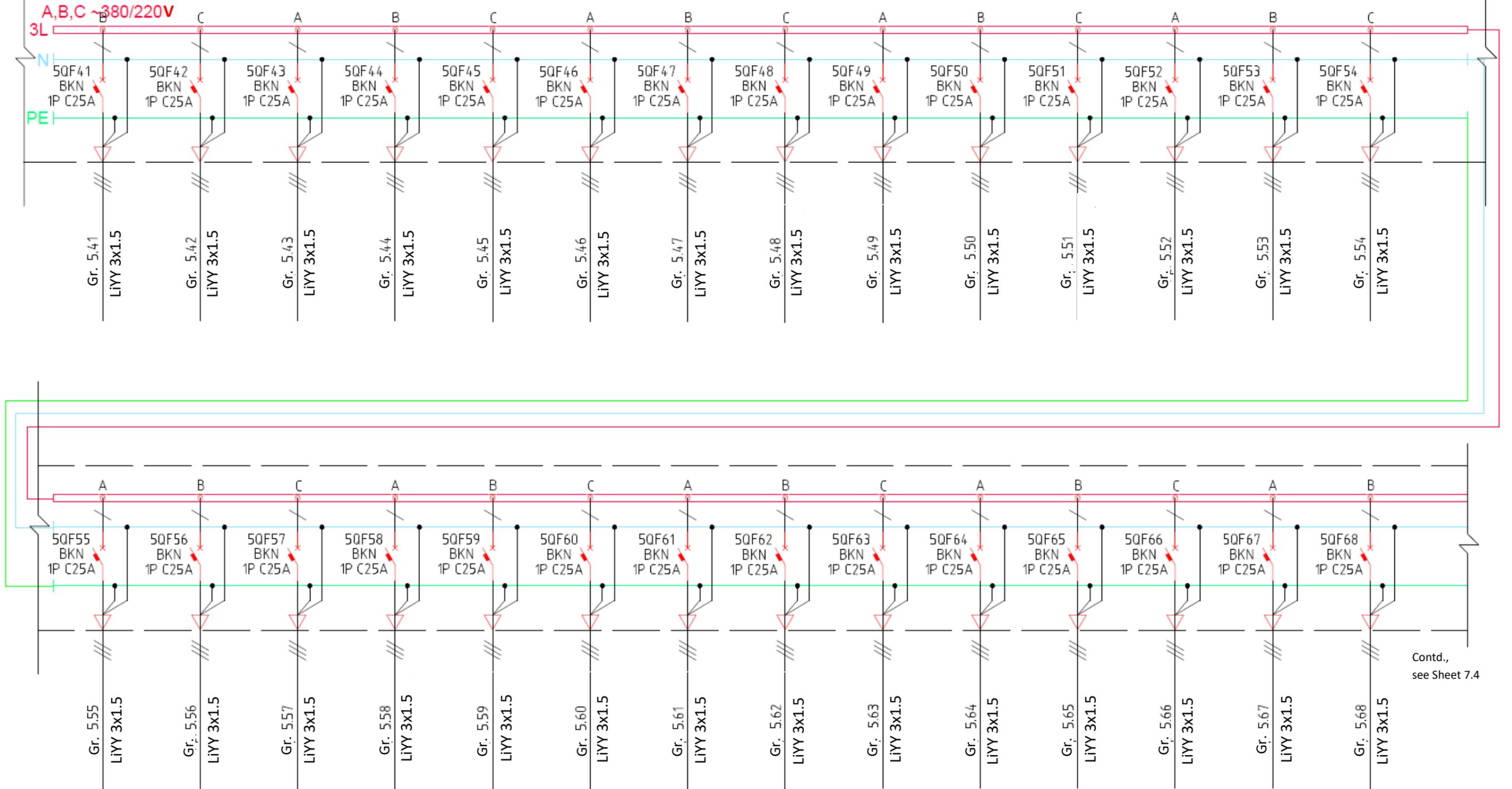
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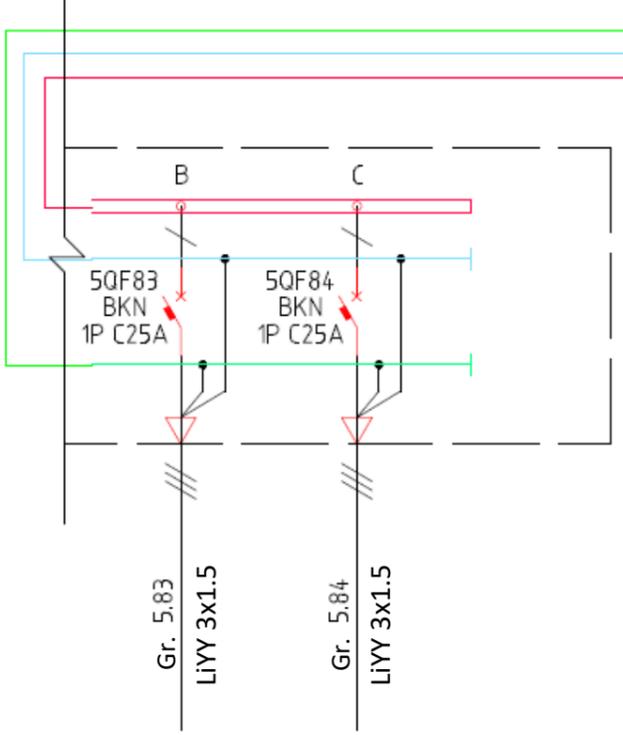
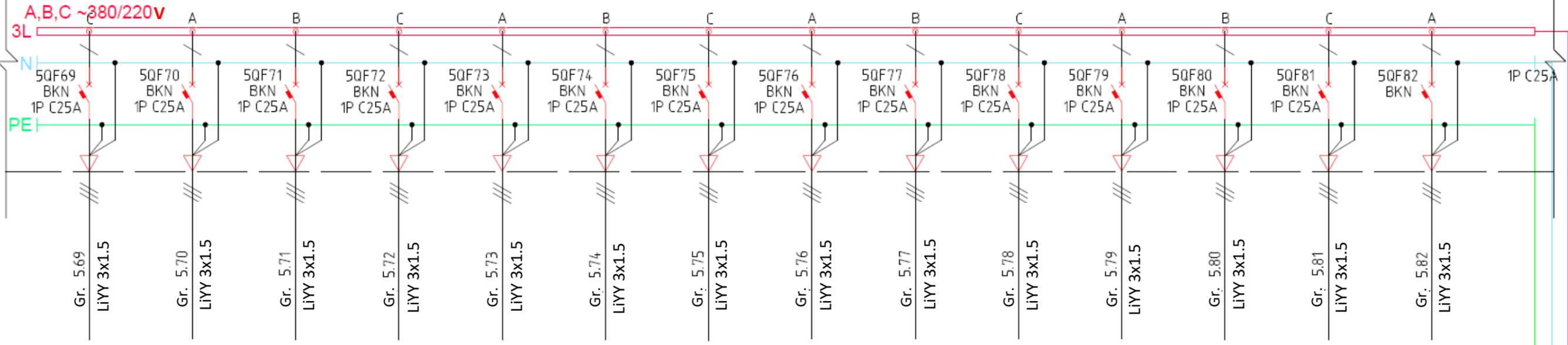
Orig. Inv. No.      Repl. Inv. No.      Signature and date

Rev.	Qty of areas	Sheet	Doc No	Sign.	Data

**MDPC-12/17-EL**

Sheet  
**7.3**

Beginning,  
see Sheet 7.3



Agreed by

Orig. Inv. No.	Signature and date	Repl. Inv. No.

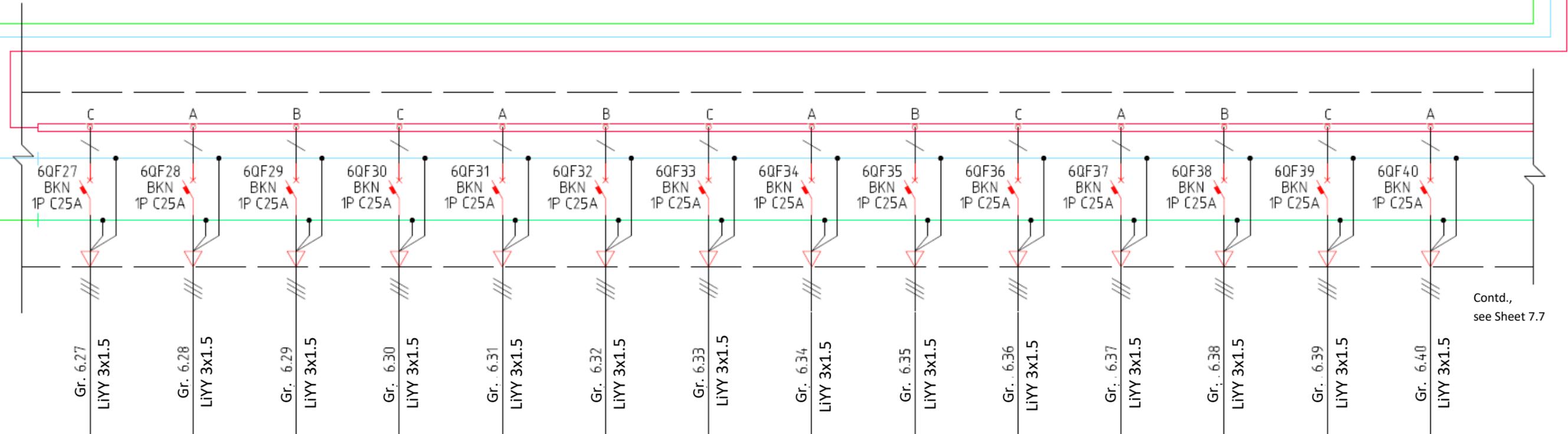
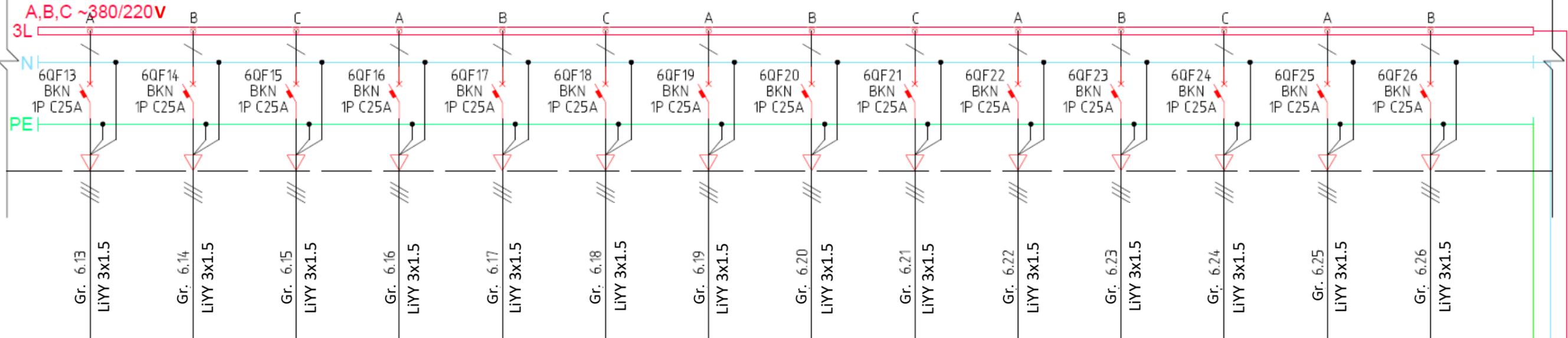
Rev.	Qty of areas	Sheet	Doc No	Sign.	Data

**MDPC-12/17-EL**

Sheet  
7.4



Beginning,  
see Sheet 7.5



Contd.,  
see Sheet 7.7

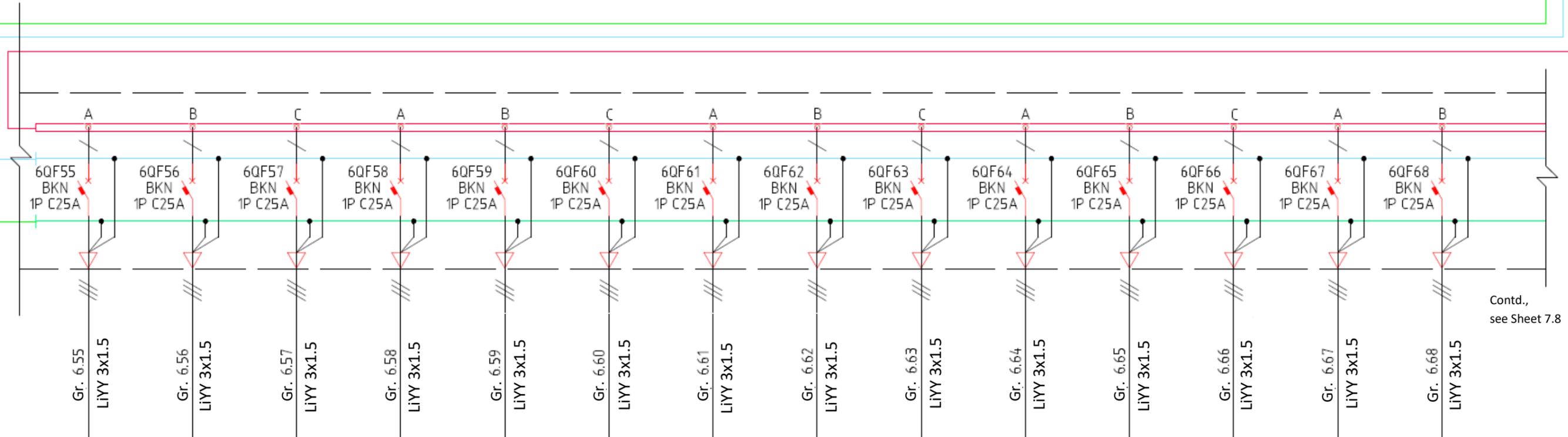
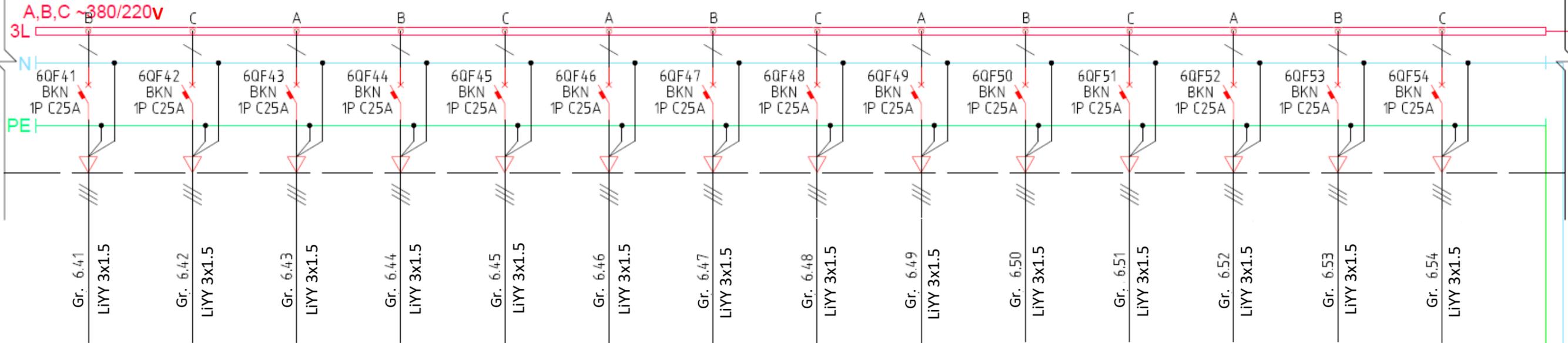
Agreed by

Orig. Inv. No.	Signature and date	Repl. Inv. No.

Rev.	Qty of areas	Sheet	Doc No	Sign.	Data

**MDPC-12/17-EL**

Beginning,  
see Sheet 7.6



Contd.,  
see Sheet 7.8

Agreed by

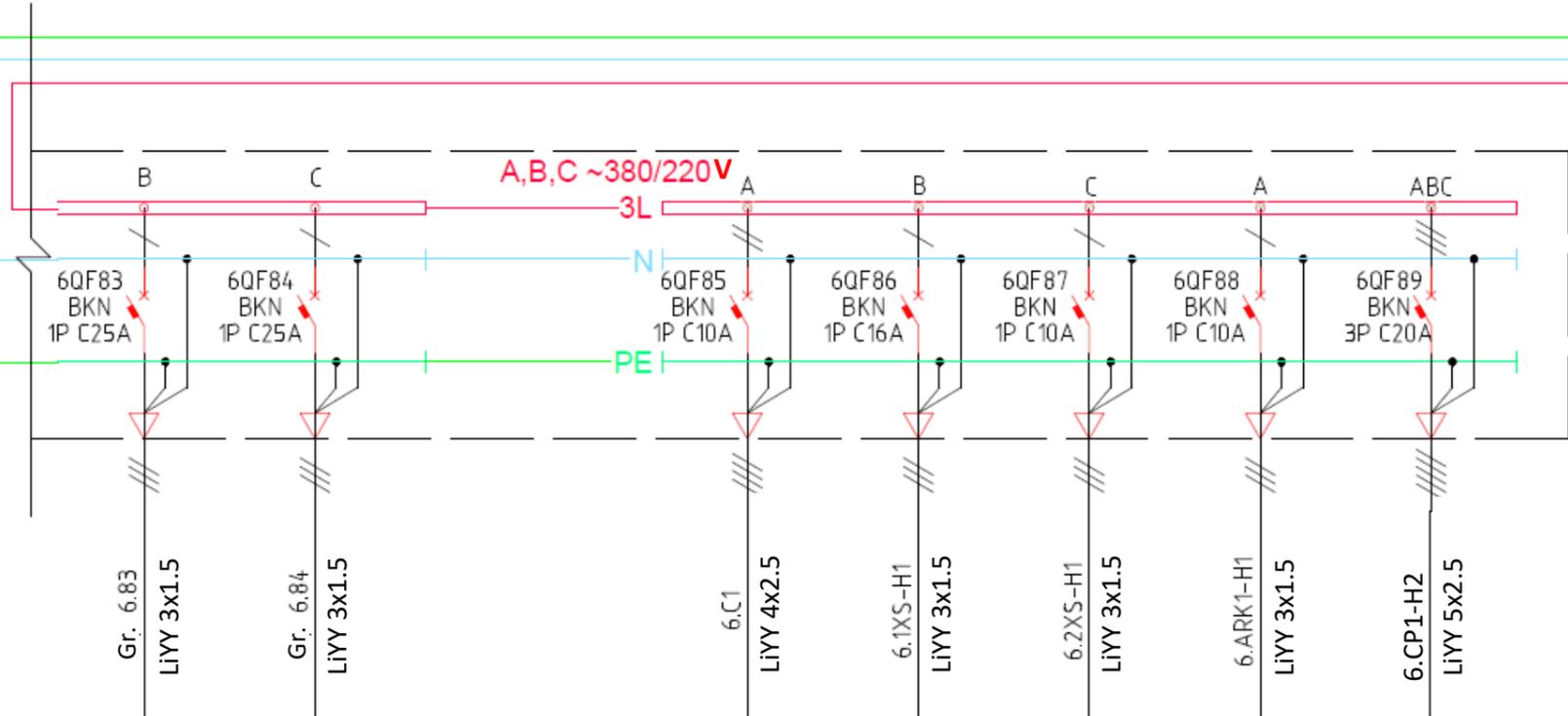
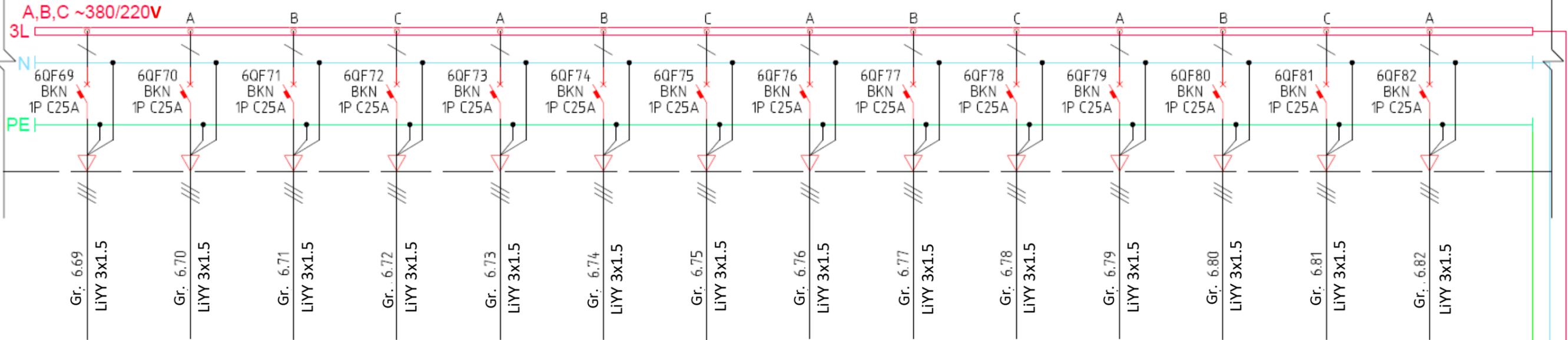
Orig. Inv. No. Signature and date Repl. Inv. No.

Rev.	Qty of areas	Sheet	Doc No	Sign.	Data

MDPC-12/17-EL

Sheet  
7.7

Beginning,  
see Sheet 7.7



Agreed by

Orig. Inv. No.	Signature and date	Repl. Inv. No.

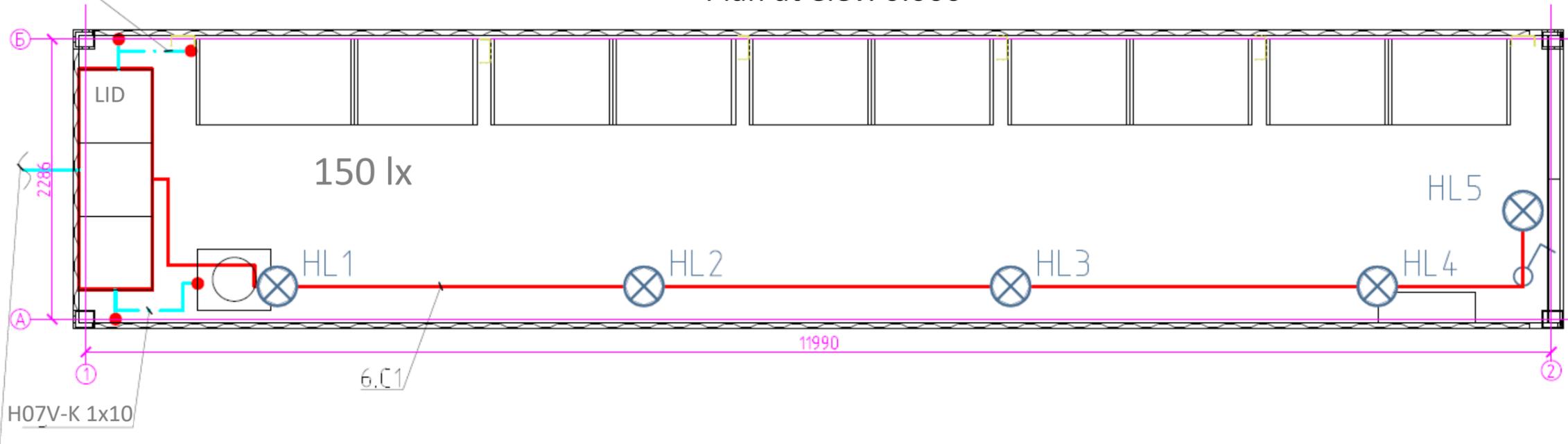
Rev.	Qty of areas	Sheet	Doc No	Sign.	Data

MDPC-12/17-EL

Sheet  
7.8

H07V-K 1x10

Plan at elev. 0.000



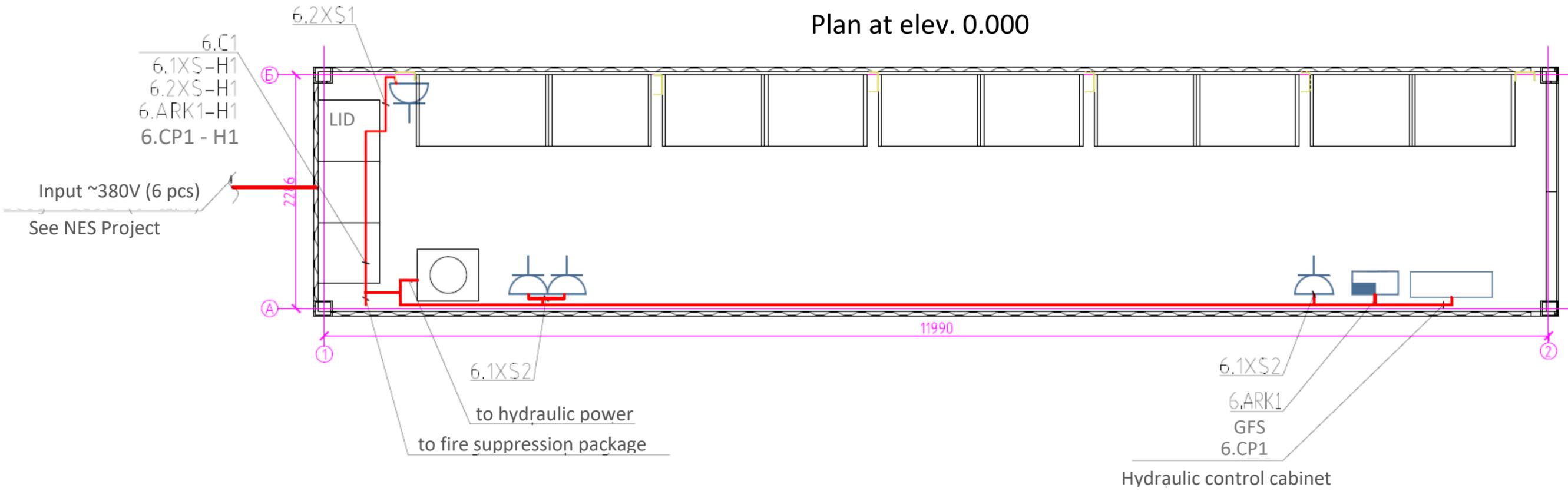
To be connected to the outer  
grounding circuit

Notes:

1. Outdoor lighting networks should be laid open in metal trays and in HDPE pipes along the walls.
2. The circuit breaker to be set up at 1.8 m from the floor.
3. The HL1 & HL4 luminaires are combined type (with integrated EPS)
4. The HL5 luminaire is the Exit light.

Agreed by

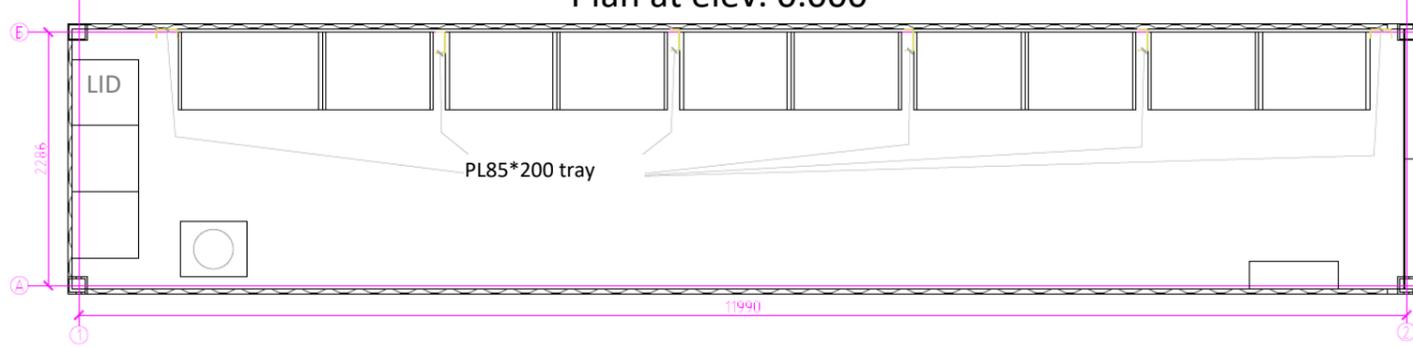

Plan at elev. 0.000



Agreed by	
Signature and date	
Repl. Inv. No.	
Orig. Inv. No.	

						<b>MDPC-12/17-EL</b>			
						<b>Mobile Data Processing Center</b>			
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Indoor Electrical Equipment & Lighting	Stage	Sheet	Sheets
CPE		Rozhnov		/Sign./	12/17		P	9	18
Stndrds verified by		Sidneva		/Sign./	12/17				
Checked by		Rozhnov		/Sign./	12/17				
Prepared by		Kirillova		/Sign./	12/17	DP Center. Elev. +0.000. Layout of Equipment and Cable Lines		 MegaProektStroy LLC, Voronezh, 2017	

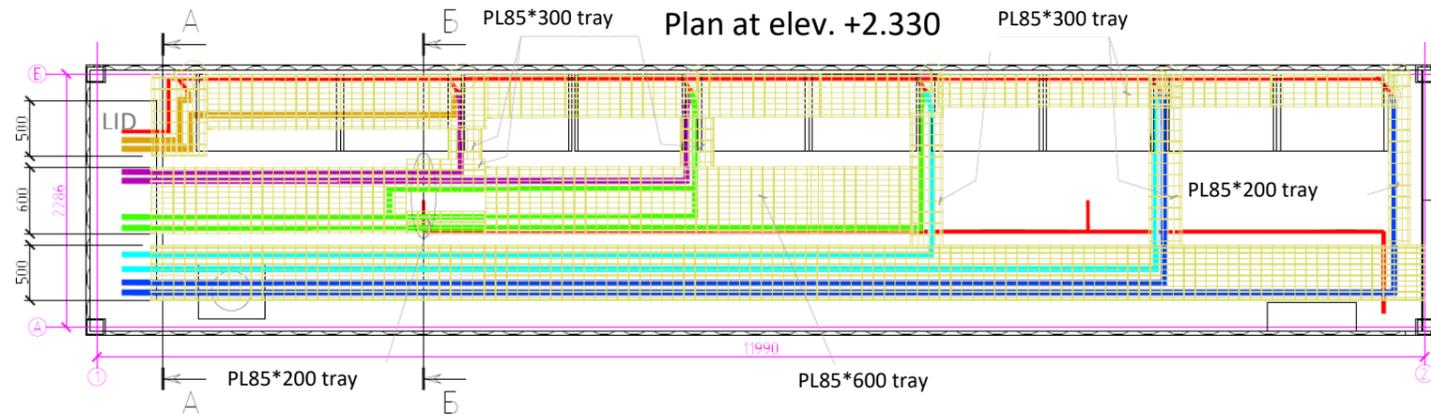
Plan at elev. 0.000



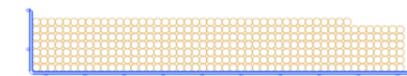
4-server unit



Plan at elev. +2.330



500x85 tray



336 lines  $\varnothing 9.7$  mm/each

300x85 tray



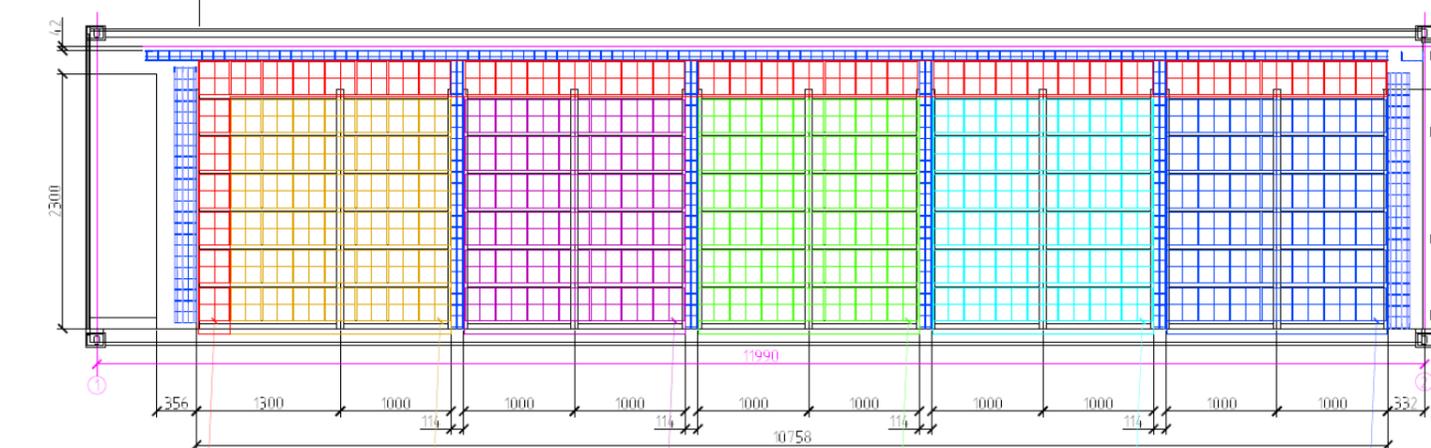
172 lines  $\varnothing 9.7$  mm/each

200x85 tray



164 lines  $\varnothing 9.7$  mm/each

Front view of racks



Equipment Input #1 Server 1.1 .. 1.168  
 Equipment Input #2 Server 2.1 .. 2.168  
 Equipment Input #3 Server 3.1 .. 3.168  
 Equipment Input #4 Server 4.1 .. 4.168  
 Equipment Input #5 Server 5.1 .. 5.168  
 Equipment Input #6 Server 6.1 .. 6.168

Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data
CPE		Rozhnov		/Sign./	12/17
Stndrs verified by		Sidneva		/Sign./	12/17
Checked by		Rozhnov		/Sign./	12/17
Prepared by		Kirillova		/Sign./	12/17

MDPC-12/17-EL

Mobile Data Processing Center

Indoor Electrical Equipment & Lighting

Stage	Sheet	Sheets
P	10	18

DP Center. Elev. +0.000. Layout of Equipment and Cable Lines



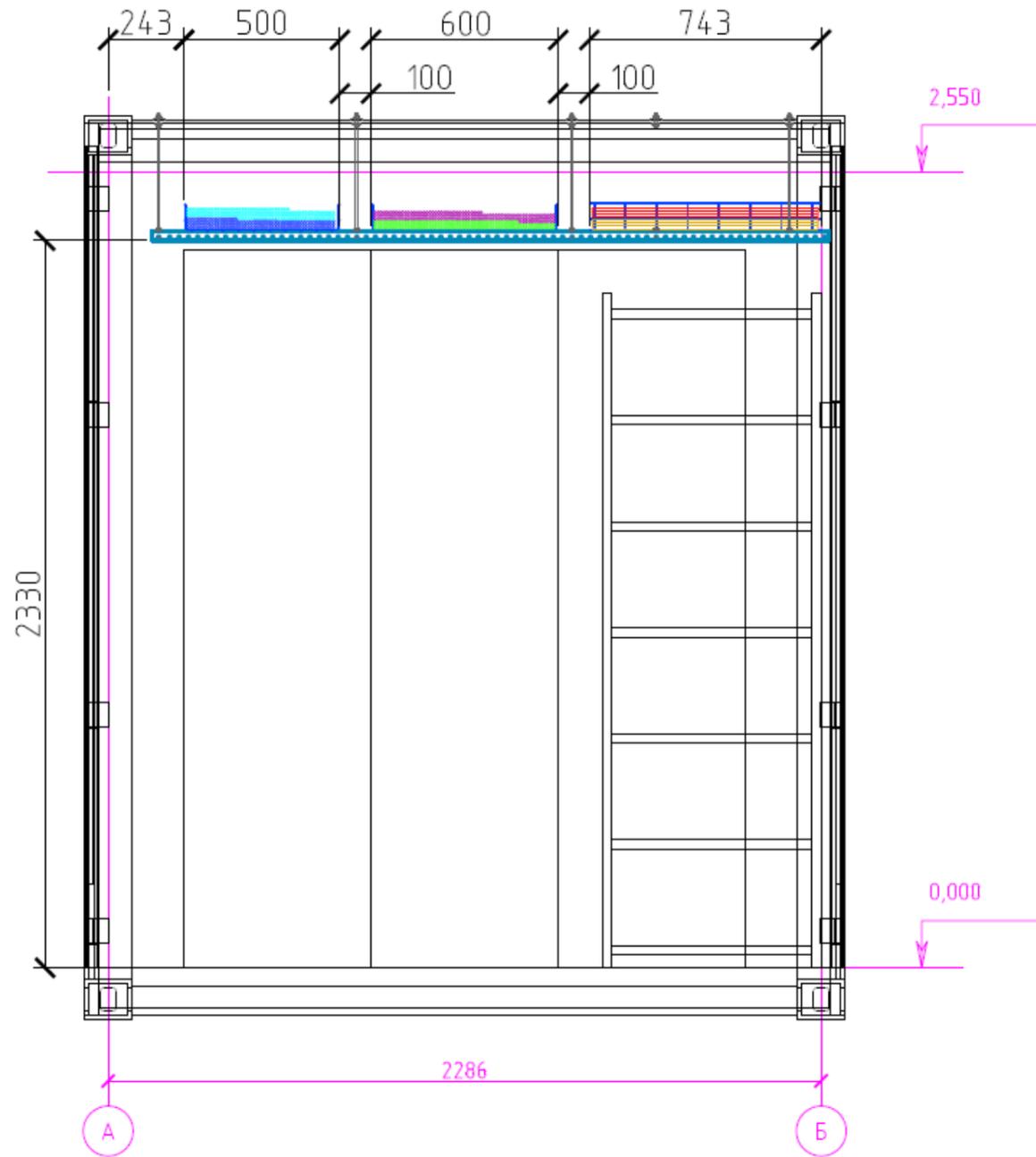
Agreed by

Repl. Inv. No.

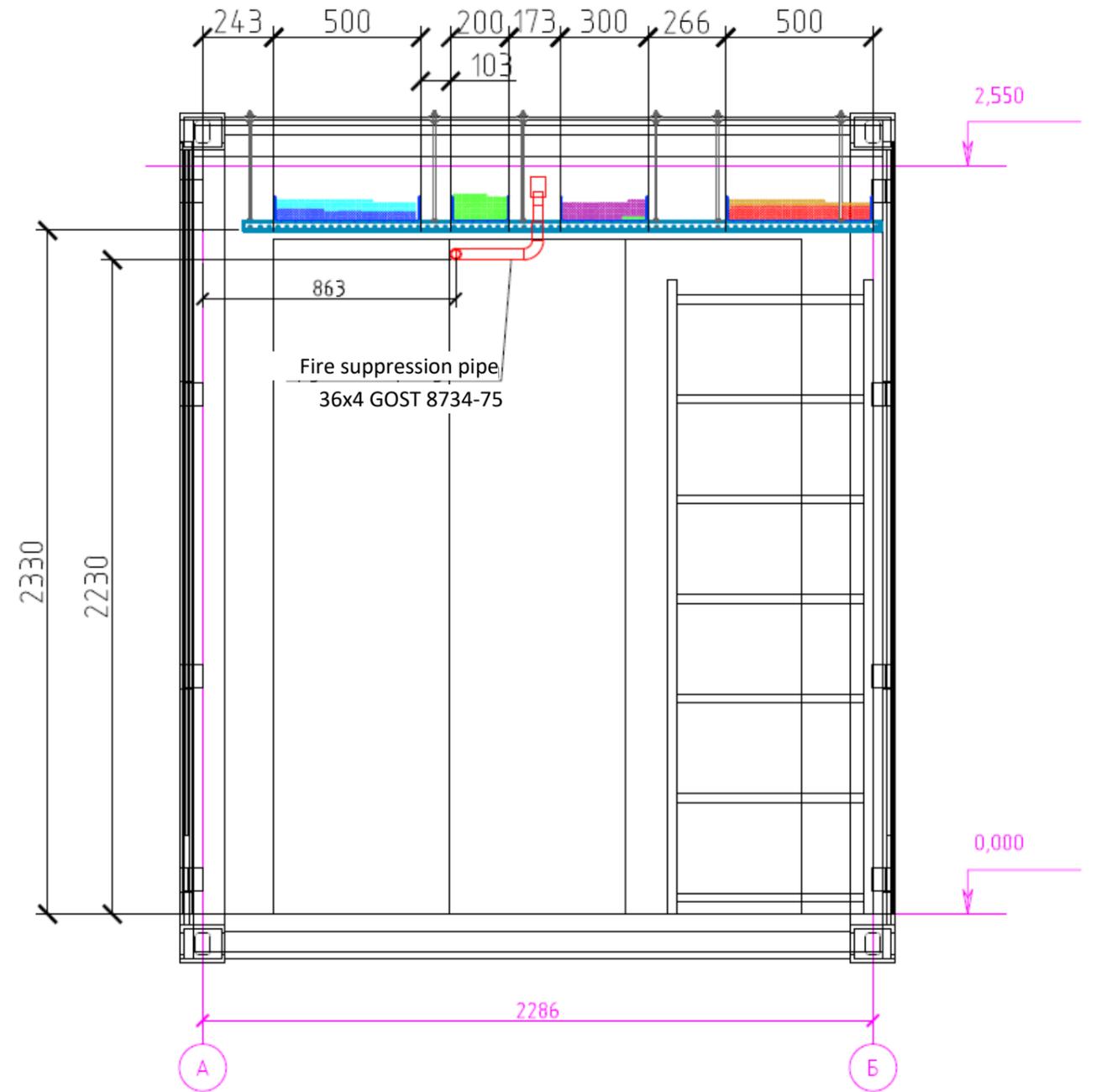
Signature and date

Orig. Inv. No.

### View A-A



### View B-B



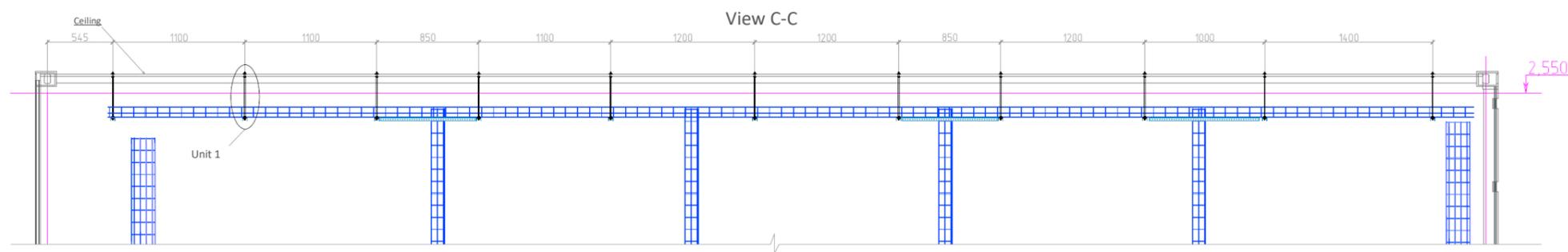
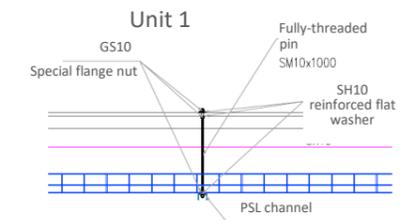
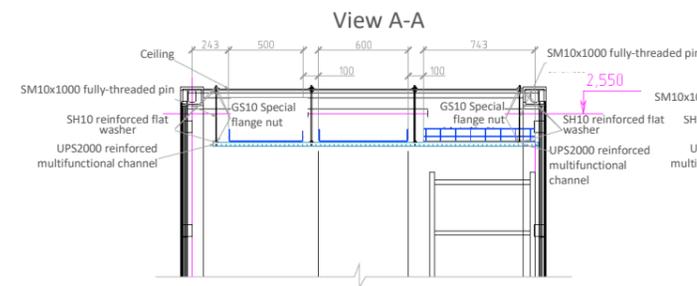
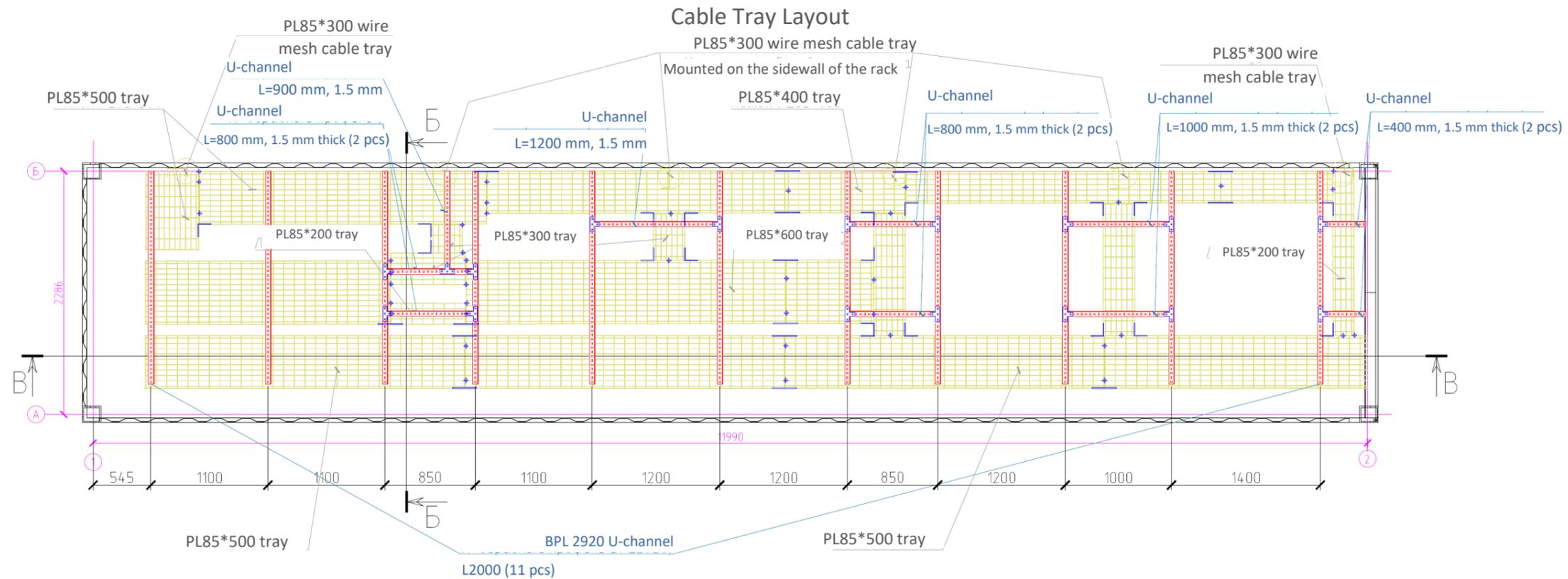
Note:

The distance to the trays is indicated from the centerline

						<b>MDPC-12/17-EL</b>			
						Mobile Data Processing Center			
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Indoor Electrical Equipment & Lighting	Stage	Sheet	Sheets
CPE		Rozhnov	/Sign./	12/17			P	11	18
Stndrds verified by		Sidneva	/Sign./	12/17					
Checked by		Rozhnov	/Sign./	12/17					
Prepared by		Kirillova	/Sign./	12/17					
						View A-A, B-B	 MegaProektStroy LLC, Voronezh, 2017		

Agreed by

Orig. Inv. No. Signature and date Repl. Inv. No.



Agreed by

Orig. Inv. No. Signature and date Repl. Inv. No.

<b>MDPC-12/17-EL</b>					
<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data
CPE		Rozhnov		/Sign./	12/17
Sndrds verified by		Sidneva		/Sign./	12/17
Checked by		Rozhnov		/Sign./	12/17
Prepared by		Kirillova		/Sign./	12/17
Indoor Electrical Equipment & Lighting				Stage	Sheet
DP Center. Elev. +0.000. Tray Layout and Mounting Plan				P	12
MegaProektSroy LLC, Voronezh, 2017				Sheets	18

Copied by

A3 size

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 1.1	LID (Input#1)	Server 1.1	PL85 wire mesh cable tray	LiYY	3x1.5	8.3			
Gr. 1.1	LID (Input#1)	Server 1.2	PL85 wire mesh cable tray	LiYY	3x1.5	8.3			
Gr. 1.2	LID (Input#1)	Server 1.3	PL85 wire mesh cable tray	LiYY	3x1.5	8.3			
Gr. 1.2	LID (Input#1)	Server 1.4	PL85 wire mesh cable tray	LiYY	3x1.5	8.3			
Gr. 1.3	LID (Input#1)	Server 1.5	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 1.3	LID (Input#1)	Server 1.6	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 1.4	LID (Input#1)	Server 1.7	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 1.4	LID (Input#1)	Server 1.8	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 1.5	LID (Input#1)	Server 1.9	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 1.5	LID (Input#1)	Server 1.10	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 1.6	LID (Input#1)	Server 1.11	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 1.6	LID (Input#1)	Server 1.12	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 1.7	LID (Input#1)	Server 1.13	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 1.7	LID (Input#1)	Server 1.14	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 1.8	LID (Input#1)	Server 1.15	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 1.8	LID (Input#1)	Server 1.16	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 1.9	LID (Input#1)	Server 1.17	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 1.9	LID (Input#1)	Server 1.18	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 1.10	LID (Input#1)	Server 1.19	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 1.10	LID (Input#1)	Server 1.20	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 1.11	LID (Input#1)	Server 1.21	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 1.11	LID (Input#1)	Server 1.22	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			

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 Signature and date  
 Orig. Inv. No

<b>MDPC-12/17-EL</b>					
<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
CPE		Rozhnov		/Sign./	12.17
Stndrds verified by		Sidneva		/Sign./	12.17
Checked by		Rozhnov		/Sign./	12.17
Prepared by		Kirillova		/Sign./	12.17
<b>Indoor Electrical Equipment &amp; Lighting</b>				Stage	Sheet
<b>LID Cable List (Input#1)</b>				P	13.1
<b>Indoor Electrical Equipment &amp; Lighting</b>				Sheets	18
<b>LID Cable List (Input#1)</b>				 <b>MegaProektStroy LLC,</b> Voronezh, 2017	

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 1.12	LID (Input#1)	Server 1.23	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 1.12	LID (Input#1)	Server 1.24	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 1.13	LID (Input#1)	Server 1.25	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.13	LID (Input#1)	Server 1.26	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.14	LID (Input#1)	Server 1.27	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.14	LID (Input#1)	Server 1.28	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.15	LID (Input#1)	Server 1.29	PL85 wire mesh cable tray	LiYY	3x1.5	8.7			
Gr. 1.15	LID (Input#1)	Server 1.30	PL85 wire mesh cable tray	LiYY	3x1.5	8.7			
Gr. 1.16	LID (Input#1)	Server 1.31	PL85 wire mesh cable tray	LiYY	3x1.5	8.7			
Gr. 1.16	LID (Input#1)	Server 1.32	PL85 wire mesh cable tray	LiYY	3x1.5	8.7			
Gr. 1.17	LID (Input#1)	Server 1.33	PL85 wire mesh cable tray	LiYY	3x1.5	9.1			
Gr. 1.17	LID (Input#1)	Server 1.34	PL85 wire mesh cable tray	LiYY	3x1.5	9.1			
Gr. 1.18	LID (Input#1)	Server 1.35	PL85 wire mesh cable tray	LiYY	3x1.5	9.1			
Gr. 1.18	LID (Input#1)	Server 1.36	PL85 wire mesh cable tray	LiYY	3x1.5	9.1			
Gr. 1.19	LID (Input#1)	Server 1.37	PL85 wire mesh cable tray	LiYY	3x1.5	9.5			
Gr. 1.19	LID (Input#1)	Server 1.38	PL85 wire mesh cable tray	LiYY	3x1.5	9.5			
Gr. 1.20	LID (Input#1)	Server 1.39	PL85 wire mesh cable tray	LiYY	3x1.5	9.5			
Gr. 1.20	LID (Input#1)	Server 1.40	PL85 wire mesh cable tray	LiYY	3x1.5	9.5			
Gr. 1.21	LID (Input#1)	Server 1.41	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.21	LID (Input#1)	Server 1.42	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.22	LID (Input#1)	Server 1.43	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.22	LID (Input#1)	Server 1.44	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.23	LID (Input#1)	Server 1.45	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.23	LID (Input#1)	Server 1.46	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.24	LID (Input#1)	Server 1.47	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.24	LID (Input#1)	Server 1.48	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.25	LID (Input#1)	Server 1.49	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			

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 Orig. Inv. No

Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 1.25	LID (Input#1)	Server 1.50	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 1.26	LID (Input#1)	Server 1.51	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 1.26	LID (Input#1)	Server 1.52	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 1.27	LID (Input#1)	Server 1.53	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.27	LID (Input#1)	Server 1.54	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.28	LID (Input#1)	Server 1.55	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.28	LID (Input#1)	Server 1.56	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 1.29	LID (Input#1)	Server 1.57	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.29	LID (Input#1)	Server 1.58	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.30	LID (Input#1)	Server 1.59	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.30	LID (Input#1)	Server 1.60	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 1.31	LID (Input#1)	Server 1.61	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 1.31	LID (Input#1)	Server 1.62	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 1.32	LID (Input#1)	Server 1.63	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 1.32	LID (Input#1)	Server 1.64	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 1.33	LID (Input#1)	Server 1.65	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 1.33	LID (Input#1)	Server 1.66	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 1.34	LID (Input#1)	Server 1.67	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 1.34	LID (Input#1)	Server 1.68	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 1.35	LID (Input#1)	Server 1.69	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.35	LID (Input#1)	Server 1.70	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.36	LID (Input#1)	Server 1.71	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.36	LID (Input#1)	Server 1.72	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.37	LID (Input#1)	Server 1.73	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			
Gr. 1.37	LID (Input#1)	Server 1.74	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			
Gr. 1.38	LID (Input#1)	Server 1.75	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			
Gr. 1.38	LID (Input#1)	Server 1.76	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			

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 Signature and date  
 Orig. Inv. No

Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 1.39	LID (Input#1)	Server 1.77	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.39	LID (Input#1)	Server 1.78	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.40	LID (Input#1)	Server 1.79	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.40	LID (Input#1)	Server 1.80	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.41	LID (Input#1)	Server 1.81	PL85 wire mesh cable tray	LiYY	3x1.5	15.6			
Gr. 1.41	LID (Input#1)	Server 1.82	PL85 wire mesh cable tray	LiYY	3x1.5	15.6			
Gr. 1.42	LID (Input#1)	Server 1.83	PL85 wire mesh cable tray	LiYY	3x1.5	15.6			
Gr. 1.42	LID (Input#1)	Server 1.84	PL85 wire mesh cable tray	LiYY	3x1.5	15.6			
Gr. 1.43	LID (Input#1)	Server 1.85	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.43	LID (Input#1)	Server 1.86	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.44	LID (Input#1)	Server 1.87	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.44	LID (Input#1)	Server 1.88	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 1.45	LID (Input#1)	Server 1.89	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			
Gr. 1.45	LID (Input#1)	Server 1.90	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			
Gr. 1.46	LID (Input#1)	Server 1.91	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			
Gr. 1.46	LID (Input#1)	Server 1.92	PL85 wire mesh cable tray	LiYY	3x1.5	14.8			
Gr. 1.47	LID (Input#1)	Server 1.93	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.47	LID (Input#1)	Server 1.94	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.48	LID (Input#1)	Server 1.95	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.48	LID (Input#1)	Server 1.96	PL85 wire mesh cable tray	LiYY	3x1.5	15.2			
Gr. 1.49	LID (Input#1)	Server 1.97	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.49	LID (Input#1)	Server 1.98	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.50	LID (Input#1)	Server 1.99	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.50	LID (Input#1)	Server 1.100	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.51	LID (Input#1)	Server 1.101	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 1.51	LID (Input#1)	Server 1.102	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 1.52	LID (Input#1)	Server 1.103	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 1.52	LID (Input#1)	Server 1.104	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 1.53	LID (Input#1)	Server 1.105	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.53	LID (Input#1)	Server 1.106	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.54	LID (Input#1)	Server 1.107	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.54	LID (Input#1)	Server 1.108	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.55	LID (Input#1)	Server 1.109	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 1.55	LID (Input#1)	Server 1.110	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 1.56	LID (Input#1)	Server 1.111	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 1.56	LID (Input#1)	Server 1.112	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 1.57	LID (Input#1)	Server 1.113	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.57	LID (Input#1)	Server 1.114	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.58	LID (Input#1)	Server 1.115	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.58	LID (Input#1)	Server 1.116	PL85 wire mesh cable tray	LiYY	3x1.5	17.2			
Gr. 1.59	LID (Input#1)	Server 1.117	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 1.59	LID (Input#1)	Server 1.118	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 1.60	LID (Input#1)	Server 1.119	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 1.60	LID (Input#1)	Server 1.120	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 1.61	LID (Input#1)	Server 1.121	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.61	LID (Input#1)	Server 1.122	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.62	LID (Input#1)	Server 1.123	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.62	LID (Input#1)	Server 1.124	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 1.63	LID (Input#1)	Server 1.125	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.63	LID (Input#1)	Server 1.126	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.64	LID (Input#1)	Server 1.127	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.64	LID (Input#1)	Server 1.128	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.65	LID (Input#1)	Server 1.129	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			
Gr. 1.65	LID (Input#1)	Server 1.130	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

Sheet  
13.5

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 1.66	LID (Input#1)	Server 1.131	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			
Gr. 1.66	LID (Input#1)	Server 1.132	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			
Gr. 1.67	LID (Input#1)	Server 1.133	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.67	LID (Input#1)	Server 1.134	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.68	LID (Input#1)	Server 1.135	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.68	LID (Input#1)	Server 1.136	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.69	LID (Input#1)	Server 1.137	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 1.69	LID (Input#1)	Server 1.138	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 1.70	LID (Input#1)	Server 1.139	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 1.70	LID (Input#1)	Server 1.140	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 1.71	LID (Input#1)	Server 1.141	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.71	LID (Input#1)	Server 1.142	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.72	LID (Input#1)	Server 1.143	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.72	LID (Input#1)	Server 1.144	PL85 wire mesh cable tray	LiYY	3x1.5	19.9			
Gr. 1.73	LID (Input#1)	Server 1.145	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			
Gr. 1.73	LID (Input#1)	Server 1.146	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			
Gr. 1.74	LID (Input#1)	Server 1.147	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			
Gr. 1.74	LID (Input#1)	Server 1.148	PL85 wire mesh cable tray	LiYY	3x1.5	20.3			
Gr. 1.75	LID (Input#1)	Server 1.149	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.75	LID (Input#1)	Server 1.150	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.76	LID (Input#1)	Server 1.151	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.76	LID (Input#1)	Server 1.152	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 1.77	LID (Input#1)	Server 1.153	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 1.77	LID (Input#1)	Server 1.154	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 1.78	LID (Input#1)	Server 1.155	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 1.78	LID (Input#1)	Server 1.156	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 1.79	LID (Input#1)	Server 1.157	PL85 wire mesh cable tray	LiYY	3x1.5	23.1			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

Sheet  
13.6



### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 2.1	LID (Input#2)	Server 2.1	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 2.1	LID (Input#2)	Server 2.2	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 2.2	LID (Input#2)	Server 2.3	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 2.2	LID (Input#2)	Server 2.4	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 2.3	LID (Input#2)	Server 2.5	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 2.3	LID (Input#2)	Server 2.6	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 2.4	LID (Input#2)	Server 2.7	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 2.4	LID (Input#2)	Server 2.8	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 2.5	LID (Input#2)	Server 2.9	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 2.5	LID (Input#2)	Server 2.10	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 2.6	LID (Input#2)	Server 2.11	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 2.6	LID (Input#2)	Server 2.12	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 2.7	LID (Input#2)	Server 2.13	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 2.7	LID (Input#2)	Server 2.14	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 2.8	LID (Input#2)	Server 2.15	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 2.8	LID (Input#2)	Server 2.16	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 2.9	LID (Input#2)	Server 2.17	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 2.9	LID (Input#2)	Server 2.18	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 2.10	LID (Input#2)	Server 2.19	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 2.10	LID (Input#2)	Server 2.20	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 2.11	LID (Input#2)	Server 2.21	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 2.11	LID (Input#2)	Server 2.22	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			

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<b>MDPC-12/17-EL</b>					
<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
CPE		Rozhnov		/Sign./	12.17
Stndrds verified by		Sidneva		/Sign./	12.17
Checked by		Rozhnov		/Sign./	12.17
Prepared by		Kirillova		/Sign./	12.17
<b>Indoor Electrical Equipment &amp; Lighting</b>				Stage	Sheet
<b>LID Cable List (Input#2)</b>				P	14.1
<b>Indoor Electrical Equipment &amp; Lighting</b>				Sheets	18
<b>LID Cable List (Input#2)</b>				 <b>MegaProektStroy LLC,</b> Voronezh, 2017	

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 2.12	LID (Input#2)	Server 2.23	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 2.12	LID (Input#2)	Server 2.24	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 2.13	LID (Input#2)	Server 2.25	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 2.13	LID (Input#2)	Server 2.26	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 2.14	LID (Input#2)	Server 2.27	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 2.14	LID (Input#2)	Server 2.28	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 2.15	LID (Input#2)	Server 2.29	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 2.15	LID (Input#2)	Server 2.30	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 2.16	LID (Input#2)	Server 2.31	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 2.16	LID (Input#2)	Server 2.32	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 2.17	LID (Input#2)	Server 2.33	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 2.17	LID (Input#2)	Server 2.34	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 2.18	LID (Input#2)	Server 2.35	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 2.18	LID (Input#2)	Server 2.36	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 2.19	LID (Input#2)	Server 2.37	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 2.19	LID (Input#2)	Server 2.38	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 2.20	LID (Input#2)	Server 2.39	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 2.20	LID (Input#2)	Server 2.40	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 2.21	LID (Input#2)	Server 2.41	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 2.21	LID (Input#2)	Server 2.42	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 2.22	LID (Input#2)	Server 2.43	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 2.22	LID (Input#2)	Server 2.44	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 2.23	LID (Input#2)	Server 2.45	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 2.23	LID (Input#2)	Server 2.46	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 2.24	LID (Input#2)	Server 2.47	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 2.24	LID (Input#2)	Server 2.48	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 2.25	LID (Input#2)	Server 2.49	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 2.25	LID (Input#2)	Server 2.50	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			
Gr. 2.26	LID (Input#2)	Server 2.51	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			
Gr. 2.26	LID (Input#2)	Server 2.52	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			
Gr. 2.27	LID (Input#2)	Server 2.53	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 2.27	LID (Input#2)	Server 2.54	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 2.28	LID (Input#2)	Server 2.55	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 2.28	LID (Input#2)	Server 2.56	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 2.29	LID (Input#2)	Server 2.57	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 2.29	LID (Input#2)	Server 2.58	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 2.30	LID (Input#2)	Server 2.59	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 2.30	LID (Input#2)	Server 2.60	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 2.31	LID (Input#2)	Server 2.61	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 2.31	LID (Input#2)	Server 2.62	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 2.32	LID (Input#2)	Server 2.63	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 2.32	LID (Input#2)	Server 2.64	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 2.33	LID (Input#2)	Server 2.65	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 2.33	LID (Input#2)	Server 2.66	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 2.34	LID (Input#2)	Server 2.67	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 2.34	LID (Input#2)	Server 2.68	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 2.35	LID (Input#2)	Server 2.69	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 2.35	LID (Input#2)	Server 2.70	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 2.36	LID (Input#2)	Server 2.71	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 2.36	LID (Input#2)	Server 2.72	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 2.37	LID (Input#2)	Server 2.73	PL85 wire mesh cable tray	LiYY	3x1.5	10			
Gr. 2.37	LID (Input#2)	Server 2.74	PL85 wire mesh cable tray	LiYY	3x1.5	10			
Gr. 2.38	LID (Input#2)	Server 2.75	PL85 wire mesh cable tray	LiYY	3x1.5	10			
Gr. 2.38	LID (Input#2)	Server 2.76	PL85 wire mesh cable tray	LiYY	3x1.5	10			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 2.39	LID (Input#2)	Server 2.77	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 2.39	LID (Input#2)	Server 2.78	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 2.40	LID (Input#2)	Server 2.79	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 2.40	LID (Input#2)	Server 2.80	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 2.41	LID (Input#2)	Server 2.81	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 2.41	LID (Input#2)	Server 2.82	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 2.42	LID (Input#2)	Server 2.83	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 2.42	LID (Input#2)	Server 2.84	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 2.43	LID (Input#2)	Server 2.85	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 2.43	LID (Input#2)	Server 2.86	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 2.44	LID (Input#2)	Server 2.87	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 2.44	LID (Input#2)	Server 2.88	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 2.45	LID (Input#2)	Server 2.89	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 2.45	LID (Input#2)	Server 2.90	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 2.46	LID (Input#2)	Server 2.91	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 2.46	LID (Input#2)	Server 2.92	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 2.47	LID (Input#2)	Server 2.93	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 2.47	LID (Input#2)	Server 2.94	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 2.48	LID (Input#2)	Server 2.95	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 2.48	LID (Input#2)	Server 2.96	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 2.49	LID (Input#2)	Server 2.97	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 2.49	LID (Input#2)	Server 2.98	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 2.50	LID (Input#2)	Server 2.99	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 2.50	LID (Input#2)	Server 2.100	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 2.51	LID (Input#2)	Server 2.101	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			
Gr. 2.51	LID (Input#2)	Server 2.102	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			
Gr. 2.52	LID (Input#2)	Server 2.103	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

Sheet  
**14.4**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 2.52	LID (Input#2)	Server 2.104	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			
Gr. 2.53	LID (Input#2)	Server 2.105	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 2.53	LID (Input#2)	Server 2.106	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 2.54	LID (Input#2)	Server 2.107	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 2.54	LID (Input#2)	Server 2.108	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 2.55	LID (Input#2)	Server 2.109	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 2.55	LID (Input#2)	Server 2.110	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 2.56	LID (Input#2)	Server 2.111	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 2.56	LID (Input#2)	Server 2.112	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 2.57	LID (Input#2)	Server 2.113	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 2.57	LID (Input#2)	Server 2.114	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 2.58	LID (Input#2)	Server 2.115	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 2.58	LID (Input#2)	Server 2.116	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 2.59	LID (Input#2)	Server 2.117	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 2.59	LID (Input#2)	Server 2.118	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 2.60	LID (Input#2)	Server 2.119	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 2.60	LID (Input#2)	Server 2.120	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 2.61	LID (Input#2)	Server 2.121	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 2.61	LID (Input#2)	Server 2.122	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 2.62	LID (Input#2)	Server 2.123	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 2.62	LID (Input#2)	Server 2.124	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 2.63	LID (Input#2)	Server 2.125	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 2.63	LID (Input#2)	Server 2.126	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 2.64	LID (Input#2)	Server 2.127	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 2.64	LID (Input#2)	Server 2.128	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 2.65	LID (Input#2)	Server 2.129	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			
Gr. 2.65	LID (Input#2)	Server 2.130	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 2.66	LID (Input#2)	Server 2.131	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			
Gr. 2.66	LID (Input#2)	Server 2.132	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			
Gr. 2.67	LID (Input#2)	Server 2.133	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 2.67	LID (Input#2)	Server 2.134	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 2.68	LID (Input#2)	Server 2.135	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 2.68	LID (Input#2)	Server 2.136	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 2.69	LID (Input#2)	Server 2.137	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 2.69	LID (Input#2)	Server 2.138	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 2.70	LID (Input#2)	Server 2.139	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 2.70	LID (Input#2)	Server 2.140	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 2.71	LID (Input#2)	Server 2.141	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 2.71	LID (Input#2)	Server 2.142	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 2.72	LID (Input#2)	Server 2.143	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 2.72	LID (Input#2)	Server 2.144	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 2.73	LID (Input#2)	Server 2.145	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 2.73	LID (Input#2)	Server 2.146	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 2.74	LID (Input#2)	Server 2.147	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 2.74	LID (Input#2)	Server 2.148	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 2.75	LID (Input#2)	Server 2.149	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 2.75	LID (Input#2)	Server 2.150	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 2.76	LID (Input#2)	Server 2.151	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 2.76	LID (Input#2)	Server 2.152	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 2.77	LID (Input#2)	Server 2.153	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 2.77	LID (Input#2)	Server 2.154	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 2.78	LID (Input#2)	Server 2.155	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 2.78	LID (Input#2)	Server 2.156	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 2.79	LID (Input#2)	Server 2.157	PL85 wire mesh cable tray	LiYY	3x1.5	14.3			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**



### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 3.1	LID (Input#3)	Server 3.1	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 3.1	LID (Input#3)	Server 3.2	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 3.2	LID (Input#3)	Server 3.3	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 3.2	LID (Input#3)	Server 3.4	PL85 wire mesh cable tray	LiYY	3x1.5	8.8			
Gr. 3.3	LID (Input#3)	Server 3.5	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 3.3	LID (Input#3)	Server 3.6	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 3.4	LID (Input#3)	Server 3.7	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 3.4	LID (Input#3)	Server 3.8	PL85 wire mesh cable tray	LiYY	3x1.5	9.4			
Gr. 3.5	LID (Input#3)	Server 3.9	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 3.5	LID (Input#3)	Server 3.10	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 3.6	LID (Input#3)	Server 3.11	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 3.6	LID (Input#3)	Server 3.12	PL85 wire mesh cable tray	LiYY	3x1.5	9.9			
Gr. 3.7	LID (Input#3)	Server 3.13	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 3.7	LID (Input#3)	Server 3.14	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 3.8	LID (Input#3)	Server 3.15	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 3.8	LID (Input#3)	Server 3.16	PL85 wire mesh cable tray	LiYY	3x1.5	10.4			
Gr. 3.9	LID (Input#3)	Server 3.17	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 3.9	LID (Input#3)	Server 3.18	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 3.10	LID (Input#3)	Server 3.19	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 3.10	LID (Input#3)	Server 3.20	PL85 wire mesh cable tray	LiYY	3x1.5	10.9			
Gr. 3.11	LID (Input#3)	Server 3.21	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 3.11	LID (Input#3)	Server 3.22	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			

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<b>MDPC-12/17-EL</b>					
<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
CPE		Rozhnov		/Sign./	12.17
Stndrds verified by		Sidneva		/Sign./	12.17
Checked by		Rozhnov		/Sign./	12.17
Prepared by		Kirillova		/Sign./	12.17
<b>Indoor Electrical Equipment &amp; Lighting</b>				Stage	Sheet
<b>LID Cable List (Input#3)</b>				P	15.1
<b>Indoor Electrical Equipment &amp; Lighting</b>				Sheets	18
<b>LID Cable List (Input#3)</b>				 <b>MegaProektStroy LLC,</b> Voronezh, 2017	

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 3.12	LID (Input#3)	Server 3.23	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 3.12	LID (Input#3)	Server 3.24	PL85 wire mesh cable tray	LiYY	3x1.5	11.4			
Gr. 3.13	LID (Input#3)	Server 3.25	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 3.13	LID (Input#3)	Server 3.26	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 3.14	LID (Input#3)	Server 3.27	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 3.14	LID (Input#3)	Server 3.28	PL85 wire mesh cable tray	LiYY	3x1.5	9.2			
Gr. 3.15	LID (Input#3)	Server 3.29	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 3.15	LID (Input#3)	Server 3.30	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 3.16	LID (Input#3)	Server 3.31	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 3.16	LID (Input#3)	Server 3.32	PL85 wire mesh cable tray	LiYY	3x1.5	9.8			
Gr. 3.17	LID (Input#3)	Server 3.33	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 3.17	LID (Input#3)	Server 3.34	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 3.18	LID (Input#3)	Server 3.35	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 3.18	LID (Input#3)	Server 3.36	PL85 wire mesh cable tray	LiYY	3x1.5	10.3			
Gr. 3.19	LID (Input#3)	Server 3.37	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 3.19	LID (Input#3)	Server 3.38	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 3.20	LID (Input#3)	Server 3.39	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 3.20	LID (Input#3)	Server 3.40	PL85 wire mesh cable tray	LiYY	3x1.5	10.8			
Gr. 3.21	LID (Input#3)	Server 3.41	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 3.21	LID (Input#3)	Server 3.42	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 3.22	LID (Input#3)	Server 3.43	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 3.22	LID (Input#3)	Server 3.44	PL85 wire mesh cable tray	LiYY	3x1.5	11.3			
Gr. 3.23	LID (Input#3)	Server 3.45	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 3.23	LID (Input#3)	Server 3.46	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 3.24	LID (Input#3)	Server 3.47	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 3.24	LID (Input#3)	Server 3.48	PL85 wire mesh cable tray	LiYY	3x1.5	11.8			
Gr. 3.25	LID (Input#3)	Server 3.49	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			

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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 3.25	LID (Input#3)	Server 3.50	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			
Gr. 3.26	LID (Input#3)	Server 3.51	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			
Gr. 3.26	LID (Input#3)	Server 3.52	PL85 wire mesh cable tray	LiYY	3x1.5	9.6			
Gr. 3.27	LID (Input#3)	Server 3.53	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 3.27	LID (Input#3)	Server 3.54	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 3.28	LID (Input#3)	Server 3.55	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 3.28	LID (Input#3)	Server 3.56	PL85 wire mesh cable tray	LiYY	3x1.5	10.1			
Gr. 3.29	LID (Input#3)	Server 3.57	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 3.29	LID (Input#3)	Server 3.58	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 3.30	LID (Input#3)	Server 3.59	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 3.30	LID (Input#3)	Server 3.60	PL85 wire mesh cable tray	LiYY	3x1.5	10.7			
Gr. 3.31	LID (Input#3)	Server 3.61	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 3.31	LID (Input#3)	Server 3.62	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 3.32	LID (Input#3)	Server 3.63	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 3.32	LID (Input#3)	Server 3.64	PL85 wire mesh cable tray	LiYY	3x1.5	11.2			
Gr. 3.33	LID (Input#3)	Server 3.65	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 3.33	LID (Input#3)	Server 3.66	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 3.34	LID (Input#3)	Server 3.67	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 3.34	LID (Input#3)	Server 3.68	PL85 wire mesh cable tray	LiYY	3x1.5	11.7			
Gr. 3.35	LID (Input#3)	Server 3.69	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 3.35	LID (Input#3)	Server 3.70	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 3.36	LID (Input#3)	Server 3.71	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 3.36	LID (Input#3)	Server 3.72	PL85 wire mesh cable tray	LiYY	3x1.5	12.2			
Gr. 3.37	LID (Input#3)	Server 3.73	PL85 wire mesh cable tray	LiYY	3x1.5	10			
Gr. 3.37	LID (Input#3)	Server 3.74	PL85 wire mesh cable tray	LiYY	3x1.5	10			
Gr. 3.38	LID (Input#3)	Server 3.75	PL85 wire mesh cable tray	LiYY	3x1.5	10			
Gr. 3.38	LID (Input#3)	Server 3.76	PL85 wire mesh cable tray	LiYY	3x1.5	10			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 3.39	LID (Input#3)	Server 3.77	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 3.39	LID (Input#3)	Server 3.78	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 3.40	LID (Input#3)	Server 3.79	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 3.40	LID (Input#3)	Server 3.80	PL85 wire mesh cable tray	LiYY	3x1.5	10.5			
Gr. 3.41	LID (Input#3)	Server 3.81	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 3.41	LID (Input#3)	Server 3.82	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 3.42	LID (Input#3)	Server 3.83	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 3.42	LID (Input#3)	Server 3.84	PL85 wire mesh cable tray	LiYY	3x1.5	11.1			
Gr. 3.43	LID (Input#3)	Server 3.85	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 3.43	LID (Input#3)	Server 3.86	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 3.44	LID (Input#3)	Server 3.87	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 3.44	LID (Input#3)	Server 3.88	PL85 wire mesh cable tray	LiYY	3x1.5	11.6			
Gr. 3.45	LID (Input#3)	Server 3.89	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 3.45	LID (Input#3)	Server 3.90	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 3.46	LID (Input#3)	Server 3.91	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 3.46	LID (Input#3)	Server 3.92	PL85 wire mesh cable tray	LiYY	3x1.5	12.1			
Gr. 3.47	LID (Input#3)	Server 3.93	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 3.47	LID (Input#3)	Server 3.94	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 3.48	LID (Input#3)	Server 3.95	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 3.48	LID (Input#3)	Server 3.96	PL85 wire mesh cable tray	LiYY	3x1.5	12.6			
Gr. 3.49	LID (Input#3)	Server 3.97	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 3.49	LID (Input#3)	Server 3.98	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 3.50	LID (Input#3)	Server 3.99	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 3.50	LID (Input#3)	Server 3.100	PL85 wire mesh cable tray	LiYY	3x1.5	12			
Gr. 3.51	LID (Input#3)	Server 3.101	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			
Gr. 3.51	LID (Input#3)	Server 3.102	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			
Gr. 3.52	LID (Input#3)	Server 3.103	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

Sheet  
15.4

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 3.52	LID (Input#3)	Server 3.104	PL85 wire mesh cable tray	LiYY	3x1.5	12.5			
Gr. 3.53	LID (Input#3)	Server 3.105	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 3.53	LID (Input#3)	Server 3.106	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 3.54	LID (Input#3)	Server 3.107	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 3.54	LID (Input#3)	Server 3.108	PL85 wire mesh cable tray	LiYY	3x1.5	13			
Gr. 3.55	LID (Input#3)	Server 3.109	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 3.55	LID (Input#3)	Server 3.110	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 3.56	LID (Input#3)	Server 3.111	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 3.56	LID (Input#3)	Server 3.112	PL85 wire mesh cable tray	LiYY	3x1.5	13.5			
Gr. 3.57	LID (Input#3)	Server 3.113	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 3.57	LID (Input#3)	Server 3.114	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 3.58	LID (Input#3)	Server 3.115	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 3.58	LID (Input#3)	Server 3.116	PL85 wire mesh cable tray	LiYY	3x1.5	14			
Gr. 3.59	LID (Input#3)	Server 3.117	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 3.59	LID (Input#3)	Server 3.118	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 3.60	LID (Input#3)	Server 3.119	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 3.60	LID (Input#3)	Server 3.120	PL85 wire mesh cable tray	LiYY	3x1.5	14.6			
Gr. 3.61	LID (Input#3)	Server 3.121	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 3.61	LID (Input#3)	Server 3.122	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 3.62	LID (Input#3)	Server 3.123	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 3.62	LID (Input#3)	Server 3.124	PL85 wire mesh cable tray	LiYY	3x1.5	12.4			
Gr. 3.63	LID (Input#3)	Server 3.125	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 3.63	LID (Input#3)	Server 3.126	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 3.64	LID (Input#3)	Server 3.127	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 3.64	LID (Input#3)	Server 3.128	PL85 wire mesh cable tray	LiYY	3x1.5	12.9			
Gr. 3.65	LID (Input#3)	Server 3.129	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			
Gr. 3.65	LID (Input#3)	Server 3.130	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 3.66	LID (Input#3)	Server 3.131	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			
Gr. 3.66	LID (Input#3)	Server 3.132	PL85 wire mesh cable tray	LiYY	3x1.5	13.4			
Gr. 3.67	LID (Input#3)	Server 3.133	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 3.67	LID (Input#3)	Server 3.134	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 3.68	LID (Input#3)	Server 3.135	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 3.68	LID (Input#3)	Server 3.136	PL85 wire mesh cable tray	LiYY	3x1.5	13.9			
Gr. 3.69	LID (Input#3)	Server 3.137	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 3.69	LID (Input#3)	Server 3.138	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 3.70	LID (Input#3)	Server 3.139	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 3.70	LID (Input#3)	Server 3.140	PL85 wire mesh cable tray	LiYY	3x1.5	14.4			
Gr. 3.71	LID (Input#3)	Server 3.141	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 3.71	LID (Input#3)	Server 3.142	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 3.72	LID (Input#3)	Server 3.143	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 3.72	LID (Input#3)	Server 3.144	PL85 wire mesh cable tray	LiYY	3x1.5	15			
Gr. 3.73	LID (Input#3)	Server 3.145	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 3.73	LID (Input#3)	Server 3.146	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 3.74	LID (Input#3)	Server 3.147	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 3.74	LID (Input#3)	Server 3.148	PL85 wire mesh cable tray	LiYY	3x1.5	12.7			
Gr. 3.75	LID (Input#3)	Server 3.149	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 3.75	LID (Input#3)	Server 3.150	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 3.76	LID (Input#3)	Server 3.151	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 3.76	LID (Input#3)	Server 3.152	PL85 wire mesh cable tray	LiYY	3x1.5	13.3			
Gr. 3.77	LID (Input#3)	Server 3.153	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 3.77	LID (Input#3)	Server 3.154	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 3.78	LID (Input#3)	Server 3.155	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 3.78	LID (Input#3)	Server 3.156	PL85 wire mesh cable tray	LiYY	3x1.5	13.8			
Gr. 3.79	LID (Input#3)	Server 3.157	PL85 wire mesh cable tray	LiYY	3x1.5	14.3			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

Sheet  
15.6



### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 4.1	LID (Input#4)	Server 4.1	PL85 wire mesh cable tray	LiYY	3x1.5	16			
Gr. 4.1	LID (Input#4)	Server 4.2	PL85 wire mesh cable tray	LiYY	3x1.5	16			
Gr. 4.2	LID (Input#4)	Server 4.3	PL85 wire mesh cable tray	LiYY	3x1.5	16			
Gr. 4.2	LID (Input#4)	Server 4.4	PL85 wire mesh cable tray	LiYY	3x1.5	16			
Gr. 4.3	LID (Input#4)	Server 4.5	PL85 wire mesh cable tray	LiYY	3x1.5	16.5			
Gr. 4.3	LID (Input#4)	Server 4.6	PL85 wire mesh cable tray	LiYY	3x1.5	16.5			
Gr. 4.4	LID (Input#4)	Server 4.7	PL85 wire mesh cable tray	LiYY	3x1.5	16.5			
Gr. 4.4	LID (Input#4)	Server 4.8	PL85 wire mesh cable tray	LiYY	3x1.5	16.5			
Gr. 4.5	LID (Input#4)	Server 4.9	PL85 wire mesh cable tray	LiYY	3x1.5	17			
Gr. 4.5	LID (Input#4)	Server 4.10	PL85 wire mesh cable tray	LiYY	3x1.5	17			
Gr. 4.6	LID (Input#4)	Server 4.11	PL85 wire mesh cable tray	LiYY	3x1.5	17			
Gr. 4.6	LID (Input#4)	Server 4.12	PL85 wire mesh cable tray	LiYY	3x1.5	17			
Gr. 4.7	LID (Input#4)	Server 4.13	PL85 wire mesh cable tray	LiYY	3x1.5	17.5			
Gr. 4.7	LID (Input#4)	Server 4.14	PL85 wire mesh cable tray	LiYY	3x1.5	17.5			
Gr. 4.8	LID (Input#4)	Server 4.15	PL85 wire mesh cable tray	LiYY	3x1.5	17.5			
Gr. 4.8	LID (Input#4)	Server 4.16	PL85 wire mesh cable tray	LiYY	3x1.5	17.5			
Gr. 4.9	LID (Input#4)	Server 4.17	PL85 wire mesh cable tray	LiYY	3x1.5	18			
Gr. 4.9	LID (Input#4)	Server 4.18	PL85 wire mesh cable tray	LiYY	3x1.5	18			
Gr. 4.10	LID (Input#4)	Server 4.19	PL85 wire mesh cable tray	LiYY	3x1.5	18			
Gr. 4.10	LID (Input#4)	Server 4.20	PL85 wire mesh cable tray	LiYY	3x1.5	18			
Gr. 4.11	LID (Input#4)	Server 4.21	PL85 wire mesh cable tray	LiYY	3x1.5	18.6			
Gr. 4.11	LID (Input#4)	Server 4.22	PL85 wire mesh cable tray	LiYY	3x1.5	18.6			

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						<b>MDPC-12/17-EL</b>					
						<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data	Indoor Electrical Equipment & Lighting			Stage	Sheet	Sheets
CPE		Rozhnov		/Sign./	12.17				P	16.1	18
Stndrs verified by		Sidneva		/Sign./	12.17						
Checked by		Rozhnov		/Sign./	12.17						
Prepared by		Kirillova		/Sign./	12.17	LID Cable List (Input#4)			 MegaProektStroy LLC, Voronezh, 2017		

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 4.12	LID (Input#4)	Server 4.23	PL85 wire mesh cable tray	LiYY	3x1.5	18.6			
Gr. 4.12	LID (Input#4)	Server 4.24	PL85 wire mesh cable tray	LiYY	3x1.5	18.6			
Gr. 4.13	LID (Input#4)	Server 4.25	PL85 wire mesh cable tray	LiYY	3x1.5	16.3			
Gr. 4.13	LID (Input#4)	Server 4.26	PL85 wire mesh cable tray	LiYY	3x1.5	16.3			
Gr. 4.14	LID (Input#4)	Server 4.27	PL85 wire mesh cable tray	LiYY	3x1.5	16.3			
Gr. 4.14	LID (Input#4)	Server 4.28	PL85 wire mesh cable tray	LiYY	3x1.5	16.3			
Gr. 4.15	LID (Input#4)	Server 4.29	PL85 wire mesh cable tray	LiYY	3x1.5	16.9			
Gr. 4.15	LID (Input#4)	Server 4.30	PL85 wire mesh cable tray	LiYY	3x1.5	16.9			
Gr. 4.16	LID (Input#4)	Server 4.31	PL85 wire mesh cable tray	LiYY	3x1.5	16.9			
Gr. 4.16	LID (Input#4)	Server 4.32	PL85 wire mesh cable tray	LiYY	3x1.5	16.9			
Gr. 4.17	LID (Input#4)	Server 4.33	PL85 wire mesh cable tray	LiYY	3x1.5	17.4			
Gr. 4.17	LID (Input#4)	Server 4.34	PL85 wire mesh cable tray	LiYY	3x1.5	17.4			
Gr. 4.18	LID (Input#4)	Server 4.35	PL85 wire mesh cable tray	LiYY	3x1.5	17.4			
Gr. 4.18	LID (Input#4)	Server 4.36	PL85 wire mesh cable tray	LiYY	3x1.5	17.4			
Gr. 4.19	LID (Input#4)	Server 4.37	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 4.19	LID (Input#4)	Server 4.38	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 4.20	LID (Input#4)	Server 4.39	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 4.20	LID (Input#4)	Server 4.40	PL85 wire mesh cable tray	LiYY	3x1.5	17.9			
Gr. 4.21	LID (Input#4)	Server 4.41	PL85 wire mesh cable tray	LiYY	3x1.5	18.4			
Gr. 4.21	LID (Input#4)	Server 4.42	PL85 wire mesh cable tray	LiYY	3x1.5	18.4			
Gr. 4.22	LID (Input#4)	Server 4.43	PL85 wire mesh cable tray	LiYY	3x1.5	18.4			
Gr. 4.22	LID (Input#4)	Server 4.44	PL85 wire mesh cable tray	LiYY	3x1.5	18.4			
Gr. 4.23	LID (Input#4)	Server 4.45	PL85 wire mesh cable tray	LiYY	3x1.5	18.9			
Gr. 4.23	LID (Input#4)	Server 4.46	PL85 wire mesh cable tray	LiYY	3x1.5	18.9			
Gr. 4.24	LID (Input#4)	Server 4.47	PL85 wire mesh cable tray	LiYY	3x1.5	18.9			
Gr. 4.24	LID (Input#4)	Server 4.48	PL85 wire mesh cable tray	LiYY	3x1.5	18.9			
Gr. 4.25	LID (Input#4)	Server 4.49	PL85 wire mesh cable tray	LiYY	3x1.5	16.7			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 4.25	LID (Input#4)	Server 4.50	PL85 wire mesh cable tray	LiYY	3x1.5	16.7			
Gr. 4.26	LID (Input#4)	Server 4.51	PL85 wire mesh cable tray	LiYY	3x1.5	16.7			
Gr. 4.26	LID (Input#4)	Server 4.52	PL85 wire mesh cable tray	LiYY	3x1.5	16.7			
Gr. 4.27	LID (Input#4)	Server 4.53	PL85 wire mesh cable tray	LiYY	3x1.5	17.3			
Gr. 4.27	LID (Input#4)	Server 4.54	PL85 wire mesh cable tray	LiYY	3x1.5	17.3			
Gr. 4.28	LID (Input#4)	Server 4.55	PL85 wire mesh cable tray	LiYY	3x1.5	17.3			
Gr. 4.28	LID (Input#4)	Server 4.56	PL85 wire mesh cable tray	LiYY	3x1.5	17.3			
Gr. 4.29	LID (Input#4)	Server 4.57	PL85 wire mesh cable tray	LiYY	3x1.5	17.8			
Gr. 4.29	LID (Input#4)	Server 4.58	PL85 wire mesh cable tray	LiYY	3x1.5	17.8			
Gr. 4.30	LID (Input#4)	Server 4.59	PL85 wire mesh cable tray	LiYY	3x1.5	17.8			
Gr. 4.30	LID (Input#4)	Server 4.60	PL85 wire mesh cable tray	LiYY	3x1.5	17.8			
Gr. 4.31	LID (Input#4)	Server 4.61	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 4.31	LID (Input#4)	Server 4.62	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 4.32	LID (Input#4)	Server 4.63	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 4.32	LID (Input#4)	Server 4.64	PL85 wire mesh cable tray	LiYY	3x1.5	18.3			
Gr. 4.33	LID (Input#4)	Server 4.65	PL85 wire mesh cable tray	LiYY	3x1.5	18.8			
Gr. 4.33	LID (Input#4)	Server 4.66	PL85 wire mesh cable tray	LiYY	3x1.5	18.8			
Gr. 4.34	LID (Input#4)	Server 4.67	PL85 wire mesh cable tray	LiYY	3x1.5	18.8			
Gr. 4.34	LID (Input#4)	Server 4.68	PL85 wire mesh cable tray	LiYY	3x1.5	18.8			
Gr. 4.35	LID (Input#4)	Server 4.69	PL85 wire mesh cable tray	LiYY	3x1.5	19.3			
Gr. 4.35	LID (Input#4)	Server 4.70	PL85 wire mesh cable tray	LiYY	3x1.5	19.3			
Gr. 4.36	LID (Input#4)	Server 4.71	PL85 wire mesh cable tray	LiYY	3x1.5	19.3			
Gr. 4.36	LID (Input#4)	Server 4.72	PL85 wire mesh cable tray	LiYY	3x1.5	19.3			
Gr. 4.37	LID (Input#4)	Server 4.73	PL85 wire mesh cable tray	LiYY	3x1.5	17.1			
Gr. 4.37	LID (Input#4)	Server 4.74	PL85 wire mesh cable tray	LiYY	3x1.5	17.1			
Gr. 4.38	LID (Input#4)	Server 4.75	PL85 wire mesh cable tray	LiYY	3x1.5	17.1			
Gr. 4.38	LID (Input#4)	Server 4.76	PL85 wire mesh cable tray	LiYY	3x1.5	17.1			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 4.39	LID (Input#4)	Server 4.77	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 4.39	LID (Input#4)	Server 4.78	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 4.40	LID (Input#4)	Server 4.79	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 4.40	LID (Input#4)	Server 4.80	PL85 wire mesh cable tray	LiYY	3x1.5	17.6			
Gr. 4.41	LID (Input#4)	Server 4.81	PL85 wire mesh cable tray	LiYY	3x1.5	18.2			
Gr. 4.41	LID (Input#4)	Server 4.82	PL85 wire mesh cable tray	LiYY	3x1.5	18.2			
Gr. 4.42	LID (Input#4)	Server 4.83	PL85 wire mesh cable tray	LiYY	3x1.5	18.2			
Gr. 4.42	LID (Input#4)	Server 4.84	PL85 wire mesh cable tray	LiYY	3x1.5	18.2			
Gr. 4.43	LID (Input#4)	Server 4.85	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.43	LID (Input#4)	Server 4.86	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.44	LID (Input#4)	Server 4.87	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.44	LID (Input#4)	Server 4.88	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.45	LID (Input#4)	Server 4.89	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			
Gr. 4.45	LID (Input#4)	Server 4.90	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			
Gr. 4.46	LID (Input#4)	Server 4.91	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			
Gr. 4.46	LID (Input#4)	Server 4.92	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			
Gr. 4.47	LID (Input#4)	Server 4.93	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.47	LID (Input#4)	Server 4.94	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.48	LID (Input#4)	Server 4.95	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.48	LID (Input#4)	Server 4.96	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.49	LID (Input#4)	Server 4.97	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.49	LID (Input#4)	Server 4.98	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.50	LID (Input#4)	Server 4.99	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.50	LID (Input#4)	Server 4.100	PL85 wire mesh cable tray	LiYY	3x1.5	18.7			
Gr. 4.51	LID (Input#4)	Server 4.101	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			
Gr. 4.51	LID (Input#4)	Server 4.102	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			
Gr. 4.52	LID (Input#4)	Server 4.103	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 4.52	LID (Input#4)	Server 4.104	PL85 wire mesh cable tray	LiYY	3x1.5	19.2			
Gr. 4.53	LID (Input#4)	Server 4.105	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.53	LID (Input#4)	Server 4.106	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.54	LID (Input#4)	Server 4.107	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.54	LID (Input#4)	Server 4.108	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 4.55	LID (Input#4)	Server 4.109	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 4.55	LID (Input#4)	Server 4.110	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 4.56	LID (Input#4)	Server 4.111	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 4.56	LID (Input#4)	Server 4.112	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 4.57	LID (Input#4)	Server 4.113	PL85 wire mesh cable tray	LiYY	3x1.5	20.8			
Gr. 4.57	LID (Input#4)	Server 4.114	PL85 wire mesh cable tray	LiYY	3x1.5	20.8			
Gr. 4.58	LID (Input#4)	Server 4.115	PL85 wire mesh cable tray	LiYY	3x1.5	20.8			
Gr. 4.58	LID (Input#4)	Server 4.116	PL85 wire mesh cable tray	LiYY	3x1.5	20.8			
Gr. 4.59	LID (Input#4)	Server 4.117	PL85 wire mesh cable tray	LiYY	3x1.5	21.3			
Gr. 4.59	LID (Input#4)	Server 4.118	PL85 wire mesh cable tray	LiYY	3x1.5	21.3			
Gr. 4.60	LID (Input#4)	Server 4.119	PL85 wire mesh cable tray	LiYY	3x1.5	21.3			
Gr. 4.60	LID (Input#4)	Server 4.120	PL85 wire mesh cable tray	LiYY	3x1.5	21.3			
Gr. 4.61	LID (Input#4)	Server 4.121	PL85 wire mesh cable tray	LiYY	3x1.5	19.1			
Gr. 4.61	LID (Input#4)	Server 4.122	PL85 wire mesh cable tray	LiYY	3x1.5	19.1			
Gr. 4.62	LID (Input#4)	Server 4.123	PL85 wire mesh cable tray	LiYY	3x1.5	19.1			
Gr. 4.62	LID (Input#4)	Server 4.124	PL85 wire mesh cable tray	LiYY	3x1.5	19.1			
Gr. 4.63	LID (Input#4)	Server 4.125	PL85 wire mesh cable tray	LiYY	3x1.5	19.6			
Gr. 4.63	LID (Input#4)	Server 4.126	PL85 wire mesh cable tray	LiYY	3x1.5	19.6			
Gr. 4.64	LID (Input#4)	Server 4.127	PL85 wire mesh cable tray	LiYY	3x1.5	19.6			
Gr. 4.64	LID (Input#4)	Server 4.128	PL85 wire mesh cable tray	LiYY	3x1.5	19.6			
Gr. 4.65	LID (Input#4)	Server 4.129	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			
Gr. 4.65	LID (Input#4)	Server 4.130	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 4.66	LID (Input#4)	Server 4.131	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			
Gr. 4.66	LID (Input#4)	Server 4.132	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			
Gr. 4.67	LID (Input#4)	Server 4.133	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 4.67	LID (Input#4)	Server 4.134	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 4.68	LID (Input#4)	Server 4.135	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 4.68	LID (Input#4)	Server 4.136	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 4.69	LID (Input#4)	Server 4.137	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 4.69	LID (Input#4)	Server 4.138	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 4.70	LID (Input#4)	Server 4.139	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 4.70	LID (Input#4)	Server 4.140	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 4.71	LID (Input#4)	Server 4.141	PL85 wire mesh cable tray	LiYY	3x1.5	21.7			
Gr. 4.71	LID (Input#4)	Server 4.142	PL85 wire mesh cable tray	LiYY	3x1.5	21.7			
Gr. 4.72	LID (Input#4)	Server 4.143	PL85 wire mesh cable tray	LiYY	3x1.5	21.7			
Gr. 4.72	LID (Input#4)	Server 4.144	PL85 wire mesh cable tray	LiYY	3x1.5	21.7			
Gr. 4.73	LID (Input#4)	Server 4.145	PL85 wire mesh cable tray	LiYY	3x1.5	19.5			
Gr. 4.73	LID (Input#4)	Server 4.146	PL85 wire mesh cable tray	LiYY	3x1.5	19.5			
Gr. 4.74	LID (Input#4)	Server 4.147	PL85 wire mesh cable tray	LiYY	3x1.5	19.5			
Gr. 4.74	LID (Input#4)	Server 4.148	PL85 wire mesh cable tray	LiYY	3x1.5	19.5			
Gr. 4.75	LID (Input#4)	Server 4.149	PL85 wire mesh cable tray	LiYY	3x1.5	20			
Gr. 4.75	LID (Input#4)	Server 4.150	PL85 wire mesh cable tray	LiYY	3x1.5	20			
Gr. 4.76	LID (Input#4)	Server 4.151	PL85 wire mesh cable tray	LiYY	3x1.5	20			
Gr. 4.76	LID (Input#4)	Server 4.152	PL85 wire mesh cable tray	LiYY	3x1.5	20			
Gr. 4.77	LID (Input#4)	Server 4.153	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			
Gr. 4.77	LID (Input#4)	Server 4.154	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			
Gr. 4.78	LID (Input#4)	Server 4.155	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			
Gr. 4.78	LID (Input#4)	Server 4.156	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			
Gr. 4.79	LID (Input#4)	Server 4.157	PL85 wire mesh cable tray	LiYY	3x1.5	21			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**



### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 5.1	LID (Input#5)	Server 5.1	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 5.1	LID (Input#5)	Server 5.2	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 5.2	LID (Input#5)	Server 5.3	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 5.2	LID (Input#5)	Server 5.4	PL85 wire mesh cable tray	LiYY	3x1.5	19.7			
Gr. 5.3	LID (Input#5)	Server 5.5	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 5.3	LID (Input#5)	Server 5.6	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 5.4	LID (Input#5)	Server 5.7	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 5.4	LID (Input#5)	Server 5.8	PL85 wire mesh cable tray	LiYY	3x1.5	20.2			
Gr. 5.5	LID (Input#5)	Server 5.9	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 5.5	LID (Input#5)	Server 5.10	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 5.6	LID (Input#5)	Server 5.11	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 5.6	LID (Input#5)	Server 5.12	PL85 wire mesh cable tray	LiYY	3x1.5	20.7			
Gr. 5.7	LID (Input#5)	Server 5.13	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 5.7	LID (Input#5)	Server 5.14	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 5.8	LID (Input#5)	Server 5.15	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 5.8	LID (Input#5)	Server 5.16	PL85 wire mesh cable tray	LiYY	3x1.5	21.2			
Gr. 5.9	LID (Input#5)	Server 5.17	PL85 wire mesh cable tray	LiYY	3x1.5	21.8			
Gr. 5.9	LID (Input#5)	Server 5.18	PL85 wire mesh cable tray	LiYY	3x1.5	21.8			
Gr. 5.10	LID (Input#5)	Server 5.19	PL85 wire mesh cable tray	LiYY	3x1.5	21.8			
Gr. 5.10	LID (Input#5)	Server 5.20	PL85 wire mesh cable tray	LiYY	3x1.5	21.8			
Gr. 5.11	LID (Input#5)	Server 5.21	PL85 wire mesh cable tray	LiYY	3x1.5	22.3			
Gr. 5.11	LID (Input#5)	Server 5.22	PL85 wire mesh cable tray	LiYY	3x1.5	22.3			

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<b>MDPC-12/17-EL</b>					
<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
CPE		Rozhnov		/Sign./	12.17
Stndrds verified by		Sidneva		/Sign./	12.17
Checked by		Rozhnov		/Sign./	12.17
Prepared by		Kirillova		/Sign./	12.17
<b>Indoor Electrical Equipment &amp; Lighting</b>				Stage	Sheet
<b>LID Cable List (Input#5)</b>				P	17.1
<b>Indoor Electrical Equipment &amp; Lighting</b>				Sheets	18
<b>LID Cable List (Input#5)</b>				 <b>MegaProektStroy LLC,</b> Voronezh, 2017	

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 5.12	LID (Input#5)	Server 5.23	PL85 wire mesh cable tray	LiYY	3x1.5	22.3			
Gr. 5.12	LID (Input#5)	Server 5.24	PL85 wire mesh cable tray	LiYY	3x1.5	22.3			
Gr. 5.13	LID (Input#5)	Server 5.25	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			
Gr. 5.13	LID (Input#5)	Server 5.26	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			
Gr. 5.14	LID (Input#5)	Server 5.27	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			
Gr. 5.14	LID (Input#5)	Server 5.28	PL85 wire mesh cable tray	LiYY	3x1.5	20.1			
Gr. 5.15	LID (Input#5)	Server 5.29	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 5.15	LID (Input#5)	Server 5.30	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 5.16	LID (Input#5)	Server 5.31	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 5.16	LID (Input#5)	Server 5.32	PL85 wire mesh cable tray	LiYY	3x1.5	20.6			
Gr. 5.17	LID (Input#5)	Server 5.33	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 5.17	LID (Input#5)	Server 5.34	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 5.18	LID (Input#5)	Server 5.35	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 5.18	LID (Input#5)	Server 5.36	PL85 wire mesh cable tray	LiYY	3x1.5	21.1			
Gr. 5.19	LID (Input#5)	Server 5.37	PL85 wire mesh cable tray	LiYY	3x1.5	21.6			
Gr. 5.19	LID (Input#5)	Server 5.38	PL85 wire mesh cable tray	LiYY	3x1.5	21.6			
Gr. 5.20	LID (Input#5)	Server 5.39	PL85 wire mesh cable tray	LiYY	3x1.5	21.6			
Gr. 5.20	LID (Input#5)	Server 5.40	PL85 wire mesh cable tray	LiYY	3x1.5	21.6			
Gr. 5.21	LID (Input#5)	Server 5.41	PL85 wire mesh cable tray	LiYY	3x1.5	22.2			
Gr. 5.21	LID (Input#5)	Server 5.42	PL85 wire mesh cable tray	LiYY	3x1.5	22.2			
Gr. 5.22	LID (Input#5)	Server 5.43	PL85 wire mesh cable tray	LiYY	3x1.5	22.2			
Gr. 5.22	LID (Input#5)	Server 5.44	PL85 wire mesh cable tray	LiYY	3x1.5	22.2			
Gr. 5.23	LID (Input#5)	Server 5.45	PL85 wire mesh cable tray	LiYY	3x1.5	22.7			
Gr. 5.23	LID (Input#5)	Server 5.46	PL85 wire mesh cable tray	LiYY	3x1.5	22.7			
Gr. 5.24	LID (Input#5)	Server 5.47	PL85 wire mesh cable tray	LiYY	3x1.5	22.7			
Gr. 5.24	LID (Input#5)	Server 5.48	PL85 wire mesh cable tray	LiYY	3x1.5	22.7			
Gr. 5.25	LID (Input#5)	Server 5.49	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			

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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 5.25	LID (Input#5)	Server 5.50	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			
Gr. 5.26	LID (Input#5)	Server 5.51	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			
Gr. 5.26	LID (Input#5)	Server 5.52	PL85 wire mesh cable tray	LiYY	3x1.5	20.5			
Gr. 5.27	LID (Input#5)	Server 5.53	PL85 wire mesh cable tray	LiYY	3x1.5	21			
Gr. 5.27	LID (Input#5)	Server 5.54	PL85 wire mesh cable tray	LiYY	3x1.5	21			
Gr. 5.28	LID (Input#5)	Server 5.55	PL85 wire mesh cable tray	LiYY	3x1.5	21			
Gr. 5.28	LID (Input#5)	Server 5.56	PL85 wire mesh cable tray	LiYY	3x1.5	21			
Gr. 5.29	LID (Input#5)	Server 5.57	PL85 wire mesh cable tray	LiYY	3x1.5	21.5			
Gr. 5.29	LID (Input#5)	Server 5.58	PL85 wire mesh cable tray	LiYY	3x1.5	21.5			
Gr. 5.30	LID (Input#5)	Server 5.59	PL85 wire mesh cable tray	LiYY	3x1.5	21.5			
Gr. 5.30	LID (Input#5)	Server 5.60	PL85 wire mesh cable tray	LiYY	3x1.5	21.5			
Gr. 5.31	LID (Input#5)	Server 5.61	PL85 wire mesh cable tray	LiYY	3x1.5	22			
Gr. 5.31	LID (Input#5)	Server 5.62	PL85 wire mesh cable tray	LiYY	3x1.5	22			
Gr. 5.32	LID (Input#5)	Server 5.63	PL85 wire mesh cable tray	LiYY	3x1.5	22			
Gr. 5.32	LID (Input#5)	Server 5.64	PL85 wire mesh cable tray	LiYY	3x1.5	22			
Gr. 5.33	LID (Input#5)	Server 5.65	PL85 wire mesh cable tray	LiYY	3x1.5	22.5			
Gr. 5.33	LID (Input#5)	Server 5.66	PL85 wire mesh cable tray	LiYY	3x1.5	22.5			
Gr. 5.34	LID (Input#5)	Server 5.67	PL85 wire mesh cable tray	LiYY	3x1.5	22.5			
Gr. 5.34	LID (Input#5)	Server 5.68	PL85 wire mesh cable tray	LiYY	3x1.5	22.5			
Gr. 5.35	LID (Input#5)	Server 5.69	PL85 wire mesh cable tray	LiYY	3x1.5	23.1			
Gr. 5.35	LID (Input#5)	Server 5.70	PL85 wire mesh cable tray	LiYY	3x1.5	23.1			
Gr. 5.36	LID (Input#5)	Server 5.71	PL85 wire mesh cable tray	LiYY	3x1.5	23.1			
Gr. 5.36	LID (Input#5)	Server 5.72	PL85 wire mesh cable tray	LiYY	3x1.5	23.1			
Gr. 5.37	LID (Input#5)	Server 5.73	PL85 wire mesh cable tray	LiYY	3x1.5	20.9			
Gr. 5.37	LID (Input#5)	Server 5.74	PL85 wire mesh cable tray	LiYY	3x1.5	20.9			
Gr. 5.38	LID (Input#5)	Server 5.75	PL85 wire mesh cable tray	LiYY	3x1.5	20.9			
Gr. 5.38	LID (Input#5)	Server 5.76	PL85 wire mesh cable tray	LiYY	3x1.5	20.9			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

Sheet  
**17.3**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 5.39	LID (Input#5)	Server 5.77	PL85 wire mesh cable tray	LiYY	3x1.5	21.4			
Gr. 5.39	LID (Input#5)	Server 5.78	PL85 wire mesh cable tray	LiYY	3x1.5	21.4			
Gr. 5.40	LID (Input#5)	Server 5.79	PL85 wire mesh cable tray	LiYY	3x1.5	21.4			
Gr. 5.40	LID (Input#5)	Server 5.80	PL85 wire mesh cable tray	LiYY	3x1.5	21.4			
Gr. 5.41	LID (Input#5)	Server 5.81	PL85 wire mesh cable tray	LiYY	3x1.5	21.9			
Gr. 5.41	LID (Input#5)	Server 5.82	PL85 wire mesh cable tray	LiYY	3x1.5	21.9			
Gr. 5.42	LID (Input#5)	Server 5.83	PL85 wire mesh cable tray	LiYY	3x1.5	21.9			
Gr. 5.42	LID (Input#5)	Server 5.84	PL85 wire mesh cable tray	LiYY	3x1.5	21.9			
Gr. 5.43	LID (Input#5)	Server 5.85	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.43	LID (Input#5)	Server 5.86	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.44	LID (Input#5)	Server 5.87	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.44	LID (Input#5)	Server 5.88	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.45	LID (Input#5)	Server 5.89	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 5.45	LID (Input#5)	Server 5.90	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 5.46	LID (Input#5)	Server 5.91	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 5.46	LID (Input#5)	Server 5.92	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 5.47	LID (Input#5)	Server 5.93	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 5.47	LID (Input#5)	Server 5.94	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 5.48	LID (Input#5)	Server 5.95	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 5.48	LID (Input#5)	Server 5.96	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 5.49	LID (Input#5)	Server 5.97	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.49	LID (Input#5)	Server 5.98	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.50	LID (Input#5)	Server 5.99	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.50	LID (Input#5)	Server 5.100	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 5.51	LID (Input#5)	Server 5.101	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 5.51	LID (Input#5)	Server 5.102	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 5.52	LID (Input#5)	Server 5.103	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**



### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 5.66	LID (Input#5)	Server 5.131	PL85 wire mesh cable tray	LiYY	3x1.5	23.8			
Gr. 5.66	LID (Input#5)	Server 5.132	PL85 wire mesh cable tray	LiYY	3x1.5	23.8			
Gr. 5.67	LID (Input#5)	Server 5.133	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 5.67	LID (Input#5)	Server 5.134	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 5.68	LID (Input#5)	Server 5.135	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 5.68	LID (Input#5)	Server 5.136	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 5.69	LID (Input#5)	Server 5.137	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 5.69	LID (Input#5)	Server 5.138	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 5.70	LID (Input#5)	Server 5.139	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 5.70	LID (Input#5)	Server 5.140	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 5.71	LID (Input#5)	Server 5.141	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 5.71	LID (Input#5)	Server 5.142	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 5.72	LID (Input#5)	Server 5.143	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 5.72	LID (Input#5)	Server 5.144	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 5.73	LID (Input#5)	Server 5.145	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			
Gr. 5.73	LID (Input#5)	Server 5.146	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			
Gr. 5.74	LID (Input#5)	Server 5.147	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			
Gr. 5.74	LID (Input#5)	Server 5.148	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			
Gr. 5.75	LID (Input#5)	Server 5.149	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 5.75	LID (Input#5)	Server 5.150	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 5.76	LID (Input#5)	Server 5.151	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 5.76	LID (Input#5)	Server 5.152	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 5.77	LID (Input#5)	Server 5.153	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 5.77	LID (Input#5)	Server 5.154	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 5.78	LID (Input#5)	Server 5.155	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 5.78	LID (Input#5)	Server 5.156	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 5.79	LID (Input#5)	Server 5.157	PL85 wire mesh cable tray	LiYY	3x1.5	24.8			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

Sheet  
17.6



### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 6.1	LID (Input#6)	Server 6.1	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 6.1	LID (Input#6)	Server 6.2	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 6.2	LID (Input#6)	Server 6.3	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 6.2	LID (Input#6)	Server 6.4	PL85 wire mesh cable tray	LiYY	3x1.5	22.4			
Gr. 6.3	LID (Input#6)	Server 6.5	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 6.3	LID (Input#6)	Server 6.6	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 6.4	LID (Input#6)	Server 6.7	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 6.4	LID (Input#6)	Server 6.8	PL85 wire mesh cable tray	LiYY	3x1.5	22.9			
Gr. 6.5	LID (Input#6)	Server 6.9	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 6.5	LID (Input#6)	Server 6.10	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 6.6	LID (Input#6)	Server 6.11	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 6.6	LID (Input#6)	Server 6.12	PL85 wire mesh cable tray	LiYY	3x1.5	23.5			
Gr. 6.7	LID (Input#6)	Server 6.13	PL85 wire mesh cable tray	LiYY	3x1.5	24			
Gr. 6.7	LID (Input#6)	Server 6.14	PL85 wire mesh cable tray	LiYY	3x1.5	24			
Gr. 6.8	LID (Input#6)	Server 6.15	PL85 wire mesh cable tray	LiYY	3x1.5	24			
Gr. 6.8	LID (Input#6)	Server 6.16	PL85 wire mesh cable tray	LiYY	3x1.5	24			
Gr. 6.9	LID (Input#6)	Server 6.17	PL85 wire mesh cable tray	LiYY	3x1.5	24.5			
Gr. 6.9	LID (Input#6)	Server 6.18	PL85 wire mesh cable tray	LiYY	3x1.5	24.5			
Gr. 6.10	LID (Input#6)	Server 6.19	PL85 wire mesh cable tray	LiYY	3x1.5	24.5			
Gr. 6.10	LID (Input#6)	Server 6.20	PL85 wire mesh cable tray	LiYY	3x1.5	24.5			
Gr. 6.11	LID (Input#6)	Server 6.21	PL85 wire mesh cable tray	LiYY	3x1.5	25			
Gr. 6.11	LID (Input#6)	Server 6.22	PL85 wire mesh cable tray	LiYY	3x1.5	25			

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						<b>MDPC-12/17-EL</b>					
						<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data	<b>Indoor Electrical Equipment &amp; Lighting</b>					
CPE		Rozhnov		/Sign./	12.17				Stage	Sheet	Sheets
Stndrs verified by		Sidneva		/Sign./	12.17				P	18.1	18
Checked by		Rozhnov		/Sign./	12.17						
Prepared by		Kirillova		/Sign./	12.17	<b>LID Cable List (Input#6)</b>					
						 <b>MegaProektStroy LLC,</b> Voronezh, 2017					

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 6.12	LID (Input#6)	Server 6.23	PL85 wire mesh cable tray	LiYY	3x1.5	25			
Gr. 6.12	LID (Input#6)	Server 6.24	PL85 wire mesh cable tray	LiYY	3x1.5	25			
Gr. 6.13	LID (Input#6)	Server 6.25	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 6.13	LID (Input#6)	Server 6.26	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 6.14	LID (Input#6)	Server 6.27	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 6.14	LID (Input#6)	Server 6.28	PL85 wire mesh cable tray	LiYY	3x1.5	22.8			
Gr. 6.15	LID (Input#6)	Server 6.29	PL85 wire mesh cable tray	LiYY	3x1.5	23.3			
Gr. 6.15	LID (Input#6)	Server 6.30	PL85 wire mesh cable tray	LiYY	3x1.5	23.3			
Gr. 6.16	LID (Input#6)	Server 6.31	PL85 wire mesh cable tray	LiYY	3x1.5	23.3			
Gr. 6.16	LID (Input#6)	Server 6.32	PL85 wire mesh cable tray	LiYY	3x1.5	23.3			
Gr. 6.17	LID (Input#6)	Server 6.33	PL85 wire mesh cable tray	LiYY	3x1.5	23.8			
Gr. 6.17	LID (Input#6)	Server 6.34	PL85 wire mesh cable tray	LiYY	3x1.5	23.8			
Gr. 6.18	LID (Input#6)	Server 6.35	PL85 wire mesh cable tray	LiYY	3x1.5	23.8			
Gr. 6.18	LID (Input#6)	Server 6.36	PL85 wire mesh cable tray	LiYY	3x1.5	23.8			
Gr. 6.19	LID (Input#6)	Server 6.37	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 6.19	LID (Input#6)	Server 6.38	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 6.20	LID (Input#6)	Server 6.39	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 6.20	LID (Input#6)	Server 6.40	PL85 wire mesh cable tray	LiYY	3x1.5	24.4			
Gr. 6.21	LID (Input#6)	Server 6.41	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 6.21	LID (Input#6)	Server 6.42	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 6.22	LID (Input#6)	Server 6.43	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 6.22	LID (Input#6)	Server 6.44	PL85 wire mesh cable tray	LiYY	3x1.5	24.9			
Gr. 6.23	LID (Input#6)	Server 6.45	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 6.23	LID (Input#6)	Server 6.46	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 6.24	LID (Input#6)	Server 6.47	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 6.24	LID (Input#6)	Server 6.48	PL85 wire mesh cable tray	LiYY	3x1.5	25.4			
Gr. 6.25	LID (Input#6)	Server 6.49	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 6.25	LID (Input#6)	Server 6.50	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			
Gr. 6.26	LID (Input#6)	Server 6.51	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			
Gr. 6.26	LID (Input#6)	Server 6.52	PL85 wire mesh cable tray	LiYY	3x1.5	23.2			
Gr. 6.27	LID (Input#6)	Server 6.53	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 6.27	LID (Input#6)	Server 6.54	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 6.28	LID (Input#6)	Server 6.55	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 6.28	LID (Input#6)	Server 6.56	PL85 wire mesh cable tray	LiYY	3x1.5	23.7			
Gr. 6.29	LID (Input#6)	Server 6.57	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 6.29	LID (Input#6)	Server 6.58	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 6.30	LID (Input#6)	Server 6.59	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 6.30	LID (Input#6)	Server 6.60	PL85 wire mesh cable tray	LiYY	3x1.5	24.2			
Gr. 6.31	LID (Input#6)	Server 6.61	PL85 wire mesh cable tray	LiYY	3x1.5	24.8			
Gr. 6.31	LID (Input#6)	Server 6.62	PL85 wire mesh cable tray	LiYY	3x1.5	24.8			
Gr. 6.32	LID (Input#6)	Server 6.63	PL85 wire mesh cable tray	LiYY	3x1.5	24.8			
Gr. 6.32	LID (Input#6)	Server 6.64	PL85 wire mesh cable tray	LiYY	3x1.5	24.8			
Gr. 6.33	LID (Input#6)	Server 6.65	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.33	LID (Input#6)	Server 6.66	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.34	LID (Input#6)	Server 6.67	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.34	LID (Input#6)	Server 6.68	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.35	LID (Input#6)	Server 6.69	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			
Gr. 6.35	LID (Input#6)	Server 6.70	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			
Gr. 6.36	LID (Input#6)	Server 6.71	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			
Gr. 6.36	LID (Input#6)	Server 6.72	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			
Gr. 6.37	LID (Input#6)	Server 6.73	PL85 wire mesh cable tray	LiYY	3x1.5	23.6			
Gr. 6.37	LID (Input#6)	Server 6.74	PL85 wire mesh cable tray	LiYY	3x1.5	23.6			
Gr. 6.38	LID (Input#6)	Server 6.75	PL85 wire mesh cable tray	LiYY	3x1.5	23.6			
Gr. 6.38	LID (Input#6)	Server 6.76	PL85 wire mesh cable tray	LiYY	3x1.5	23.6			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 6.39	LID (Input#6)	Server 6.77	PL85 wire mesh cable tray	LiYY	3x1.5	24.1			
Gr. 6.39	LID (Input#6)	Server 6.78	PL85 wire mesh cable tray	LiYY	3x1.5	24.1			
Gr. 6.40	LID (Input#6)	Server 6.79	PL85 wire mesh cable tray	LiYY	3x1.5	24.1			
Gr. 6.40	LID (Input#6)	Server 6.80	PL85 wire mesh cable tray	LiYY	3x1.5	24.1			
Gr. 6.41	LID (Input#6)	Server 6.81	PL85 wire mesh cable tray	LiYY	3x1.5	24.6			
Gr. 6.41	LID (Input#6)	Server 6.82	PL85 wire mesh cable tray	LiYY	3x1.5	24.6			
Gr. 6.42	LID (Input#6)	Server 6.83	PL85 wire mesh cable tray	LiYY	3x1.5	24.6			
Gr. 6.42	LID (Input#6)	Server 6.84	PL85 wire mesh cable tray	LiYY	3x1.5	24.6			
Gr. 6.43	LID (Input#6)	Server 6.85	PL85 wire mesh cable tray	LiYY	3x1.5	25.1			
Gr. 6.43	LID (Input#6)	Server 6.86	PL85 wire mesh cable tray	LiYY	3x1.5	25.1			
Gr. 6.44	LID (Input#6)	Server 6.87	PL85 wire mesh cable tray	LiYY	3x1.5	25.1			
Gr. 6.44	LID (Input#6)	Server 6.88	PL85 wire mesh cable tray	LiYY	3x1.5	25.1			
Gr. 6.45	LID (Input#6)	Server 6.89	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.45	LID (Input#6)	Server 6.90	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.46	LID (Input#6)	Server 6.91	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.46	LID (Input#6)	Server 6.92	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.47	LID (Input#6)	Server 6.93	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.47	LID (Input#6)	Server 6.94	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.48	LID (Input#6)	Server 6.95	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.48	LID (Input#6)	Server 6.96	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.49	LID (Input#6)	Server 6.97	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.49	LID (Input#6)	Server 6.98	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.50	LID (Input#6)	Server 6.99	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.50	LID (Input#6)	Server 6.100	PL85 wire mesh cable tray	LiYY	3x1.5	25.3			
Gr. 6.51	LID (Input#6)	Server 6.101	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			
Gr. 6.51	LID (Input#6)	Server 6.102	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			
Gr. 6.52	LID (Input#6)	Server 6.103	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			

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Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 6.52	LID (Input#6)	Server 6.104	PL85 wire mesh cable tray	LiYY	3x1.5	25.8			
Gr. 6.53	LID (Input#6)	Server 6.105	PL85 wire mesh cable tray	LiYY	3x1.5	26.3			
Gr. 6.53	LID (Input#6)	Server 6.106	PL85 wire mesh cable tray	LiYY	3x1.5	26.3			
Gr. 6.54	LID (Input#6)	Server 6.107	PL85 wire mesh cable tray	LiYY	3x1.5	26.3			
Gr. 6.54	LID (Input#6)	Server 6.108	PL85 wire mesh cable tray	LiYY	3x1.5	26.3			
Gr. 6.55	LID (Input#6)	Server 6.109	PL85 wire mesh cable tray	LiYY	3x1.5	26.8			
Gr. 6.55	LID (Input#6)	Server 6.110	PL85 wire mesh cable tray	LiYY	3x1.5	26.8			
Gr. 6.56	LID (Input#6)	Server 6.111	PL85 wire mesh cable tray	LiYY	3x1.5	26.8			
Gr. 6.56	LID (Input#6)	Server 6.112	PL85 wire mesh cable tray	LiYY	3x1.5	26.8			
Gr. 6.57	LID (Input#6)	Server 6.113	PL85 wire mesh cable tray	LiYY	3x1.5	27.4			
Gr. 6.57	LID (Input#6)	Server 6.114	PL85 wire mesh cable tray	LiYY	3x1.5	27.4			
Gr. 6.58	LID (Input#6)	Server 6.115	PL85 wire mesh cable tray	LiYY	3x1.5	27.4			
Gr. 6.58	LID (Input#6)	Server 6.116	PL85 wire mesh cable tray	LiYY	3x1.5	27.4			
Gr. 6.59	LID (Input#6)	Server 6.117	PL85 wire mesh cable tray	LiYY	3x1.5	27.9			
Gr. 6.59	LID (Input#6)	Server 6.118	PL85 wire mesh cable tray	LiYY	3x1.5	27.9			
Gr. 6.60	LID (Input#6)	Server 6.119	PL85 wire mesh cable tray	LiYY	3x1.5	27.9			
Gr. 6.60	LID (Input#6)	Server 6.120	PL85 wire mesh cable tray	LiYY	3x1.5	27.9			
Gr. 6.61	LID (Input#6)	Server 6.121	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.61	LID (Input#6)	Server 6.122	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.62	LID (Input#6)	Server 6.123	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.62	LID (Input#6)	Server 6.124	PL85 wire mesh cable tray	LiYY	3x1.5	25.7			
Gr. 6.63	LID (Input#6)	Server 6.125	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.63	LID (Input#6)	Server 6.126	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.64	LID (Input#6)	Server 6.127	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.64	LID (Input#6)	Server 6.128	PL85 wire mesh cable tray	LiYY	3x1.5	26.2			
Gr. 6.65	LID (Input#6)	Server 6.129	PL85 wire mesh cable tray	LiYY	3x1.5	26.7			
Gr. 6.65	LID (Input#6)	Server 6.130	PL85 wire mesh cable tray	LiYY	3x1.5	26.7			

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 Repl. Inv. No  
 Signature and date  
 Orig. Inv. No

Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**

### Cable List

Cable/Wire Designation	Route		Cable/Wire Route Section	Cable/Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Qty, Section	Length, m	Brand	Core Number & Qty, Section	Length, m
Gr. 6.66	LID (Input#6)	Server 6.131	PL85 wire mesh cable tray	LiYY	3x1.5	26.7			
Gr. 6.66	LID (Input#6)	Server 6.132	PL85 wire mesh cable tray	LiYY	3x1.5	26.7			
Gr. 6.67	LID (Input#6)	Server 6.133	PL85 wire mesh cable tray	LiYY	3x1.5	27.2			
Gr. 6.67	LID (Input#6)	Server 6.134	PL85 wire mesh cable tray	LiYY	3x1.5	27.2			
Gr. 6.68	LID (Input#6)	Server 6.135	PL85 wire mesh cable tray	LiYY	3x1.5	27.2			
Gr. 6.68	LID (Input#6)	Server 6.136	PL85 wire mesh cable tray	LiYY	3x1.5	27.2			
Gr. 6.69	LID (Input#6)	Server 6.137	PL85 wire mesh cable tray	LiYY	3x1.5	27.7			
Gr. 6.69	LID (Input#6)	Server 6.138	PL85 wire mesh cable tray	LiYY	3x1.5	27.7			
Gr. 6.70	LID (Input#6)	Server 6.139	PL85 wire mesh cable tray	LiYY	3x1.5	27.7			
Gr. 6.70	LID (Input#6)	Server 6.140	PL85 wire mesh cable tray	LiYY	3x1.5	27.7			
Gr. 6.71	LID (Input#6)	Server 6.141	PL85 wire mesh cable tray	LiYY	3x1.5	28.3			
Gr. 6.71	LID (Input#6)	Server 6.142	PL85 wire mesh cable tray	LiYY	3x1.5	28.3			
Gr. 6.72	LID (Input#6)	Server 6.143	PL85 wire mesh cable tray	LiYY	3x1.5	28.3			
Gr. 6.72	LID (Input#6)	Server 6.144	PL85 wire mesh cable tray	LiYY	3x1.5	28.3			
Gr. 6.73	LID (Input#6)	Server 6.145	PL85 wire mesh cable tray	LiYY	3x1.5	26.1			
Gr. 6.73	LID (Input#6)	Server 6.146	PL85 wire mesh cable tray	LiYY	3x1.5	26.1			
Gr. 6.74	LID (Input#6)	Server 6.147	PL85 wire mesh cable tray	LiYY	3x1.5	26.1			
Gr. 6.74	LID (Input#6)	Server 6.148	PL85 wire mesh cable tray	LiYY	3x1.5	26.1			
Gr. 6.75	LID (Input#6)	Server 6.149	PL85 wire mesh cable tray	LiYY	3x1.5	26.6			
Gr. 6.75	LID (Input#6)	Server 6.150	PL85 wire mesh cable tray	LiYY	3x1.5	26.6			
Gr. 6.76	LID (Input#6)	Server 6.151	PL85 wire mesh cable tray	LiYY	3x1.5	26.6			
Gr. 6.76	LID (Input#6)	Server 6.152	PL85 wire mesh cable tray	LiYY	3x1.5	26.6			
Gr. 6.77	LID (Input#6)	Server 6.153	PL85 wire mesh cable tray	LiYY	3x1.5	27.1			
Gr. 6.77	LID (Input#6)	Server 6.154	PL85 wire mesh cable tray	LiYY	3x1.5	27.1			
Gr. 6.78	LID (Input#6)	Server 6.155	PL85 wire mesh cable tray	LiYY	3x1.5	27.1			
Gr. 6.78	LID (Input#6)	Server 6.156	PL85 wire mesh cable tray	LiYY	3x1.5	27.1			
Gr. 6.79	LID (Input#6)	Server 6.157	PL85 wire mesh cable tray	LiYY	3x1.5	27.6			

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 Orig. Inv. No

Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data
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**MDPC-12/17-EL**



Item No.	Name and Specification	Type, Brand, Document/Checklist Index	Type, Brand, Document/Checklist Index	Manufacturer	Unit	Quantity	Unit Weight, kg	Remark
1	2	3	4	5	6	7	8	9
1	Lead-in distributor 0.4 kV			i-Tech	set	1		
2	Wire mesh cable tray	PL85*600		KM	m	9		
3	Wire mesh cable tray	PL85*500		KM	m	15		
4	Wire mesh cable tray	PL85*400		KM	m	6		
5	Wire mesh cable tray	PL85*300		KM	m	9		
6	Wire mesh cable tray	PL85*200		KM	m	21		
7	Wire mesh cable tray	PL100*200		KM	m	3		
8	Wire mesh cable tray	PL100*300		KM	m	3		
9	Multifunctional channel (1 pcs = 2 m)	BPL2920		DKC	pcs	16		
10	T-coupler	BMD1031		DKC	pcs	17		
11	Perforated connector	PSP		KM	pcs	40		
12	Wire mesh cable tray connection kit (1 flange)	KS20		KM	pcs	160		
13	Wire mesh cable tray connection kit (2 flanges)	PSK		KM	pcs	50		
14	Fully threaded pin	SM8*1000		KM	pcs	25		
15	Special flange nut	GS8		KM	pcs	200		
16	Reinforced flat washer	SH8		KM	pcs	100		
17	M10x21 bolt	GOST 7798-70			pcs	80		
18	M10 flange bolt & nut	GOST R 50592-93			pcs	80		
19	Commercial rubber sheet 250 mm."1000 mm.	GOST 7338-65			pcs	2		
20	Bituminous sealant 300 ml				pcs	4		
21	C13 cable socket connector	IEC 60320 C13			pcs	1030		22 in SPTA
22	Insulated end sleeve IES 2x1.5-12 (100 pcs/pck)	IES(2) 1.5-12		KVT	PCK	11		
23	Insulated end sleeve IES 1.5-12 (100 pcs/pck)	IES 1.5-12		KVT	PCK	11		
24	Insulated end sleeve IES 2.5-13 (100 pcs/pck)	IES 2.5-13		KVT	PCK	1		
25	Tin coated copper lug	TML 6-6-4		KVT	pcs	30		

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Repl. Inv. No

						<b>MDPC-12/17-EL.SO</b>					
						<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data	<b>Indoor Electrical Equipment &amp; Lighting</b>  <b>Equipment, Goods and Materials Specification</b>					
CPE		Rozhnov		/Sign./	12.17				Stage	Sheet	Sheets
Stndrs verified by		Sidneva		/Sign./	12.17				P	1	2
Checked by		Rozhnov		/Sign./	12.17						
Prepared by		Kirillova		/Sign./	12.17						
						 <b>MegaProektStroy LLC,</b> Voronezh, 2017					

Item No.	Name and Specification	Type, Brand, Document/Checklist Index	Type, Brand, Document/Checklist Index	Manufacturer	Unit	Quantity	Unit Weight, kg	Remark
1	2	3	4	5	6	7	8	9
26	Grounding wire	H07V-K 1x6 yellow-green		REC	m	30		
27	Steel strip 4x40	GOST 103-2006			m	14		
28	Power cable	LiYY	3x1.5		m	18615		
29	Power cable	YSLY	3x1.5		m	15		
30	Power cable	LiYY	4x1.5		m	20		
31	Power cable	LiYY	5x2.5		m	15		
32	PVC corrugated pipe d20	91920		DKC	m	50		
33	Clip	51020		DKC	pcs	100		
34	IP54 switch	EVS10-K03-10-54-DC		IEK	pcs	1		
35	2P+E IP54 socket	ERS12-K03-16-54-DC		IEK	pcs	4		
36	Luminaire	LLSP3-3907-1-18-K03		IEK	pcs	4		
37	T8/G13 lamp	928047305451		Philips	pcs	4		
38	Emergency power supply	LLVPOD-EPK-58-1H		IEK	pcs	2		
39	Exit light	LSSA0-1001-003-K03		IEK	pcs	1		
40	Pull box 85x85x40 IP44	KM41235		IEK	pcs	3		

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Signature and date	
Repl. Inv. No	

Rev.	Qty of areas	Sheet	Doc.No	Sign.	Data

**MDPC-12/17-EL.SO**

1 General Information .....	2
2 Background.....	2
3 Facility Specifications .....	2
4 Lead-in Distributor .....	2
5 Lighting and Socket Network.....	4
6 Grounding.....	5
7 Integrated Cable System.....	6
8 Health, Safety & Environment. Fire Precautions.....	7
9 Construction Organization .....	8
10 Operation Organization.....	8
11 Environmental Protection .....	9
12 Electric Power Metering.....	9

Repl. Inv. No.

Signature and date

Orig. Inv. No.

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date
CPE		Rozhnov		/Sign./	02.17
Sndrds verified by		Sidneva		/Sign./	02.17
Checked by		Rozhnov		/Sign./	02.17
Prepared by		Kirillova		/Sign./	02.17

<b>MDPC-12/17-EL.PZ</b>					
Mobile Data Processing Center					
Stage		Sheet	Sheets		
P		1	9		
MegaProektStroy LLC, Voronezh, 2017					

## 1 General Information

The "Mobile Data Processing Center" detailed design was carried out on the basis of the terms of reference issued by the customer.

## 2 General provisions

This detailed design is being developed for the purpose of supplying power to process equipment located in a mobile container.

The detailed design provides for the following scope of work on developing a power supply system for this facility:

- **LID installation;**
- **Installation of cable support systems;**
- **Erection of the server power supply line;**
- **Erection of the hydraulic power supply line;**
- **Installation of container electrical lighting equipment;**
- **Installation of power supply equipment for the fire suppression system;**
- **Installation of sockets for adjustment equipment.**

## 3 Facility Specifications

### 3.1 Location

The mobile container can be located in a non-seismic area, on the street, on a dedicated foundation, in any place that meets the environmental requirements for the equipment operation.

## 4 Lead-in Distributor

A lead-in distributor 0.4 kV (hereinafter referred to as LID) is used to connect equipment to the transformer substation supply lines. The LID consists of 3 panels; each panel features 2 sections.

In total, it is possible to connect six inlets with a 5x240 sq.mm cable. No provision is made for the mutual redundancy of inputs. The Susol 400A circuit breakers are used as input protection devices.

Orig. Inv. No.	Signature and date	Repl. Inv. No.					Sheet
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Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date		

**MDPC-12/17-EL.PZ**

Each output line panel is a block of circuit breakers and busbar distributors N and Pe. Each panel is capable of serving up to 168 servers. The P-3.2 panel has output groups for lighting, fire suppression, and hydraulic equipment.

To ensure the nominal temperature regime of the protection devices, each LID section consists of a thermostat, a heater, and a fan.

Six (6) Tense EM-06 panel-mount three-phase digital multimeters are used to monitor the load of each LID section.

Incoming circuit breakers are equipped with undervoltage tripping devices. Once an automatic fire suppression system receives a signal, a command pulse will be sent to the hydraulic power unit to close the ventilation doors of the container, followed by deenergization of the server equipment after the time required for closing has elapsed.

LID load calculation is given in Table 1

Table 1

Description	Pins, kW	Ku	cos f	tg f	Pest, kW	Qest, kVAr	Sest, kVA	Iest, A
Input 1 (servers 168 pcs)	193.2	1	0.85	0.62	193.2	119.78	227.32	345.34
Input 2 (servers 168 pcs)	193.2	1	0.85	0.62	193.2	119.78	227.32	345.34
Input 3 (servers 168 pcs)	193.2	1	0.85	0.62	193.2	119.78	227.32	345.34
Input 4 (servers 168 pcs)	193.2	1	0.85	0.62	193.2	119.78	227.32	345.34
Input 5 (servers 168 pcs)	193.2	1	0.85	0.62	193.2	119.78	227.32	345.34
Input 6 (servers 168 pcs)	193.2	1	0.85	0.62	193.2	119.78	227.32	345.34
Lighting	0.06	1	0.9	0.48	0.06	0.03	0.07	0.31
Hygrostat system	0.15	1	1	0	0.15	0	0.15	0.69
Hydraulic power unit	7	0.8	0.7	1.02	5.6	5.71	8	12.16
Socket group	2	0.8	0.95	0.33	1.6	0.53	1.69	7.66
Network equipment	2	1	0.9	0.48	2	0.96	2.22	10.11
Total:	1170.41				1168.61	725.91	1376.05	2102.97

### Emergency Mode

Emergency operation of the electrical installation is not assumed. In the event of an accidental loss of voltage on one or more of the inputs, the corresponding number of servers will be disconnected.

Orig. Inv. No.	Repl. Inv. No.
Signature and date	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date	<b>MDPC-12/17-EL.PZ</b>	Sheet
							3

## 5 Lighting and Socket Network

### 5.1 Main Design Decisions

Lighting has been designed on the basis of EIC, Section 6. Lighting standards for premises have been adopted as per SNIIP 23-05-95 and SP 31-110-2003.

The container provides for both working and combined lighting.

The lighting supply voltage is 380/220 V. Luminaires and sockets are supplied from 220 V using three-wire lines.

A NYM-0(N)YM(St) three-core cable of the required cross-section with pull boxes is used for branch circuits of all types of lighting and the socket network. The equipment is connected via the TN-C-S grounding system.

A self-contained PE zero protective conductor is used to connect the metallic non-conductive parts of the lighting unit. Avoid combining PE zero protective conductor and the working N neutral conductor in a three-wire network.

The lighting network calculation is carried out by loss of voltage at the most remote point from the sources, followed by checking for the permissible load current. The loss of voltage from the panel to the farthest luminaire does not exceed 5%.

### 5.2 Working Lighting

The container working lighting uses IP54 luminaires with fluorescent lamps. The lighting has manual control using a switch installed at an elevation of 1,700 m.

### 5.3 Emergency Lighting

The emergency lighting is divided into safety and evacuation lighting.

The safety and evacuation lighting standards have been adopted as per SNIIP 23-05-95.

Orig. Inv. No.	Repl. Inv. No.
Signature and date	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date
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**MDPC-12/17-EL.PZ**

Sheet

4

A combined emergency luminaire with an inscription "Exit" is installed above the exit from the container. If there is a voltage in the network, the light is supplied from it and recharges the built-in battery. When the power is off, the light operates from the battery.

Two of the four main working lights are equipped with built-in emergency power supplies. If there is a voltage in the network, the light operates as regular working lighting and recharges the built-in battery. When the power is off, the light turns on and operates from the battery.

#### 5.4 Socket Network

The container provides for the installation of 220 V sockets intended for auxiliary equipment.

Electrical sockets are installed on the container walls at an elevation of 1,000 m. Electrical sockets have an IP54 rating and are equipped with a protective cover.

#### 5.5 Electric Power Distribution

Electric lighting and socket network are supplied from the P-3.2 panel of the planned LID.

### 6 Grounding

To protect the maintenance personnel from electrocution, the container features inner grounding circuit according to EIC, Sec. 1.1. The inner grounding circuit is connected to the outer grounding circuit at two points. Enclosures of electrical equipment, cable support structures, panel products and other exposed conductive parts that are not energized during the normal operation of the electrical installation are connected to the inner grounding circuit.

According to EIC, Sec. 1.1, the TN-C-S grounding system is used, which has its zero protective conductor and neutral conductor functions combined in a single conductor from the transformer to the LID.

The TN-C-S grounding system is designed with a zero protective bus (PE) and a neutral bus (N). All six inputs are supplied from a four-wire circuit. The N lead-in conductor is connected to the PE bus at the input panels.

Orig. Inv. No.	Repl. Inv. No.
Signature and date	

						<b>MDPC-12/17-EL.PZ</b>	Sheet
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date		5

### 7 Integrated Cable System

PVC-insulated flame-retardant (for bunched wiring) NYM-0(N)YM(St) 3x1.5 copper-conductor cables are used where specifically requested by the Customer. Server power supply cables are laid in the wire mesh cable trays.

A NYM-0(N)YM(St) 5x2.5 cable is used to supply the hydraulic power unit. A NYM-0(N)YM(St) 4x1.5 cable is used to supply the lighting groups.

A fire-resistant flame-retardant NYY-0 cable with low smoke and gas emission is used to supply the fire suppression system. The cable is laid in a corrugated PVC pipe.

Orig. Inv. No.	Repl. Inv. No.
Signature and date	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

**MDPC-12/17-EL.PZ**

Sheet

6

### 8 Health, Safety & Environment. Fire Precautions

For the reconstruction and operation of the designed facility, health, safety & environment (HSE) is ensured by taking all design decisions in strict compliance with the "Electrical Installations Code", SNiP 12-03-2001 "Occupational Safety in Construction", POT RM-016-2001 "Interindustry Labor Safety Rules (Safety Rules) in the Operation of Electrical Installations" (as amended as of July 1, 2003).

Persons having at least an electrical safety group III can be admitted to work.

In accordance with the current technological design standards, the detailed design provides for the following action framework to ensure HSE:

- Use of products having certificates in the established standard form;
- Use of machines and mechanisms having HSE principles laid down in their design in the performance of construction and assembly work;
- Grounding of all normally dead metal structures, which may become live as a result of an emergency in electrical circuits;
- Installation of earthing arrangements with a standardized resistance value and a design that complies with the requirements of SNiP 3.05.06-85 "Electrotechnical Installations";
- Use of high-scale mechanical operations;
- Enclosure of conductive parts at an accessible height (the use of enclosed boards, panels);
- Before starting any installation work, the availability and correctness of the necessary hoisting mechanisms, tools, protective equipment, and safety devices must be checked;
- The equipment installation work shall be performed after complete removal of voltage from the conductive parts of the distributor.

The Customer's operational personnel is responsible for the site preparation, installation of guards, safety signs, as well as for the issuance of permits to work to the team.

Orig. Inv. No.	
Signature and date	
Repl. Inv. No.	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

**MDPC-12/17-EL.PZ**

Sheet

7

The electrical installation work must be carried out in strict compliance with the requirements of EIC, SNiP 3.05.06-85 "Electrotechnical Installations".

### 9 Construction Organization

The section has been prepared on the basis of SNiP 12-01-2004 "Organization of Construction". The delivery of materials and equipment is carried out in accordance with the transport scheme.

The whole range of construction and assembly work must be performed in compliance with the requirements of SNiP 12-03-2001 "Occupational Safety in Construction", as well as POT RM-016-2001 "Interindustry Labor Safety Rules (Safety Rules) in the Operation of Electrical Installations" (as amended as of July 1, 2003). In addition, all requirements for the organization of the team's admission, the qualification of the maintenance personnel must be met at work.

Construction waste shall be picked up and disposed of by the organization responsible for the performance of construction and assembly work.

### 10 Operation Organization

In accordance with the "Instruction on the Procedure for Clearing New and Reconstructed Electrical Installations for Operation", the Rostekhnadzor bodies shall draw up a certificate of clearance of energy units for operation and issue a permit to energize the energy unit on the basis of the decision taken by the acceptance committee.

The certificate of clearance of the energy unit for operation shall be prepared following consideration of the documentation provided by the owner (Customer) and inspection of the electrical installation by the Rostekhnadzor's inspector.

The permit to energize (connect) the energy unit shall be issued in writing by the territorial administration of Rostekhnadzor subject to an electricity supply contract between the consumer and the electric power provider. The energy unit shall be connected in the established manner within 5 (five) days as from the date of issue of the permit.

The operation of electrical installations is organized in accordance with the following regulatory documents:

Orig. Inv. No.	Repl. Inv. No.
Signature and date	

						<b>MDPC-12/17-EL.PZ</b>	Sheet
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date		8

- Interindustry Labor Safety Rules (Safety Rules) in the Operation of Electrical Installations;
- Instruction on the work-related duties of the person responsible for the electrical facilities;
- The conditions reflected in the "Act on the Separation of Ownership and Responsibility for the Operation of Electrical Installations between the Electric Power Provider and the Consumer".

During the operation, inspections, checks, preventive measurements, routine and major repairs are carried out aimed at ensuring their reliable operation, maintaining and complying with the requirements of the relevant section of EIC (7th ed.).

### 11 Environmental Protection

The electric power supply of the container has zero emissions and excludes any harmful environmental emissions (both air and water). There is no industrial noise and vibration. Therefore, the detailed design provides for no air and water protection measures to reduce industrial noise and vibration.

### 12 Electric Power Metering

The commercial electric power metering is carried out at the transformer substation.

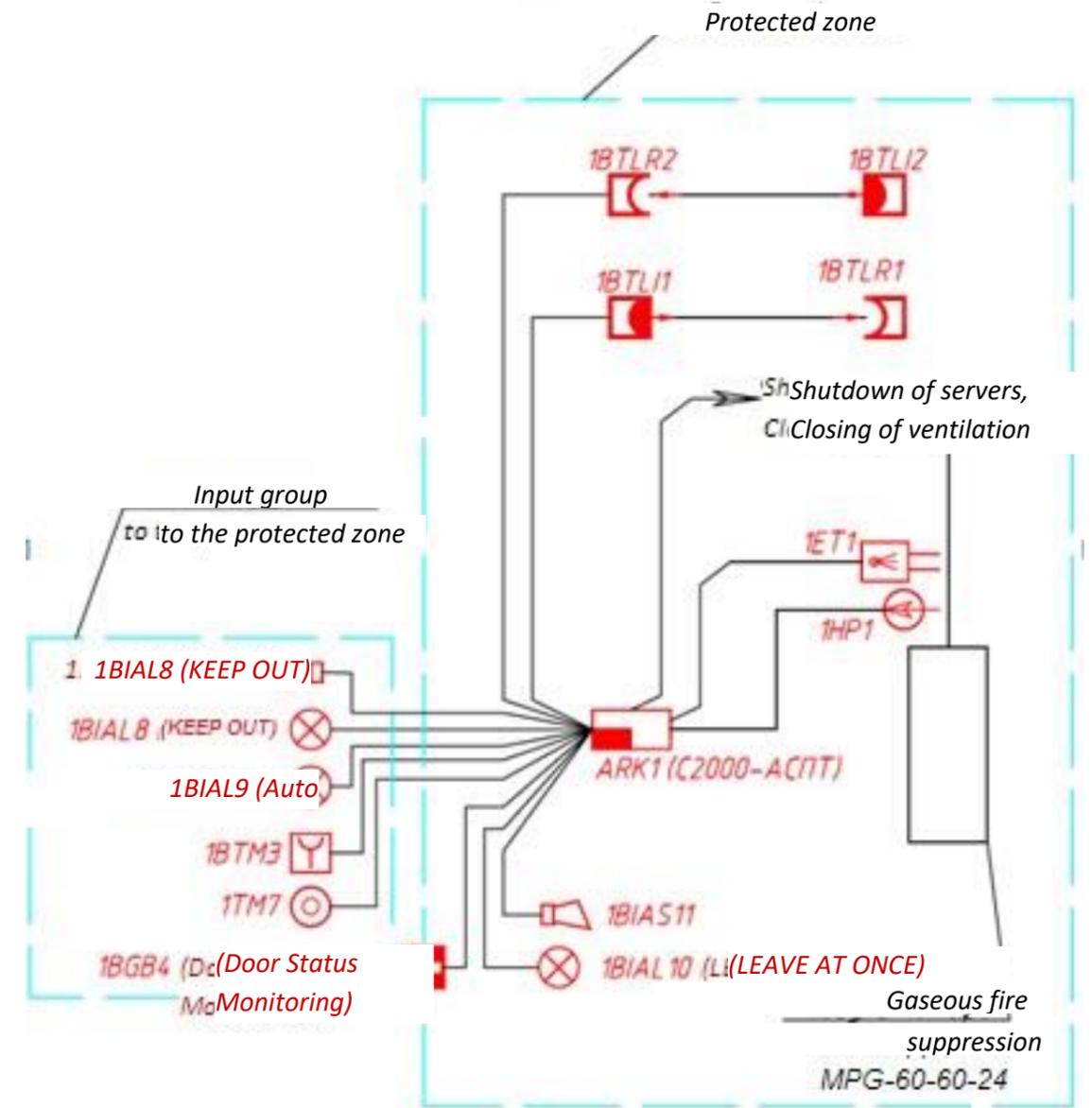
Tense EM-06 multimeters are used to organize technical monitoring of electric power supply parameters.

Orig. Inv. No.	Signature and date					Repl. Inv. No.	
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date	<b>MDPC-12/17-EL.PZ</b>	Sheet
							9

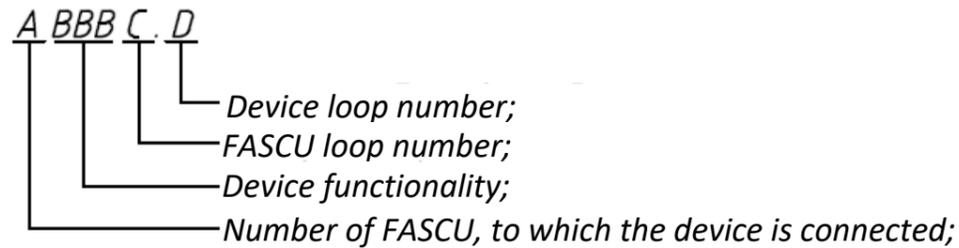


Legend

Item No.	Description	Plan Designation	Item Identification
	S2000-M Input Control Unit	ARK3	
	S2000-PT Display Panel	ARK4	
	S2000-ASPT Input Control & Automatic Fire Suppression Unit	ARK1	
	S2000-KPB Monitoring & Starter Unit	ARK2	
	RIP-24 RS Redundant Power Supply	UZ1	
	PChO-2 Ignition Cylinder	1ET1	
	Multi-Purpose Pressure Indicator Unit	1HP1	
	Point Smoke Detector	1BTH1.1	
	Remote Control Element	1BTM1	
	Sound Alarm (Siren)	1BIAS1	
	Light Alarm (Light Panel)	1BIAL1	
	Magnetic Contact Detector	1BGB1	
	TouchMemory Reader	1TM1	
	Route in the Cable Duct		
	Route in the corrugated PVC pipe		

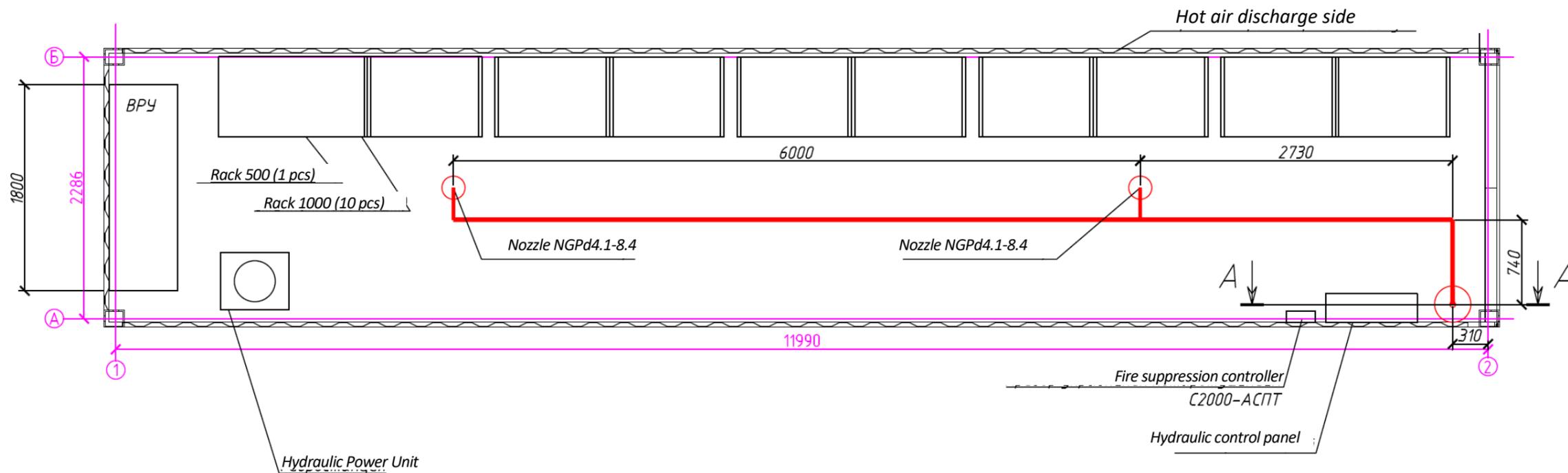


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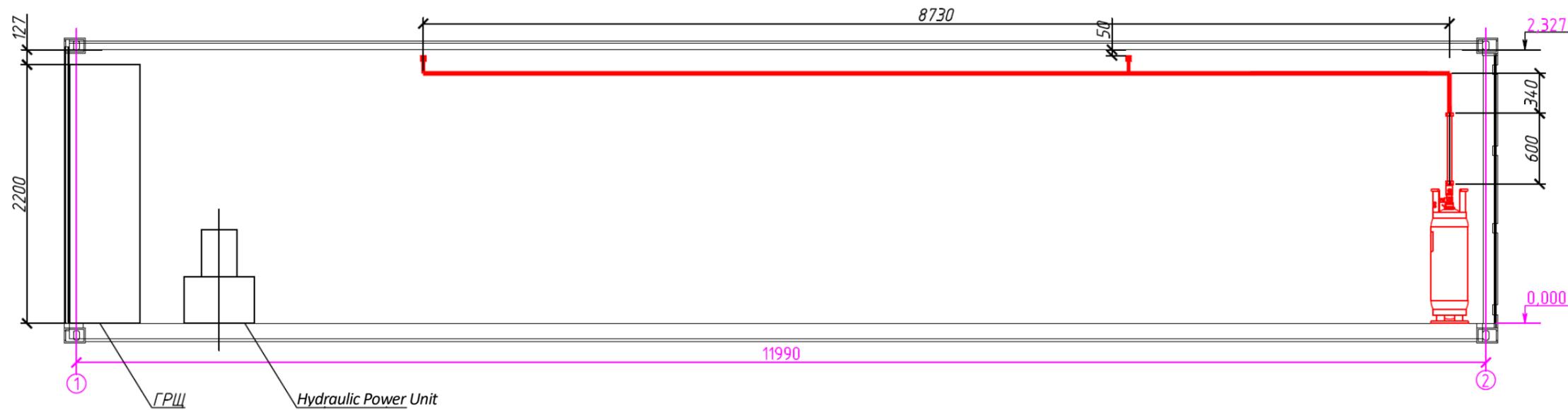


MDPC-12/17-PT					
Mobile Data Processing Center					
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data
CPE		Rozhnov		/Sign./	12/17
Stndrds verified by		Sidneva		/Sign./	12/17
Checked by		Rozhnov		/Sign./	12/17
Prepared by		Kirillova		/Sign./	12/17
Fire Suppression			Stage	Sheet	Sheets
Block Diagram			P	2	
 MegaProektStroy LLC, Voronezh, 2017					

Container Equipment Layout



Section A-A  
(racks not shown for clarity)

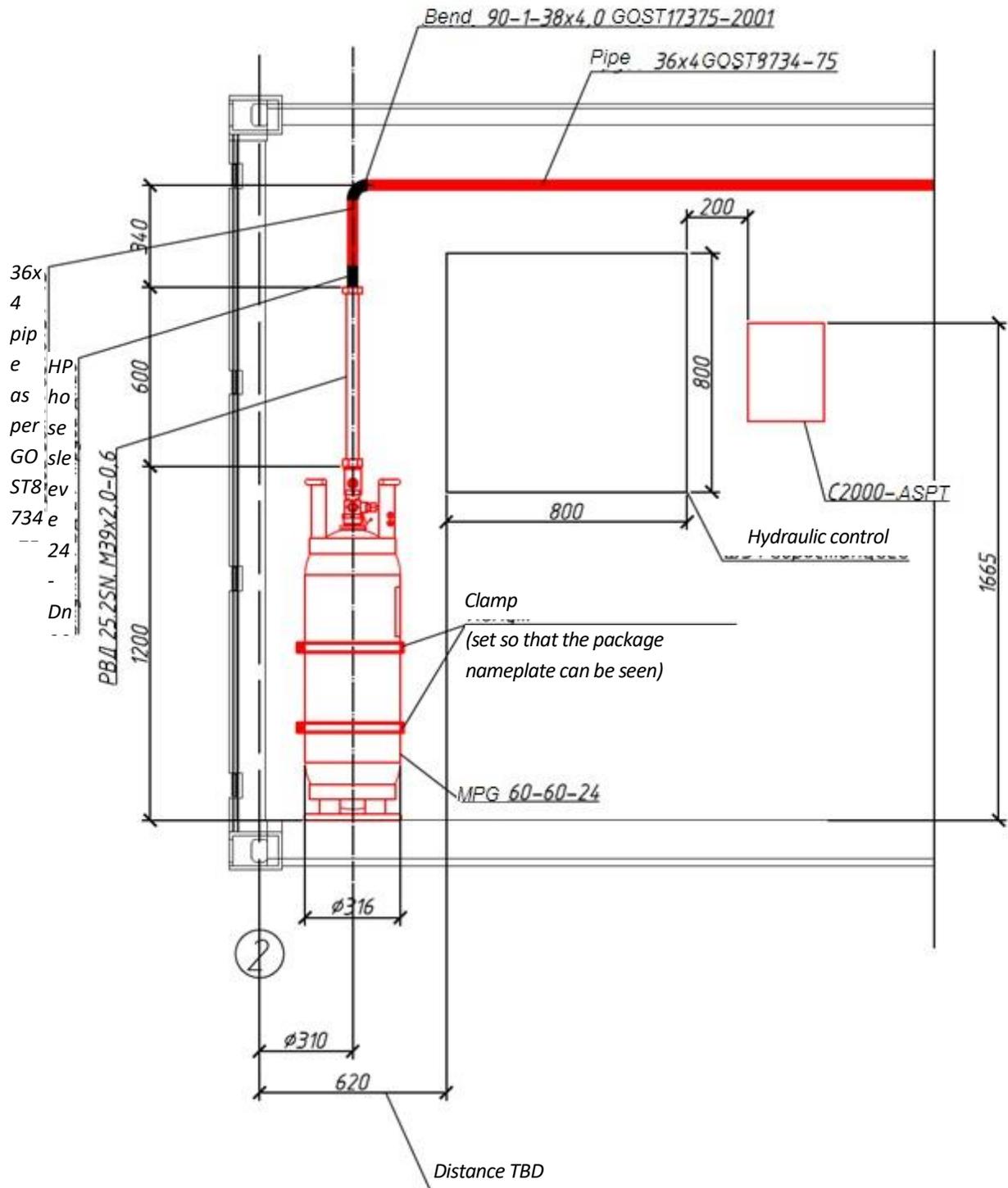


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Repl. Inv. No.	

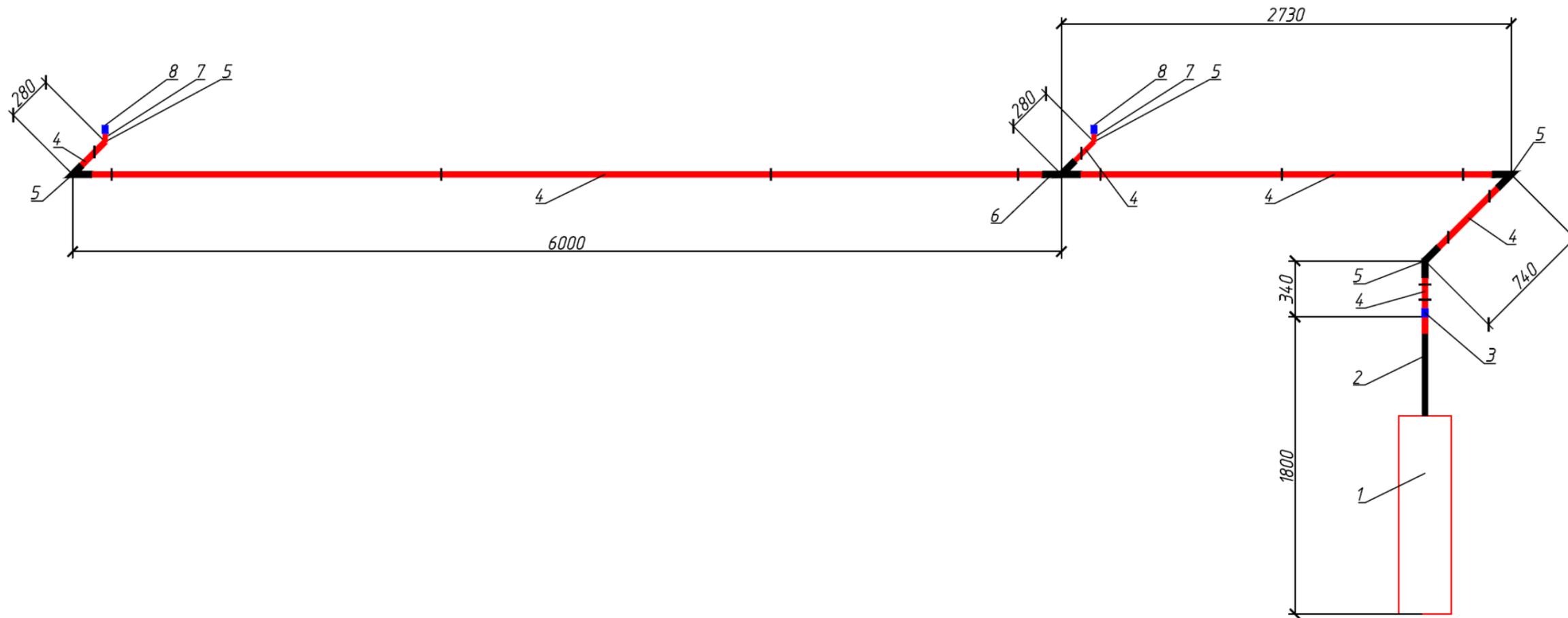
						MDPC-12/17-PT				
						Mobile Data Processing Center				
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Fire Suppression		Stage	Sheet	Sheets
CPE		Rozhnov		/Sign./	12/17			P	3	
Stndrds verified by		Sidneva		/Sign./	12/17					
Checked by		Rozhnov		/Sign./	12/17					
Prepared by		Kirillova		/Sign./	12/17	Fire Suppression Equipment Layout		 MegaProektStroy LLC, Voronezh, 2017		

# View A-A



Repl. inv. No.
Signature and date
Orig. inv. No.

<b>MDPC-12/17-PT</b>					
Mobile Data Processing Center					
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date
CPE		Rozhnov		/Sign./	02.17
Stndrds verified by		Sidneva		/Sign./	02.17
Checked by		Rozhnov		/Sign./	02.17
Prepared by		Kirillova		/Sign./	02.17
				Stage	Sheet
				P	4
				Sheets	
Wall View				 MegaProektStroy LLC, Voronezh, 2017	



List of Equipment

Item No.	Description	Designation	Unit	Qty	Remark
1	Fire Suppression Package	MPG 60-60-24	pcs	1	
2	High-Pressure Hose	HP hose, 25.2SN. M39x2.0-0.6	pcs	1	
3	Reducing Sleeve	HP hose sleeve 24 - Dn28 pipe	pcs	1	
4	Pipe	36x4 GOST 8734-75	m	12	
5	Bend	90-1-38x4.0 GOST 17375-2001	pcs	5	
6	Straight Tee	38x4.0 GOST 17376-2001	pcs	1	
7	Nozzle Sleeve	01	pcs	2	
8	Nozzle	NGPd4.1-8.4	pcs	2	
9	Pipe Clamp	MP-MI 1" G	pcs	14	

Legend:

1 - suspension point (Item No. 9)

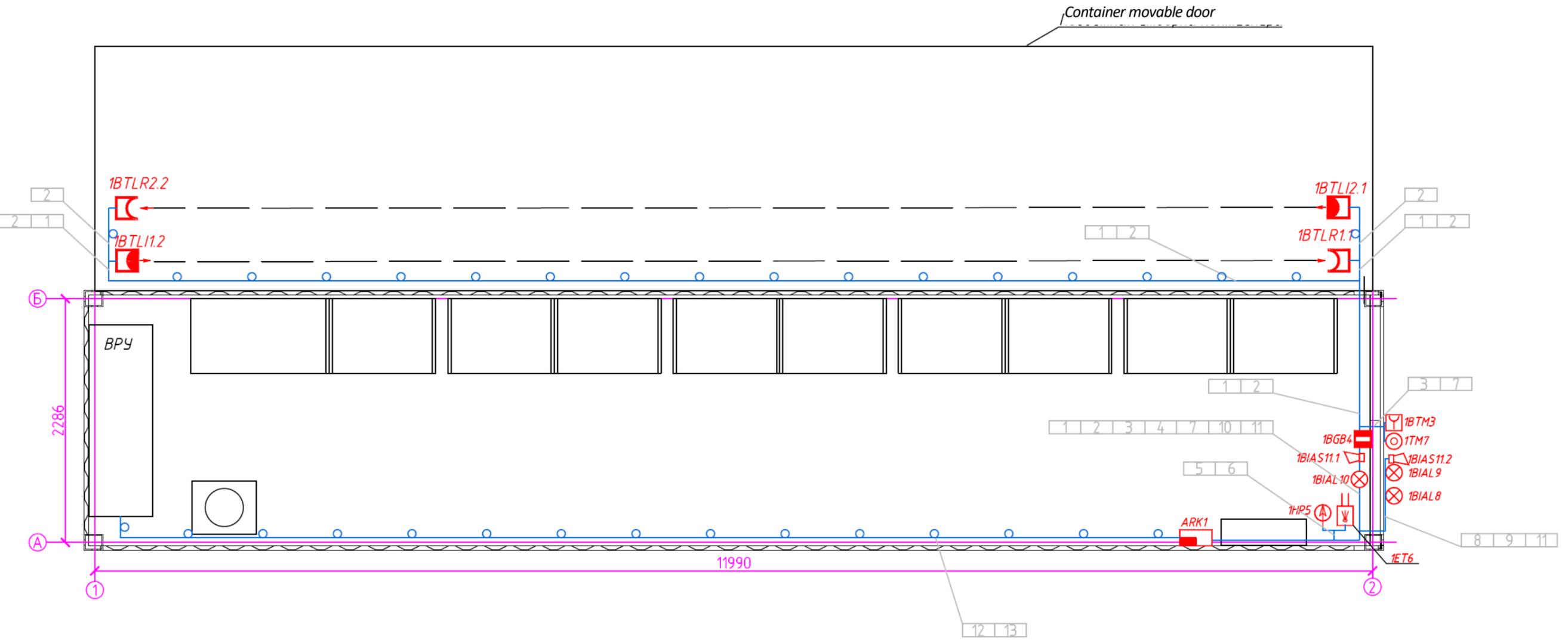
Remarks

- The dimensions are shown by pipe centerlines;
- The pipeline to be mounted with a step of at least 2 m;

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						<b>MDPC-12/17-PT</b>				
						<b>Mobile Data Processing Center</b>				
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Fire Suppression		Stage	Sheet	Sheets
CPE		Rozhnov		/Sign./	12/17			P	5	
Stndrds verified by		Sidneva		/Sign./	12/17					
Checked by		Rozhnov		/Sign./	12/17					
Prepared by		Kirillova		/Sign./	12/17	Pipeline Axonometric View		 MegaProektStroy LLC, Voronezh, 2017		



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Orig. Inv. No.	
Signature and date	
Repl. Inv. No.	

						<b>MDPC-12/17-PT</b>			
						<b>Mobile Data Processing Center</b>			
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Fire Suppression	Stage	Sheet	Sheets
CPE		Rozhnov		/Sign./	12/17		P	6	
Stndrds verified by		Sidneva		/Sign./	12/17				
Checked by		Rozhnov		/Sign./	12/17				
Prepared by		Kirillova		/Sign./	12/17	Automation Equipment Layout	 MegaProektStroy LLC, Voronezh, 2017		



Cable / Wire Designation	Route		Cable / Wire Route Section	Cable / Wire					
	Starting Point	End Point		Designed			Laid		
				Brand	Core Number & Section	Length, m	Brand	Core Number & Section	Length, m
1	ARK1	1BTLR1.1 - 1BTLI1.2	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	2x2x0.60	30			
2	ARK1	1BTLR2.1- 1BTLI2.2	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	2x2x0.60	30			
3	ARK1	1BTM3	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	1x2x0.60	12			
4	ARK1	1BGB4	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	1x2x0.60	12			
5	ARK1	1HP5	In the corrugated PVC tube d16	JE-2GYu	1x2x0.5	10			
6	ARK1	1EM6	In the corrugated PVC tube d16	JE-2GYu	1x2x0.5	10			
7	ARK1	1TM7	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	2x2x0.60	12			
8	ARK1	1BIAL8	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	1x2x0.60	10			
9	ARK1	1BIAL9	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	1x2x0.60	10			
10	ARK1	1BIAL10	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	1x2x0.60	10			
11	ARK1	1BIAS11.1 - 1BIAS11.2	In the corrugated PVC tube d16	KSHSGNG(A)-FRLS	1x2x0.60	17			
12	ARK1	MDB	In the corrugated PVC tube d16	JE-2GYu	1x2x0.5	17			
13	MDB	Hydraulic control panel	In the corrugated PVC tube d16	JE-2GYu	1x2x0.5	17			

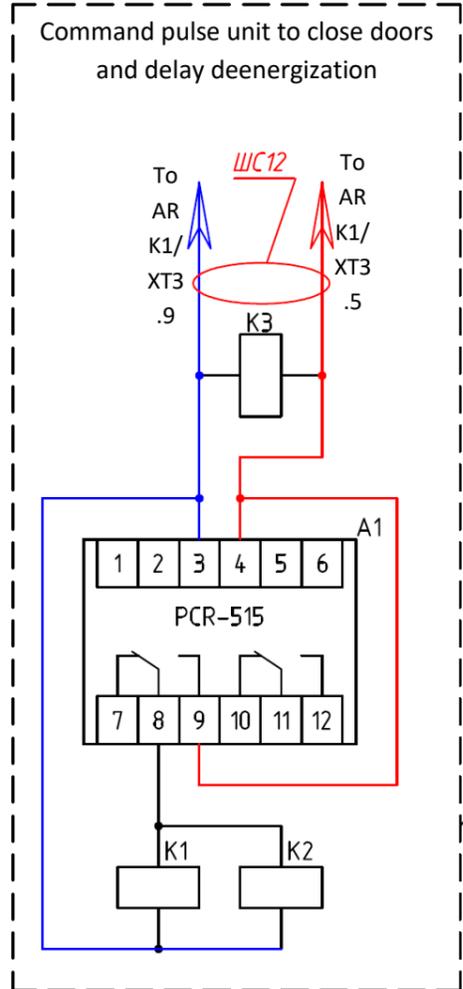
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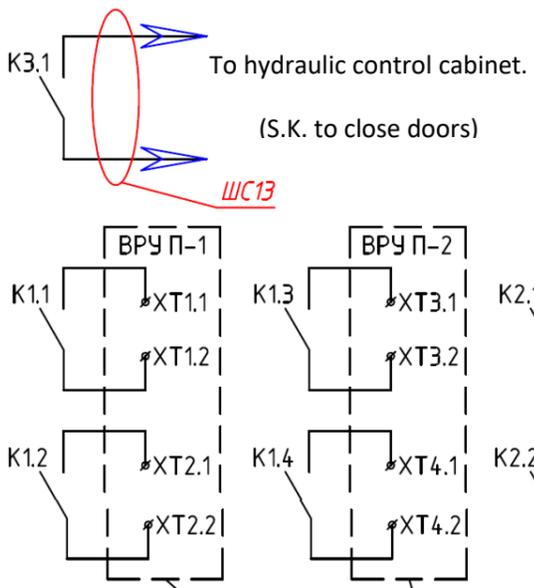
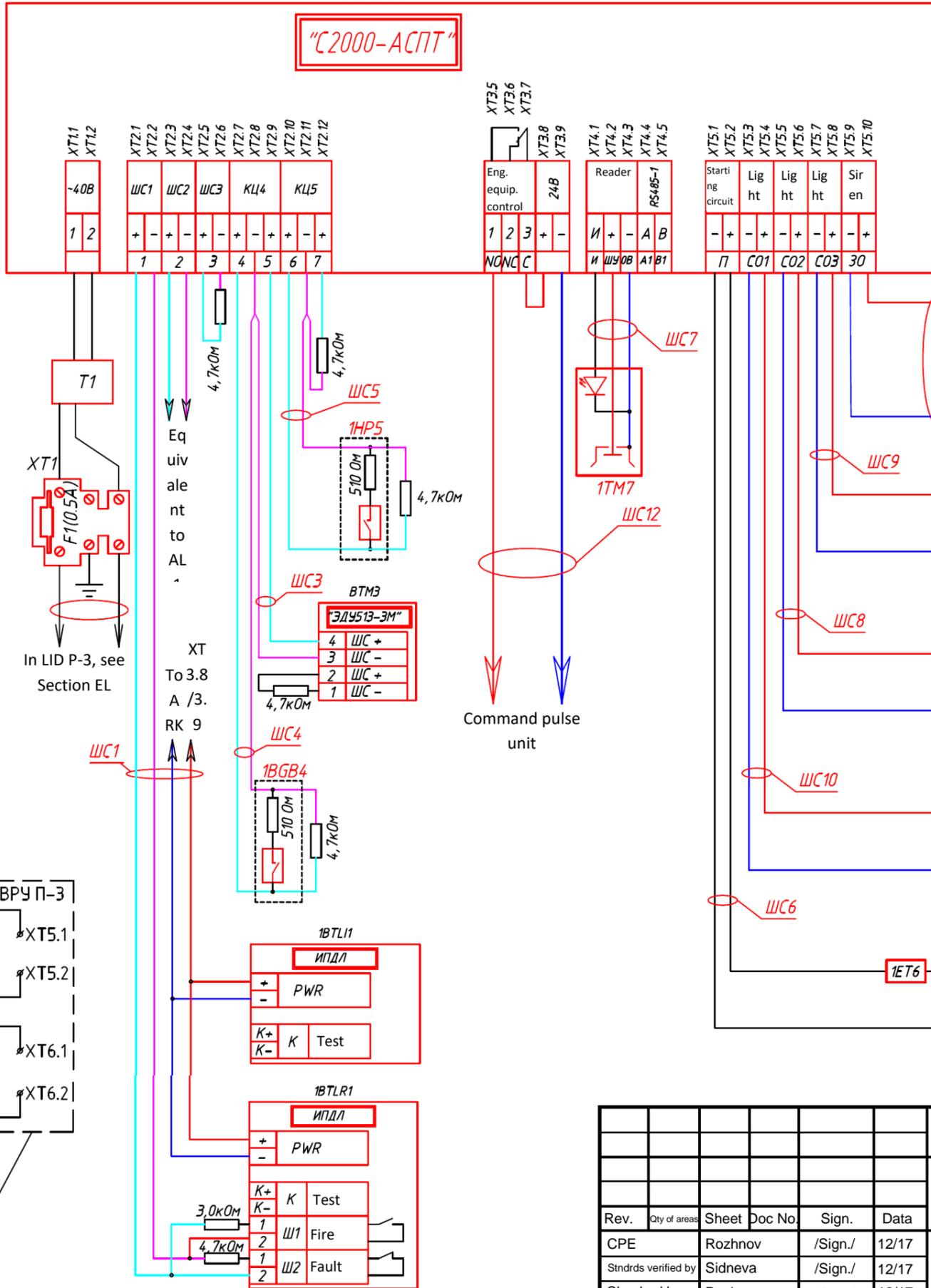
						<b>MDPC-12/17-PT</b>					
						<b>Mobile Data Processing Center</b>					
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Fire Suppression		Stage	Sheet	Sheets	
CPE		Rozhnov		/Sign./	12/17			Cable List	P	8	
Stndrds verified by		Sidneva		/Sign./	12/17						
Checked by		Rozhnov		/Sign./	12/17						
Prepared by		Kirillova		/Sign./	12/17			 <b>MegaProektStroy LLC,</b> Voronezh, 2017			

ARK1

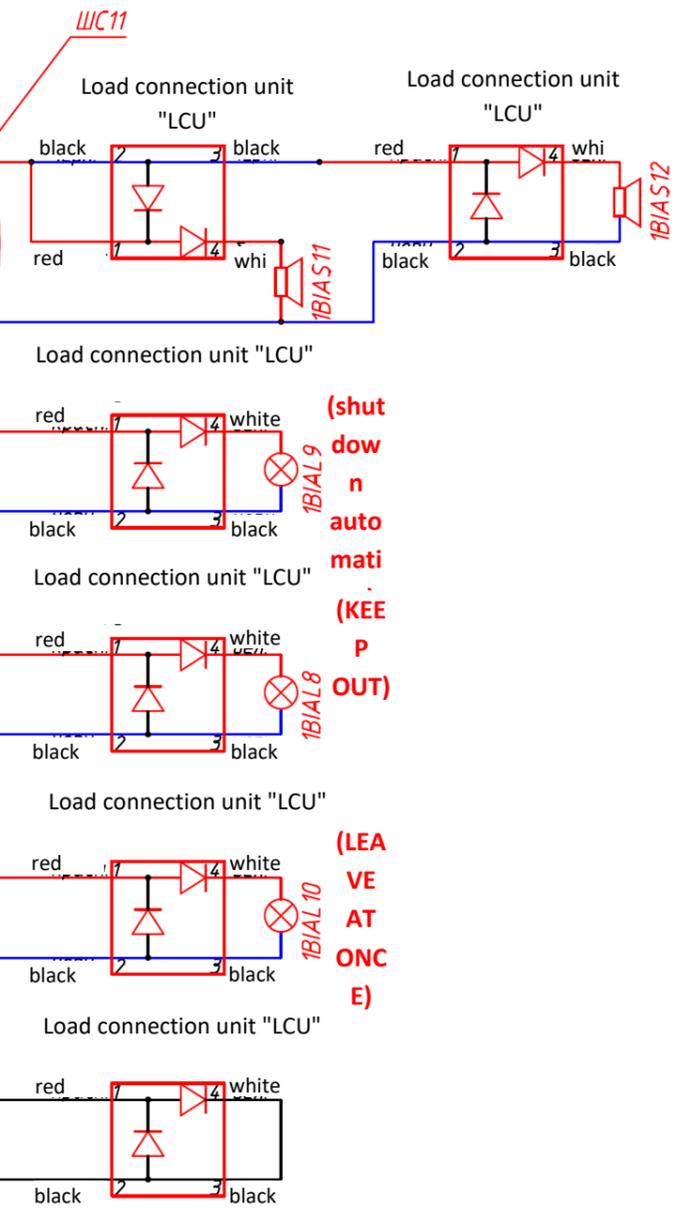
"С2000-АСПТ"



Install equipment to LID DIN rail



The equipment is specified in the EPS section



					<b>MDPC-12/17-PT</b>				
					<b>Mobile Data Processing Center</b>				
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Fire Suppression	Stage	Sheet	Sheets
CPE		Rozhnov	/Sign./		12/17		P	9	
Stndrds verified by		Sidneva	/Sign./		12/17				
Checked by		Rozhnov	/Sign./		12/17				
Prepared by		Kirillova	/Sign./		12/17	Wiring Diagram			
							 MegaProektStroy LLC, Voronezh, 2017		

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Orig. Inv. No. Signature and date Repl. Inv. No.

Item No.	Name and Specification	Type, Brand, Document/Checklist Index	Equipment, Item, Material Code	Manufacturer	Unit	Quantity	Unit Weight, kg	Remark
1	2	3	4	5	6	7	8	9
	<i>Process equipment</i>							
1	Package 60 bar, 60 liters, DN 24mm, H = 860mm, d = 311mm, m = 31 kg,	MPG60-60-24		NPO PAS	pcs	1		
2	Gas fire extinguishing agent compound	HFC-125		NPO PAS	kg	49		
3	Starting device	PChO-2		NPO PAS	pcs	1		
4	Multi-Purpose Pressure Indicator Unit	SDU		NPO PAS	pcs	1		
5	High-pressure hose Dn25, M39x2, L=600mm	HP hose, 25.2SN. M39x2.0-0.6		NPO PAS	pcs	1		
6	HP hose reducer D (outer) 28	HP hose sleeve 24 - Dn28 pipe		NPO PAS	pcs	1		
7	Rigid clamp	KhZh316		NPO PAS	pcs	2		
8	36x4 pipe as per GOST 8734-75	36x4			m	12		
9	90-1-38x4.0 bend as per GOST 17375-2001	90-1-38x4.0 GOST 17375-2001			pcs	5		
	38x4.0 straight tee as per GOST 17376-2001	38x4.0 GOST 17376-2001			pcs	1		
10	Threaded nozzle welded sleeve G1	01		NPO PAS	pcs	2		
11	Threaded nozzle 01	NGPd4.1-8.4		NPO PAS	pcs	2		
12	Heavy duty pipe clamp	MP-MI 1" G	20847	Hilti	pcs	14		
13	Pin M12, L=1000mm	SM201201		DKC	pcs	7		
	<i>Spare parts &amp; accessories</i>							
14	Package 60 bar, 60 liters, DN 24mm, H = 860mm, d = 311mm, m = 31 kg,	MPG60-60-24		NPO PAS	pcs	1		
15	Gas fire extinguishing agent compound	HFC-125		NPO PAS	kg	49		
16	Starting device	PUO-2		NPO PAS	pcs	1		
17	Test cup 01			NPO PAS	pcs	2		
	<i>Automatic fire fighting equipment</i>							
18	Fire suppression controller	S2000-ASPT		Bolid	pcs	1		
19	Battery 12V / 4.5Ah	DT12045		Delta	pcs	2		
20	Two-component line type detector	IPDL-D-I/4R		Poliservis	pcs	2		
21	Remote Control Element	EDU-513		Bolid	pcs	1		
22	Magnetic contact detector	IO-102-20 B2P		KSS	pcs	1		

Agreed by

Orig. Inv. No. Signature and date Repl. Inv. No.

						<b>MDPC-12/17-PT.S0</b>				
						<b>Mobile Data Processing Center</b>				
Rev.	Qty of areas	Sheet	Doc No.	Sign.	Data	Fire Suppression		Stage	Sheet	Sheets
CPE		Rozhnov		/Sign./	12/17			P	1	2
Stndrds verified by		Sidneva		/Sign./	12/17	Equipment and Materials Specification		 MegaProektStroy LLC, Voronezh, 2017		
Checked by		Rozhnov		/Sign./	12/17					
Prepared by		Kirillova		/Sign./	12/17					

Item No.	Name and Specification	Type, Brand, Document/Checklist Index	Equipment, Item, Material Code	Manufacturer	Unit	Quantity	Unit Weight, kg	Remark
1	2	3	4	5	6	7	8	9
23	Sounder beacon	Mayak-24-KP		Electrical Equipment &	pcs	2		
24	"GAS HAZARD! KEEP OUT!" light panel, hidden inscription	LIUKS-24-SN "GAS HAZARD! KEEP		Electrical Equipment &	pcs	1		
25	"GAS HAZARD! LEAVE AT ONCE!" light panel, hidden inscription	LIUKS-24-SN "GAS HAZARD! LEAVE AT		Electrical Equipment &	pcs	1		
26	Light panel "Automation Disabled", hidden inscription	LIUKS-24-SN "Automation Disabled"		Electrical Equipment & Automation	pcs	1		
27	Touch Memory reader	Reader-1		Bolid	pcs	1		
28	Touch Memory key			Dallas	pcs	6		
29	Electromagnetic relay, 4 groups, 24V	RXM4AB1BD		Schneider Electric	pcs	3		
30	Terminal block	RXZE2M114		Schneider Electric	pcs	3		
31	RXZ4 clamp for RXM4 relay	RXZ400		Schneider Electric	pcs	3		
32	Time relay, 220V, cont.2R, on delay, DIN mounting	PCR-515	EA02.001.006	F&F	pcs	1		
	Materials							
33	Fire alarm cable	JE-2GYu 1x2x0.5		Spetskabel	m	60		
34	Fire alarm cable	KShSGng(A)-FRLS 1x2x0.60		Spetskabel	m	80		
35	Fire alarm cable	KShSGng(A)-FRLS 2x2x0.60		Spetskabel	m	80		
36	Corrugated PVC pipe D16	91916		DKC	m	220		
37	Pipe clip D16	51016		DKC	pcs	440		
38	Solid tray 100x50x3000	35022		DKC	m	3		
39	Tray cover, base 100	35522		DKC	m	3		

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Orig. Inv. No.

Signature and date

Repl. Inv. No.

Rev.	Qty of areas	Sheet	Doc No	Sign.	Data
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**MDPC-12/17-PT.SO**

Sheet  
2

1.	General Information .....	2
2.	Main Detailed Design Decisions .....	2
3.	Electric Power Supply of Units .....	4
4.	Equipment Layout .....	5
5.	Cable Communication Lines.....	5
6.	Requirements for Installation and Operation .....	6
7.	Occupational Safety Requirements .....	6
8.	Installation of Equipment and Wiring.....	8

Repl. Inv. No.	
Signature and date	
Orig. Inv. No.	

						<b>MDPC-12/17-PT.PZ</b>		
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date			
CPE		Rozhnov		/Sign./	12.17	Stage	Sheet	Sheets
Stndrds verified by		Sidneva		/Sign./	12.17	P	1	10
Checked by		Rozhnov		/Sign./	12.17	Mobile Data Processing Center		
Prepared by		Kirillova		/Sign./	12.17			

## 1. General Information

The detailed design documentation has been executed in accordance with the requirements:

- Federal Law of the Russian Federation No. 123-FZ "Technical Regulations on Fire Safety Requirements" of July 22, 2008, as amended as of July 10, 2012; July 2, 2013; June 23, 2014;
- SP 3.13103.2009 "Public Address/General Alarm System. Requirements of Fire Safety";
- SP 5.13130.2009 "Automatic Fire-Extinguishing and Alarm Systems. Designing and Regulations Rules";
- SP 6.13130.2013 "Systems of Fire Protection. Electrical Equipment. Requirements of Fire Safety";
- GOST R 21.1101-2013 "System of Design Documents for Construction. Main Requirements for Design and Working Documents";
- GOST 31565-2012 "Cable Products. Requirements of Fire Safety";
- RD 78.145-93 MIA of Russia "Guidelines. Security Alarm, Fire Alarm, and Security Fire Alarm Systems and Assemblies. Installation and Acceptance Requirements";
- EIC (7th ed.). Electrical Installations Code.

The detailed design documentation is allowed for the performance of works after it has been checked and agreed with the Customer.

The detailed design documentation has been developed in accordance with the requirements of environmental, sanitary and hygiene, fire safety and other rules and regulations in force in the Russian Federation.

## 2. Main Detailed Design Decisions

In accordance with the regulatory documents, the detailed design provides for a gaseous fire system (hereinafter referred to as GFS). The detailed design also provides for the public address/general alarm system (hereinafter referred to as PA/GA).

The fire alarm technical facilities include:

- The S2000-ASPT input control and automatic fire suppression unit;

Repl. Inv. No.		Signature and date		Orig. Inv. No.		Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date	<b>MDPC-12/17-PT.PZ</b>	Sheet
			2										

- Touch Memory reader (Reader-2);
- Touch Memory electronic key with an SB 1990 A holder;
- EDU 513-3M remote control electrical contact device;
- IPDL-D-ii/4r line type electronic smoke detector;
- LIUKS-24 SN "GAS HAZARD! LEAVE AT ONCE!" fire alarm device;
- LIUKS-24 SN "GAS HAZARD! KEEP OUT!" fire alarm device;
- LIUKS-24 "Automation Disabled" fire alarm device;
- Mayak-24-KP sounder beacon;
- IO 102-20 B2P magnetic contact point smoke detector;
- Delta DTM12045 12V/4.5 Ah sealed lead-acid battery;
- Cable & wire networks.

The design decisions provide for the gaseous fire suppression in the container for server equipment.

The S2000-ASPT input control and automatic fire suppression unit is designed for operation as part of an automatic gaseous fire suppression. The fire suppression has both an automatic control using signals from fire alarm devices and a remote control using an electrical contact device.

The IPDL-D-ii/4r line type electronic smoke detectors are provided to detect fire in the premises to increase the optical density of the environment when it is smoked. The remote start of the fire suppression system is carried out using the EDU 513-3M remote control electrical contact device.

Orig. Inv. No.		Signature and date		Repl. Inv. No.	
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date
<b>MDPC-12/17-PT.PZ</b>					Sheet
					3

Once the fire alarm signal has been received from the detectors in the automatic mode, the alarm system will be activated and an on delay enabled before the fire suppression system is started. The on delay feature is necessary to evacuate personnel from the container and close the ventilation doors. As soon as the time required for closing of the ventilation doors has elapsed, the LID incoming circuit breakers will be disabled merely to deactivate the built-in fans. After that, a command pulse will be output to the package's ignition cylinder, followed by release of the gas fire extinguishing agent compound into the container.

In case of fire, the security detector sends a door status (open/closed) monitoring signal to the S2000-ASPT unit to automatically block the GFES release if there are people in the container.

In accordance with SP 3.13103.2009, premises with electrical equipment shall be equipped with an automatic warning and evacuation control system for category I fire.

The detailed design provides for the following sound and light alarm aids:

- LIUKS-24 SN "GAS HAZARD! LEAVE AT ONCE!" fire alarm device;
- LIUKS-24 SN "GAS HAZARD! KEEP OUT!" fire alarm device;
- LIUKS-24 "Automation Disabled" fire alarm device;
- Mayak-24-KP sounder beacon.

The alarm system starts automatically when two detectors (hereinafter referred to as the detectors) are triggered. In the event of a fault of any detector, a "faulty" message will be output to the S2000-ASPT control unit.

### 3. Electric Power Supply of Units

Automatic fire alarm electrical circuits shall be executed in accordance with EIC (7th edition). In terms of ensuring the electric reliability, the automatic fire alarm system is assigned to category I consumers in accordance with EIC.

Repl. Inv. No.	
Signature and date	
Orig. Inv. No.	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

<b>MDPC-12/17-PT.PZ</b>	Sheet 4
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In terms of protecting personnel from electrocution, automatic fire alarm systems have items of electrical equipment complying with the requirements of GOST 12.2.007.0-75.

Protective grounding of automatic fire alarm electrical equipment to be executed in accordance with the requirements of EIC and the manufacturer's technical documentation.

The S2000-ASPT unit shall have its working (main) power supply carried out from the 220 VAC 50 Hz:

The backup power supply shall be carried out from the batteries built in the S2000-ASPT.

The transfer of power supply from the main to the backup and vice versa shall be carried out automatically.

The connection of the 220V network to the devices, the connection of the equipment housings to the grounding circuit shall be carried out on site during installation. The grounding shall be executed as per SNiP 3.05.06-85 and EIC.

#### 4. Equipment Layout

To automatically detect the fire of equipment, the detailed design provides for the installation of the automatic smoke detectors under the ventilation door.

The remote manual start-up is provided by the EDU 513-3M remote control electrical contact device installed at the inlet to the container at a height of 1.5 m from the ground level.

For the timely notification of personnel about a fire in the premises, the detailed design provides for Class 1 Public Address/General Alarm System. The sound and light alarm notification method is used.

The LIUKS-24 SN "GAS HAZARD! LEAVE AT ONCE!", LIUKS-24 SN "GAS HAZARD! KEEP OUT!", and LIUKS-24 "Automation Disabled" fire alarm devices to be installed above the door to the container. The Mayak-24-KP sounder beacon shall be installed above the entrance door both inside and outside the container.

#### 5. Cable Communication Lines

The choice of wires and cables, as well as their laying methods have been provided in accordance with EIC and RD 78.145-93.

Cables shall be laid (in compliance with the requirements of SP 5.13130.2009) in the corrugated PVC pipe.

Repl. Inv. No.
Signature and date
Orig. Inv. No.

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

**MDPC-12/17-PT.PZ**

Sheet
5

The following communication lines shall be provided (subject to the requirements of GOST 315652012):

- Stationary control lines (with no operational bends) using a JE-2GYu 1x2x0.5 cable.
- Stationary lines with occasional bends when opening/closing the doors/doors of the container using KShSGng(A)-FRLS 1x2x0.60 and KShSGng(A)-FRLS 2x2x0.60 cables.

Cable routes and cable laying methods can be changed on site subject to the current norms and standards.

All fire alarm electrical wiring uses a flame-resistant cable.

The distance between the fire alarm cables and power cables must be at least 0.25 m.

Prior to laying cables and wires, they must be subjected to visual inspection. In addition to the visual inspection, electrical cable resistance must be measured and the integrity of conductor insulation checked.

Cable connections shall be executed in accordance with the cable network layout. The cable laying and installation work must be carried out in compliance with the safety regulations.

#### 6. Requirements for Installation and Operation

The GFS and PA/GA systems developed on the basis of the detailed design documentation shall be operated on a continuous basis.

The unit installation and operation must be carried out in compliance with the requirements specified in the technical documentation of the equipment manufacturers. The installation work must be performed by a specialized organization certified by the MES of Russia in accordance with the technical documentation for the devices, as well as in accordance with the requirements of the fire safety regulatory documents.

#### 7. Occupational Safety Requirements

Installation work must be carried out by a specialized organization in the construction preparedness and in strict compliance with applicable standards.

Persons having at least an electrical safety group III can be admitted to work.

Repl. Inv. No.	
Signature and date	
Orig. Inv. No.	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

**MDPC-12/17-PT.PZ**

Sheet

6

Installation and assembly work shall be commenced following the implementation of the HSE measures as per SNiP 12-04-2002 and the execution of the acceptance control certificate.

The operation of electric power tools requires compliance with the requirements of GOST 12.2.013.0-91.

Fire suppression equipment is safe for operating and maintenance personnel who observe the operation and maintenance rules and regulations, and causes no harm to health of persons near it. Personnel operating the FS and PG/GA equipment must undergo the safety training and observe safety precautions.

All electrical installation work, equipment maintenance, protective equipment inspection intervals and methods shall comply with the "Regulations for Operation of Consumer Electrical Installations".

The maintenance personnel must have practical skills in operating equipment and be aware of the safety precautions for operating electrical installations of up to 1000V.

The requirements of SNiP 3.05.06-85 and EIC must also be met when performing electrical installation work.

Electrical installations may be operated and maintained by persons who have passed preliminary and periodic medical examination, have permits to work with electrical installations and a certificate of verification of knowledge, norms and rules of working with electrical installations (at least electrical safety group III); as well as those who have passed the introductory HSE briefing and the tool box talk on safe working methods.

Repl. Inv. No.	
Signature and date	
Orig. Inv. No.	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

<b>MDPC-12/17-PT.PZ</b>	Sheet
	7

Mounting and repair work in electrical networks and devices (or in vicinity thereof), as well as wiring work must be carried out with the voltage removed. In this case, it is necessary to carry out inspection for the absence of voltage, provide the grounding, and install the prohibiting/warning signs. However, a permit to work shall be issued when performing work at height, in confined and hard-to-reach spaces, as well as in existing electrical installations. Construction electricians (wiremen) responsible for the maintenance of electrical installations must wear overalls, safety footwear and personal protective equipment (PPE) at all times, and should also be provided with electrical safety devices that are subject to periodic inspection. All electrical installation work, maintenance of electrical installations, inspection intervals and methods of electrical safety devices shall comply with the Gosenergonadzor's "Regulations for Operation of Consumer Electrical Installations".

#### 8. Installation of Equipment and Wiring

Before starting any work, the assembly organization shall familiarize itself with the detailed design and review the equipment used.

Equipment may be installed following the acceptance control with the drawing up of the acceptance control certificate as required.

Equipment should be installed in accordance with the established procedure:

- Check pipes for the cable/wire pass through;
- Fix trays and PVC pipes in the indicated places;
- Install wires;
- Install equipment;
- Connect actuators to their respective controllers;
- Verify proper function and operation of individual devices and the entire system.

Installation and maintenance of the system may be carried out by persons who have been briefed in safety precautions. Briefing shall be logged.

Installation work require compliance with the requirements of SNiP 12-04-2002. Occupational Safety in Construction. Part 2. Construction Operations", Sections 8 to 18, EIC.

Repl. Inv. No.	
Signature and date	
Orig. Inv. No.	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

**MDPC-12/17-PT.PZ**

Sheet
8

When performing construction and assembly works, the workplaces of installers must be equipped with safety devices.

Persons having at least an electrical safety group III can be admitted to work.

When working with electrical installations, warning signs must be installed. For existing electrical installations, electrical installation work shall be performed only with the voltage removed.

Wiring work should be performed in accordance with the detailed design (inspection report and standard design decisions) subject to the requirements of EIC and SNiP 3.05.06-85.

For parallel exposed laying of wires/cables of communication, power and lighting lines, the distance between them should be at least 0.5 m, otherwise induced-noise protection should be provided.

Cable routes should be designed as short as possible given the location of electric lighting networks, as well as other utilities. Wires and cables to be laid along the walls inside the container should be laid at least 0.1 m from the ceiling, and typically at a height. Wires and cables to be laid at an elevation of at least 2.0 m from the ground level must be protected against mechanical damage.

Wiring that passes along the outer walls at an elevation of less than 2.5 m from the ground level or through the premises that are not subject to protection must be laid hidden way or in metal pipes.

When crossing power supply and lighting networks, cables and wires must be protected with rubber or PVC pipes, the ends of which should protrude by 4-5 mm from each side of the passage. In this case, cables with a larger capacity must be adjacent to the wall, with that with a smaller capacity bending them from above.

When laying cables at the turn points at an angle of 90 degrees (or close to it), the bend radius must be at least seven cable diameters.

Cables and wires should be fastened to building structures using clamps or clips of thin sheet galvanized steel, as well as elastic polyethylene clamps. Fasteners should be installed using screws or adhesive.

When laying multiple cables/wires in a single route, they can be bunched.

Repl. Inv. No.
Signature and date
Orig. Inv. No.

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

**MDPC-12/17-PT.PZ**

Sheet

9

It is recommended to use distribution and junction boxes for connecting and branching wires and busbars.

Orig. Inv. No.	Repl. Inv. No.
Signature and date	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date

**MDPC-12/17-PT.PZ**

Sheet
10

Facility: Mobile Data Processing Center

## Hydraulic Calculation of Packaged Automatic Gaseous Fire Suppression Facility: Equipment Container

The hydraulic calculation has been executed on the basis of the methodology and using the "Gamma-Potok" software developed by the NPO "Pozharnaya Avtomatika Servis"

Calculation dated:  
Code for manufacturer

12/26/2017  
Q/RF-OawuG-eIkpg-nUN9p-+xIj

Page 1 of 4

Repl. Inv. No.	
Signature and date	
Orig. Inv. No.	

						<b>MDPC-12/17-PT.R</b>
						<b>Mobile Data Processing Center</b>
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date	
						Fire Suppression
CPE		Rozhnov		/Sign./	12.17	Stage
Stndrds verified by		Sidneva		/Sign./	12.17	Sheet
Checked by		Rozhnov		/Sign./	12.17	P
Prepared by		Kirillova		/Sign./	12.17	1
						Sheets
						4
						Hydraulic Calculation
						 MegaProektStroy LLC, Voronezh, 2017

## Hydraulic Calculation: Equipment Container

### Basis of Design

Unit type		Packaged
Package type		MPG 60-60-24
Number of packages	pcs	1
Equivalent package length	m	8.1
GFES type		HFC-125
Package pressure at 20°C	bar	37
Fire suppression module operating efficiency	kg/l	0.82
Keff		
Minimum mass of GFES for creating fire-extinguishing concentration in the protected premises (MP)	kg	45.55
Total amount of GFES loaded into packages	kg	49
Standard delivery time of GFES	s	10
Nozzle minimum inlet pressure	bar	10.81

### Data on Pipeline Sections

Section			Length, m	Inner Diameter, mm	Elevation, m	Item at the Section End	Section Nozzles	Name of Section
Item No.	Starting Point	End Point						
1	1	2	0.34	28	0.34	Bend		Main line
2	2	3	0.74	28	0	Bend		Main line
3	3	4	2.73	28	0	Tee		Main line
4	4	5	6	28	0	Bend		
5	5	6	0.28	28	0	Bend		
6	6	7	0.05	28	0.05	Nozzle	T1-01	
7	4	8	0.28	28	0	Bend		
8	8	9	0.05	28	0.05	Nozzle	T1-02	

### Calculation Data

Unit type		Packaged
Estimated delivery time of GFES	s	9.7
Total volume of the pipeline	m <sup>3</sup>	0.0064
Ratio of the pipeline internal volume to the GFES liquid phase volume	%	15.79
GFES residue in the pipeline	kg	0.0336
<i>The residue in the pipeline to be neglected due to its littleness (if 1% of M<sub>est</sub>)</i>		
Distributor used	kg	45.55

### Protected premises

Repl. Inv. No.  
 Signature and date  
 Orig. Inv. No.

<b>MDPC-12/17-PT.R</b>						Sheet
Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date	

Name of the Protected Zone	M <sub>est</sub> , kg		Nozzle	
	Required	Supplied	Calculation Designation	Type
Container	45.55	45.49	T1-**	NGPd 4.1-8.4
Total	45.55	45.49		

Data on Nozzles

Nozzle	Reduced Nozzle Diameter, mm	Qty of Holes, pcs	Hole Size, mm	Nozzle Inlet Pressure, bar	Nozzle Flow Rate, kg/s	GFES Feed Time, s	Nozzle Flow Differential, %
T1-01	16.8	4	8.4	16.1	2.23	9.7	9.81
T1-02	16.8	4	8.4	16.94	2.46		

Data on Pipes

Internal Pipe Size, mm	Estimated Length, m	Recommended Pipe Type
28	10.47	36x4.0

Data on Bends

Internal Bend Diameter, mm	Number of Bends	Recommended Bend Type
28	5	90--36x4.0

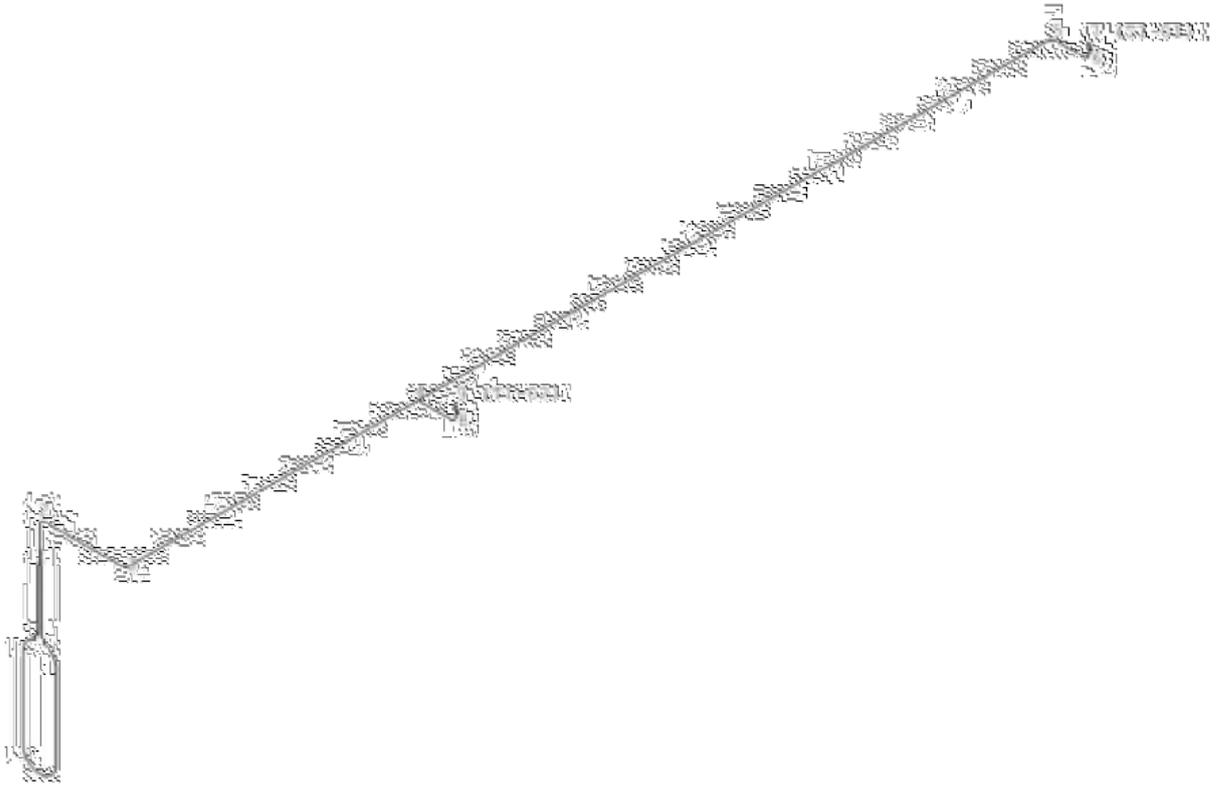
Data on Tees

Internal Tee Diameter, mm	Number of Tees	Recommended Type
28	1	-36x4.0

Pipeline Axonometric View

Orig. Inv. No.	Repl. Inv. No.
Signature and date	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date



Orig. Inv. No.	Repl. Inv. No.
Signature and date	

Rev.	Qty of areas	Sheet	Doc. No.	Sign.	Date
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**MDPC-12/17-PT.R**

Sheet