

Reliability.
Flexibility.
Intelligence.



Square D Power-Zone 4
LVDO Switchgear

schneider-electric.us/pz4

Life Is 

SQUARE D™

by Schneider Electric

The Square D Family of Power-Zone 4 Low Voltage Drawout Switchgear

Reliability, flexibility, and intelligence.
Small footprint. Proven performance.



Square D™ brand Power-Zone™ 4 switchgear from Schneider Electric is built for reliability and power system protection, and serves as a critical component in any modern power distribution system.

From water and wastewater treatment, to other critical power applications such as oil and gas, hospitals, and data centers, Power-Zone 4 switchgear is rugged, easy to maintain, and built for ultimate reliability.

Power-Zone 4 low voltage switchgear is your line of defense when protecting your valuable assets, while maintaining reliable circuit protection.

Power-Zone 4 ANSI Rated Switchgear

- Equipment Designed to ANSI C37.20.1/UL 1558/CSA C22.2 No.31
 - » Rigorous testing
 - » Rugged designs
 - » Higher temperature ratings
 - » 30-cycle withstand ratings
 - » Compartmentalized and barriered for safety
- Low voltage power circuit breakers designed to ANSI C37, UL1066
- Easily maintained for continuity of service in heavy industrial applications

An investment in innovation

- Flexible, space saving breaker/bus arrangements
- Validated intelligent communication networks
- Data-rich devices for predictable operation
- Arc flash solutions to help minimize risk
- Strategy for upgrades throughout lifecycle

Power-Zone 4 Rear Accessible

Low Voltage Drawout Switchgear with Masterpact Air Circuit Breakers

ANSI rated to provide superior electrical distribution protection and power management in a space-efficient footprint. Masterpact™ air circuit breakers deliver maximum uptime, system selectivity, ease of maintenance, and reliable circuit protection.

Rugged, Long Life Operation

- The Masterpact circuit breaker and Power-Zone 4 enclosure are designed and tested per stringent ANSI ratings
- Masterpact circuit breakers are designed for low maintenance
- Masterpact circuit breakers are built to exceed number of ANSI required electrical and mechanical operations

Add-on Intelligence

- Communications via Ethernet and embedded web pages turn your gear into a smart system
- Range of trip units add metering and diagnostic capability
- Advanced metering from our industry leading Powerlogic power meters and monitors, as well as Masterpact MTZ air circuit breakers

Designed to Take up Less Space and Time

- Unit mount, drawout for quick maintenance and replacement
- Up to 8-800 Amp feeders in 30-inch-wide enclosure
- Depth ranges from 60-80-inches deep

Quality and Performance

- High short circuit ratings without fuses (up to 200 kA at 480 V, 130 kA at 600 V)
- Segregated power and control wireways
- NEMA/UL/ANSI standards and built in ISO9001 facility.



Front



Rear



72" Deep Typical

NEMA Type 3R Outdoor
Walk-in Enclosure

Optional Features

- Ethernet communications for energy & asset management with built-in web pages
- Powerlogic™ power meters and monitors
- Automatic throwover PLC-based control or UL1008 listed Automatic Transfer Switch
- Arc flash limiting Masterpact feeder breakers
- High resistance ground controls/resistors
- Surge protection devices
- Infrared windows/thermal monitoring
- Energy reduction maintenance setting (ERMS) switch
- Insulated bus
- Optional Masterpact circuit breaker remote racking device



Remote Racking Device



ERMS Switch with Lockout Tagout

Standard Features

- Stored energy drawout circuit breakers
- System voltages up to 600Volts AC
- Compartmentalized and barriered enclosures
- Designed and built to ANSI® C37.20.1, UL Listed to UL® 1558, cUL Listed to CSA C22.2 No.31
- Masterpact NW/NT circuit breakers are designed and built to ANSI C37.13 and C37.16. Listed to UL 1066
- High short-time withstand ratings up to 100 kA for 30 cycles, minimum
- Smallest equipment footprint available in this product class
- Front access to control and communications wire connections
- Bolted silver-plated copper bus provided as standard (up to 6000 amperes maximum)
- Large cable compartment pull area allowing maximum room for power cables (located at rear)
- NEMA Type 1, Type 1 with gaskets or NEMA Type 3R outdoor walk-in enclosures
- Up to 8 Masterpact NT circuit breakers can be mounted in a 30-inch wide section. (Not available for 600 volts.)

→ Quality

→ Reliability

→ Innovation

Power-Zone 4 Front Accessible

Low voltage drawout switchgear with 42-inch-deep sections

Greater flexibility with reliable ANSI-rated power distribution.

Provides a small footprint for electrical rooms with limited space. A 42-inch-deep enclosure allows the switchgear to be placed against a wall with 100% access through the front of the equipment. Front accessible switchgear can lower capex with smaller electrical rooms or Power Zone Centers (eHouses).

Why Front Accessible

- If you need to reduce the size of your electrical house/room but require reliable ANSI-rated gear
- If you want to upgrade to switchgear where only switchboards would fit previously
- If you have to put your gear inside existing older buildings but want to update your electrical infrastructure
- If you have had trouble integrating rear-connected switchgear into your scheme
- Save space by reducing aiseways required vs. rear accessible switchgear
- Fit switchgear into more application spaces
- Lower capex on building or e-house construction
- Meet layout challenges without sacrificing reliability
- Retrofit into tight spaces with a flexible footprint
- Provide compartmentalized construction and enhance maintenance with drawout construction that is easier to install and work on from the front



Main with Incoming Lugs
(shown with lugs at top)



Main with Feeder Section

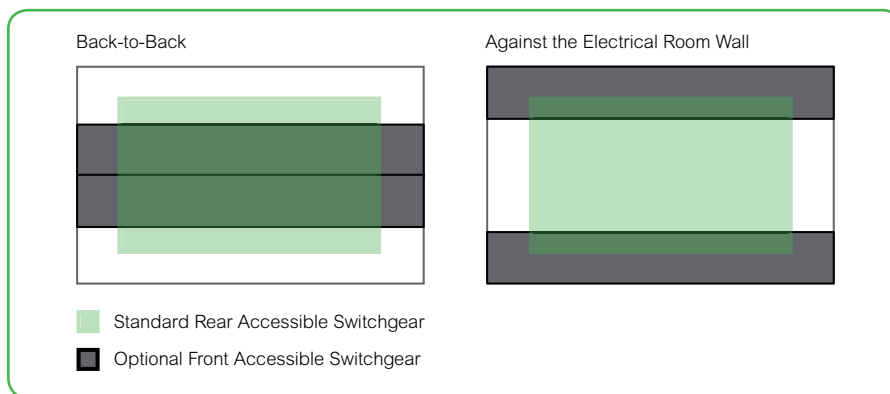


42" deep

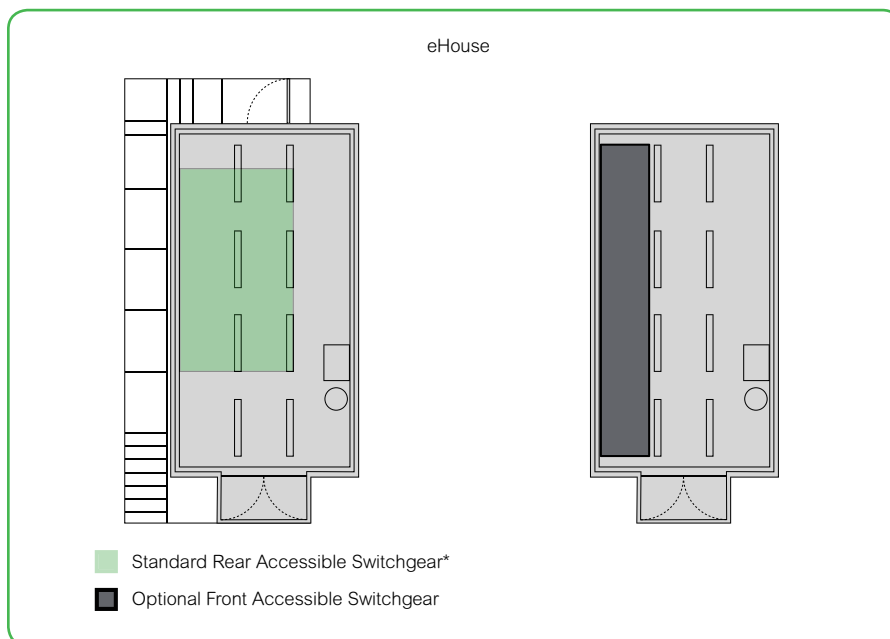
Front Accessible Switchgear Has More Flexible Layouts

Low voltage equipment, such as motor control centers and switchboards, allow front access with ability to mount against a wall or each other. Users wanting stored-energy, drawout power circuit breakers have typically needed to use rear access switchgear with limited layout configurations ... until now.

Switchgear with two-step, stored-energy, drawout power circuit breakers can now be mounted against a wall, or back-to-back, as shown below.



- In electrical rooms, rear access requires a large block of space in the middle of the room and does not fit against walls.
- Virtually twice as many loads can be served in less floor space.



*Rear accessible requires outer doors, increased depth and catwalk, which are eliminated with front accessible. (left vs. right)

Standard Feature

Flexibility to fit in more spaces

- 42-inch deep
- Able to mount against a wall or back-to-back
- No rear access or rear doors required in rooms or buildings
- Captive splice-from-front design
- Wide range of main-tie-feeder layouts

Quality and Reliable Construction

- ANSI C37.20.1 rated and UL certified to UL1558 & cUL certified to CSA C22.2, No. 31
- 100kA short circuit and short time (60 cycle) bus ratings available
- Silver plated bus, standard (tin plated & insulated options available)
- Standard, repeatable designs that are manufactured in ISO9001 facilities
- Industry-leading Masterpact drawout, stored-energy air circuit breakers
- Large cable compartment pull areas with options to increase widths

Advanced Technology

- Ethernet connectivity with embedded web server
- Advanced power meters and software solutions
- PLC control for automatic transfer for main-tie-main or main-generator schemes

Power-Zone 4 Arc Resistant

Low voltage metal-enclosed, draw-out switchgear designed to contain the effects of arc flash events inside the gear per ANSI/IEEE standard C37.20.7.

This arc resistant solution features the proven reliability and durability of Masterpact NW power circuit breakers with a unique combination of arc flash mitigation features and upgraded arc flash containment, providing superior protection from the consequences of internal arcing faults.

Arc flash energy containment occurs on the front, back, and sides, even when the instrument compartment door is open, complying with ANSI Type 2B rating. This simple solution is a space saving design that offers an additional level of protection for personnel. Plus, Power-Zone 4 switchgear features simple installation, reduced maintenance and inspection requirements.

Superior Arc Flash Protection

- Masterpact ANSI rated power circuit breaker with ArcBlok arc extinguishing technology
- Industry leading 100kA, 635V short circuit rating
- Mitigates effects of arc flash energy via passive containment Low Maintenance Design
- Does not rely on special door seals/vent flaps
- Internal phase and ground insulated barriers limit propagation Space Efficient
- Does not increase footprint
- 60-inch-deep sections available
- No minimum lineup width



Also available with Masterpact MTZ

Standard Features

- Industry leading withstand rating of 100 kA @ 635 VAC
- Patented Masterpact ArcBlok technology for superior arc flash protection
- 60-inch deep and 22-inch wide design allows for the smallest footprint in the industry
- Complete line of Masterpact NW Breakers available up to and including 5,000 A
- Field interchangeable Micrologic™ trip units
- Enhanced ventilation system optimizes heat transfer

Ratings

- NEMA Type 1 enclosure with ANSI Type 2B rating
- Bus ratings up to and including 5,000 A
- UL® certified and tested in accordance with ANSI C37.20.7 for 500ms arc duration
- ANSI C37.20.1, ANSI C37.51
- Canadian Standard C22.2, No. 31
- UL 1558
- ANSI C37.13, ANSI C37.16
- ANSI C37.17, ANSI C37.50
- UL 1066





Options for Arc Flash and Electrical Protection

Power-Zone 4 switchgear offers a wide range of arc flash mitigation options to fit your personal protective equipment (PPE) and operational requirements in standard designs.



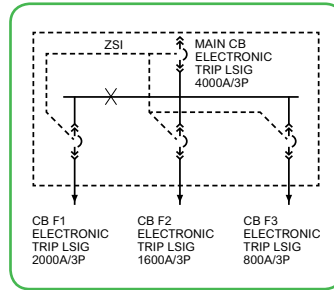
Power-Zone 4 Arc Resistant with ArcBlok Technology

Industry leading withstand rating of 100 kA @ 635 VAC; Patented Masterpact ArcBlok technology for superior arc flash protection; NEMA Type 1 enclosure with ANSI Type 2B rating.



Energy Reduction Maintenance Setting (ERMS)

Schneider Electric has developed a method to temporarily reduce the instantaneous pickup setting of the circuit breaker using an Energy Reduction Maintenance Setting (ERMS) switch.



Zone Selective Interlocking

Zone selective interlocking preserves the desired selective coordination between main, tie, and feeder protective devices, but also allows fast tripping for faults within each device's desired zone.



Bus Differential Protection

Square D also offers differential relaying protection to reduce arc flash with high technology reliable MV switchgear relays.



Circuit Protection

Masterpact circuit breakers have the highest short circuit ratings in the industry. Couple that with ease of maintenance, multiple interlocking options, and clear breaker status indication - Masterpact circuit breakers redefine electrical distribution protection.



Remote Racking Device

The remote racking device allows the circuit breaker to be racked in or out while the worker operates the device from outside of the arc flash boundary.



Arc Flash Training

When working on any electrical equipment, proper techniques must be followed to ensure worker safety. From wearing proper PPE, to following safety practices such as lock-out tag-out procedures, it is important to make these practices second nature. Take a class specifically designed for teaching you to work on switchgear following correct safety practices.



Protection

Lower PPE requirements with smarter arc flash mitigation solutions. Passive arc resistant enclosures are offered, as well as active solutions, such as maintenance switches, relay system design, system grounding, remote operations, and digital maintenance advisory tools.



Power-Zone 4 Flexibility with unlimited configurations

Power-Zone 4 low voltage drawout switchgear is designed for flexibility and long life as you protect, control, and isolate your valuable downstream equipment and processes. With a wide range of quality components and customization, Power-Zone 4 allows for more flexibility in design.

Power System Reliability

Power-Zone 4 low voltage switchgear is your line of defense when protecting your valuable assets, while maintaining reliable circuit protection.



Compartmentalization

Compartmentalized units of various sizes are offered with dedicated wireways for ease of installation and access to control wiring without contacting bus and connections.



Circuit Protection

Add Square D brand circuit protection to any switchgear application to improve worker and equipment protection. There are many to choose from to meet your application needs.



Large Cable Compartments

Maximum space for bending and splicing cable. Better conduit entry for quicker installation and easier maintenance.



Easy-to-Operate Drawout Mechanism

The drawout mechanism is durable and easy to operate, and features safety interlocks for both local and remote racking.



Connectivity

All Power-Zone 4 switchgear can communicate vital power system data, allowing you to know what is going on inside your equipment, as well as understand your overall power consumption.



Innovation

Although Power-Zone 4 switchgear has a legacy of dependability, it's also known for innovation.

From designing new features, to reducing footprint and increasing quality, our design teams are constantly striving to meet higher demands for the critical infrastructure needs of customers.

Masterpact™ MTZ

FUTURE READY



Masterpact MTZ

Masterpact MTZ circuit breakers prepare you for the future of power distribution with smart connectivity, remote monitoring, and easy customization via digital modules. Masterpact MTZ circuit breakers bring EcoStruxure Power capabilities you need to build smart, secure, and sustainable power distribution systems.

- Upgrade control unit functions at any time without shutting down the power
- A fast opening time of 30ms - ERMS
- Certified embedded Class 1 energy meter
- Native direct Ethernet connection (EIFE)
- Withstand harsher environment
- Realtime total self-diagnosis

Optional Digital Modules for Additional Functionality

- Under/Over Voltage (ANSI 27/59)
- Reverse Power (ANSI 32P)
- Ground Fault Alarm (ANSI 51G)
- ERMS (Energy Reducing Maintenance Setting)
- Individual Harmonics Analysis
- Energy Per Phase
- Power Restoration Assistant
- Masterpact Operation Assistant
- Waveform Capture on Trip



Bus Splice Connections

No rear access is required for Power-Zone 4 front access switchgear. As a result, there:

- Is no front-to-back wiring to trace
- Are no rear compartment components you can't see

Innovative captive splice makes it easy to make bus connections from the front of the switchgear

- Rotating
- Captive within gear



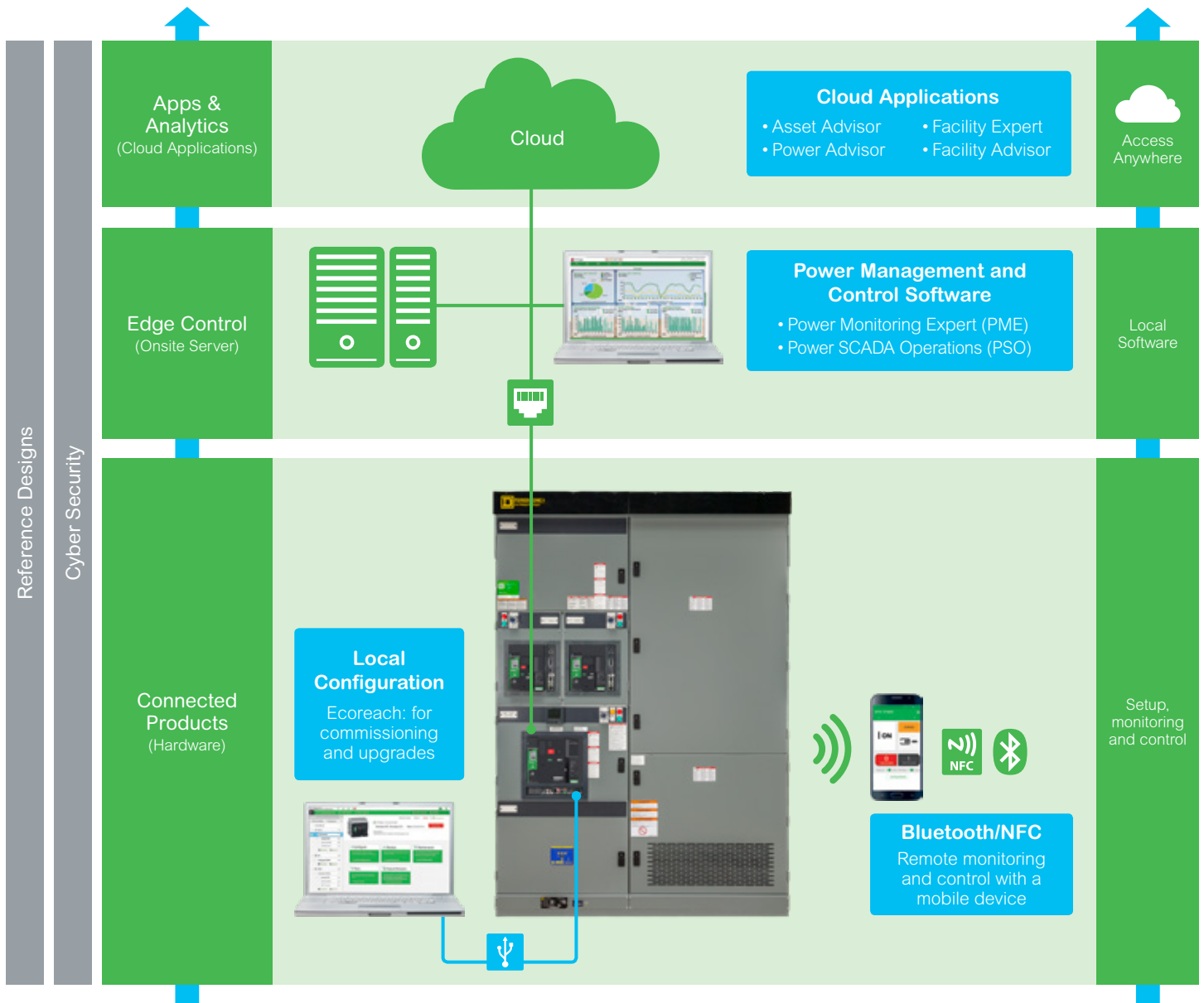
Digital Solutions: EcoStruxure™ Power

The world is becoming more electric, digitized, decarbonized and decentralized. Our digitized low voltage (LV) drawout switchgear products are powered by innovation at every level enabling enhanced connectivity, real-time operations and smart analytics. They bring improved safety and security. They help you to improve reliability and performance – and to prepare for the future of power distribution.

- Maximize energy efficiency and sustainability through smarter systems and real-time, data-driven decisions.
- Optimize asset availability and performance through predictive analytics and proactive maintenance.
- Enable smart, productive, and profitable operations through reduction of waste and downtime.
- Provide mobile insight and proactive risk-mitigation through simulation, situational awareness, and digitization.
- Foster open innovation and interoperability through development and partnerships with leading standards organizations and best-in-class technology leaders.

EcoStruxure™ Power integrates best-in-class services and products within tested, validated, and designed architectures.

This helps us provide you with dedicated end-to-end solutions that help you see the big picture, from operations management and energy efficiency, to asset optimization and maintenance.



EcoStruxure™ Power: Power Distribution, Redefined.

EcoStruxure Power delivers more safe, reliable and efficient power for peace of mind and significant financial benefits. IoT-enabled future-proof solutions are tailored to meet your specific needs, and simply work. Our digitized LV and MV solutions are powered by innovation at every level enabling enhanced connectivity, real-time operations and smart analytics.

Applications

Critical Facilities such as:



Water/Wastewater



Oil & Gas



Healthcare Facilities



Automotive



Life Is On



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