

# ***JSB-2L***

Low Voltage Switchboard

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# ***JGP-21***

Group Starter Panel

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## Low Voltage Switchboard

# JSB-2L

**The 3-tier generator panel width is downsized by up to 33% compared to the conventional width.**

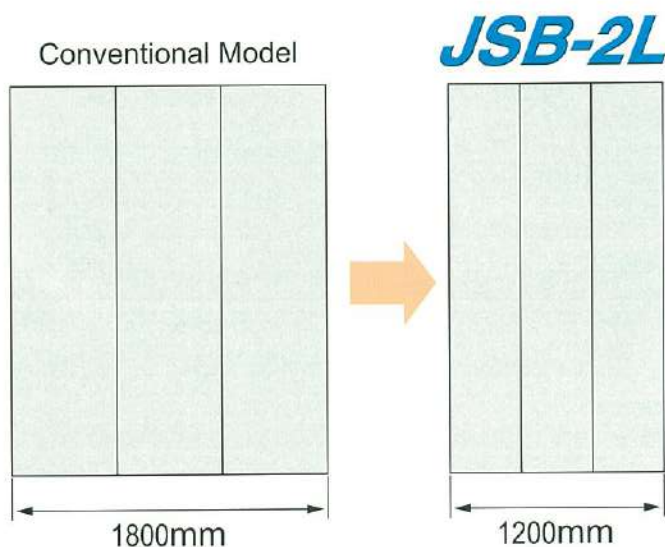
Whilst maintaining the longstanding JRCS reputation for the highest standards of quality and reliability, JRCS has successfully produced the JSB-2L, the world's smallest Low Voltage Switchboard for its classification.

This significant downsizing provides major space saving opportunities.

## Ease of access for cable connections and wiring

Ease of access for cable connections and wiring remains the same as for a conventional size. Standardized vertically placed generator bus bars contribute to the downsizing of panels.

A long history of production for large vessels has provided JRCS with an unrivalled record of excellence in short circuit resistance technology.





# Superior Compact Reliable

## Improvement in ACB cradle construction



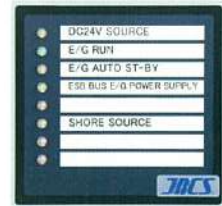
With the co-operation of the ACB manufacturer, a new improved ACB cradle construction has been achieved by redesigning and reducing the size of the casing construction.

## Introduction of a combined unit

A combined unit of operating switches and indicator lamps has been designed thus eliminating unnecessary components and simplifying maintenance.



- SPACE HEATER ON/OFF
- GOVERNOR LOWER/RAISE
- ACB OPEN/CLOSE
- GEN ABNORMAL RESET



## Use of JRCS's own bus bar separation device

Integration of the bus bar separation device and the bus bar provides further space saving.

Bus bar separation can be implemented safely and easily by using the JRCS tools provided.

The JSB-2L is applicable for all Classification Societies.



## As a result of a complete standardization review and examination of all circuits and components etc., reliability is greatly improved.



By standardizing control circuits, JRCS has successfully unitized them on printed circuit boards.

The application of detachable terminal blocks eases replacement work.

The changes have considerably reduced the number of circuits and simplified parts replacement.

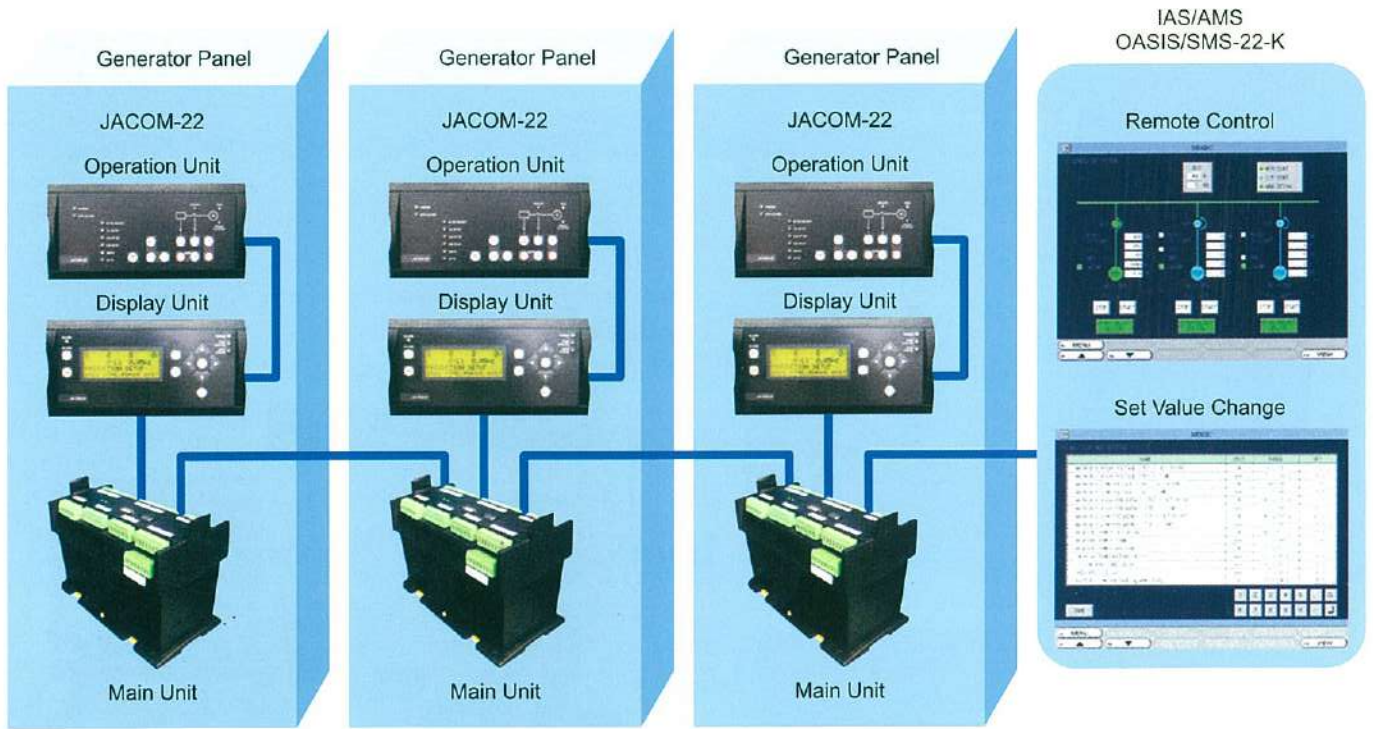
## Interface to host system

Through experience in product delivery to highly technological vessels, LNG Carriers etc., JRCS's communication functions to host systems have become highly advanced.

Remote operation and alarm output including engine start, ACB closing, and stand-by setting are available through communication lines.

Additionally, measuring values, such as electrical power, current, and frequency can be displayed via CAN-BUS communications.

If necessary, please refer to the JACOM-22 and OASIS/SMS-22-K product catalogues for more details.



## JSB-2L (Low Voltage Switchboard)

### Specification & Ratings

Type	JSB-2L
Rated Voltage	AC450V and less
Control Voltage	AC110V (Option: AC220V), DC24V
Rated Frequency	60Hz (Option: 50Hz)
Applicable Standard	JEM IEC
Applicable Classification Society	GL, LR, ABS, DNV, NK, JG
Ambient Temperature	45°C
Bus Bar Short-circuit Current	Maximum : 2700A
Bus Bar Short-circuit Capacity	50kA (AC450V)
Degree of Protection	Drip-proof type IP21/IP22 (Option: IP23)

### Standard Dimensions & Construction

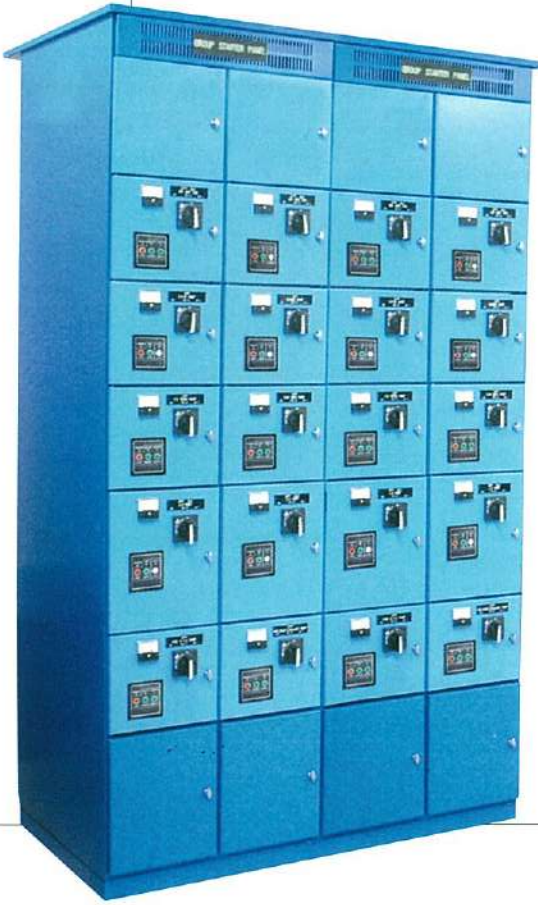
Width	Generator Panel	400mm (Generator: AC450V 1120kVA and less) ※1
	Synchronizing Panel	Not necessary (available with option)
	Feeder Panel	500~1200mm depending on range and quantity of breakers
Height		2100mm (2100~2300mm)
Depth		900mm
Cable Inlet (Generator Panel)		Bottom
Cable Inlet (Feeder Panel)		Bottom or upper part of the rear side
Door		Front: left hinge (with door stopper) Rear: detachable (with hook)

### Generator Automation

Generator Plant Control JACOM-22 (Refer to the catalogue.)

※1 Please contact us if you require two generators.





Group Starter Panel

# JGP-21

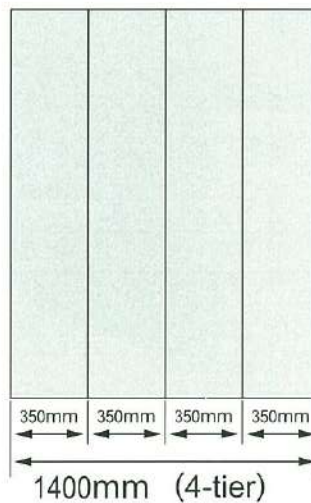
## Standard width of each panel is downsized from 350mm to 300mm

The newly designed JGP-21 Group Starter Panel from JRCS which is downsized from a standard width of 350mm to 300mm is now the world's smallest for its classification. This significant downsizing provides major space saving opportunities where space is limited on vessels. Ease of access for cable connections and wiring is improved compared with a conventional sized starter.

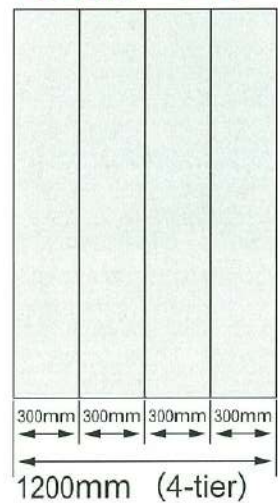


3-tier Integral Structure

Conventional Model



## JGP-21



## A new Starter Control Unit (NSU)

Clear development objectives include unit size reduction, and most of all user-friendliness is featured.

The NSU integrates the motor control and status indications.

Control system integration is also easily achieved through serial communication between ship control & monitoring systems by use of the unique JRCS SCS (Starter Control Station).

NSU-RN2



NSU-AN8



NSU-AN7



UNIT TYPE \ FUNCTION	NSU-DN2	NSU-LN1	NSU-RN2/3	NSU-RN4	NSU-AN5	NSU-AN6	NSU-AN8	NSU-AN7
SINGLE SPEED	●	●	●		●	●	●	●
2-SPEED				●				
REVERSIBLE			●					
UVP	●	●	●	●	●	●	●	●
UVR (WITH TIMER)		●	●	●	●	●	●	●
MOTOR ABNOR STOP (88 & 5)	●	●	●	●	●	●	●	●
AUTO START & AUTO STOP							●	●
MANU START & AUTO STOP						●		
AUTO START & MANU STOP					●			
AUTO CHANGEOVER								●

(1) Change of control program can be made because the flash memory is applied.

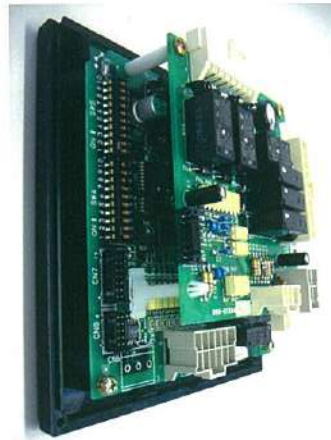
(2) Changeover of UVP/UVR can be done by using the dip switch inside the NSU. (except for NSU-DN2)

(3) Switchover of the dip switch inside the NSU allows users to select and set the sequential timer, chattering bypass timer etc., and the number of pressure switches for automatic start/stop.

(4) The connector terminal allows users to easily replace parts.

(5) A wide range of controls can be obtained by installing an additional extension printed circuit board.

(6) The NSU is approved by the major Classification Societies such as GL, LR, ABS, DNV, NK and JG





## Introduction of the MMS (Manual Motor Starter)

The MMS is a combined unit of the circuit breaker and the over current relay.

The MMS simplifies the circuits and enhances the breaker's closing capacity, thus greatly increasing reliability.

In general, this MMS is suitable for motors up to a capacity of AC450V 37kW. (breaking capacity: AC450V 35kA)



## JGP-21 (Group Starter Panel)

Specification & Ratings	
Type	JGP-21
Rated Voltage	AC450V and less
Control Voltage	AC110V (Option: AC220V), DC24V
Rated Frequency	60Hz (Option: 50Hz)
Applicable Standard	JEM IEC
Applicable Classification Society	GL, LR, ABS, DNV, NK, JG
Ambient Temperature	45°C
Short-circuit Capacity	35kA (AC450V)
Degree of Protection	Drip-proof type IP21/IP22 (Option: IP44)

Standard Dimensions & Construction		
Outside Dimensions	Front panel maintenance type	W350 X D450 X H2100mm (1800~2300mm)
	Rear panel maintenance type	W300 X D600 X H2100mm (1800~2300mm)
	Front & rear panels maintenance type	W550 X D900 X H2100mm (1800~2300mm)
Door	Front: left hinge	Rear: detachable (with hook)

Unit Dimensions				
Motor Capacity	Direct Startup		Star/Delta Startup	Compensator Startup
	Single Speed	Reversible/2-Speed		
3.7kW	300mm	300mm	-	-
15kW	300mm	350mm	-	-
37kW	400mm	700mm	600mm	800mm (width: 600mm)
45kW	550mm	800mm	750mm	850mm (width: 600mm)
60kW	550mm	900mm	950mm	900mm (width: 600mm)
90kW	600mm	-	950mm	1000mm (width: 600mm)
120kW	950mm	-	1200mm	1600mm (width: 600mm)

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