



19 - Power distribution systems

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MaxSG switchgear

Low voltage metal enclosed



Standard Line-Up of MaxSG metal enclosed low voltage switchgear with instrumentation and Emax power circuit breakers.

MaxSG switchgear

ABB MaxSG switchgear is designed, constructed, and tested to provide superior power distribution, protection, and power monitoring and control. MaxSG is designed to maximize the functionality of the World Class Emax power circuit breakers and follows the vision of ABB products in providing customers with advanced solutions to meet the needs associated with the mechanical, electrical and thermal stress of today's manufacturing environment.

Benefits and features

The MaxSG metal-enclosed low voltage switchgear offers many advantages that include:

- Modular frame design arrangements for flexibility
- No front door breaker ventilation
- Optional barriers for increased personnel protection
- Maintenance switch option
- Insulated bus through 4000A
- Standard connections to a full range of ABB products
- Modbus communication
- REA Relay Arc Flash System

MaxSG vertical sections can accommodate up to four individually enclosed Emax power circuit breakers or auxiliary compartments which are designed to modularity and uniform height.

Ratings

MaxSG is available with the following equipment ratings:

- 635 VAC max
- 4000A max horizontal bus
- 2000A max vertical bus
- 50/60 Hz
- 100kA Symmetrical short circuit withstand rating
- NEMA 1A, NEMA 3R Outdoor walk in

Breaker frame types:

- E2 800-1600AF
- E3 800-2500AF
- E4 3200AF
- E6 4000AF

Standards

ABB MaxSG switchgear is designed and built to the following standards and guidelines:

- ANSI C37.20.1, C37.51 – Standard for MaxSG construction and testing
- UL1558 – Standard for low voltage switchgear
- CSA C22.2 No. 31 – Canadian Standard
- ANSI C37.13, C37.16, C37.17 – Standard for low voltage power breaker construction and testing
- UL 1066 – Standard for low voltage power breakers
- IBC-2006 – Standard for Seismic

MaxSG and ABB will fill the customer's needs from general application through a full range of special applications including electrical protection, transfer/coordination, and extreme environmental applications.

ATLV
MaxSG



Switchboard MaxSB

Low voltage products and systems



Description

ABB MaxSB is designed, constructed, and tested in order to provide high reliability for customer custom applications. ABB MaxSB incorporates the ABB Tmax Thermal Magnetic breakers for group mounted enclosures as well as ABB Emax power circuit breakers for mains and feeders.

Fresh ideas are incorporated with features such as a slotted vertical bus design, a full hinged door that incorporates the breaker cover plates, and a modular frame enclosure. ABB MaxSB is designed for customization to meet customer needs

Equipment ratings

- UL891 and cUL rated switchboard
- Incorporates UL489 and UL1066 circuit breakers
- Main bus up to 5000A
- 100kA short circuit at 480 VAC and 50kA short circuit at 600 VAC
- NEMA 1 indoor enclosure
- Main Lug and Main incoming applications

Features

- Hinged door and large wire ways save time and money in field wiring.
- Unique bus layout delivers the freedom to locate feeder breakers independent of any hole pattern.
- Plated copper bus used in all three phases and neutral
- Copper ground bus extends full width of switchboard.
- Horizontal bus up to 5000 Amps
- Vertical bus up to 3000 Amps
- Group mounted feeder breakers ranging from 15 amps to 1200 Amps
- Main breakers up to 5000 Amps
- Strong frame construction isolates bus and breaker assemblies from enclosure "skin".
- Durable, dry paint finish.
- Four inch base and lifting eyes are standard.

Switchboard MaxSB

① 15-30A are 65kA at 480VAC

UL508A Custom control panels



UL508A Custom control panels Low voltage products and systems



Custom display pump panel showing ABB PLC, Softstarter, Variable frequency drive pilot devices and various ABB components.

Description

At ABB, we offer more than you would expect from a systems integrator or custom panel shop because we are capable of handling jobs at any scale. We provide engineered-to-order and manufacturing solutions for control and distribution panels in two "World Class" manufacturing facilities located in Wichita Falls, TX, and San Luis Potosi, MX. This capacity gives us the ability to quickly meet the volume needs of our customers while continually focusing on quality, reliability, and economic value.

Our core engineering, production, and project management teams use the latest design technology, lean production processes, and project management methodologies. This is why we have become a solid business partner to customers in various industries including wind, solar, oil and gas, semi-conductor, and water/waste water.

Our design and applications engineers collaborate with our customers' technical staff to uncover high quality, creative, and cost effective solutions. This effort typically results in decreased panel size, increased panel functionality, and improved panel aesthetics.

Benefits ABB custom panels provide:

- Quality control procedures and implementation
- Design engineering and technical support capabilities
- Lean Manufacturing processes
- Best in class panel construction and engineering techniques
- Engineering staff skilled in multiple market disciplines

Technical data

Standards

- UL508A – industrial control panels
- UL698A – industrial control panels relating to hazardous (classified) locations
- NEC – National Electrical Code
- CSA – Canadian Standards Association
- IEC – International Electrotechnical Commission

Test certificates

- UL
- CSA

Electrical data

- Voltages AC – 600V and below
- Frequency – 50 to 60Hz
- Voltage DC – 1000 VDC

Mechanical characteristics

- UL/NEMA Type 1, 12, 3R, 4, 4X, EXP

Value-added services

- On-site design engineering department
- On-site licensed professional engineer
- On-site technical support
- Custom test procedures to fully test functionality of each custom control design/solution

www.abb-control.com/custompanels.htm

