S&SYS

ABOUT POWER SOLUTION

S&SYS PRODUCT BROCHURE

High Voltage Switchboard

Low Voltage Switchboard

Industrial Power System

EP System

Offshore Switchboard

About Power System

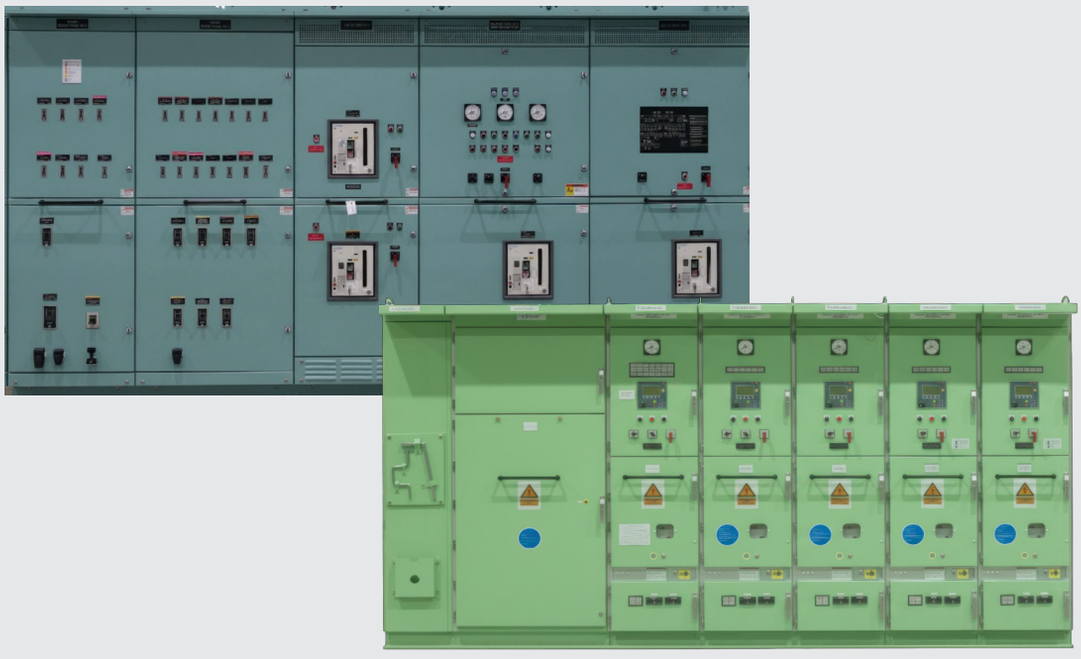
Power System

For shipowners who prioritize quality and safety

The power system, high-voltage switchboards (SSMV-7, SSMV-7S/7H), and low-voltage switchboards (SSLV) are designed as completely safe and efficient solutions.

These switchboards prevent potential accidents that may occur during power transmission and distribution. Unlike industrial systems, ships have power generation and electrical loads located in the same space, meaning that electrical faults can lead to major accidents.

Our system is developed based on knowledge and experience accumulated through commissioning and testing on more than 1,300 vessels in the shipbuilding industry.

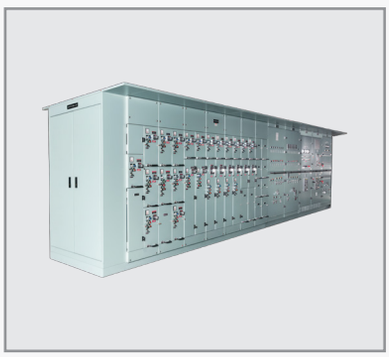


HV/LV SWBD Overall

Commercial Ship

SSMV-7/7R

· 7.2kV / up to 25kA
· Rated current : 1250/2000A
· Class : ABS/BV/DNV_GL/ KR/NK
· IEC62271-200



SSLV

· 690V / 130kA
· Rated current : 8000A
· IEC 61439-1/2

SSMV-7S/7H

· 7.2kV / up to 25kA
· Rated current : 1200/1600A
· Optional : Single / Double levels Bottom / Top coaming
· Class : ABS/BV/DNV_GL/ KR/NK/LR(In Certification)
· IEC62271-200

SSLV-1S

· 440V / 70kA
· Rated current : 5235A
· IEC61439-1/2 (Ed3.0, 2020)

Offshore

SOLT

· 690V / 90kA
· Rated current : 5000A
· Class : ABS/LR/DNV
· IEC61439-1/2, IEC-61641

*ABB Licensed

UNIGEAR ZS1

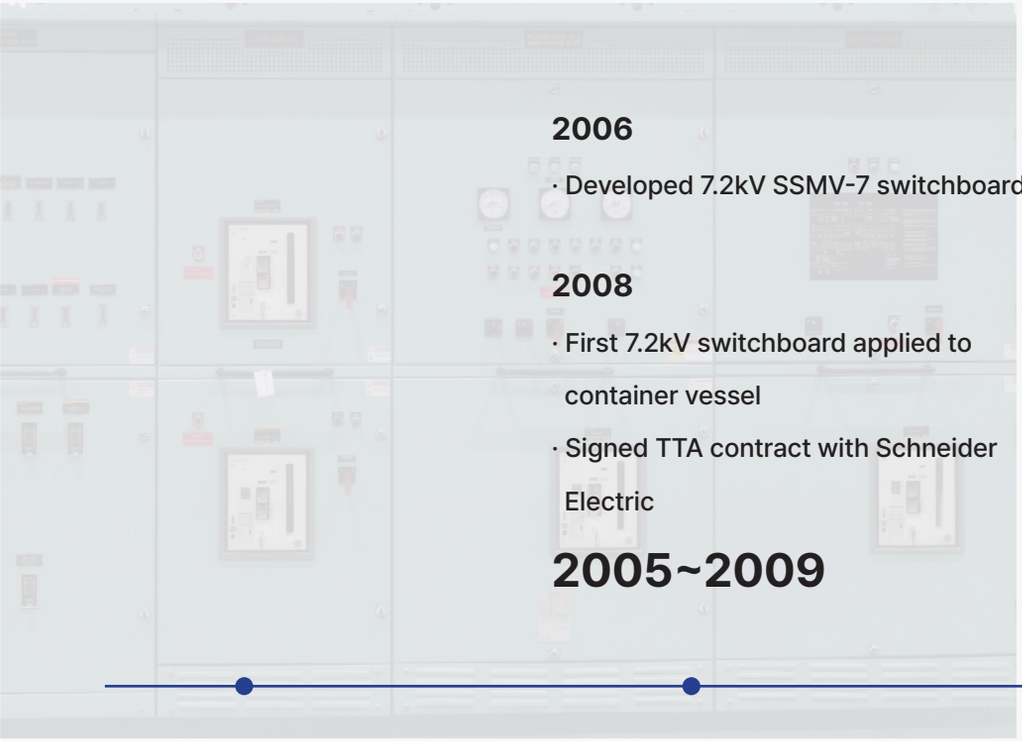
· 24kV / up to 63kA/1s (50kA/3s)
· Rated current : 630/1250/1600/2000/2500/3150/3600/4000A
· VCB
· Class : ABS/BV/DNV/GL/KR/LR/RINA/RMRS
· IEC62271-200
· Double level, Double Busbar

*ABB Licensed

PRO E

· 415V / up to 120kA
· IP 30, 31, 40, 41, 65
· Rated current : up to 6300
· Foam 3b or 4b
· IEC61439-1,2, IEC61641, IEC60068

SWITCHBOARD History



2005~2009

2006

· Developed 7.2kV SSMV-7 switchboard

2008

· First 7.2kV switchboard applied to container vessel

· Signed TTA contract with Schneider Electric

1994~2004

1994

· Started ship power systems for Samsung Heavy Industries

· Developed SSLV switchboard

2003

· Expanded vessel applications of SSLV and SSDB switchboards

– COT, CONT, SHTL

2004

· First SSLV switchboard applied to LNG project

2010~2015

2010

· Commercialized Schneider-licensed products:

– MV & LV SWBD

2012

· Expanded into special-purpose marine projects

(FPSO, FSU, FLNG, etc.)

2015

· Completed development testing of 12kV 40kA HV switchboard (SEPT)

· LR-certified 690V 90kA LV switchboard (SOLT)

2019

· Developed 7.2kV SSMV-7S HV switchboard

· Certified to IEC 62271-200

· Type-approved by ABS, BV, DNVGL, and LR

2021

· Developed 7.2kV SSMV-7S Double – Level type

· Compliant with IEC 62271-200

2022

· Developed New SSLV-1S LV switchboard

· Compliant with IEC 61439-1,2

2019~2022

2016~2018

2016

· ABS-certified: 12kV 40kA HV switchboard (SEPT))

· DNV-certified: 690V 90kA LV switchboard (SOLT)

· Standards: IEC 61439 / 61641

2018

· Passed IEC certification and arc test (SEPT)

· DNV-certified: 12kV 40kA HV switchboard

2023~2025

2023

· Developed 7.2kV SSMV-7H HV switchboard

· Compliant with IEC 62271-200

2024

· Signed MOU with ABB for Unigear ZS1 HV switchboard supply

2025

· Developed 7.2kV SSMV-7H Double – Level type

· Signed MOU with ABB for MNS & PRO E LV switchboard supply

Power Solution Overview

HV

High Voltage Switchboard

The High Voltage Switchboard is a metal-clad power distribution system designed for marine and offshore applications, fully compliant with IEC 62271-200 and certified by major classification societies (ABS, BV, DNV, LR, KR, etc.).

It features arc-fault protection, mechanical interlocks, intelligent monitoring devices, and a front-access design for easy maintenance and efficient operation.

With a rated capacity of up to AC 12kV / 2000A, it ensures stable and reliable power control even under extreme vibration, temperature, and humidity conditions — making it an ideal solution for LNG carriers, shuttle tankers, oil rigs, and offshore plants.

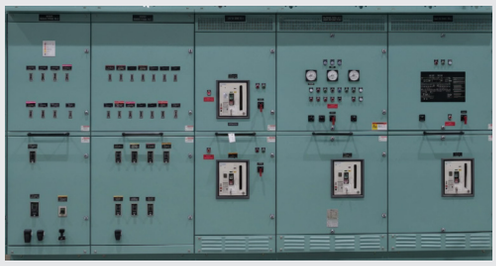
LV

Low Voltage Switchboard

The Low Voltage Switchboard (SSLV/SSLV-1S) provides a full range of low-voltage switchboards for marine power systems, based on advanced technology and extensive experience.
The low-voltage switchboard is designed and developed to be optimized for marine environments, offering sufficient working space while maintaining a compact design to save installation space.

High Voltage Switchboard

- Fully Type Approved
- Completed independent Arc-Fault test
- Tested in accordance with IEC 62271-200 standards
- Applied Metal-Clad structure (LSC2B and PM type)



Low Voltage Switchboard

- Fully enclosed, front-access, floor-mounted multi-cubicle type
- Compact low-voltage switchboard for efficient power distribution
- Tested in accordance with IEC 61439 standards
- Proven high-quality marine service worldwide

Industrial Power System

Switchgear / MCC / Distribution Panel

The land-based switchboard has secured stability and reliability through international standard tests and certifications.
With a metal-clad structure, arc-fault prevention, and seismic-resistant design, it ensures safe power supply in any industrial environment.
Its withdrawable structure and interlock functions provide easy maintenance and enhanced operator safety, making it an optimized power management solution.

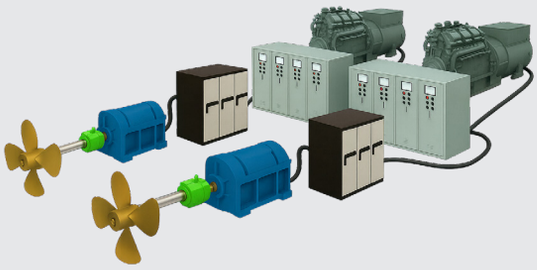
EP System

Electric Propulsion System

EPS Eco Solution combines the Electric Propulsion System (EPS) with the Fuel Gas Supply System (FGSS) to enable eco-friendly and efficient vessel operation.
It can be applied to large vessels as well as small and medium-sized coastal ships, and is available in various configurations through collaboration with partner companies.

Eco-friendliness	Energy efficiency	Stable power supply	Reduced operating costs

Land-based Switchgear



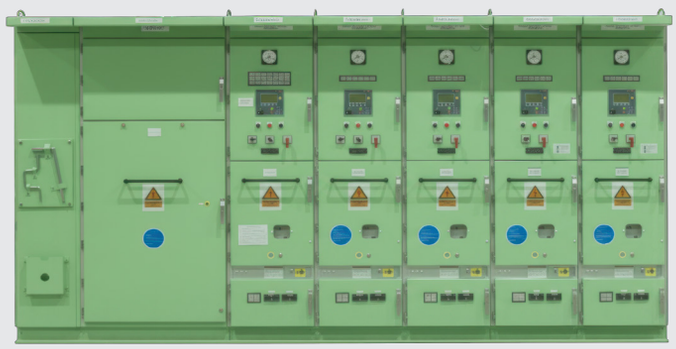
EP System

HV Switchboard

Features

· Achieved full type approval
· Tested in accordance with IEC Pub.62271-200
· Metal-clad construction
· Independently arc-fault tested
· World wide quality marine service
· Safety mechanical interlocks
· Front service operation
· Making current earthing switch
· Intelligent circuit monitoring devices
· Circuit breaker insertion and withdrawal with the front panel door closed
· Environmental tested in accordance with IEC60092-504 Sec.5 and GL 2003 VI-part.7

Items		SSMV-7		SSMV-7S/7H	
Application	Standard Conformance	IEC Pub 62271-200			
	Classifications	ABS, BV, DNV_GL, LR, KR and others			
Rating	Rated Voltage	AC 7.2kV			
	Rated Frequency	50/60Hz			
	Rated Power Frequency Withstand Voltage	20kV/min			
	Rated Lightning Impulse Withstand Voltage	60kV			
	Rated Shot Time Withstand Current	25kA			
	Rated Peak Withstand Current	65kA			
	Internal Arc Withstand Current	25kA			
	Main Bus Bar Current	1250A	2000A	1200A	1600A
	Load Bus Bar Current	600A	600/1000A	1000A	1000A
Construction	Switchboard Construction	Totally-Enclosed, Dead-Front, Floor Standing Multi-Cubicle			
	Degree of Protection	IP42(Please Contact to our SWBD team)			
Vessel type	· LNG Carriers · Container Ships · Suttle Tankers · Oil Rig Supply Vessels · Offshore Plant ... etc				
Option	· Insulation tube on bus bar · Infra-red Ray Window				

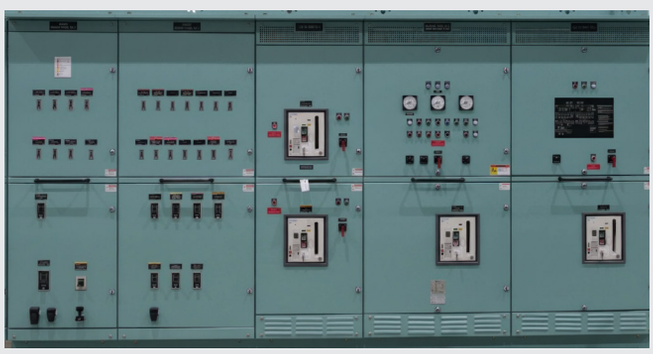


LV Switchboard

Features

· Totally-enclosed, dead-front, floor standing
· multi-cubicle type
· Tested in accordance with IEC Pub. 61439-1, 2
· World wide quality marine service
· Compact low-voltage board for power distribution
· Specially developed for marine applications
· Meets the requirements of classification societies

Items		SSLV, SSLV-1S
Application	Classifications	ABS, BV, DNV_GL, LR, NK, LRS, KR, RINA
Rating	Rated Voltage	500 V AC
	Rated Frequency	50/60 Hz
	Rated Current	Up to 6300 A (Busbar : up to 8000A)
	Rated Peak Withstand Current	150 kA, Sym
Construction	Type	Totally-Enclosed, Dead-Front, Floor Standing Multi-Cubicle
	Degree of Protection	IP 22(Please Contact to our SWBD team)
	Frame Work	Formed Sheet Steel or Substantial Box-Frame
	Access	Front and Rear
	Power Line Inlet	Bottom Part of the Rear (Upper Part)
Option	690V AC, IP44	



Offshore Switchboard

SOLT

*ABB LICENSED

UNIGEAR ZS1

*ABB LICENSED

PRO E

Items	SOLT	UNIGEAR ZS1	PRO E
Classification	ABS, LR, DNV	-	-
Rated Voltage	690V AC	12~17.5kV / 24kV	415V AC
Rated Frequency	50/60Hz	50/60Hz	50/60Hz
Rated Current	5000A	3150 / 4000A	6300A
Rated Short-Time Withstand Current	90kA	Up to 63kA (12~17.5kV) Up to 31.5kA (24kV)	120kA
Standards	IEC 61439-1/2, IEC 61641	IEC 62271-200	IEC 61439-1/2


Together,
We Power the Future

S&SYS

HQ / Tech Center (Hwaseong) SK V1 center, 7F, 830, Dongtansunhwan-daero, Hwaseong-si, Gyeonggi-do, Republic of Korea(18468)
Main Factory / Eco Center (Busan) 51, Garisae 3-ro, Gangseo-gu, Busan, Republic of Korea(46727)

Sales Department	TEL +82-(0)31-229-1127	FAX +82-(0)31-229-1269	E-Mail sales@snsys.net
Service Department	TEL +82-(0)31-229-1321	FAX +82-(0)31-229-1269	E-Mail csas@snsys.net

www.snsys.net