

Magnum PXR low-voltage switchgear

Featuring Magnum circuit breakers with Power Xpert™ Release trip units

Understanding the challenges.
Engineering the solutions.



Data Center



Healthcare



Industrial



Oil and Gas

EATON

Powering Business Worldwide



Delivering consistent performance.

Eaton listens and learns from customers to understand the unique operational challenges across industries. This drives our pursuit for innovation and the application of our expertise to engineer low-voltage switchgear solutions that consistently deliver on performance, safety and savings.

For more than 70 years, Eaton has been a premier leader in power distribution equipment. Magnum PXR switchgear, brings a new look along with the integration of Power Xpert Release trip units, providing what you expect and much more, with added safety features, enhanced functionality and communications.



Rear access

Lower installation and maintenance costs, higher interrupting and withstand ratings, enhanced safety, higher quality, reliability and maintainability



Levering Magnum PXR breaker through the door



Integrated HRG

- UL 1558/891
- Up to 10,000 A continuous current – horizontal main bus
- Up to 5,000 A continuous current – vertical riser bus
- Short circuit withstand rating of 100 kA.
- Bus standard bracing is 100 kA – optional 150 kA
- 4-wire applications, 100% neutral
- Eaton PXR trip unit with digital display, programming through the Power Xpert Power Management (PXP) software via micro-B USB
- Optional safety shutters
- Rear cover or doors
- Control wire standard Type SIS insulated stranded copper.
- Integrated LV-HRG optional (LV-HRG can be stand alone or wall mount)
- MPN 4000 A in 30" structure
 - 508 Vac—100 kAIC maximum short circuit
 - 635 Vac—65 kAIC maximum short circuit



Front access

When floor space is limited, or room constraints dictate that equipment be mounted against a wall, why compromise on switchgear design?

Eaton's Magnum PXR front-accessible switchgear combines the robustness of UL® 1558 low-voltage switchgear with the flexibility of UL 891 switchboard design. The front-accessible switchgear offering allows mounting against a wall, or in other tight locations, where a standard rear-accessible switchgear lineup would not normally fit.

- UL 1558
- Up to 6,000 A continuous current – horizontal main bus
- Up to 5,000 A continuous current – vertical riser bus
- Bus standard bracing is 100 kA – optional 150 kA
- 600 Vac class
- NEMA 1 indoor
- NEMA 3R outdoor, both aisle and aisleless enclosures
- Standard 40.20-inch switchgear depth
- Up to 4-high breaker arrangement
- Breaker sections are 18, 22 or 44 inches wide
- Cable compartments are 18, 22, 30 or 44 inches wide

Improved maintainability with dedicated secondary terminals with separate access door and front accessible control wireway

Increased reliability with modular design allows for reduced parts for both structures and breakers

Reduced installation cost with front-accessible controls and wiring enables rapid installation and commissioning



Shown with plenum. Can be provided without plenum.

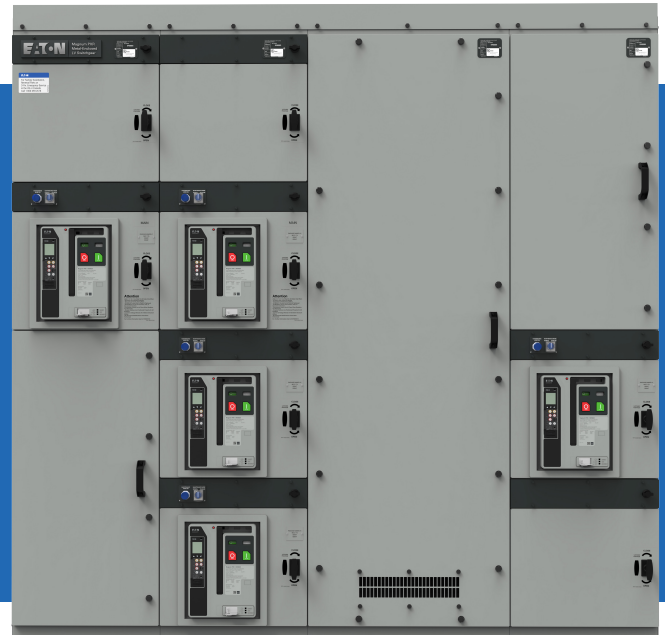
Arc-resistant rear access

Arc faults can generate thermal energy as high as 35,000°F and a blast equivalent to 20.7 lbs of TNT. Arc-resistant gear is designed to safely redirect and contain these arcs should they occur, regardless of the originating location of the arc. Arc-resistant Magnum PXR switchgear has been tested in all three compartments for a full 0.5 seconds, passing IEEE/ANSI Type 2B standards at 100 kA at 508 V and 85 kA at 635V.

- Short circuit current rating (SCCR) up to 85 kAIC @ 635 Vac max and up to 100 kAIC @ 508 Vac max
- Up to 10,000 A continuous current – horizontal main bus
- Up to 5,000 A continuous current – vertical riser bus
- Type 2B
- Plenum & direct venting available
- Clearance @ 10' floor-to-ceiling
- 60" minimum line-up width
- 72" – 90" structure depth
- Allowing drawout of breaker while maintaining type 2B approachability rating
- Venting system directs arc gasses to top of the enclosure
- Up to four-high breaker configuration
- NEMA 1 enclosure, with either top or bottom cable or bus duct entry



Type 2B secondary compartment



Shown without plenum. Plenum and duct can be added upon request.

Arc-resistant front access

Arc-resistant front-accessible switchgear from Eaton provides the robustness and strength of arc-resistant rear-accessible construction, but with the flexibility of an innovative front-accessible design. This unique gear design allows for mounting against a wall, while protecting operating and maintenance personnel from potentially dangerous arcing events.

- Short circuit current rating (SCCR) up to 85 kA @ 635 Vac max and up to 100 kA @ 508 Vac max
- Up to 6,000 A continuous current – horizontal main bus
- Up to 5,000 A continuous current – vertical riser bus
- Type 2B
- Plenum & direct venting available
- Clearance @ 10' floor-to-ceiling
- 66" minimum line-up width
- Fixed 54-inch switchgear depth
- Up to four-high breaker arrangement
- Breaker structures are 22 or 44 inches wide
- Cable compartments are 22, 30 or 44 inches wide
- NEMA 1 indoor

Increased safety with complete enhanced performance suite of options including through-the-door kirk keys



Arc Quenching

Arc Quenching Switchgear detects and contains an arc fault in less than 4 milliseconds, drastically reducing the incident energy. It works by detecting the ignition of an arc inside the switchgear using the Eaton Arc Flash Relay and transferring it to the Arc Quenching Device. Arc Quenching Switchgear transfers the arc by creating a lower impedance arc, not a bolted fault, safely contained inside the Arc Quenching Device. This reduces the peak fault current by at least 25% and puts less stress on upstream equipment during an arc fault.

- Tested to ANSI/IEEE C37.20.7, Type 2B test guide in NEMA 1 construction
- Arc Quenching Device (AQD) is a UL Recognized Component per UL 2748
- Short circuit withstand rating up to 100 kA at 635 V ac
- <4 ms arc quenching time
- >25% reduction in peak fault current
- >44% reduction in peak system stress
- Complete system self-supervision with health status communicated via Modbus and dry contacts
- Anti-nuisance trip technology
- Available in rear access and front access switchgear configurations
- Available in NEMA 1, and NEMA 3R walk-in enclosure types

• Exceptional incident energy reduction

• Enhanced safety

• Advanced switchgear protection

• Dramatically reduced downtime

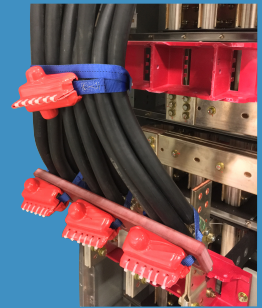
Magnum PXR Switchgear Accessories

Genuine Magnum PXR switchgear accessories improve the reliability, safety and longevity of the switchgear.



Remote racking device

The MRR1000 permits the operator to open and close a breaker from up to 25 feet away during the rack-in or withdraw process, well beyond the arc flash boundary.



Cable lashing device

The Cable Lashing Device can be used to secure cables faster, easier and more reliably when compared to the traditional rope lashing method.



Magnum™ PXR shutter module

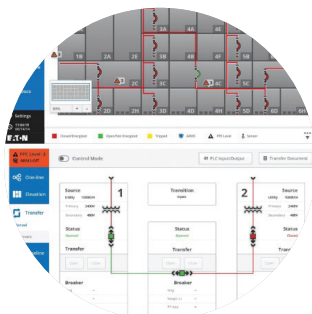
The Magnum PXR shutter module is used to test the operation of the shutters with the breaker removed. It also permits access to the bus stabs for inspection and testing.

Integrated testing

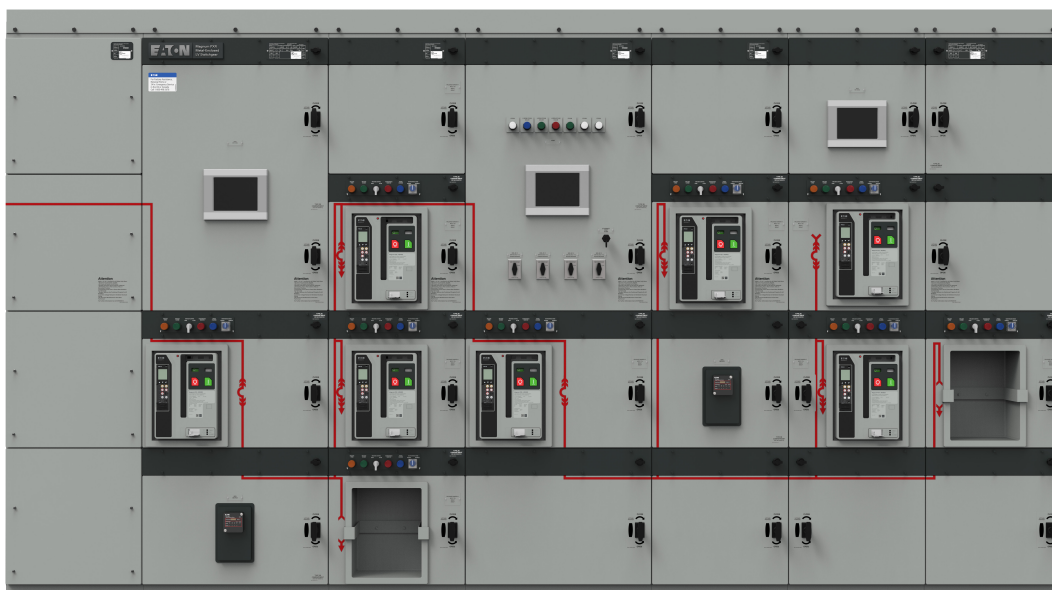
Integrated testing with the use of Power Xpert Protection Management (PXPM) removes the need for costly and potentially complicated external test kits

Automatic transfer and intelligent control packages

pre-engineered • flexible • smart



Low-voltage switchgear elevation and one line view



Eaton's Magnum PXR low-voltage switchgear offers optional pre-engineered automatic transfer and intelligent control packages with features that can be modified to meet specific requirements. The packages are available in standard switchgear as well as both front and rear access equipment. Classified by the interface, the automatic transfer and intelligent control packages are as follows:

- Eaton ATC-900 controller
- Eaton PLC with Eaton touchscreen
- Power Xpert™ dashboard

Features and benefits

Eaton ATC-900 controller

This controller can be utilized for transfer in a lineup with Main-Main, Main-Generator or Generator-Generator application (no tie-breaker present). This option will include a selector switch for Auto/Manual as well as generator start/stop/exercise.

Eaton PLC with Eaton touchscreen

Using the Eaton PLC and Eaton touchscreen, Eaton can provide automatic and Main-Tie-Gen transfer to increase uptime and efficiency. The desired sequence of operation can be selected during project quotation.

Power Distribution Monitoring and Control – Enhanced

The Power Distribution Monitoring and Control – Enhanced is an intelligent collection of views which allow users to configure a switchgear assembly and continuously monitor and control various devices and parameters. The dashboard can be integral to the switchgear assembly or remotely mounted offering a monitoring and control option outside the arc flash zone. It provides features required to maintain a switchgear assembly such as:

- Remotely open/close circuit breakers through control mode
- Initiate a transfer scheme in a Main-Tie-Main or Main-Tie-Gen switchgear for uninterrupted power supply
- Ability to configure/monitor alarms for various devices
- Provides a rich interface to monitor parameters of all devices and study the trends of those parameters.

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

© 2023 Eaton
All Rights Reserved
Printed in USA
Publication No. PA01929EN / GG
September 2023

For more information, visit
Eaton.com/MagnumPXR
or contact your local Eaton sales office.

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.

