TRUE VALUE
SEA e
DIEN DONG NAM A

SE.LVMSG

COMPLY WITH IEC 61439-1 and IEC 61439-2
Smart solution for power system

CATALOGUE

Contents

GENERAL

Electricity is just like air

As we have witnessed in the recent power outages in the US and Canada, the importance of stable power supply continues to increase. Even a few seconds of power outage can lead to a great deal of damage in life and properties, cutting off the information network and paralyzing the entire economic system.

Therefore, electricity in modern society does the role of what air does in our daily lives.

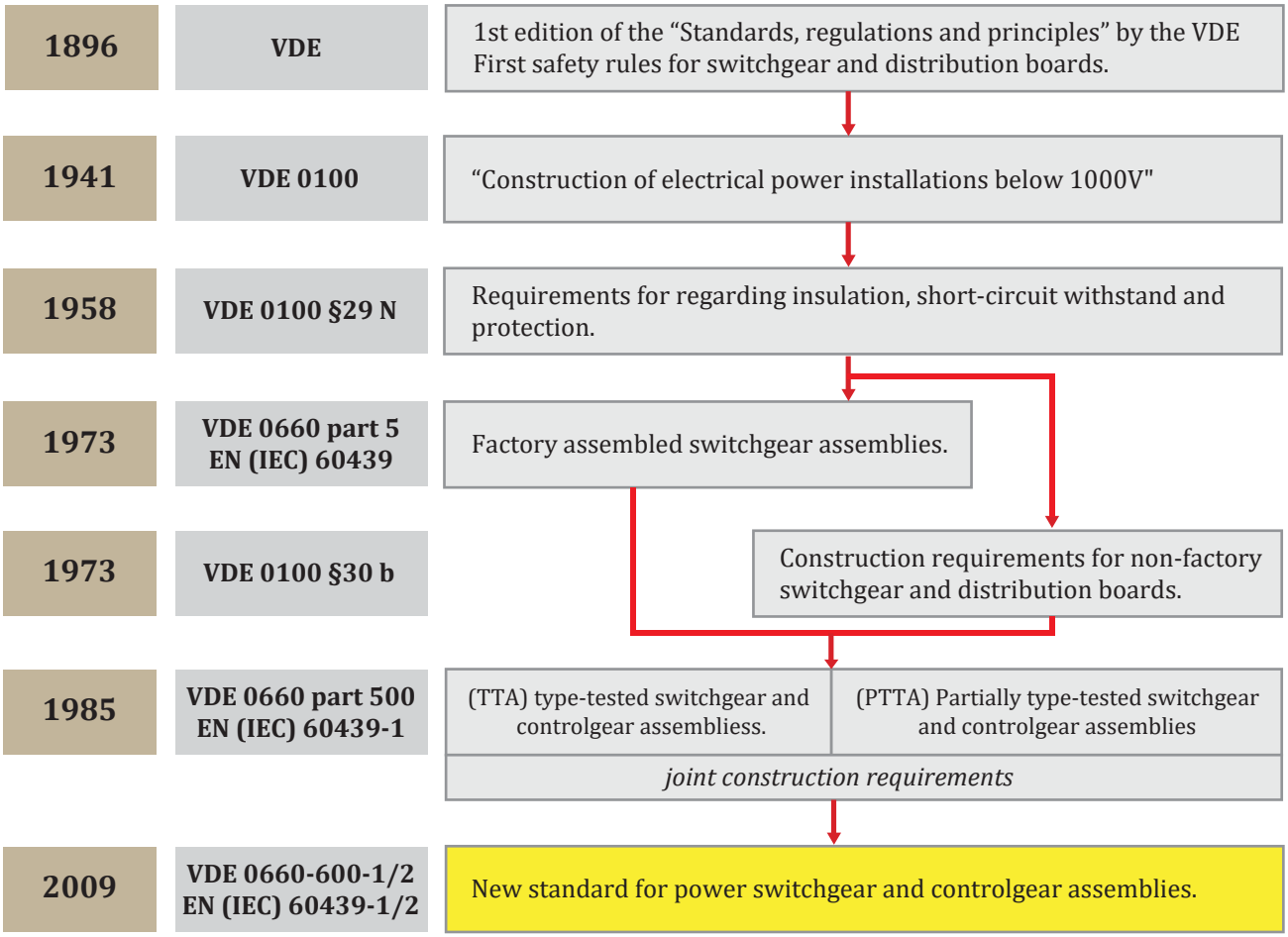
SEAE creates the future

In an effort to help efficiently control and utilize electricity, SEAE has been undertaking a variety of R&D efforts to contribute to the nation's economy and even to the development of the bio industry. Under the motto of creating a happy and safe future for the mankind, SEAE continues to invest in the development of technologies applicable in the production of reliable products as well as in the searching for human resources that will help realize the vision.

SE.LV switchgear is designed and produced to construct high quality power system.With high performance and high quality that complied with IEC 61439-1&2, it can be applied to many kinds of industrial fields:

- Manufacturing industry
- Small size power plant
- Airport and railway
- Water and wastewater
- Commercial and residential
- Hospitals, hotal , resort and shopping

Milestones of Swichboard Standards



Routine Verification

Routine Verification	Visual inspection	Tests
1. Degree of protection of enclosures	○	
2. Clearances	○	If D < value (14mm): impulse withstand test If D < 1,5 times value (21mm): measurement
3. Creepage distances	○	or measurement if visual inspection not applicable
4. Protection against electric shock and integrity of protective circuits	○ ○	Random verification of tightness of the connectionsof protective circuit
5. Incorporation of built-in components	○	
6. Internal electrical circuits and connections		Or Random verification of tightness
7. Terminals for external conductors		Number, type and identification of terminals
8. Mechanical operation	○	Effectiveness of mechanical actuating elements locks and interlocks, including those associated with removable parts
9. Dielectric properties		Power-frequency dielectric test (if > 250A) or verification of insulating resistance (if < 250A)
10. Wiring, operational performance and function	○	Verification of completeness of information & markings,inspection of wiring and Function test where relevant

Concept of IEC61439

Design Verification (Construction)

IEC 61439- 1:2009.01
Low- voltage switchgear and controlgear assemblies
Part 1: Power switchgear and controlgear assemblies

Test	Chapter	Test item		Verification options		
				Testing	Derivation	Assessment
Construction	10.2	Strength of materials and parts				
		10.2.2	Resistance to corrosion	Yes	No	No
		10.2.3	Properties of insulating materials	Yes	No	-
		10.2.4	Resistance to ultra- violet (UV) radiation	Yes	No	Yes
		10.2.5	Lifting	Yes	No	No
		10.2.6	Mechanical impact	Yes	No	No
		10.2.7	Marking	Yes	No	No
	10.3	Degree of protection of ASSEMBLIES		Yes	No	Yes
	10.4	Clearances and creepage distances		Yes	No	No
	10.5	Short-circuit withstand strength of the protective circuit				
		10.5.2	Effective continuity between the exposed conductive parts of the assembly and the protective circuit	Yes	No	No
		10.5.3		Yes	Yes	No
	10.6	Incorporation of switching devices and components		No	No	Yes
	10.7	Internal electrical circuits and connections		No	No	Yes
	10.8	Terminals for external conductors		No	No	Yes
Performance	10.9	Dielectric properties				
		10.9.2	Power-frequency withstand voltage	Yes	No	No
		10.9.3	Impulse withstand voltage	Yes	No	Yes
	10.10	Verification of temperature rise		Yes	Yes	Yes
	10.11	Short- circuit withstand strength		Yes	Yes	No
	10.12	Electromagnetic compatibility		Yes	No	Yes
	10.13	Mechanical operation		Yes	No	No

What are the forms?

The forms are metal partitions or molded material, removable by using tools or keys, which ensure the protection of operators against direct contact with power conductors when working on low voltage switchboards.

They also protect internal elements of the switchboard against external aggressions (dust, pests, water ...).

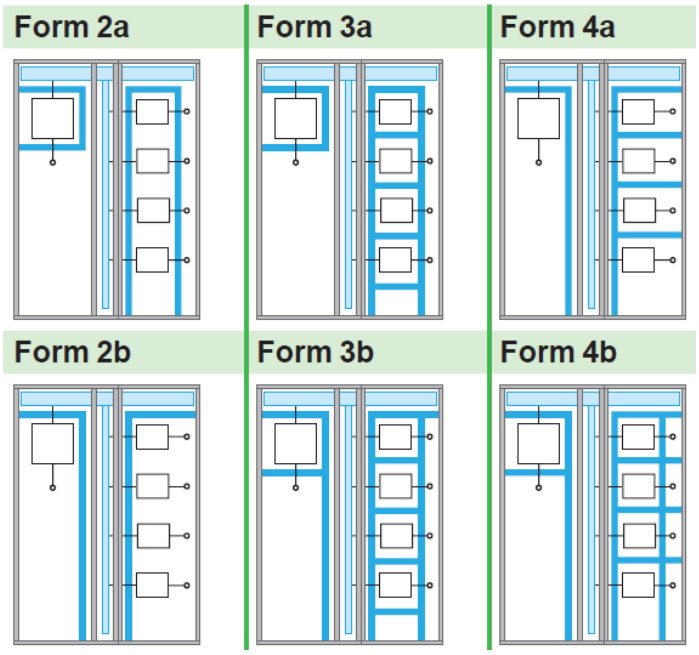
These forms are graduated from 1 to 4, with indices “a” or “b”. Their use contributes to the level of service continuity required by the user.

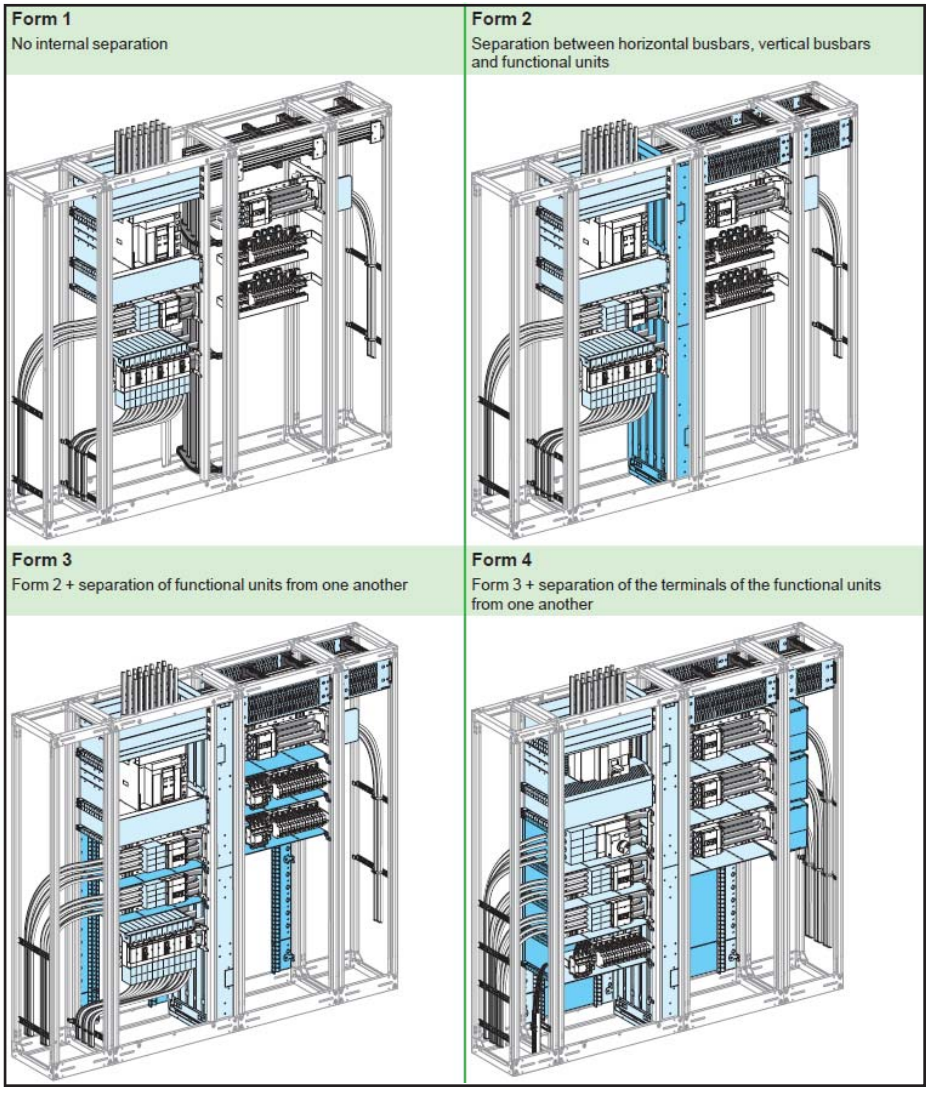
Forms have a cumulative effect (a higher form integrates the characteristics of the forms that precede it).

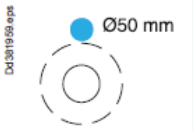
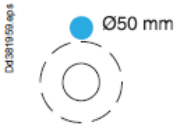
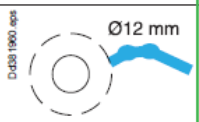
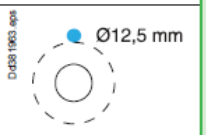
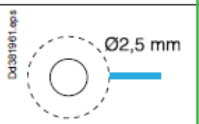
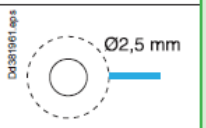
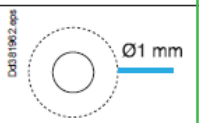
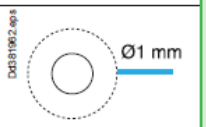
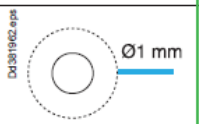
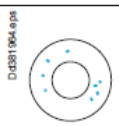
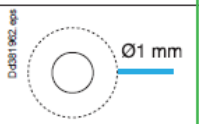
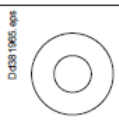
The choice of a form is the subject to an agreement between the manufacturer and the user.

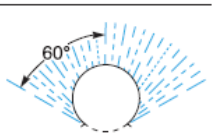
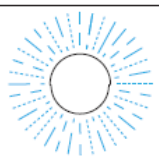
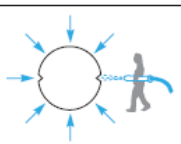
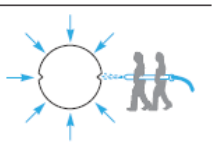
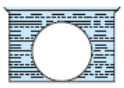
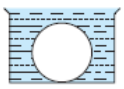
The electrical panel must comply with the degree of protection IP 2X, according to standard IEC 61439-1 & 2.

SE.LVMSW offers solutions for forms 1, 2a, 2b, 3a, 3b, 4a, 4b





1st numeral	Protection of persons		Protection against ingress of solid objects	
1	Protected against access with back of hand		Protection against solid foreign objects larger than 50 mm	
2	Protected against access with a finger		Protection against solid foreign objects larger than 12.5 mm	
3	Protected against access with a tool		Protection against solid foreign objects larger than 2.5 mm	
4	Protected against access with a wire		Protection against solid foreign objects larger than 1 mm	
5	Protected against access with a wire		Protected against dust (dust protected)	
6	Protected against access with a wire		Dust tight	

2nd numeral	Protection against ingress of water	
1	Protected against vertically dripping water (condensation)	
2	Protected against dripping water up to 15° from vertical	
3	Protected against spraying water up to 60° from vertical	
4	Protected against splashing water from all directions	
5	Protected against water jets from all directions	
6	Protected against powerful water jets from all directions	
7	Protected against the effects of temporary immersion in water	
8	Protected against the effects of continuous immersion in water	
9	Protected against close-range high pressure, high temperature spray downs	

Certificate and Partnership

Vinacontrol CE

GIẤY CHỨNG NHẬN

CERTIFICATE

Số/ No.: 05236-QPV

Chứng nhận sản phẩm
This is to certify that the product

Tủ điện đóng cắt và tủ điều khiển hạ thế
Low-voltage switchgear and controlgear assemblies

Kiểu loại: Theo phụ lục kèm theo quyết định số 05236-QPV/QĐ-CNSPHC ngày 18/12/2018
Types: According to appendix attached to decision no. 05236-QPV/QD-CNSPHC dated 18/12/2018

Nhãn hiệu/ *Trademark:* SEAE

Của/ *of*

CÔNG TY TNHH THƯƠNG MẠI ĐIỆN ĐÔNG NAM Á
SOUTHEAST ASIA ELECTRICAL TRADING COMPANY LIMITED

Trụ sở chính: 115/9A ấp 1, xã Xuân Thới Sơn, huyện Hóc Môn, thành phố Hồ Chí Minh
Head office: 115 / 9A Hamlet 1, Xuan Thoi Son Commune, Hoc Mon District, Ho Chi Minh
Văn phòng: 196/1/15 đường Cộng Hòa, phường 12, quận Tân Bình, thành phố Hồ Chí Minh
Office: 196/1/15 Cong Hoa Street, Ward 12, Tan Binh District, Ho Chi Minh City
Được sản xuất tại nhà máy: D11/54C Quách Điêu, ấp 4, xã Vĩnh Lộc A, huyện Bình Chánh, thành phố Hồ Chí Minh
Made in factory: D11 / 54C Quach Dieu, Hamlet 4, Vinh Loc A Commune, Binh Chanh District, Ho Chi Minh City

Phù hợp với tiêu chuẩn kỹ thuật quốc gia/ *conforms to the technical regulation:*

TCVN 7994-1:2009 (IEC 60439-1: 2004)

và được phép sử dụng Dấu phù hợp tiêu chuẩn chất lượng/ *and can bear the quality standard Conformity mark*

Phương thức chứng nhận/ *Certification mode:* Phương thức 5/*Method 5*
(Thông tư số 28/2012/TT-BKHCN ngày 12/12/2012 của Bộ Khoa học và Công nghệ/
Circular No. 28/2012/TT-BKHCN dated 12/12/2012 of the Ministry of Science and Technology)

Ngày ban hành/ *Date issued:* 18/12/2018
Hiệu lực đến/ *Valid to:* 17/12/2021

Tổ chức chứng nhận Vinacontrol
Vinacontrol Certification Body

Chủ tịch Hội đồng Chứng nhận
The Chairman of the Certification Board

PHAN VĂN HÙNG

Giám đốc
Director

ĐỖ THỊNH THẮNG

Vinacontrol CE TCVN 7994-1:2009

DIRECTORATE FOR STANDARDS, METROLOGY AND QUALITY (STAMEQ)
VIETNAM CERTIFICATION CENTRE (QUACERT)

QUACERT

CERTIFICATE

This is to certify that the Quality Management System of

SOUTHEAST ASIA ELECTRICAL TRADING JOINT STOCK COMPANY

Head office: 115/9A Hamlet 1, Xuan Thoi Son Commune, Hoc Mon District, Ho Chi Minh City, Viet Nam;
Representative Office: 196/1/15 Cong Hoa Street, Ward 12, Tan Binh District, Ho Chi Minh City, Viet Nam;
Factory: D11/54C Quach Dieu Street, Hamlet 4, Vinh Loc A Commune, Binh Chanh District, Ho Chi Minh City, Viet Nam

has been assessed and found to conform with the requirement of the following standard

TCVN ISO 9001:2015 / ISO 9001:2015

Certification Scope:	Manufacture, Trade and Installation of Electrical Panels Low Voltage and Medium Voltage up to 36 kV; Manufacture and Installation Cable Ladder and Cable Tray
Certificate Number:	HT 4487.20.19
The validity of this Certificate:	from to 25 September 2020 to 24 September 2023
Original Certification:	25 September 2020

QUACERT JAS-ANZ IAF

The Director General of STAMEQ — MSc. Tran Van Vinh
The Chairman of the Certification Board — Dr. Pham Hong
MSc. Pham Le Cu

QUACERT – 8 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam.
The validity of this certificate can be checked at website: www.quacert.gov.vn and www.jas-anz.org/register

VIET NAM CONSUMER CHOICE BRAND 2013 MARK OF QUALITY

Certificate of Registration

Consumer Choice Brand Index (CCBI)

This is certify that

SEAE True Value We Always Provide

SouthEast Asia Electrical trading Co.,ltd
No. 115/9A, Xuan Thoi Son ward, Hoc Mon dist., Ho Chi Minh city

Has been assessed and registered by The Intellectual Property Association of Ho Chi Minh City, SaiGon Enterprises Network & met the criteria of Consumer Choice Brand Index 2013, under the supervision of The AQA International Quality Management System

Certification No: CCBI-0092-2013 Survey No: DG13090E032
Date: 26-07-2013 Valid until: 25-07-2014

Supporting Units *
- *Ministry of Science and Technology - Southern office Rep.*
- *Department of Intellectual Property office in Ho Chi Minh City*
- *Department of Copyright office in Ho Chi Minh City.*

Chairman
The Intellectual Property Association of HCMC
Ph.D NGUYEN VAN VIEN

Manager of Viet Nam
American Quality Assessors (AQA) International
Ph.D NGUYEN PHUC NGHIEP

Certificate and Partnership

Authorized License Certificate

Awarded to
SOUTHEAST ASIA ELECTRICAL TRADING JOINT STOCK COMPANY
196/1/15 Cong Hoa Street, ward 12, Tan Binh district, Ho Chi Minh City, Vietnam

LS ELECTRIC Co., Ltd. confirms that
Southeast Asia Electrical Trading Joint Stock Company is authorized to manufacture, assemble, test and sell as follow;

Product
Susol LV Switchgear – MDB (Form 4B)
For upto 5000A(2000/2500/3200/4000/5000A), 100kA/1sec, 65kA/3sec
- ACB (Metasol) Panel 7 Species
- MCCB (Susol/Metasol) Panel 14 Species
- Junction Panel

LS ELECTRIC Co., Ltd. LS Tower, 127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 14119, KOREA, THE REPUBLIC OF KOREA

Kwak Soo Hyuk
Southern East Asia Sales Director
LS ELECTRIC Co., Ltd.

LS ELECT

DNV·GL

KEMA TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

Object	Low-voltage switchgear and controlgear assembly		**5051-16**
Type	MSB-4000A	**Serial No.**	TYPE TEST 2015-08

Rated voltage	400 V	Rated current	4000 A
Rated short-time withstand current	65 kA	Rated frequency	50 Hz

Manufacturer SOUTHEAST ASIA ELECTRICAL TRADING COMPANY LIMITED, 115/9A Hamlet 1, Xuan Thoi Son Commune, Hoc Mon District, Ho Chi Minh City, Vietnam *)

Client SOUTHEAST ASIA ELECTRICAL TRADING COMPANY LIMITED, 115/9A Hamlet 1, Xuan Thoi Son Commune, Hoc Mon District, Ho Chi Minh City, Vietnam

Tested by KEMA Laboratories Prague, Zkušebnictví, a.s., Podnikatelská 547, Prague 9, the Czech Republic

Date of tests 14 April to 27 April 2016

The object, constructed in accordance with the description, drawings and photographs incorporated in this Certificate has been subjected to the series of proving tests in accordance with

IEC 61439-2:2011, **IEC 61439-1**:2011

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard(s) and to justify the ratings assigned by the manufacturer as listed on page 7.

This Certificate applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer.
*) as declared by the manufacturer

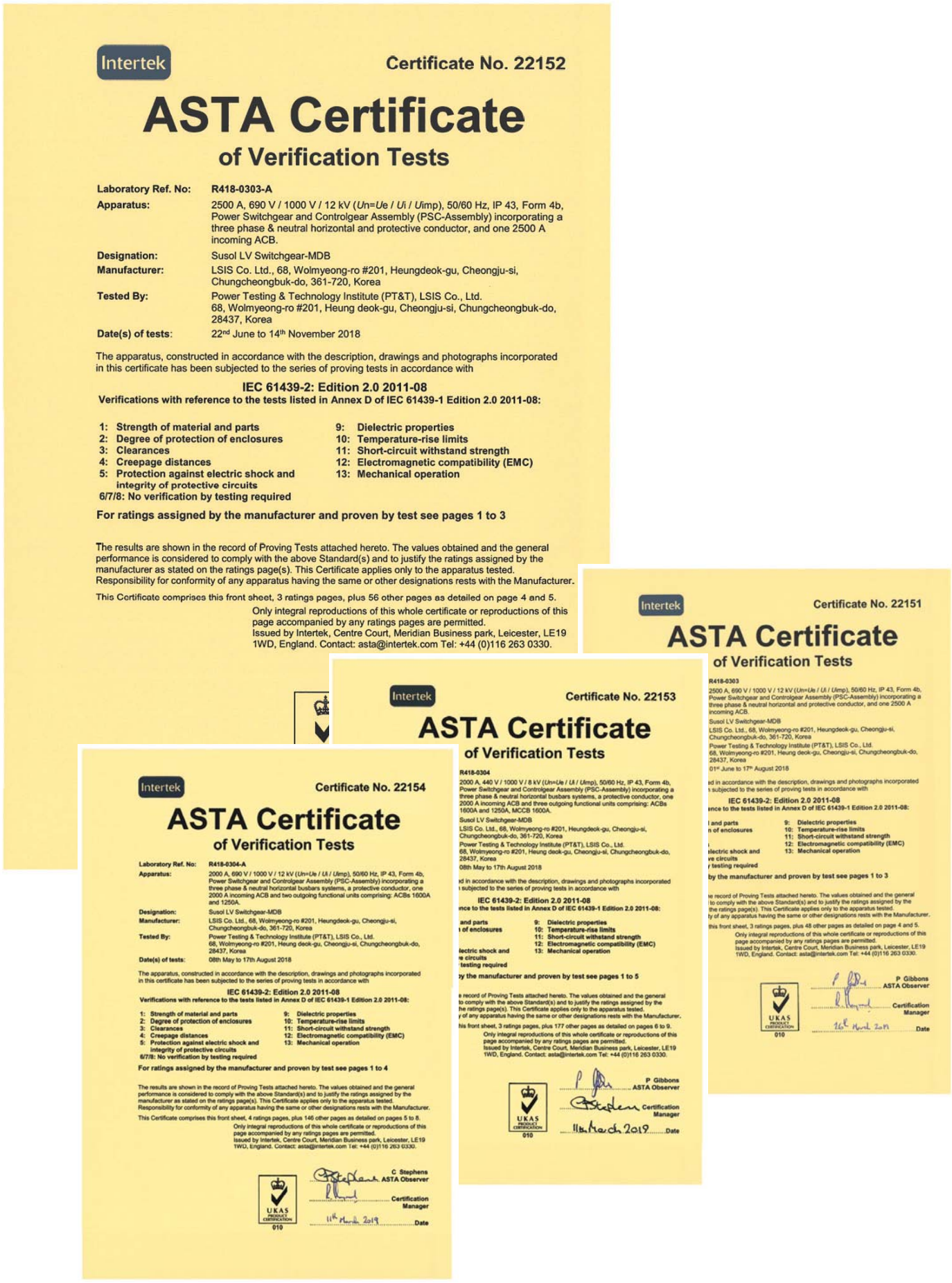
This Certificate consists of 201 pages in total.

Zkušebnictví, a. s.

Robert Jech
Operational Manager

KEMA Laboratories Prague, 25 August 2016

Version: 1



Intertek

Certificate No. 22152

ASTA Certificate

of Verification Tests

Laboratory Ref. No: R418-0303-A

Apparatus: 2500 A, 690 V / 1000 V / 12 kV (*Un=Ue / Ui / Uimp*), 50/60 Hz, IP 43, Form 4b, Power Switchgear and Controlgear Assembly (PSC-Assembly) incorporating a three phase & neutral horizontal and protective conductor, and one 2500 A incoming ACB.

Designation: Susol LV Switchgear-MDB

Manufacturer: LSIS Co. Ltd., 68, Wolmyeong-ro #201, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, 361-720, Korea

Tested By: Power Testing & Technology Institute (PT&T), LSIS Co., Ltd. 68, Wolmyeong-ro #201, Heung deok-gu, Cheongju-si, Chungcheongbuk-do, 28437, Korea

Date(s) of tests: 22nd June to 14th November 2018

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

IEC 61439-2: Edition 2.0 2011-08

Verifications with reference to the tests listed in Annex D of IEC 61439-1 Edition 2.0 2011-08:

1: Strength of material and parts
2: Degree of protection of enclosures
3: Clearances
4: Creepage distances
5: Protection against electric shock and integrity of protective circuits
6/7/8: No verification by testing required
9: Dielectric properties
10: Temperature-rise limits
11: Short-circuit withstand strength
12: Electromagnetic compatibility (EMC)
13: Mechanical operation

For ratings assigned by the manufacturer and proven by test see pages 1 to 3

The results are shown in the record of Proving Tests attached hereto. The values obtained and the general performance is considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated on the ratings page(s). This Certificate applies only to the apparatus tested. Responsibility for conformity of any apparatus having the same or other designations rests with the Manufacturer.

This Certificate comprises this front sheet, 3 ratings pages, plus 56 other pages as detailed on page 4 and 5.

Only integral reproductions of this whole certificate or reproductions of this page accompanied by any ratings pages are permitted.
Issued by Intertek, Centre Court, Meridian Business park, Leicester, LE19 1WD, England. Contact: asta@intertek.com Tel: +44 (0)116 263 0330.

Intertek

Certificate No. 22151

ASTA Certificate

of Verification Tests

R418-0303

2500 A, 690 V / 1000 V / 12 kV (*Un=Ue / Ui / Uimp*), 50/60 Hz, IP 43, Form 4b, Power Switchgear and Controlgear Assembly (PSC-Assembly) incorporating a three phase & neutral horizontal and protective conductor, and one 2500 A incoming ACB.

Susol LV Switchgear-MDB

LSIS Co. Ltd., 68, Wolmyeong-ro #201, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, 361-720, Korea

Power Testing & Technology Institute (PT&T), LSIS Co., Ltd. 68, Wolmyeong-ro #201, Heung deok-gu, Cheongju-si, Chungcheongbuk-do, 28437, Korea

01st June to 17th August 2018

ed in accordance with the description, drawings and photographs incorporated s subjected to the series of proving tests in accordance with

IEC 61439-2: Edition 2.0 2011-08

nce to the tests listed in Annex D of IEC 61439-1 Edition 2.0 2011-08:

l and parts
n of enclosures
lectric shock and
ve circuits
y testing required

9: Dielectric properties
10: Temperature-rise limits
11: Short-circuit withstand strength
12: Electromagnetic compatibility (EMC)
13: Mechanical operation

by the manufacturer and proven by test see pages 1 to 3

e record of Proving Tests attached hereto. The values obtained and the general to comply with the above Standard(s) and to justify the ratings assigned by the the ratings page(s). This Certificate applies only to the apparatus tested. y of any apparatus having the same or other designations rests with the Manufacturer.

this front sheet, 3 ratings pages, plus 48 other pages as detailed on page 4 and 5.

Only integral reproductions of this whole certificate or reproductions of this page accompanied by any ratings pages are permitted.
Issued by Intertek, Centre Court, Meridian Business park, Leicester, LE19 1WD, England. Contact: asta@intertek.com Tel: +44 (0)116 263 0330.

P Gibbons
ASTA Observer

Certification Manager

16th March 2019
Date

UKAS PRODUCT CERTIFICATION 010

Intertek

Certificate No. 22153

ASTA Certificate

of Verification Tests

R418-0304

2000 A, 440 V / 1000 V / 8 kV (*Un=Ue / Ui / Uimp*), 50/60 Hz, IP 43, Form 4b, Power Switchgear and Controlgear Assembly (PSC-Assembly) incorporating a three phase & neutral horizontal busbars systems, a protective conductor, one 2000 A incoming ACB and three outgoing functional units comprising: ACBs 1600A and 1250A, MCCB 1600A.

Susol LV Switchgear-MDB

LSIS Co. Ltd., 68, Wolmyeong-ro #201, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, 361-720, Korea

Power Testing & Technology Institute (PT&T), LSIS Co., Ltd. 68, Wolmyeong-ro #201, Heung deok-gu, Cheongju-si, Chungcheongbuk-do, 28437, Korea

08th May to 17th August 2018

d in accordance with the description, drawings and photographs incorporated subjected to the series of proving tests in accordance with

IEC 61439-2: Edition 2.0 2011-08

nce to the tests listed in Annex D of IEC 61439-1 Edition 2.0 2011-08:

and parts
of enclosures
lectric shock and
e circuits
testing required

9: Dielectric properties
10: Temperature-rise limits
11: Short-circuit withstand strength
12: Electromagnetic compatibility (EMC)
13: Mechanical operation

y the manufacturer and proven by test see pages 1 to 5

e record of Proving Tests attached hereto. The values obtained and the general to comply with the above Standard(s) and to justify the ratings assigned by the he ratings page(s). This Certificate applies only to the apparatus tested. y of any apparatus having the same or other designations rests with the Manufacturer.

his front sheet, 3 ratings pages, plus 177 other pages as detailed on pages 6 to 9.

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Issued by Intertek, Centre Court, Meridian Business park, Leicester, LE19 1WD, England. Contact: asta@intertek.com Tel: +44 (0)116 263 0330.

P Gibbons
ASTA Observer

Certification Manager

11th March 2019
Date

UKAS PRODUCT CERTIFICATION 010

Intertek

Certificate No. 22154

ASTA Certificate

of Verification Tests

Laboratory Ref. No: R418-0304-A

Apparatus: 2000 A, 690 V / 1000 V / 12 kV (*Un=Ue / Ui / Uimp*), 50/60 Hz, IP 43, Form 4b, Power Switchgear and Controlgear Assembly (PSC-Assembly) incorporating a three phase & neutral horizontal busbars systems, a protective conductor, one 2000 A incoming ACB and two outgoing functional units comprising: ACBs 1600A and 1250A.

Designation: Susol LV Switchgear-MDB

Manufacturer: LSIS Co. Ltd., 68, Wolmyeong-ro #201, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, 361-720, Korea

Tested By: Power Testing & Technology Institute (PT&T), LSIS Co., Ltd. 68, Wolmyeong-ro #201, Heung deok-gu, Cheongju-si, Chungcheongbuk-do, 28437, Korea

Date(s) of tests: 08th May to 17th August 2018

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

IEC 61439-2: Edition 2.0 2011-08

Verifications with reference to the tests listed in Annex D of IEC 61439-1 Edition 2.0 2011-08:

1: Strength of material and parts
2: Degree of protection of enclosures
3: Clearances
4: Creepage distances
5: Protection against electric shock and integrity of protective circuits
6/7/8: No verification by testing required
9: Dielectric properties
10: Temperature-rise limits
11: Short-circuit withstand strength
12: Electromagnetic compatibility (EMC)
13: Mechanical operation

For ratings assigned by the manufacturer and proven by test see pages 1 to 4

The results are shown in the record of Proving Tests attached hereto. The values obtained and the general performance is considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated on the ratings page(s). This Certificate applies only to the apparatus tested. Responsibility for conformity of any apparatus having the same or other designations rests with the Manufacturer.

This Certificate comprises this front sheet, 4 ratings pages, plus 146 other pages as detailed on pages 5 to 8.

Only integral reproductions of this whole certificate or reproductions of this page accompanied by any ratings pages are permitted.
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C Stephens
ASTA Observer

Certification Manager

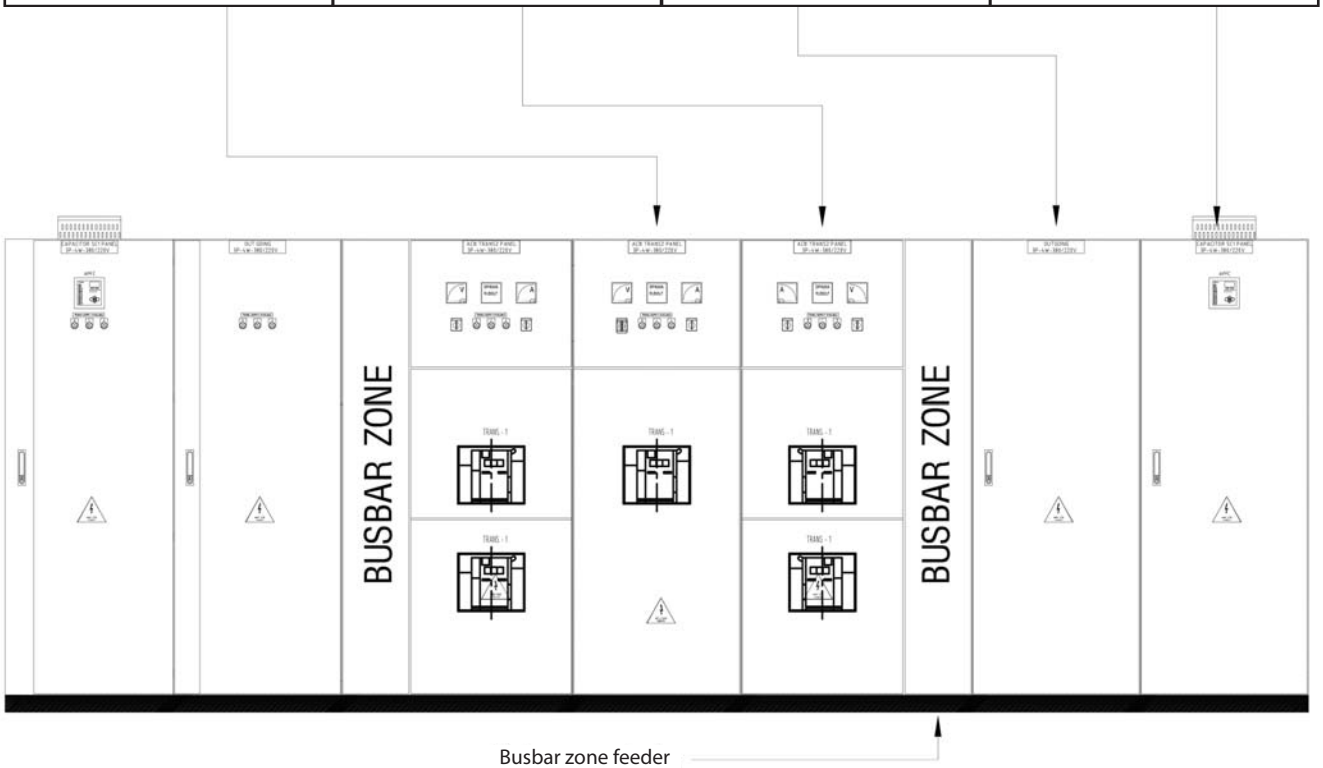
11th March 2019
Date

UKAS PRODUCT CERTIFICATION 010

Modular designation

MSB system included many modular connected together. SEAE designed the cubicle in standard

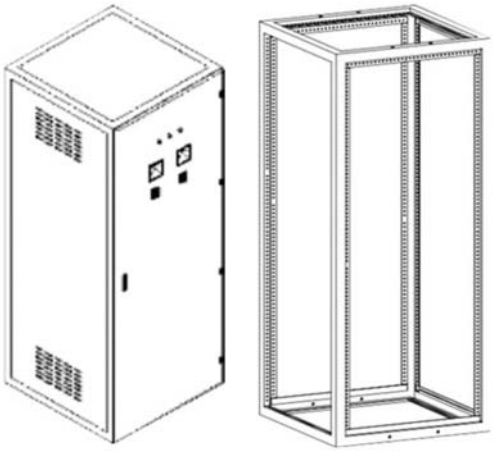
Main incoming feeder (or buscouple feeder)	ATS feeder (or incoming feeder)	Outgoing feeder	Outgoing feeder
Optional	Optional	Optional	Optional
ACB fix ACB drawout MCCB fix MCCB drawout	ACB fix ACB drawout MCCB fix MCCB drawout	ACB fix ACB drawout MCCB fix MCCB drawout	ACB fix ACB drawout MCCB fix MCCB drawout



Frame and enclosure

MODULAR DESIGNATION

Frame is designed in modular system. Each frame are functioned and standardized. All the compartments are standardized the high and the width.
The combination of the standard frame and compartment with fulfill every equipment. For future easy connection.



- The fram and support are punched by CNC with the grid hole 25mm for individual installation.
- Flexible door system for all requirements
- Door opening angle up to 180°
- Door lock to prevent opening door unintetionally
- Angled Louver for ventilation

CONSTRUCTION

H (mm)	W (mm)	D (mm)
2080	400-500-600 700-800-900 1000-1200	600-800-1000 1200-1400-1600 600-800-1000
2380	400-500-600 700-800-900 1000-1200	1200-1400-1600

Surface treatment and finishing:
- Surface treatment by seven steps.
- Epoxy powder coating.

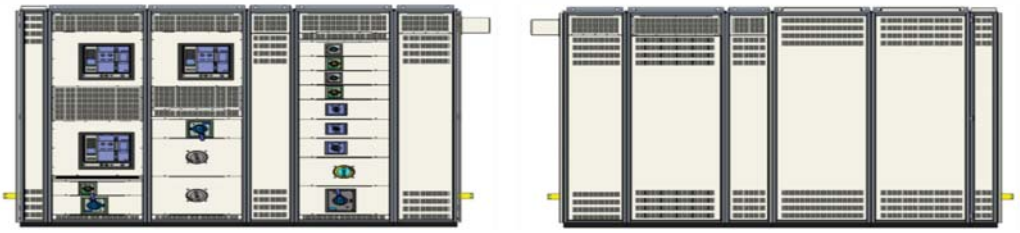
Material:
Frame & Enclosure are fabricated from sheet steel in following thickness
- Frame: 2.5mm
- Enclosure: 2.0mm
- Enternal separator: 1.5mm.

Degree of protection:
- IP30, IP40, IP42: Ventilated
- IP40, IP54: Unventilated

The standardized design is easy to change to achieve IP for the operating environment

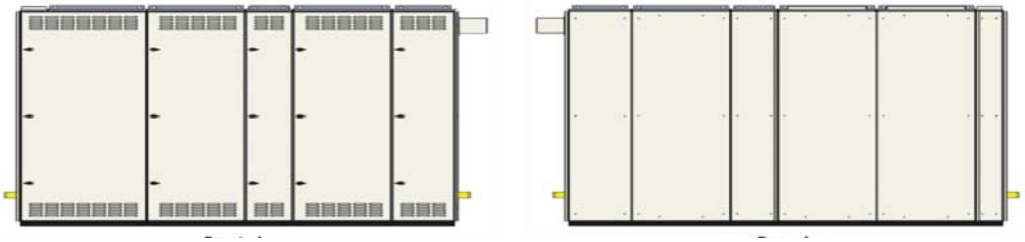
IP31

Front P-Cover
Rear Cover
Upper ventilation and
Front/Rear Ventilation slot are applied.
(A live part is not exposed.)
Upper Ventilation top cover is changed.



IP43

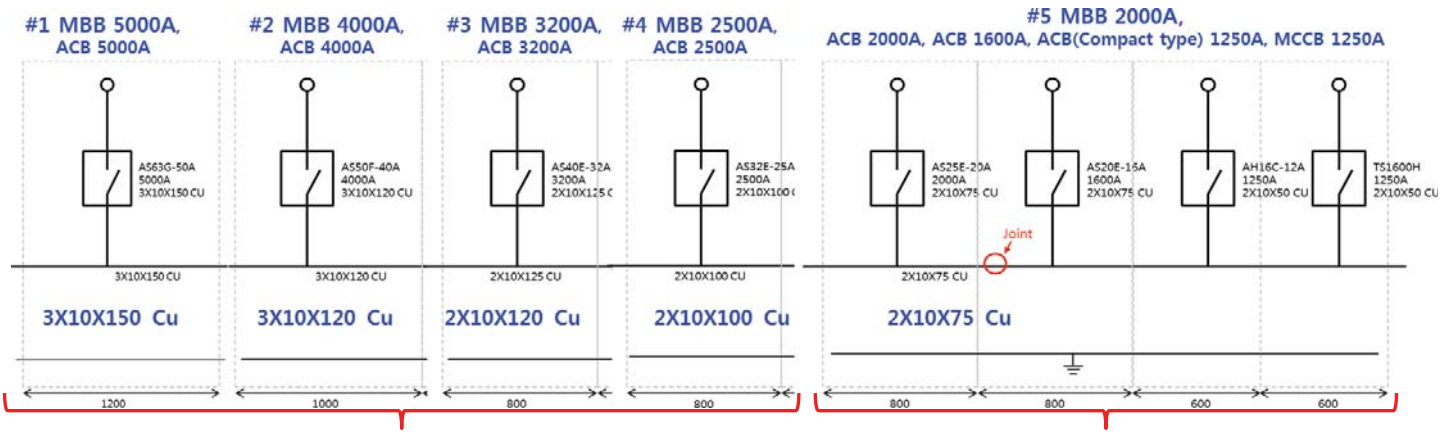
Louver manufactured Door
Louver rear 1mm mesh is applied.
Poly, Urethane, Gasket are applied.
MDB's exclusive Hinge and Locker are applied.
Upper Ventilation top cover is changed.



IP54

In IP43 Door, Louver is removed and IP54 Filter cover is applied.
Assembling structure and Gasket structure are same with IP43.
Upper Ventilation is removed
Upper Ventilation top cover is changed.

All panels have the same structure and are compatible

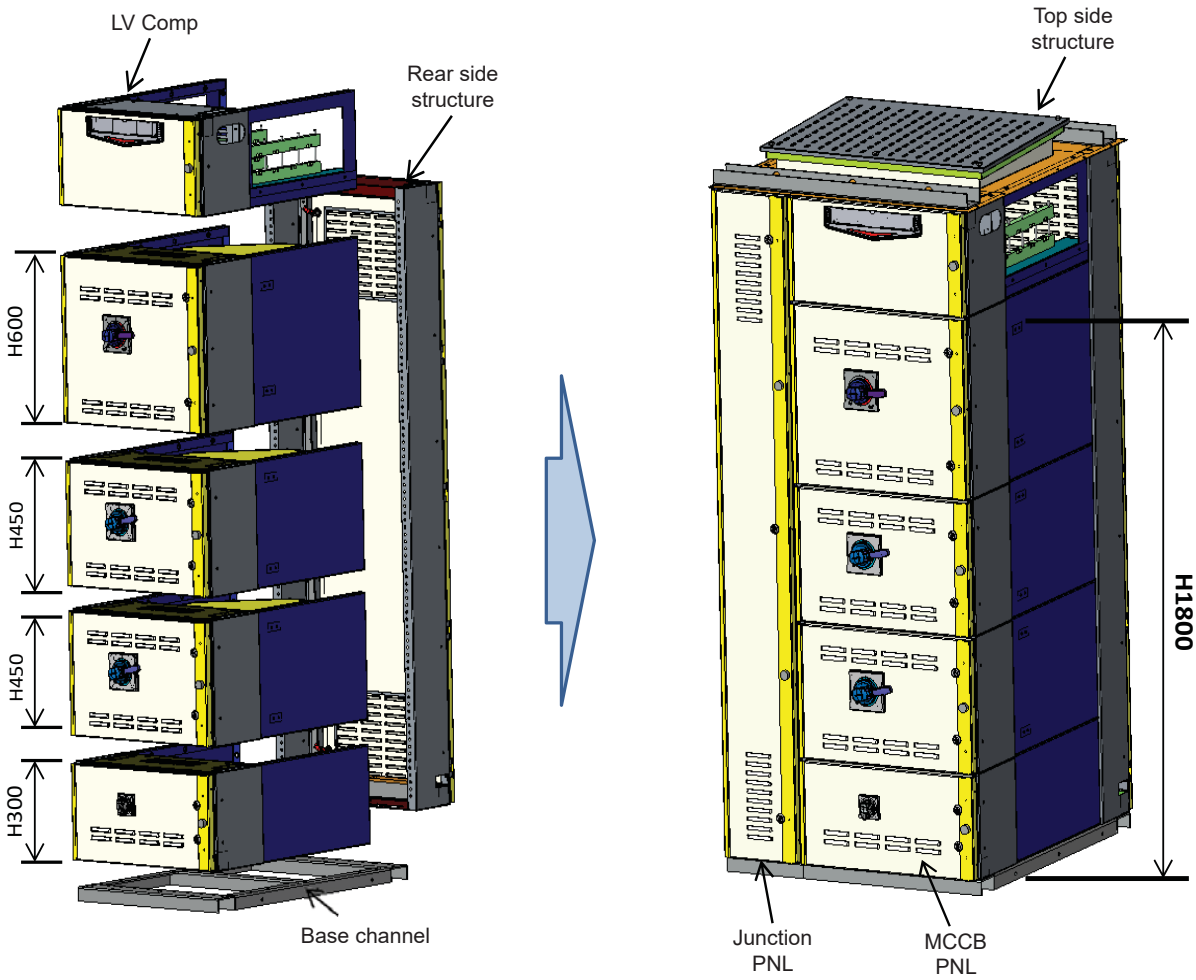


MBB : 100kA/1sec, 85kA/1sec, 65kA/3sec

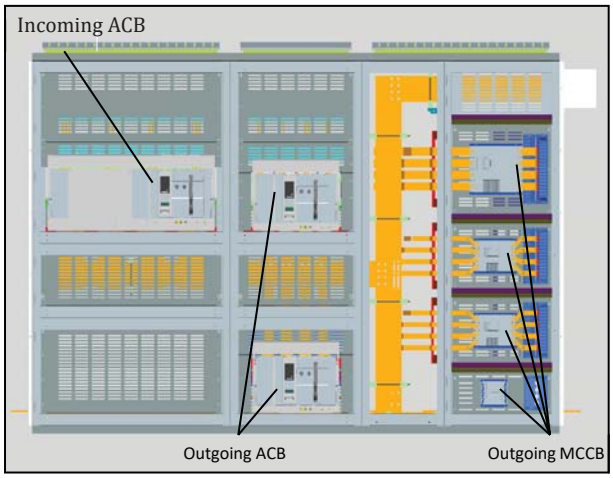
MBB : 85kA/1sec, 65kA/3sec

Easy panel

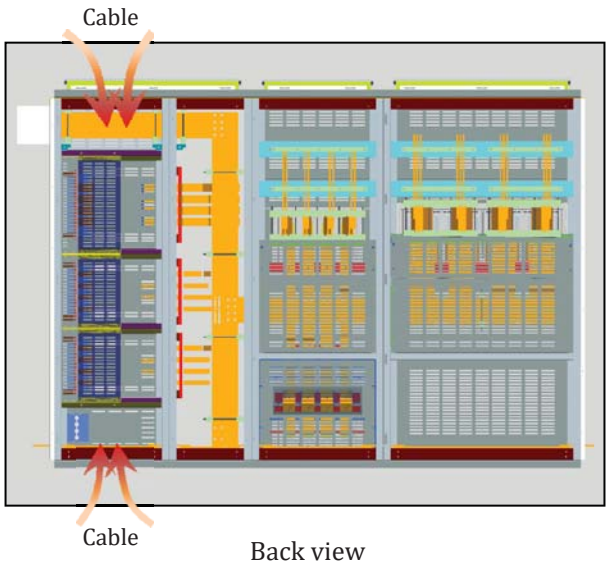
The MCCB easy install and freely compatible with each other within 1800mm height



Main Busbars are located in the middle and top section. These make you easy to place two ACB and easy to install MCCB/MCB

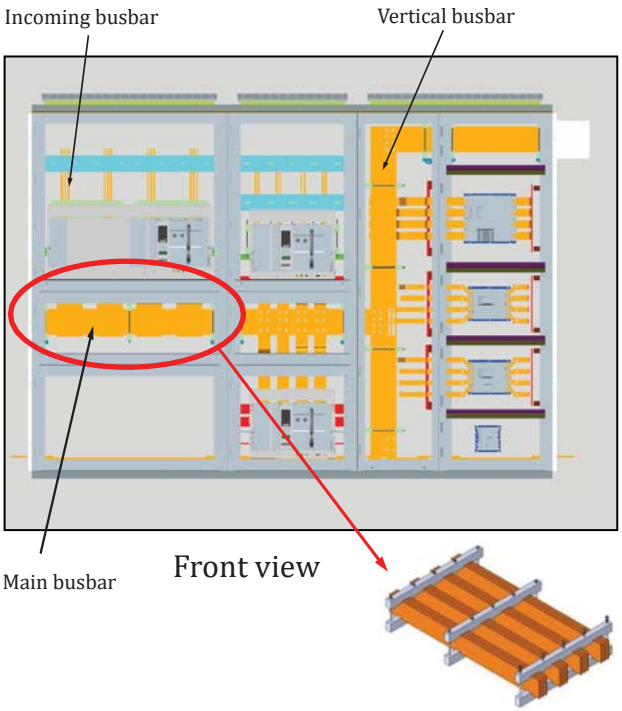


Front view

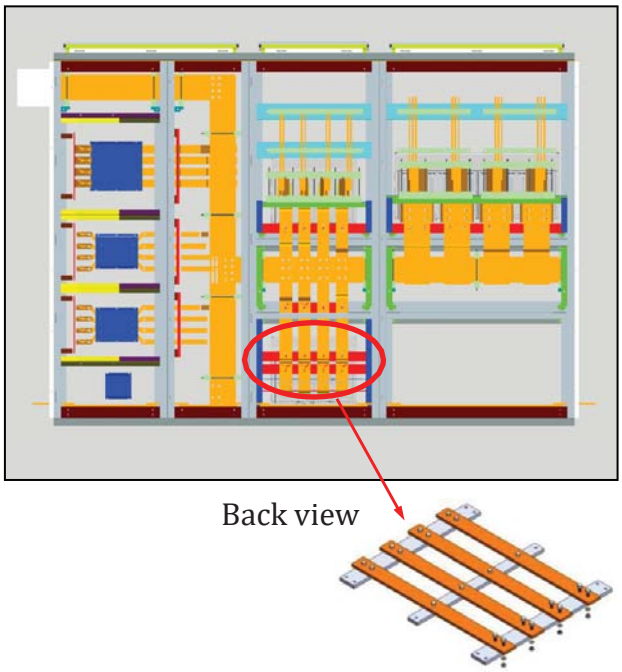


Back view

All busbars are firmly fixed. The busbar is fixed using the clamping method and fixed structure between phases. This method is easy to assemble



Front view



Back view

Easy panel

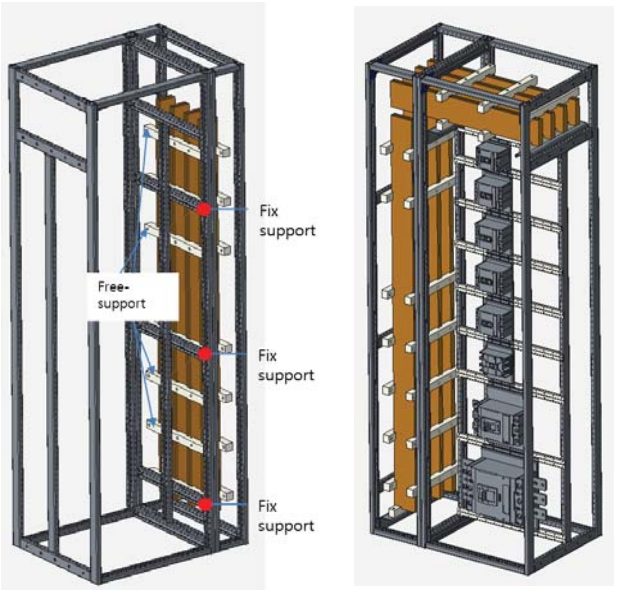
EASY TO INSTALL BUSBAR AND EXTENTION ON LEFT OR RIGHT

1. Vertical Busbar Section W175/300mm
   But, Main/Feeder Section's Width is 625mm

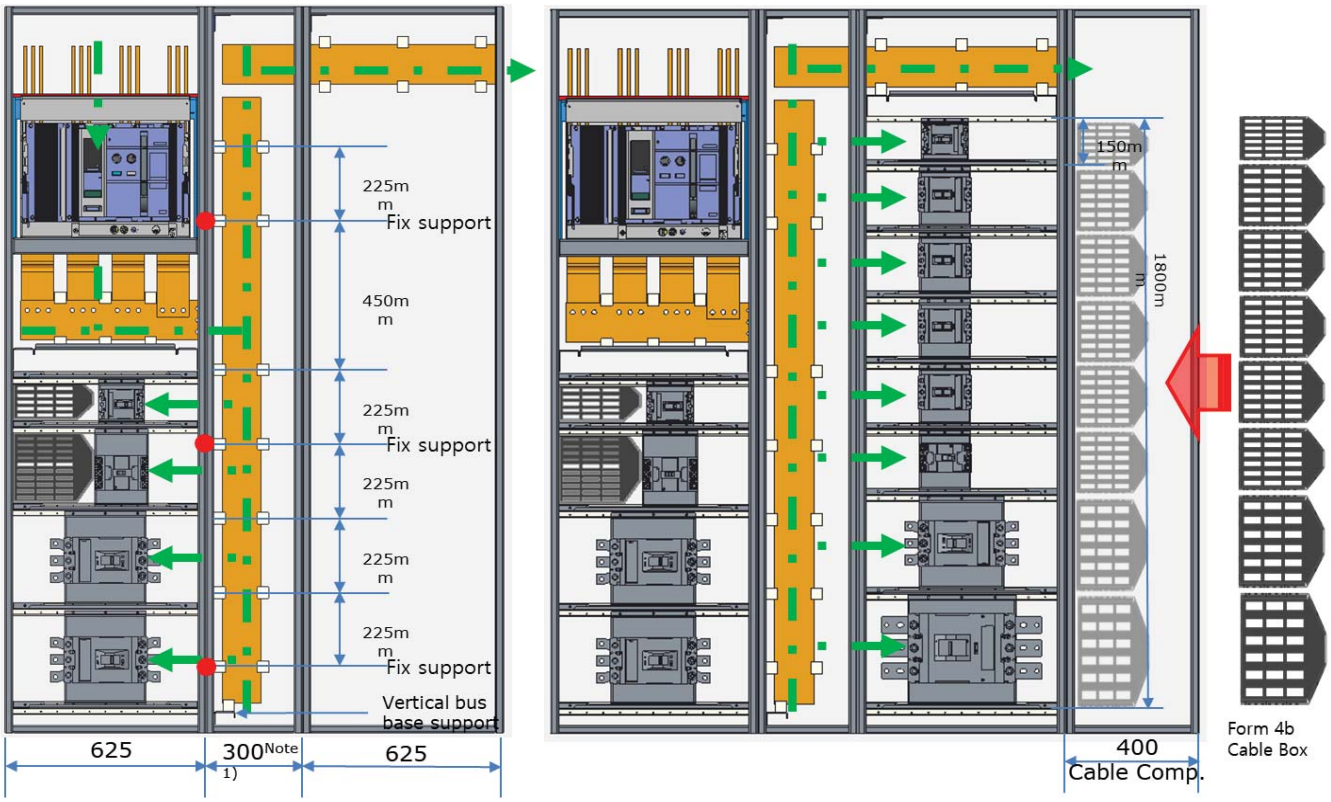
2. By designing horizontal/vertical Clamp in the same shape, the level of difficulty in assembling is low and the expandability is high.

3. Busbar fixing method is similar, but support, which is applied to fix, is not an exclusive product. By applying Fibon Clamp, it has advantages that parts can be supplied easily and manufactured & used well according to the situation.

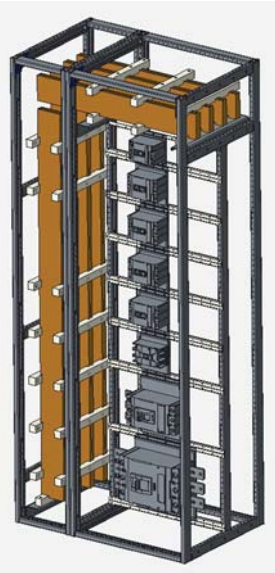
4. By designing assembly structure and fixed structure ease of assembly and quality have increased.



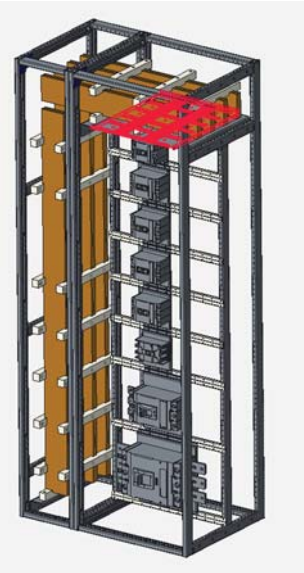
Both Left and Right sides of the Vertical Busbar can be shared



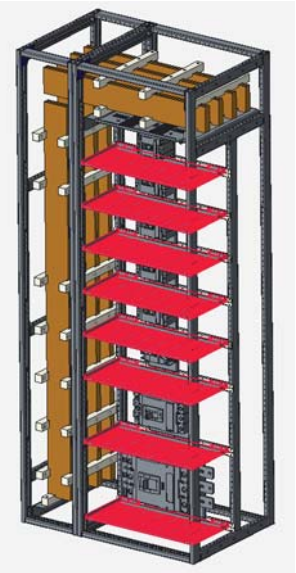
The partitions are easily removable to achieve the forms 1,2,3,4



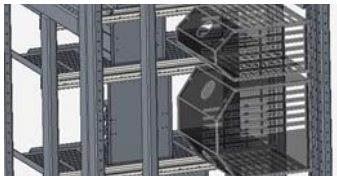
Form 1



Form 2

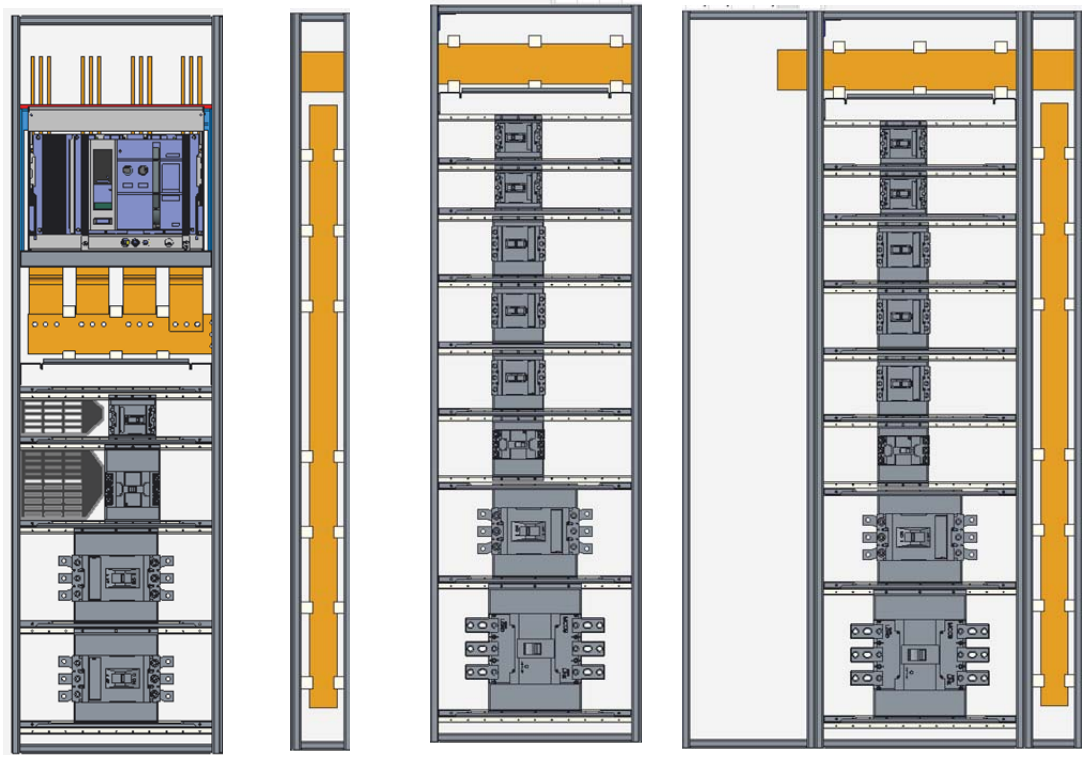


Form 3



Form 4

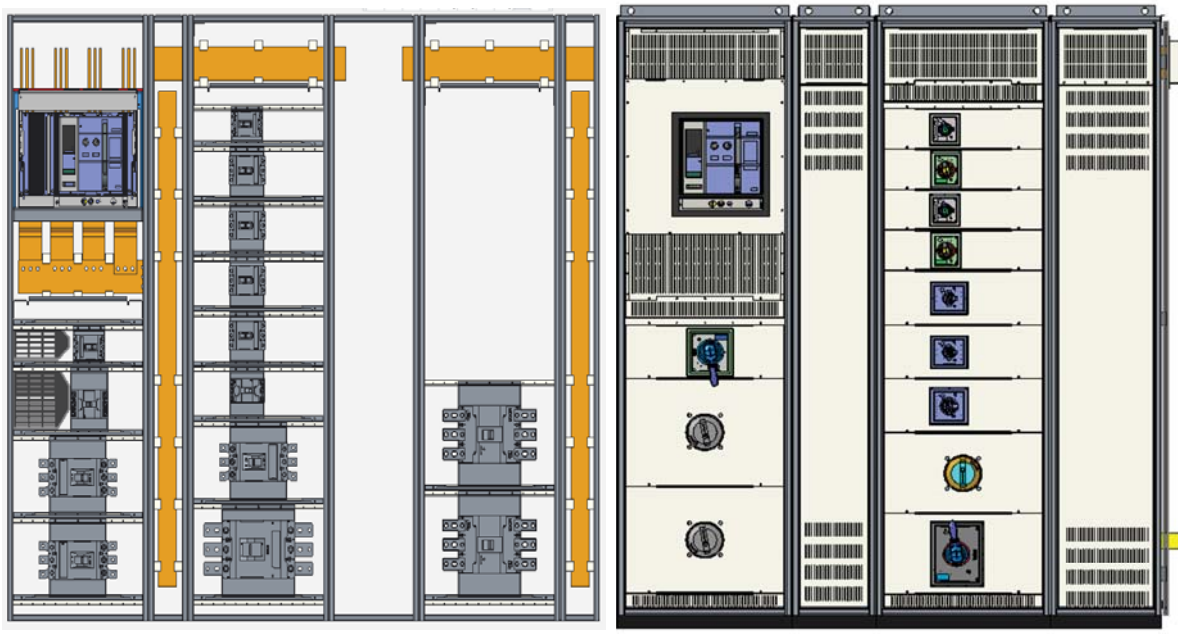
Modules are designed independently, so it is easy to disassemble, assemble and expand in the future



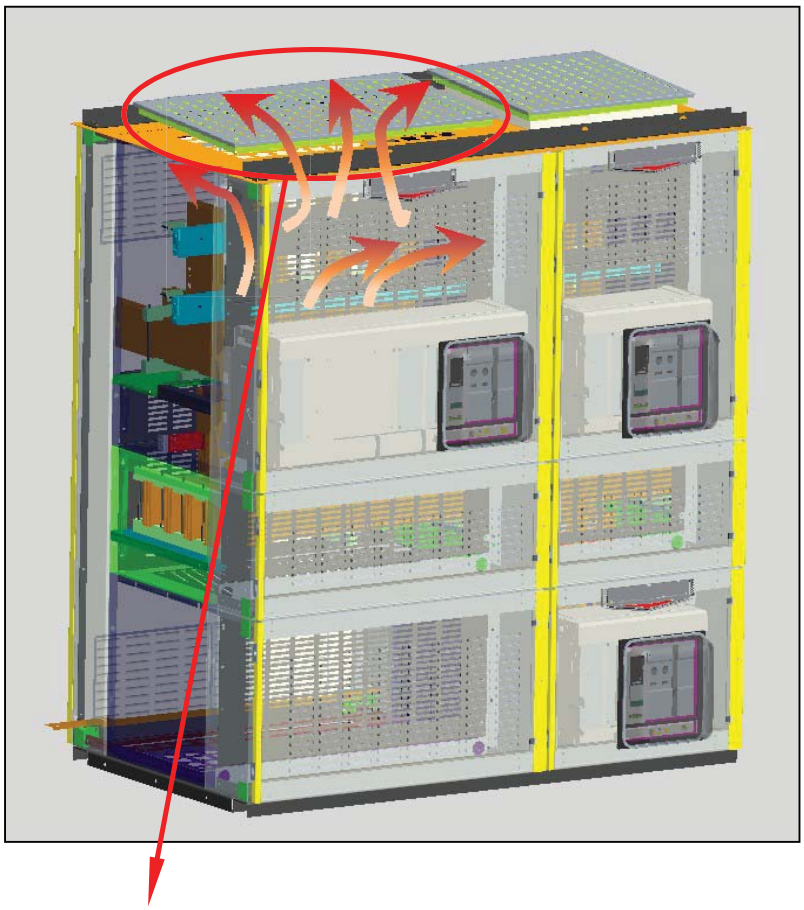
Easy panel

Access type (Front , rear,side available)

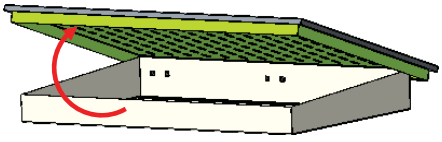
Maximum store , save money



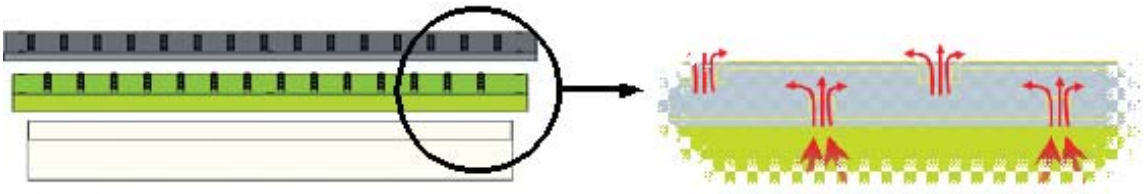
In special cases, the specially designed arc release cover has an advantageous structure heat dissipation. we do not need a fan for heat dissipation (optional)



Normal condition



Release the arc pressure



Detail structure

Type of panel

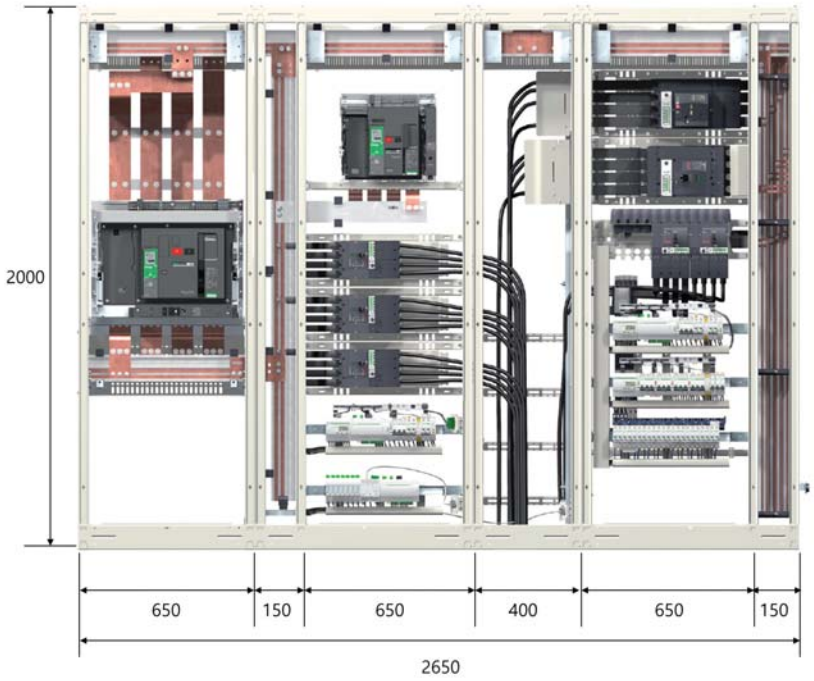
SE.LVMSG-H TYPE

Authorized by LS Electric

Desciption		SE.LVMSG-H TYPE	
		ACB	MCCB
Rated operating voltage		690V	440V
Rated Frequency		50/60Hz	50/60Hz
BUSBAR (Rated Current)	Main	2000, 2500, 3200, 4000, 5000	
	Vertical	1800, 2000, 2500, 3200, 4000, 5000	
Rated short time withstand current		Up to 100 kA/1sec , 65kA/3sec	
Rated insulated voltage		1000V	750V
Rated impulse withstand voltage		12kV	8kV
Standard		IEC 61439-1 & 2	
Form of Internal separation		Up to Form 4b	
Degree of protection		Up to IP43	

SE.LVMSG-M TYPE

Authorized by Schneider Electric



Desciption		SE.LVMSG-M TYPE	
		ACB	MCCB
Rated operating voltage		690V	440V
Rated Frequency		50/60Hz	50/60Hz
BUSBAR (Rated Current)	Main	2000, 2500, 3200, 4000	
	Vertical	1800, 2000, 2500, 3200, 4000	
Rated short time withstand current		Up to 85 kA/1sec	
Rated insulated voltage		1000V	750V
Rated impulse withstand voltage		12kV	8kV
Standard		IEC 61439-1 & 2	
Form of Internal separation		Up to Form 4b	
Degree of protection		Up to IP43	

Type of panel

SE.LVMSG-L TYPE

Manufactured by SEAE

Desciption		SE.LVMSG-L TYPE	
		ACB	MCCB
Rated operating voltage		690V	440V
Rated Frequency		50/60Hz	50/60Hz
BUSBAR (Rated Current)	Main	2000, 2500, 3200, 4000	
	Vertical	1800, 2000, 2500, 3200, 4000	
Rated short time withstand current		Up to 65 kA/1sec	
Rated insulated voltage		1000V	750V
Rated impulse withstand voltage		12kV	8kV
Standard		IEC 61439-1 & 2	
Form of Internal separation		Up to Form 4b	
Degree of protection		Up to IP54	

SOUTHEAST ASIA ELECTRICAL TRADING JOINT STOCK COMPANY

Viet Nam

Head Office: 196/1/15 Cong Hoa Street, Ward 12, Tan Binh District, HCMC

Factory: D11/54C Quach Dieu Street - Hamlet 4 - Vinh Loc A Commune - Binh Chanh District - HCMC

Factory: Lot 49G, Quang Minh Industrial Zone, Me Linh District, Hanoi City

Cambodia

Business address: #9E1Z, Road No 217-Sangkat Phsa Thmery 2, Khan Doun Penh, Phnom Penh, Cambodia

Factory:Warehouse #80G, Phum III, SK Chroy Changva, Khan Chroy Changva, Phnom Penh

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