

Power Center

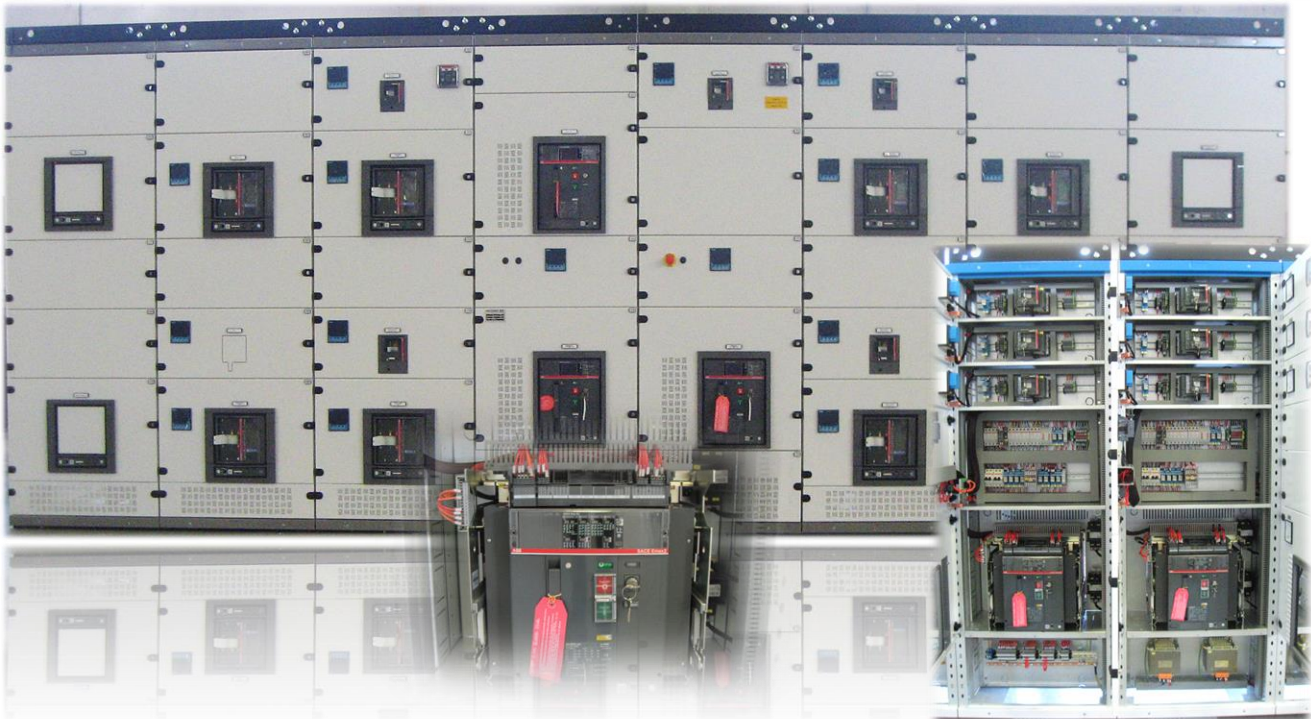
Power Center cabinets for primary low voltage distribution up to 6300A



PCT
CBL-ENG-PW-2020-0

CABEL ENERGY

ELECTRICAL SYSTEMS INTEGRATION



The main primary energy distribution panels offer many solutions for all types of wiring, accessibility, and segregation forms.

Main Features:

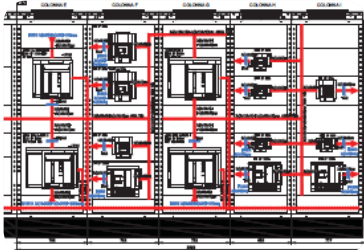
- Assembled structure, made of sheet metal, uprights with 20/10 mm thickness.
- Base with reinforced flanges, 20/10 mm thickness, for roller handling.
- Protection rating of IP30 for the open-frame version.
- The version with a blind door or transparent reinforced glass door has a heat resistance of IP55.
- Adaptable for coupling with other Cabel Energy panels.
- Capability to install devices from all major brands.
- Epoxy powder coating after phosphating, in RAL 7035 B shade (other RAL shades available upon request).
- Stainless steel cabinet available upon request.
- Patented and certified grounding system.
- Internal accessories available for complete solutions to any requirement.

IEC61439-1	test n. B0008006 test n. B5002265	Short Circuit Withstand $I_n = 6300$ A, $I_{cc} = 150$ kA for 1 second Verification of Short Circuit Withstand Verification of Equipment Grounding and Protective Circuit Connection
IEC/TR 61641 CEI17-86	test n. B0009515 test n. B5014994	Arc Fault Conditions Internal Fault Current: 105 kA for 300 milliseconds
IEC61439-1 IEC/TR 61641	test n. B0007840 test n. 02472-15-0378	Overtemperature Limits Verification Dielectric Properties Verification, includes impulse and industrial frequency Verification of Air and Surface Distances
CEIEN 60529 IEEE Std 693-2005 IEC60068-2-57 IEC62271-300	test n. B0011835 test n. B3020295	Degree of Protection Verification: IP55, category 2 Seismic Test with an acceleration of 1.0g



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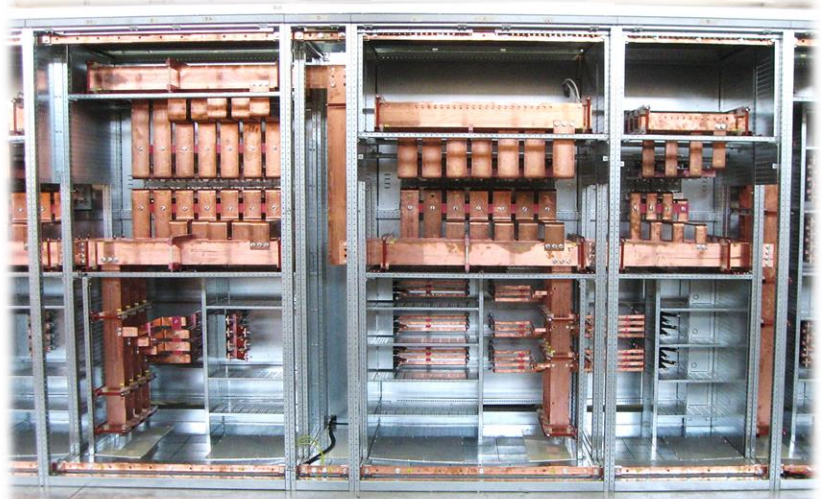
ELECTRICAL SYSTEMS INTEGRATION



Analysis and optimization of low-voltage cubicle features to provide the most suitable solutions tailored to our customers' needs



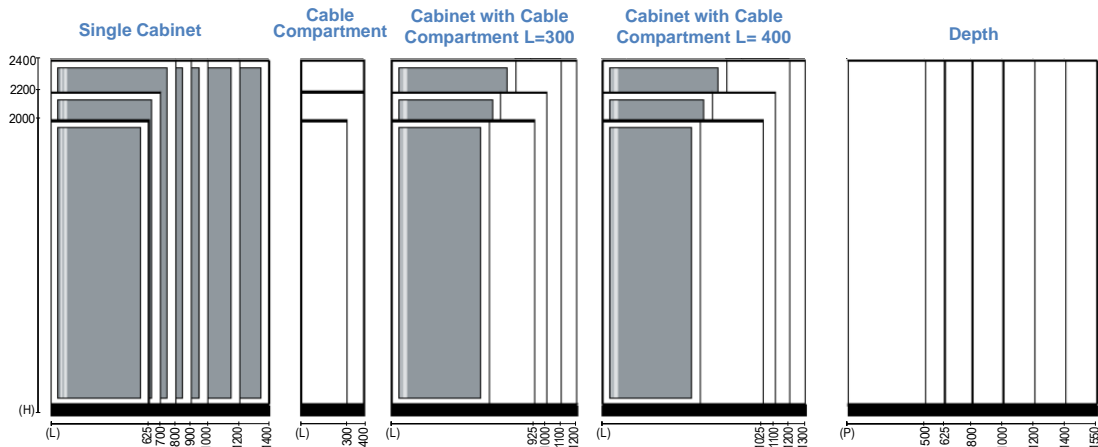
Evaluation of the busbar system to determine optimal positioning conditions, the nominal sectional dimensions for installation, and the correct distances between the busbar and its supports



**IP30 for the open-frame version
IP50 for the version with a blind door or transparent reinforced glass door.
Other protection levels available upon request**



Technical Features



	Width (L) mm	Height (H) mm	Depth (P) mm	
Single Cabinet	625 (24 modules)	2000 / 2200 / 2400 (usable =H- 200)	500 / 625 / 800 / 1000 / 1200 / 1400 / 1550	
	700 (24 modules)			
	800 (34 modules)			
	1000 (46 modules)			
	1200 (54 modules)			
	1400 (62 modules)			
Cable Compartment	300	2000 / 2200 / 2400	500 / 625 / 800 / 1000	
	400	(usable =H- 200)	/ 1200 / 1400 / 1550	
Cabinet with Cable Compartment	625 + 300 (24 modules)	2000 / 2200 / 2400 (usable =H- 200)	500 / 625 / 800 / 1000 / 1200 / 1400 / 1550	
	700 + 300 (24 modules)			
	800 + 300 (34 modules)			
	625 + 400 (24 modules)			
	700 + 400 (24 modules)			
	800 + 400 (34 modules)			
Electrical Data	Nominal voltage values	Nominal insulation voltage (Ui)	1000 V	
		Nominal operational voltage (Ue)	690 V	
		Impulse withstand voltage (Uimp)	8 /12 kV	
		Nominal frequency (fn)	50 /60 Hz	
	Nominal current values	Nominal current (In)	Up to 6300 A	
		Short-time withstand current (Icw)	150 kA	
Mechanical Characteristics	Degree of protection (IP)	Internal	Up to IP2X	
		External	From IP30 to IP55	
	Panel height (h)	150/ 200 / 250/300 / 350/400 / 450/ 500/600 / 700/ 800 / 900 / 1000		
	Impact resistance (IK)	IK09 for glass door		
		IK10 for blind door		
	Accessibility	Frontal / Lateral / Rear		
	Execution	Form 1 / Form 2a / Form 2b / Form 3a / Form 3b / Form 4a / Form 4b		
	Material	Structure	Sheet steel, thickness 15/10–20/10 mm	
		Accessories	Galvanized Metal, thickness 15/10 - 20/10 - 25/10 mm	
	Coating	Structure	RAL 7035 Light Grey Textured	
		Accessories	RAL color scale and stainless steel	
	Plastic components	Halogen-free, flame-retardant, self-extinguishing, CFC-free		
	Busbar Treatment	Aluminum	standard: Tin optional: Nickel /Silver	
Copper		standard: - optional: Tin /Nickel /Silver		

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ELECTRICAL SYSTEMS INTEGRATION

Busbar Systems



Smart-Energy Plus Busbar System:
Made of anodized aluminum with a copper contact surface applied using cold-spray technology, supporting up to 6300A.



Traditional Copper Busbar System:
Made of copper, with optional surface treatments (tin, nickel, and silver) available, supporting up to 6300A.

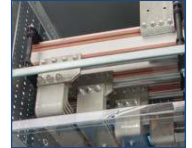
Connections



Traditional Copper Connection:
flexible strip from 250A to 1250A, shaped bar From 400A to 6300A



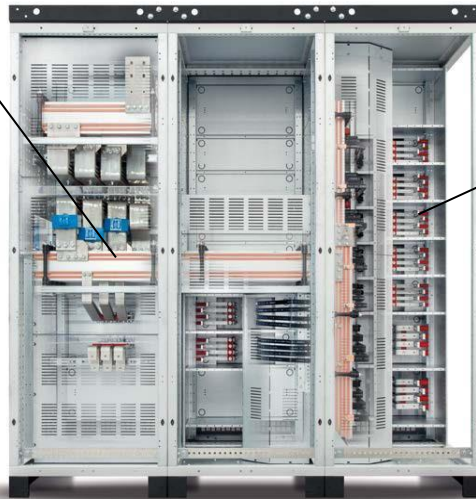
Alubar Connections for Bus Ducts and Switches:
made of tinned aluminum (nickel-plated or tinned upon request) and shaped for capacities from 250A to 400A.



Switch Terminal Extensions



Extension of Horizontal or Vertical Switch Terminals:
available in aluminum or traditional copper.



Internal Details



Cubicle with hinged panel, wiring plate, horizontal separator, and lateral segregation made of galvanized sheet metal.



Quick Assembly and Disassembly of LDIN Modular Aluminum Rails, featuring a screwless interlocking system, compatible with most distributors available on the market.

Accessibility



Cabinet with Rear Accessibility:
compartmentalized cabinet up to Form 4b, with vertical and horizontal busbar systems positioned at the rear.

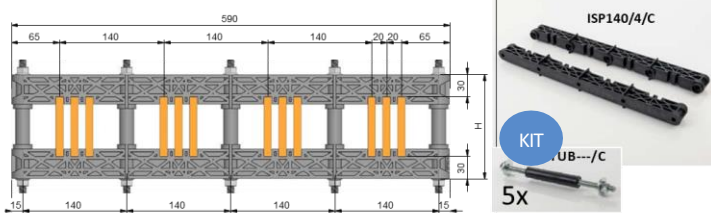


Cabinet with Front Accessibility:
Compartmentalized cabinet up to Form 4b, with vertical and horizontal busbar systems positioned at the top.

Technical Features of the Busbar System

LINEAR FOUR-POLE BUSBAR HOLDER FOR COPPER BARS WITH 100% NEUTRAL (PHASE SPACING 140 MM)

Four-pole insulator for support with 100% neutral for copper bars from 3000A to 6300A.

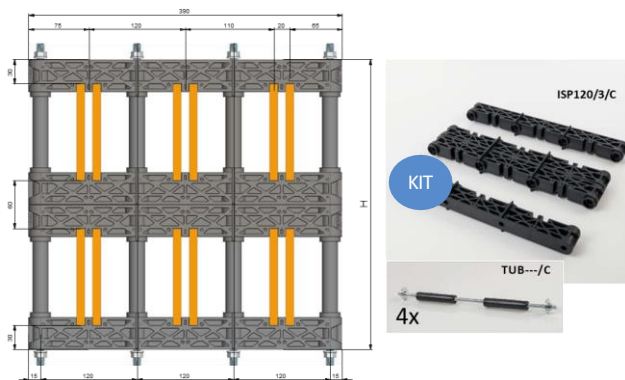


WEIGHT (kg)	BAR DIMENSIONS (H X T)	H (MM)	In (A)
2,1	80x10	140	3000
2,2	100x10	160	3300
2,2	120x10	180	4000
2,5	160x10	220	5000
2,5	200x10	260	6300

BUSBAR HOLDER PHASE SPACING TABLE					
I.Nom	3000A	3300A	4000A	5000A	6300A
Maximum Phase Spacing	Icc	Icc	Icc	Icc	Icc
1000mm	30 kA	35 kA	45 kA	50 kA	60 kA
950mm	35 kA	35 kA	50 kA	55 kA	60 kA
900mm	35 kA	35 kA	50 kA	60 kA	60 kA
850mm	40 kA	45 kA	50 kA	60 kA	65 kA
800mm	40 kA	50 kA	50 kA	65 kA	65 kA
750mm	45 kA	50 kA	55 kA	65 kA	65 kA
700mm	45 kA	55 kA	55 kA	65 kA	65 kA
650mm	50 kA	55 kA	55 kA	65 kA	65 kA
600mm	55 kA	55 kA	70 kA	80 kA	85 kA
550mm	60 kA	60 kA	75 kA	85 kA	90 kA
500mm	65 kA	75 kA	85 kA	100 kA	100 kA
450mm	70 kA	85 kA	95 kA	105 kA	105 kA
400mm	80 kA	95 kA	105 kA		
350mm	90 kA	105 kA			
300mm	105 kA				

LINEAR THREE-POLE BUSBAR HOLDER FOR COPPER BARS WITH DOUBLE CONDUCTOR (PHASE SPACING 120 MM)

Three-pole insulator for supporting double copper bars from 5000A to 6300A.



WEIGHT (kg)	BAR DIMENSIONS (H X T)	H (MM)	In (A)
3,5	100x10	320	5000
3,8	120x10	360	6300

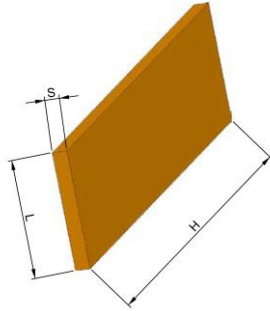
BUSBAR HOLDER PHASE SPACING TABLE		
I.Nom	5000A	6300A
Maximum Phase Spacing	Icc	Icc
1000mm	30 kA	35 kA
950mm	35 kA	40 kA
900mm	35 kA	40 kA
850mm	35 kA	40 kA
800mm	40 kA	45 kA
750mm	40 kA	45 kA
700mm	45 kA	45 kA
650mm	45 kA	45 kA
600mm	50 kA	50 kA
550mm	55 kA	60 kA
500mm	60 kA	70 kA
450mm	65 kA	75 kA
400mm	80 kA	90 kA
350mm	90 kA	100 kA
300mm	105 kA	105 kA

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ELECTRICAL SYSTEMS INTEGRATION

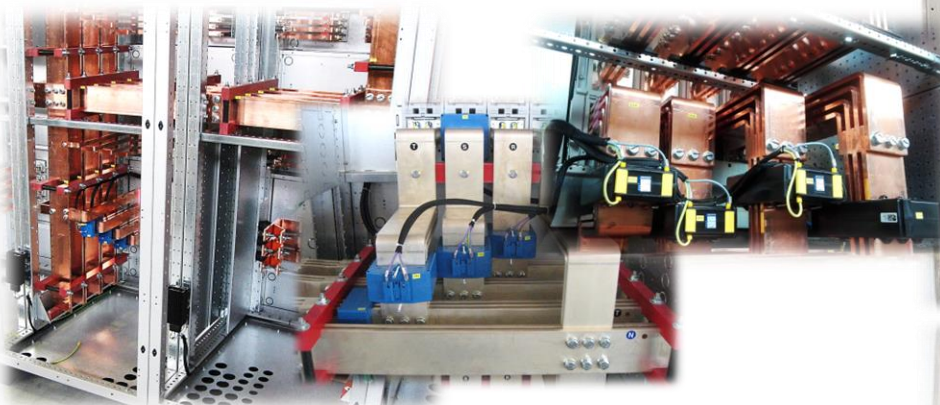
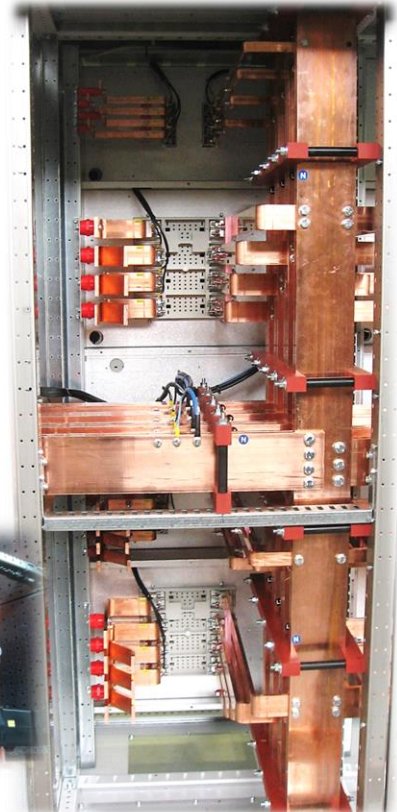
COPPER BARS

Electrolytic copper bars in various sections up to 4000 A, with thicknesses ranging from 5 mm to 10 mm and a maximum width of 2000 mm.

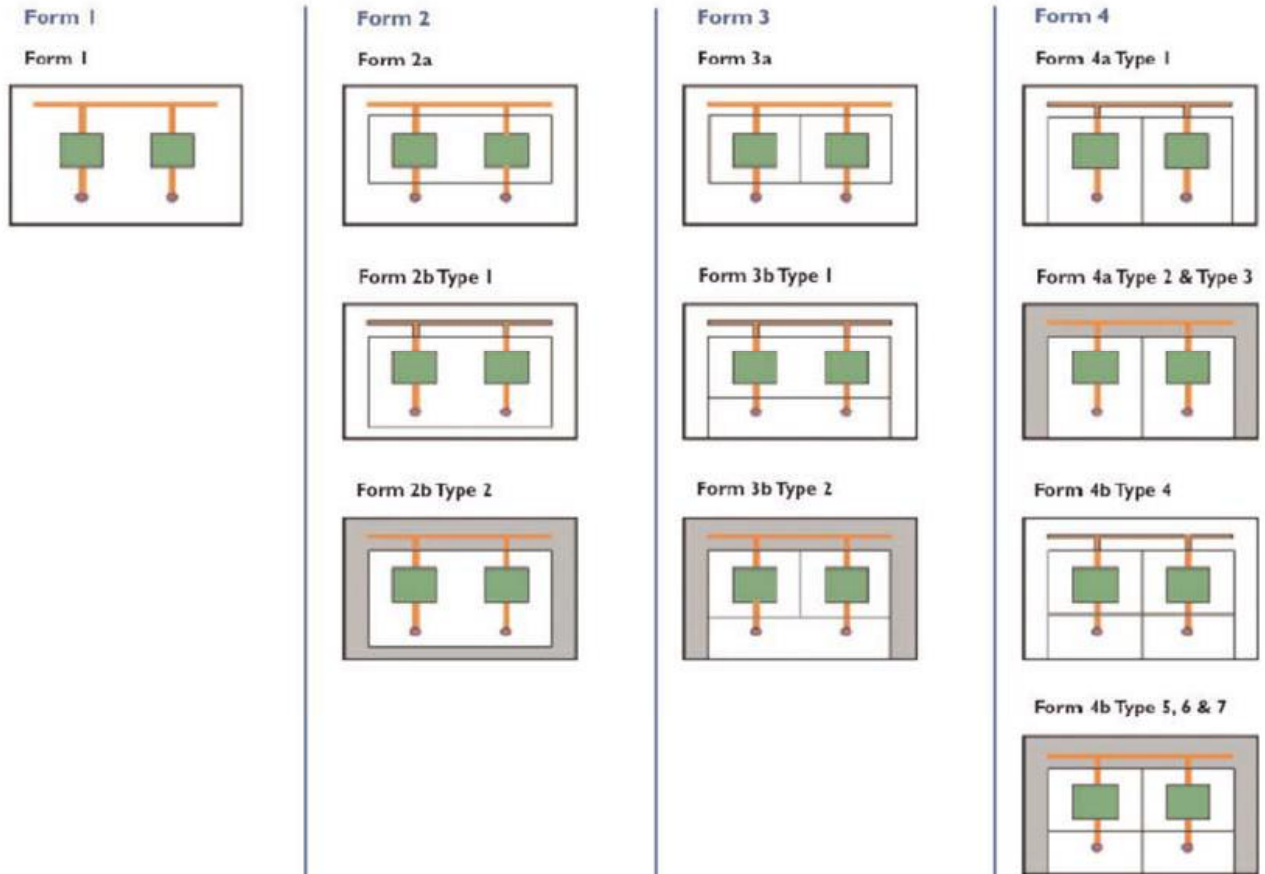


WIDTH (L) mm	THICKNESS (S) mm	HEIGHT (H) mm	SECTION mmq	WEIGHT kg
20	5	2000	100	1,8
40	5	2000	200	3,6
50	5	2000	250	4,5
60	5	2000	300	5,4
100	5	2000	500	8,9
40	6	2000	240	4,3
30	8	2000	240	4,3
40	8	2000	320	5,7
50	8	2000	400	7,1
30	10	2000	300	5,4
40	10	2000	400	7,2
50	10	2000	500	8,9
60	10	2000	600	10,7
80	10	2000	800	14,3
100	10	2000	1000	17,8
120	10	2000	1200	23,8
160	10	2000	1600	28,5
200	10	2000	2000	35,6

BAR DIMENSION	T30°C				T50°C			
	1	2	3	4	1	2	3	4
20x5	274	500	690	/	363	663	914	/
40x5	482	836	1090	/	639	1108	1444	/
50x5	583	994	1260	1411	772	1317	1670	1870
60x5	688	1150	1440	1613	912	1524	1908	2137
100x5	1080	1730	2050	2296	1431	2292	2716	3042
40x6	533	924	1219	/	704	1220	1608	/
30x8	499	852	1068	/	659	1125	1409	/
40x8	628	1034	1258	/	828	1365	1660	/
50x8	752	1208	1427	/	339	1594	1884	/
30x10	573	986	1289	/	756	1300	1701	/
40x10	715	1230	1609	/	944	1624	2124	/
50x10	852	1510	2040	/	1129	2001	2709	/
60x10	985	1720	2300	/	1305	2279	3048	/
80x10	1240	2110	2790	/	1643	2796	3697	/
100x10	1490	2480	3260	/	1974	3286	4320	/
120x10	1740	2860	3740	/	2306	3790	4956	/
160x10	2220	3590	4680	/	2942	4757	6201	/
200x10	2690	4310	5610	/	3564	5711	7433	/



Overview of Segregation Forms



Form 1

- No internal separation provided.

Form 2

- Functional units are separated from the busbars.
- Figure "a": Terminals are not separated from the busbars.
- Figure "b": Terminals are separated from the busbars.
- Type 1: Insulating covers are used for separation from the busbars.
- Type 2: Dividers are used for separation from the busbars.

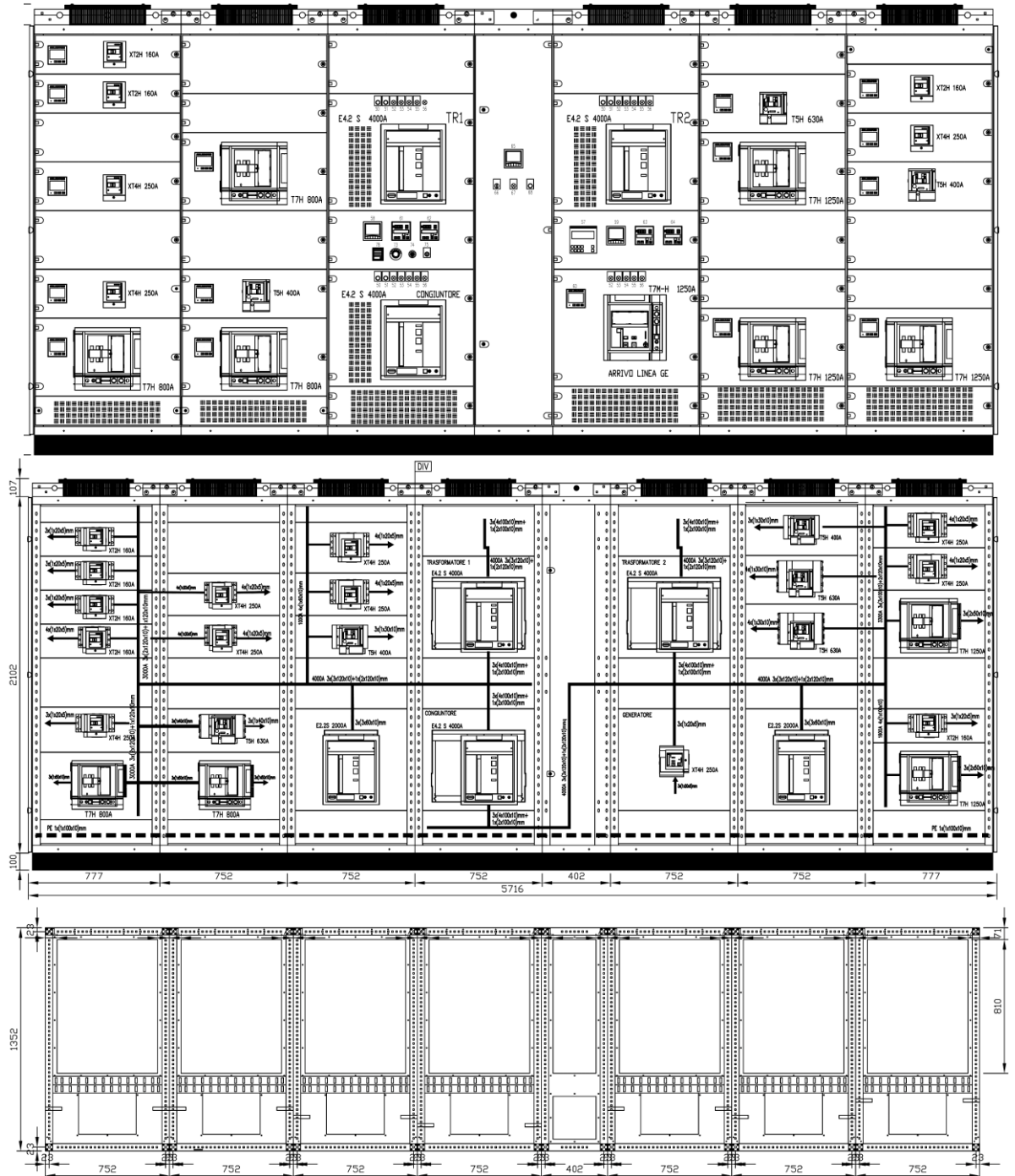
Form 3, or 2 Plus

- Functional units are separated from each other.
- Figure "a": Terminals are not separated from the busbars.
- Figure "b": Terminals for external conductors are in a distinct compartment from the functional units.
- Type 1: Insulating covers are used for separation from the busbars.
- Type 2: Dividers are used for separation from the busbars.

Form 4, or 3 Plus

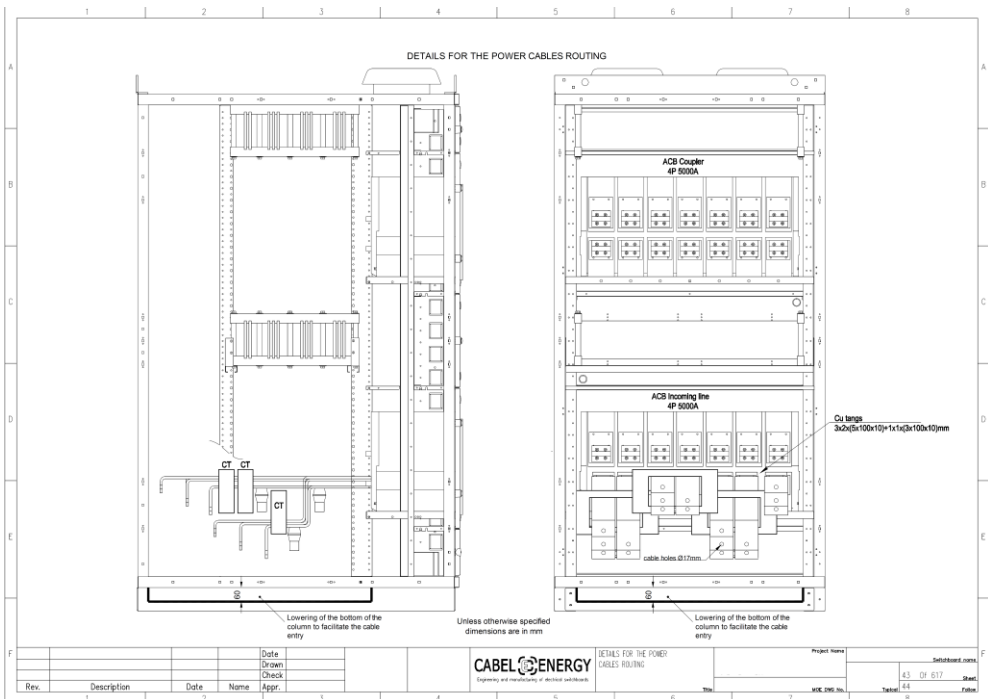
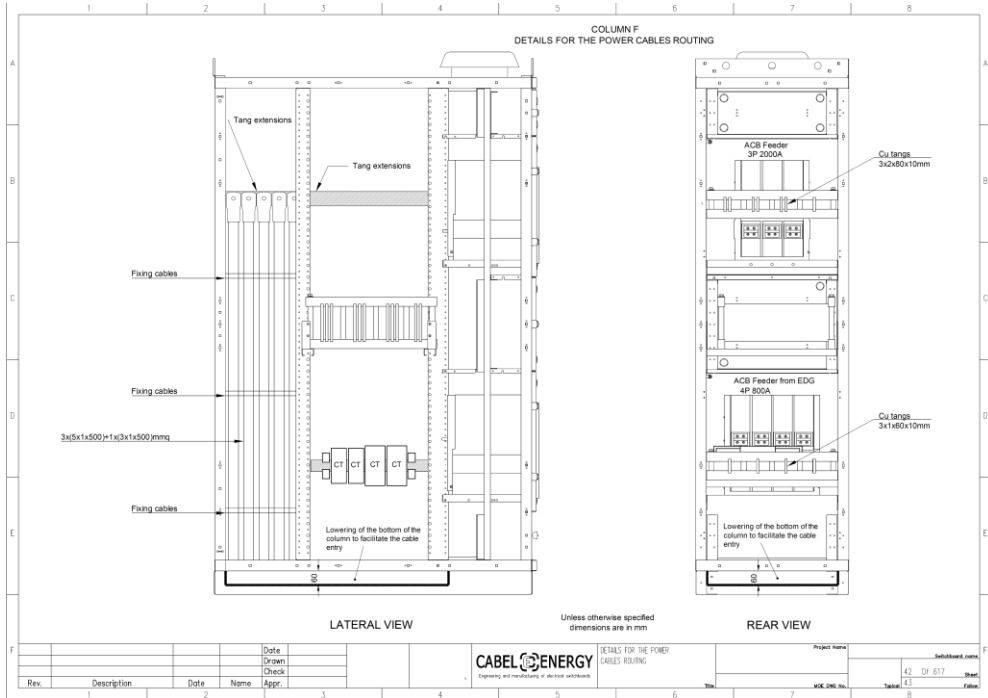
- External conductor terminals are separated from each other.
- Figure "a": Terminals are located within the functional units.
- Figure "b": Terminals for external conductors are in a distinct compartment separate from the functional units.
- Separation types: Types 1 and 4: Insulating covers are used for separation from the busbars.
- Types 2, 3, 5, 6, and 7: Dividers are used for separation from the busbars.
- Types 3 and 7: Contain internal seals. Type 5: Includes insulating covers for external conductor terminals.

Technical Drawing



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ELECTRICAL SYSTEMS INTEGRATION

CABEL ENERGY S.r.l. always attentive to precise customer requirements and satisfaction, Cabel Energy S.r.l. offers not only its own manufactured electrical panels but also the following specialized and complementary services:

- PLANT ENGINEERING
- MAINTENANCE



Progettazione e realizzazione di quadri elettrici
Installazione e manutenzione impianti elettrici
UNI EN ISO 9001:2015 - UNI EN ISO 14001:2015

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