

**SIEMENS**

Sentron™ Switchboards



# Sentron™ Front Connected Switchboards

The introduction of Sentron™ Switchboards from Siemens Energy & Automation, represents far more than a significant advancement in switchboard design. It also represents a new standard for service before, during and after the sale. What all this means is you can now expect simplified ordering from your Siemens distributor, quick and accurate deliveries of switchboards and associated drawings and, perhaps most importantly, fewer call backs.

## **A design so advanced, it shortens the ordering cycle**

The new Sentron Series of low voltage switchboards are designed to meet the many needs of the electrical contractor. Specifically, we incorporated a modular design concept into all three Sentron Front Connected Switchboards: SB1, with ratings to 2,000A; SB2, with ratings to 4,000A; and SB3, for special configurations with ratings to 6,000A. The modular construction of Sentron Switchboards allows for more flexible configurations, greater accessibility, and a wide assortment of standard and optional features for your customers.

Another important way that the modular design philosophy of Sentron Switchboards pays off for the electrical contractor is in the rapid turnaround between quotation, order placement and delivery. Products included in our short-cycle On Route/On Time program will be shipped just 10 days after we receive the order.

Whichever type of Sentron Switchboard you order – SB1, SB2 or SB3 — you have a choice of aluminum or copper bus, each with a short circuit rating up to 200kA and top or bottom feed. And all Sentron Switchboards also offer you two ground fault relaying options: a main breaker equipped with a ground fault-capable electronic trip unit or a separate ground fault relay tied to the main breaker by a shunt trip. Of course, Sentron Switchboards meet all applicable standards including UL and NEMA.

## **New software improves speed and accuracy**

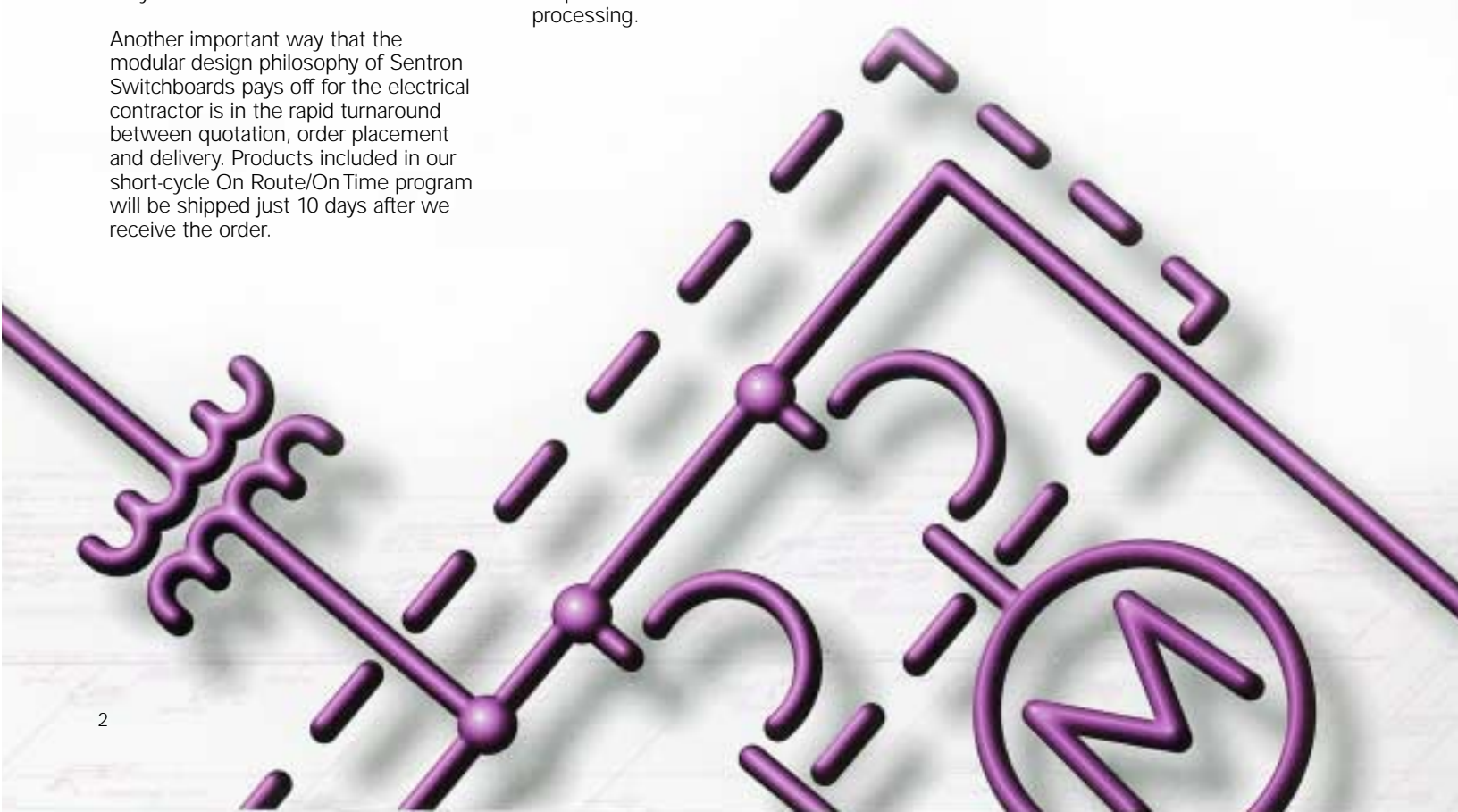
When we asked electrical contractors about their views on switchboards during our initial design phase, they mentioned that ordering the product and getting accurate product drawings can be a hassle.

We set out to change all that by integrating our modular design philosophy into a remarkable new software package available to your Siemens distributor that speeds and improves the accuracy of quotations and order processing.

Called SPACE™ (short for Siemens Proposal Automation Calculation & Entry), this software can access Siemens' entire catalog of products, provide a comprehensive quotation based on the plans and job specifications you provide and process your order – all in a matter of moments.

## **SB1, SB2 and SB3 Switchboards**

Service sections of the SB1 accept a wide range of Sentron™ Molded Case Circuit Breakers, Vacu-Break® Fusible Switches and Bolted Pressure Switches as main disconnect devices. SB2 and SB3 accept the same main devices as the SB1 plus SB Encased Systems Circuit Breakers. Siemens Type RL Low Voltage Power Circuit Breakers with Static Trip III can be used as a main device in SB3 Switchboards.



The 4300 Power Meter provides accurate, electronic metering as a standard feature.

Ground fault protection is available with Sensitrip®III electronic breakers or with a separate ground fault relay.

Ample wire gutter space for greater accessibility and cabling ease.

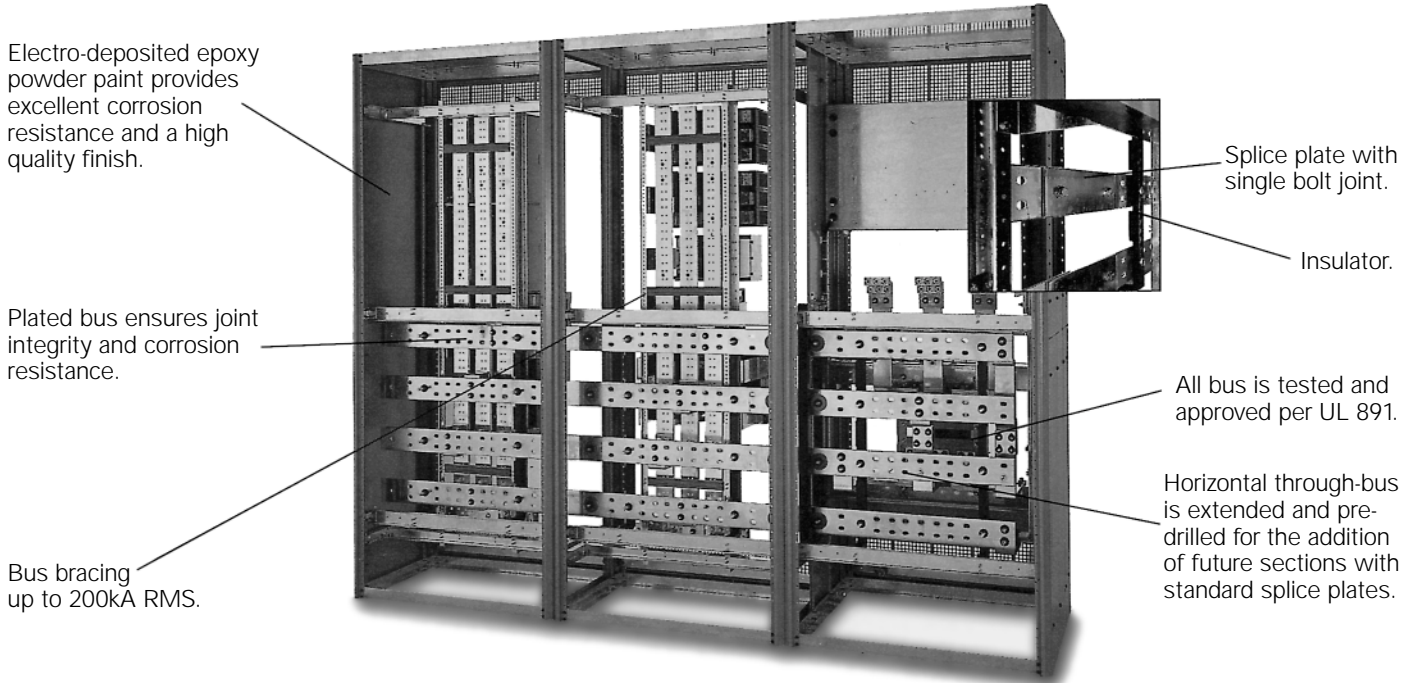
Modular design enables dual mounting of Sentron™ Molded Case Circuit Breakers through 400 amps and accepts interchangeable mounting kits for 800 through 1200 amp frames.

The efficient design of Vacu-Break® Fusible Switches permits dual mounting through 200 amps for maximum mounting density.

A wide selection of main interrupting devices are available including bolted pressure switches, fused switches, molded case circuit breakers and encased systems circuit breakers.



# The power to make a difference



The distribution sections of all Sentron Switchboards are designed with improved wiring space and greater accessibility. They're also designed for easier installation and maintenance. There are no obstructions up to 8" from the floor and no live bus bars are located closer than 10" above the floor. Conveniently located through-bus creates useful wiring gutter space, and standard bolted gutter covers offer complete access to load conductors.

The SB3 switchboard is designed for special configurations. It can be equipped with incoming and outgoing busway connections, automatic transfer schemes and many other custom engineered applications specified by your customers. The SB3 can also be supplied with hinged gutter covers and hinged compartment doors as well as special metering provisions, current transformers, potential transformers, panelboards and many other special features. For feeder and branch applications, Sentron Switchboards accept Sentron Molded Case Circuit Breakers and

Vacu-Break Fusible Switches. And should the need for additional distribution sections ever arise, the horizontal through-bus is extended and pre-drilled to accept standard splice plate bolts.

To provide additional room for load or service cable routing, pull box extensions are available in heights of 10 to 30 inches for mounting on the distribution section.

## Siemens quality throughout

Every switchboard manufacturer puts its logo on the outside of its products. But when you look inside at all the devices and interior

components, how many of these feature the same logo as the one on the outside?

The fact is, most components that make up Sentron Switchboards – interrupting devices, meters and electronic communications – are superior quality Siemens components. Knowing this, you can rest assured that all the products within are designed, built and tested for unparalleled performance.

# Accessories

Sentron Switchboards are available with a full line of circuit protection devices, each with unique advantages that help you tailor the switchboard to suit the characteristics of the electrical system.

## Sentron Series Molded Case Circuit Breakers

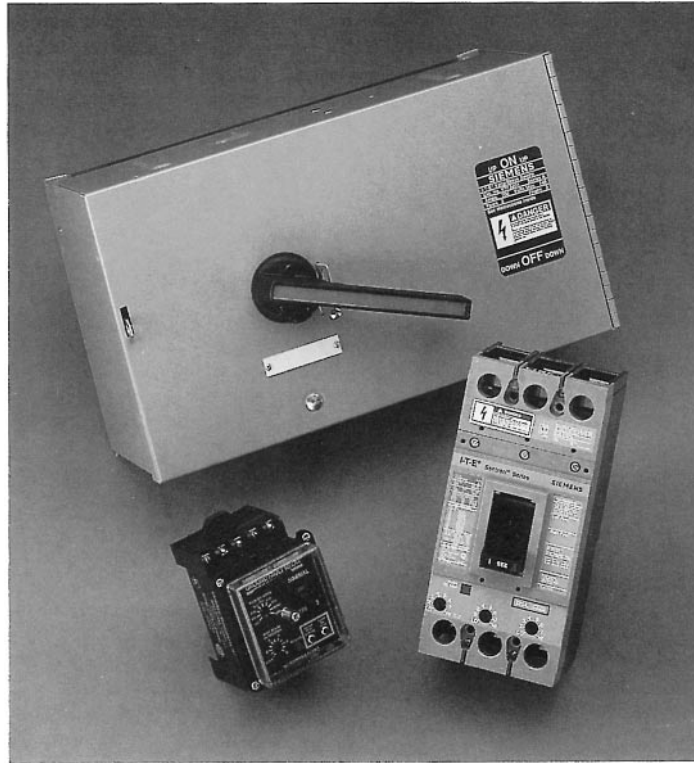
When molded case circuit breakers are specified for the main protective device, none is better matched for the Sentron Switchboard than the Sentron Series of molded case circuit breakers.

From 15 to 2,000 amperes, and up to 600 volts ac, Sentron Series Molded Case Circuit Breakers provide protection that allows the immediate restoration of power for normal system requirements. Along with standard interrupting ratings, Sentron Series Molded Case Circuit Breakers incorporate current-limiting technology to achieve some of the highest interrupting ratings in the industry.

## The SB Encased Systems Circuit Breakers

Siemens Type SB Encased Systems Circuit Breakers are designed to fill the gap between molded case circuit breakers and low voltage air circuit breakers by combining the most desirable characteristics of each. At the heart of these capabilities is a state-of-the-art microprocessor trip unit that provides true RMS sensing and true selective coordination.

Because the SB Breaker combines high interrupting ability with extended short-time delay tripping, it can be applied in



fully rated systems while ensuring full coordination through the breaker's short-time rating. This means that your customers are assured of the highest possible reliability and availability from their power distribution system.

By using interchangeable rating plugs and the continuous current adjustment provided with each trip unit, the SB Breaker is ideal for applications ranging from 100 to 4,000 amperes load current at system voltages through 600 volts ac.

## Fused Switches

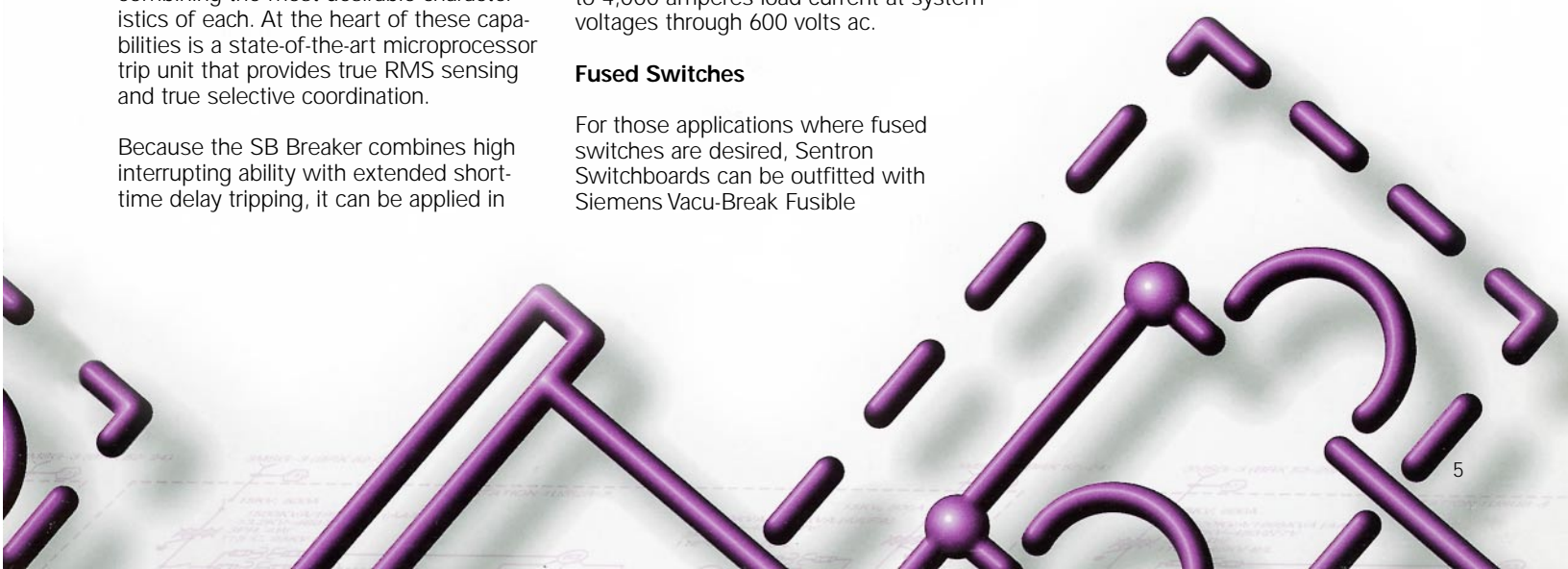
For those applications where fused switches are desired, Sentron Switchboards can be outfitted with Siemens Vacu-Break Fusible

Switches. From 400 amperes through 1200 amperes and up to 600 volts ac, Vacu-Break Fusible Switches provide reliable protection and outstanding coordination with branch protective fusible switches. They also feature quick make/quick break design and are available in 2-pole and 3-pole configurations.

## Bolted Pressure Switches

Bolted Pressure Switches, as switchboard main disconnects or feeder devices, combine economy with extremely high interrupting capacity when used with Class L fuses. Ratings range from 800 amperes through 4,000 amperes and up to 480 volts ac.

Bolted Pressure Switches include a fuse door interlock quick-make/quick-break operation and a padlockable handle. To further enhance their versatility, Bolted Pressure Switches also feature interchangeable frames for manual or electrical operation, shunt trip capability, ground fault relaying and a wide range of other optional accessories.



# The 4300 Power Meter

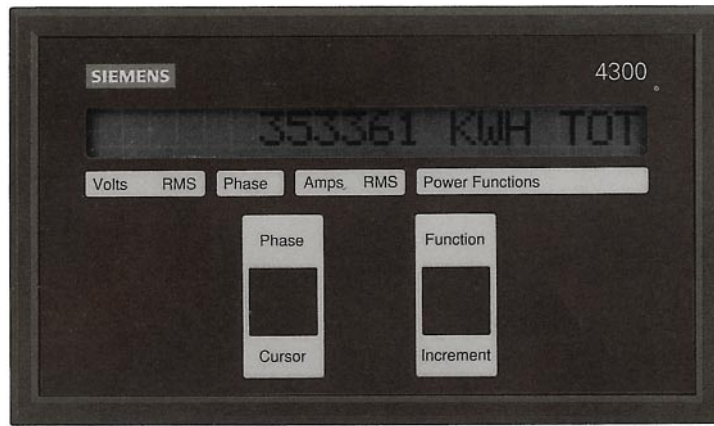
## Satisfy your user metering needs with digital accuracy

The 4300 Power Meter helps you satisfy basic user metering and communications needs by combining state-of-the-art digital metering technology with Siemens' advanced communications capabilities. This combination provides a level of accuracy and convenience no single analog meter – or bank of analog meters – can match. And the 4300 meter is a standard feature for Sentron Switchboards when metering is required by your customers.

## Complete power metering at your fingertips

The Siemens 4300 gives you the capacity to monitor power usage as never before. It does so by providing instantaneous, real-time values of any of the following measured parameters upon demand: phase currents, average phase currents, phase to neutral voltage, average phase to neutral voltages, line to line voltages, average line to line voltage, kW, kW demand, kW hours, power factor and peak demand.

A feature unique to the Siemens 4300 power meter is a three parameter display that simultaneously shows the voltage, current and power parameters. And regardless of your viewing angle, the programmable contrast control ensures that the large, 20-character LCD display is always easy to read.



## The low-cost choice for state-of-the-art communications capability

Every 4300 power meter comes equipped with a built-in communications port that economically puts you on the leading edge of communications technologies.

When connected onto a Siemens SEABus loop in a larger ACCESS™ installation, the 4300 becomes a key front-line player in a unique system that puts your customers in touch with nearly every aspect of their entire electrical distribution system.

For those seeking advanced communications on a smaller scale – and budget – up to 128 ACCESS compatible devices, including the 4300, can be connected directly to a PC or via a dial-up modem. And to help reduce the cost of putting an electrical distribution communication system on line, Siemens offers the powerful SIEServe software for this personal computer interface with the purchase of any ACCESS component.

## Certified performance and reliability

Like all Siemens products, reliability has been engineered into every aspect of the 4300. Its design has been subjected to a series of tests that ensures high voltage and high frequency conditions won't disrupt normal operation. As a result, the 4300 meets all NEMA, UL and CSA requirements for radio frequency interference (RFI) and surge withstand capabilities.



# The Sentron family of electrical distribution products

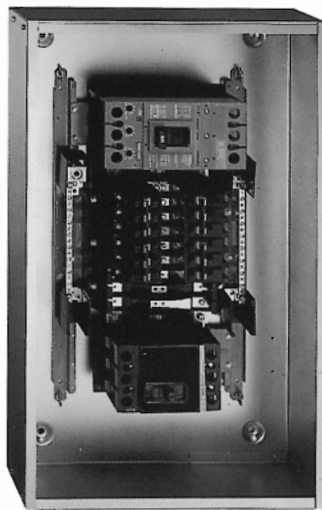
At Siemens, we adhere to the philosophy of "Technology that serves the customer." This philosophy has driven us to design and manufacture products that truly meet the needs of our customers. With this customer focus in mind, Siemens has developed an entirely new family of easy-to-install electrical distribution products under the Sentron name. In addition to Sentron Switchboards, the Sentron family of electrical distribution products includes Sentron Molded Case Circuit Breakers, Sentron Panelboards and Sentron Busway. Together, these products represent advanced technology for consultants and electrical contractors serving the construction market.



## Sentron Molded Case Circuit Breakers

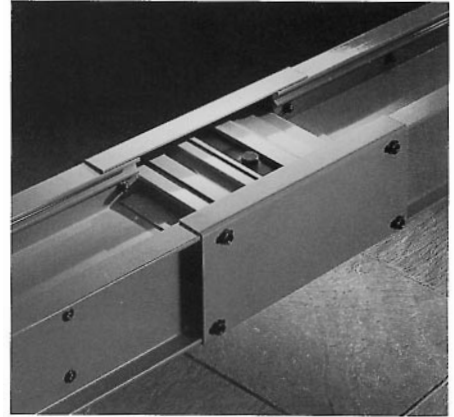
Available in ratings from 15 to 2,000 amperes and up to 600 volts ac, Sentron Molded Case Circuit Breakers feature some of the highest interrupting ratings in the industry. Sentron Molded Case Circuit Breakers are available with your choice of proven thermo-magnetic tripping technology or with our advanced Sensitrip III electronic tripping unit. This optional, microprocessor-based tripping

unit gives Sentron Molded Case Circuit Breakers true RMS sensing (especially important in today's harmonic-rich world), plus adjustable settings for continuous current, instantaneous trip points, short-time delay pick up, ground fault pickups and ground fault time delay for outstanding application flexibility.



## Sentron Panelboards

The unique design of Sentron Panelboards offers some of the most versatile and user-friendly features available today. For example, field convertible mains – available in 125 and 250 amps – allow you to switch from main lug to main breaker or vice versa. Horizontally mounted main breakers make Sentron's field convertible top or bottom feeds that much more practical. A simple bus is provided to connect the main bus bar to the main breaker and lay-in lugs make wiring the main and neutral easier and faster. Plus, Siemens' patented split neutral design and conveniently located branch neutral connections make Sentron Panelboards quick and easy to wire.



## Sentron Busway

Sentron Busway is packed with features that make it unlike any busway that has come before it. Its lightweight aluminum housing, which acts as an integral ground, hangs with minimal hardware. To speed installation, its bus plugs and cable tap boxes feature the largest wire bending space in the industry as standard. As for waterproofing, the only difference between the assembly of Sentron's indoor and waterproof joints is the field addition of a simple plastic tab. Those same joints connect with splice plates that feature a single bolt design and a special, double headed break-off bolt that eliminates the need for torque wrenches. Plus, Sentron Busway sets a new standard in performance across its entire range of available ampacities with a unique, optional 200% neutral design.

## Siemens Energy & Automation

Technology that serves the customer.



Siemens Energy & Automation, Inc.  
Distribution Products Division  
3333 Old Milton Parkway  
Alpharetta, GA 30005

For Nearest Sales Office  
**1.800.964.4114**  
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