

Low Voltage Switchboard up to 1600 A

xEnergy Basic / xEnergy Light



EATON

Powering Business Worldwide



✧ At Eaton, we believe that power is a fundamental part of just about everything people do. That's why we're dedicated to helping our customers find new ways to manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. To improve people's lives, the communities where we live and work, and the planet our future generations depend upon. Because this is what really matters. And we're here to make sure it works.

To learn more go to: [Eaton.com/whatmatters](https://www.eaton.com/whatmatters)

We make what matters work.

EATON

Powering Business Worldwide



Eaton has been providing solutions to your challenges for over a century

Look around. Every thing we touch, do, or experience in our modern world is made possible by power.

Planes. Hospitals. Factories. Data Centers. Vehicles. The electrical grid. These are things people depend on every day. And the companies behind them depend on Eaton to solve some of their toughest power management Challenges.

For centuries, simply finding, generating and harnessing that power was one of humankind's greatest challenges. But today, the challenges that we face are even greater.

As one of the world's leading global technology companies, Eaton is committed to positively impacting the environment while helping to solve the world's most pressing power management challenges. By giving people tools to use power more efficiently. Helping companies do business more sustainably. And by encouraging each and every employee at Eaton to think differently about our business, our communities – and the positive impact we can have on the world.

Eaton helps leading companies across critical markets gain a competitive advantage by managing power more efficiently, effectively and sustainably.

In commercial and residential buildings, industrial machinery, heavy equipment, aircraft, data centers, mining operations, utilities, car, trucks and commercial vehicles – Eaton's products and solutions help our global customers do more with less.

Our businesses are ready to provide you with the right solutions to meet your power management challenges.



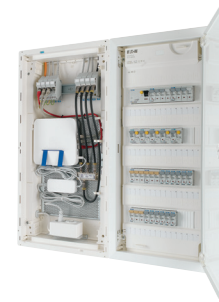
Residential



xComfort
Micro / Mini



xComfort
ECO



xComfort
KLV-U



xComfort
IKA



xComfort
BF-O / BF-U

Commercial industrial



xEnergy
B (Basic)



xEnergy
S (Safety)



xEnergy
L (Light)



xEnergy
M (Main)

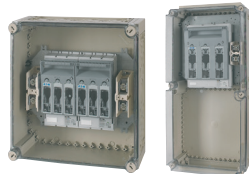


xEnergy
E (Elite)

Industrial



xEffect
CS



xEffect
Ci box



xEffect
xVTL



xEffect
Sasy60i



xEffect
Accessories

xEnergy Basic

Wall-mounted and floor-standing switchboards for low-voltage sub-distribution up to 630 A



xEnergy Basic is a wall- or floor-mounted enclosure for electrical distribution systems up to 630 A. It is not only the smallest distribution board in our xEnergy family, but also the most flexible and versatile one. The variety of different types and sizes allows it to be used in almost every possible application.

Certified as a low-voltage distribution board that may be operated by non-experts in accordance with IEC/EN 61439-1/-2/-3 and IEC/EN 62208, xEnergy Basic is the ideal choice for electrical distribution systems in residential and functional buildings.

Benefits

- A comprehensive product range for a variety of applications
- Tailor-made, pre-assembled and partially pre-wired solutions according to local market requirements are available off the shelf
- Very robust enclosure platform that supports different installation preferences and enables a high degree of functionality and performance even in harsh environments
- The integrated interior structure for the entire product range reduces the number of individual parts per assembly
- High level of quality throughout the entire portfolio based on third-party certificates and verifications
- Thanks to an established supply chain network and European production sites / warehouses, we guarantee rapid availability on the market

xEnergy Light

Power distribution board and control panel up to 1600 A



The proven xEnergy Light cabinet system is suitable for a wide range of applications.

Thanks to its incredible versatility, xEnergy Light can be used both as a power distribution board and as a control panel in industrial applications and in functional buildings. The robust 2mm thick, multiple-folded sheet-steel frame provides the stability required for any application, in stand-alone enclosures as well as in add-on enclosures which are common in power distribution. Flat-pack orders allow for space-saving and therefore cost-efficient deliveries. xEnergy Light can also be ordered as a pre-assembled cabinet and meets of course the requirements of the latest IEC 61439/1-3 and IEC/EN 62208 standards.

Benefits

- Pre-assembled or flat-pack
- Wide range of enclosure sizes to choose
- Easy to handle
- Robust frame construction
- Flexible and easy to mount
- Same screw head throughout the system
- Corrosion-resistant powder coating
- Straight-forward industrial design

Features

- IEC 61439/1-3 and IEC/EN 62208
- Combination options with different installation systems such as EP, xEnergy Basic, SASY60i,...
- Degree of protection IP31, IP42 and IP55
- Stand-alone cabinet or add-on system
- Foam-shaped door sealings
- Consistent system up to 1600A

General value proposition statement

Eaton is a reputable and well-established manufacturer of enclosures for low voltage systems. As part of our xEnergy series, the panel builder can use xEnergy Basic to match their sub-distribution boards and for the metering and final distribution boards in residential applications.

Light Commercial / PB Business

Panelbuilder doing business with Eaton are provided with a wide and flexible product basket with reference to xEnergy series, coming along with engineering software like configurator and temperature calculation tool, being able to engineer most efficient technical and commercial solution to meet end customers need.

Residential / Installer Business

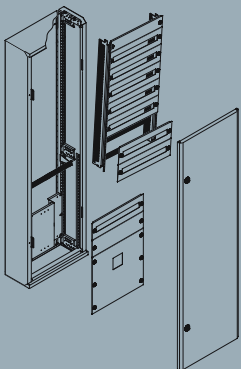
Eaton provides an easy installable, reliable, high quality and well prepared metering board incl. selected components available from EWS stock with less wiring effort on the construction site.

EWS

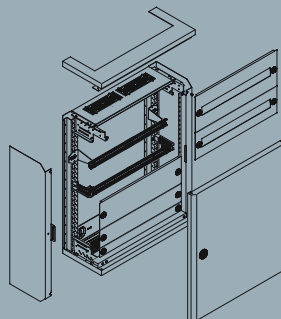
Thanks to Eaton's wide product offer and stable price management we are able to offer the full ETIM classified pallet of system and components for low-voltage distribution boards and gain additional sales volume due to perfect demand creation at the installer / PB.

System architecture

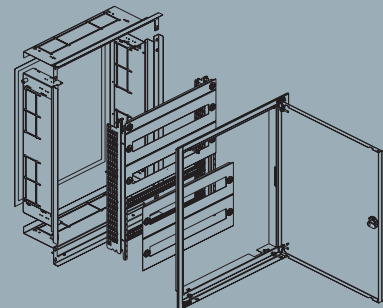
Floor-standing



Surface-mounted



Flush-mounted

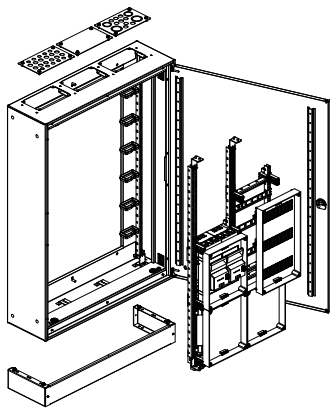


EP / Profi+ (both options)	EP / Profi+ (both options)	Profi+ (only MSW)
welded construction (no flat-pack delivery)	flat-pack or pre-mounted delivery	flat-pack or pre-mounted delivery
side-by-side arrangement	side-by-side / top-bottom arrangement	side-by-side arrangement
width 350 – 1350 mm depth 250 – 400 mm height 1760 – 2060 mm	width 350 – 1350 mm depth 250 – 270 mm height 460 – 1560 mm	width 400 – 1200 mm depth 180 – 240 mm height 460 – 2060 mm
residential and functional buildings, industrial segment	single and multiple family houses or apartment buildings	residential and functional buildings for public access

Modular installation system EP

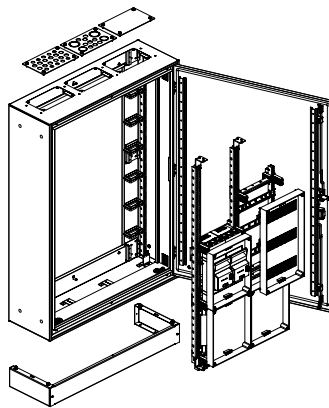
A standardized mounting system that allows for individual configurations to meet customer needs. Thanks to its flexible and easy-to-mount design, the EP system enables efficient project planning and execution. In addition, the EP system provides increased safety due to the fully insulated operator level.

Product overview enclosures/cabinets for EP



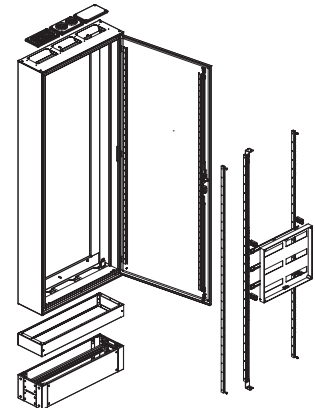
BP-O (IP31, IK08)

- Surface-mounted, RAL9016, F3A flange cut-outs, 12 different types
- 1-point locking mechanism with plastic cam lock



BPM-O (IP55, IK10)

- Surface-mounted, RAL9016 / RAL7035, F3A flange cut-outs, 24 different types
- 3-point locking mechanism with rotary lever (higher Icc rating)



BPM-F (IP55, IK10)

- Floor-standing, RAL7035, F3A flange cut-outs at top/ bottom, depth 250/400 mm
- 3-point locking mechanism with rotary lever (higher Icc rating)

Key selling points:

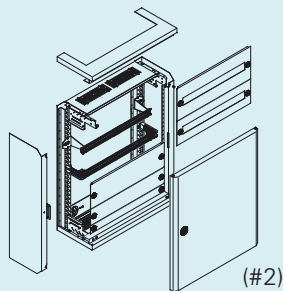
- Selection of "ready-to-use" enclosures which are prepared for modular installation system EP
- Efficient in planning, project development and execution phase
- High level of flexibility inside one type of distribution section
- Wide range of different mounting kits for MCBs / MCCBs / busbar systems / fuse switch disconnectors / energy meters etc.
- Quick and easy installation thanks to high percentage of factory assembled components
- The configuration is selectable by the customer and can completely differ from one project to another



Our proven Profi+ system

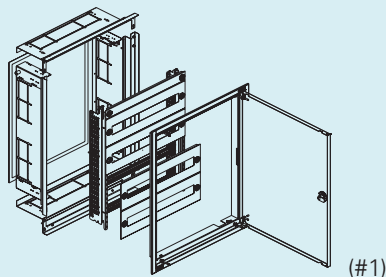
The only platform that enables two different options for assembling the interior, either via removable mounting inserts (MSW) or fixed installation directly inside the enclosure. It enables a customized set-up depending on the preferred installation behaviours mode and country-specific requirements.

Product overview enclosures/cabinets for Profi+



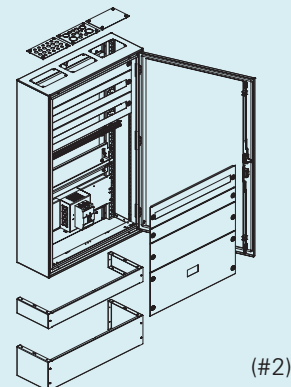
BP-O (IP30, IP31, IK08)

- Surface-mounted, RAL7035 / RAL9016, different cable entry options, flat-pack delivery possible
- 1-point locking mechanism with plastic cam lock / rotary lever



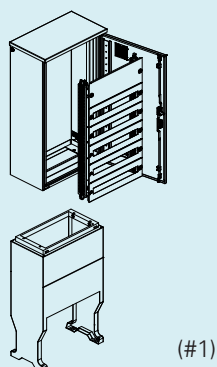
BP-U (IP30, IP43, IP54, IK08)

- Flush-mounted, RAL7035 / RAL9016, wall-box with perforations, depth 180/240 mm, flat-pack delivery possible, outdoor use
- Different locking mechanism depending on type of application



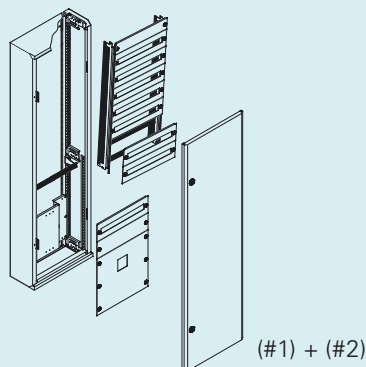
BPM-O (IP55, IK10)

- Surface-mounted, RAL7035 / RAL9016, F3A flange cut-outs
- 3-point locking mechanism with rotary lever (higher Icc rating)



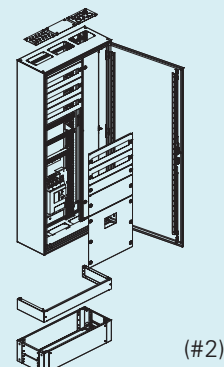
BP-VF (IP44, IK10)

- Outdoor distribution board for standalone applications, RAL7035, depth between 180 and 320 mm based on standard polyester base A-KU
- 3-point locking mechanism with rotary lever (higher Icc rating)



BP-F (IP30, IP31, IK08)

- Floor-standing, RAL7035 / RAL9016, F3A flange cut-outs top/bottom, cabinet depths between 250 and 400 mm
- 3-point locking mechanism with rotary lever (higher Icc rating)



BPM-F (IP55, IK10)

- Floor-standing, RAL7035 / RAL9016, F3A flange cut-outs top/bottom, cabinet depths between 320 and 400 mm
- 3-point locking mechanism with rotary lever (higher Icc rating)

(#1) ... Mounting side wall (MSW)
(#2) ... Mounting main frame (MF)

Key selling points:

Distinguish between two different installation methods even with the same type of enclosure:

- (#1) • High level of pre-fabrication incl. wiring outside of the switchboard related to MSW mounting insert.
 - All connection points are fully accessible and easy to check.
 - Very fast and highly effective way of assembling the interior.
 - Available for all type of enclosures incl. flush-mounted design.
- (#2) • Well-considered wiring and installation work enables a so-called "structured multilayer" assembling.
 - All interior parts are directly linked to the mounting pillars on the back side of the enclosure.
 - Very robust design even suitable for multiple MCCB mounting kits.
 - Different compartments as a result of horizontal and vertical partitions are possible to realize within the enclosure.

Core features

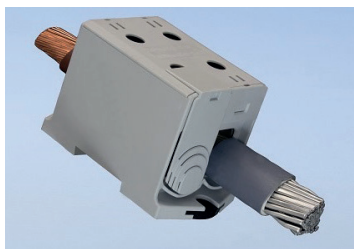
- Standards: IEC/EN 61439-1/-2/-3, IEC 62208
- Degree of protection: from IP30 up to IP55
- Rated insulation voltage [Ui]: up to 690 VAC
- Rated impulse voltage [Uimp]: up to 6 kV
- Overvoltage category / pollution degree: III / 3
- Mechanical impact protection: IK08 / IK10
- Form of separation up to form 4b (in combination with Profi+ installation system)
- Protective earthing (protection class I)
- COMING SOON: EP Modular Class 2 [EMC2] enclosure - double insulated (protection class II)
- Seismic characteristics: IEC/EN 60068-3-3: ground acceleration level AG2 and AG5
- Rated current [Ie] up to 630 A depending on main incomer and used busbar system
- Rated conditional short circuit current [Icc] up to 25/50 kA depending on incoming circuit-breaker and type of cabinet
- Available in grey RAL7035 and white RAL9016
- Material of enclosure: Standard sheet-metal (phosphatized and polyester powder-coated)
- Galvanized parts mainly for interior finish without powder-coating

Some significant accomplishments of product upgrade

- Standard series of BP-O / BP-F fulfills IP31 with just adding one spare part
- Design of double-wing doors can be adapted in relation with interior fitting / vertical compartments
- Consistent wiring concept for vertical and horizontal pillars inside EP using cable guide brackets
- All mounting kits for MCCBs (NZM series) are prepared with additional cut-out for "read-only" access to electronic trip units (PXR)
- Floor-standing cabinets with depth of 400 mm for side-by-side arrangement are now available to close the gap between xEnergy Basic and Light
- xEnergy Basic series incl. installation systems EP and Profi+ uses only TX20 and TX25 screw heads (like xEnergy M and L)

Accessories

The right accessory for every requirement



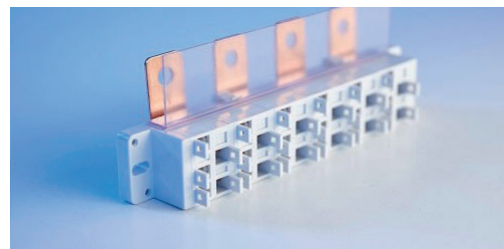
Connection terminals BPZ-KC

- Suitable for aluminum and copper connections
- For mounting on a standard DIN rail, single or double connection
- Finger-proof version, degree of protection IP20
- Three different colors: grey (phase), blue cover (neutral), yellow-green housing (PE)



Distribution blocks BPZ-KB

- Flexible and time-saving solution
- Meets the requirements of IEC 60947-7-1
- Up to 11 outgoing terminals per type
- For mounting on a standard DIN rail or mounting plate
- Suitable for aluminum and copper connections
- Rated currents from 80 A (63 A) to 1100 A (900 A)



Busbars

- The 250 A busbar can supply a row of modular devices; the max. current rating for each output is 63 A
- Each connector locks automatically, which ensures a high level of safety and avoids the risk of direct contact, in accordance with IP20
- Outgoing connections can be implemented when the busbar is energized but no load is present at the outgoing
- Feeder circuits can be easily replaced or retrofitted during operation

General value proposition statement:

Eaton as reputable and well-established manufacturer of different LV enclosures provides a system called xEnergy Light, which can serve both, the panel builder segment as complementary product to our xEnergy Main series and sub-distribution applications, as well as control panels for the MOEM segment.

Light Commercial / PB Business:

Panel Builder doing business with Eaton are provided with a wide and flexible product basket with reference to xEnergy series, coming along with engineering software like configurator and temperature calculation tool, being able to engineer most efficient technical and commercial solution to meet end customers need. The benefit for Panel Builder with this new optimized main/sub distribution system is to get the complete standards documents, a planning software tool, many solutions with few parts, and high product availability.

Residential / Installer Business

With this new optimized main/sub panel system the commercial Panel Builder have a quick and easy to learn solution, with a high degree of flexibility for the applications and only few different parts (versatile use).

In short: it is a very flexible, reliable and easy to set up a system.

EWS

Thanks to Eaton's lean product offer and competitive price setting we can offer the full ETIM classified panel system and components for low-voltage distribution boards and gain additional sales volume due to strong tool support and pre-assembled service capabilities.

With this new optimized panel system Eaton closes the gap in the area of sub-distribution. The holistic and competitive offer we provide for panel-builders and installers allow EWS partners to grow the business with very little investment in inventories and process setup.

Main Distribution Board



- Incoming supplies, outgoing and couplings with circuit breakers
- Outgoing with SL fuse switch disconnectors up to 630 A
- Incoming supply system for drill-free cable connection
- Internal separation up to form 4b type 2 and 6
- Cable connection from the top or bottom

Sub Distribution Board



- Installation systems Profi+ and EP
- Fitting modules for NZM, NH-fuse load disconnector switches and strips, for screw fuse bases, devices for modular installation and individual devices

Control Distribution Board



- Control technology with Sasy 60i
- Individual, fixed installation units on a mounting plate
- Ventilation and air-conditioning
- Automation technology

xEnergy Light

Power distribution board up to 1600 A



xEnergy Light power distribution enclosures accommodate switchgear up to 1600 A. Housing made of sheet steel protects against both damaging influences and electric shocks caused by touching live parts. The side-by-side mountable xEnergy Light can be easily transformed into a control enclosure for industrial purposes or into an energy distributor for functional buildings according to your requirements. The xEnergy Light has easy mounting, is stable and quick to disassemble, and is available in more than 55 different dimensions.

- A new simplified, cost and assembly orientated modular system
- Tested according IEC 61439
- New application orientated catalog
- Instruction leaflets and copper work instruction
- Included in the configurator



Key selling points:

- Standards: IEC/EN 61439-2
- Internal partition: up to Form 4b Type 2 and 6
- Rated operational voltage U_e : 415 V / 50 - 60 Hz
- Rated current I_e : up to 1600 A
- Rated short-time withstand current I_{cw} : up to 65 kA 1s
- Degree of protection: IP 31, IP42, IP55, (without doors) IP2X
- Colour: RAL 7035
- Dimensions: Height 1400 / 1600 / 1800 / 2000 mm
Width 425 / 600 / 650 / 800 / 850 / 1000 / 1100 / 1200 / 1350 mm
Depth 300 / 400 / 600 / 800 mm
- Delivery: Flat pack und assembled
- Outgoing Feeders: MCCB and Fuse Switch

xEnergy Light EP and Profi+

The standard section installation system is a system for setting up factory-built, type-tested switchgear assemblies.

- An universal and stable system
- Rational in planning and project development
- Flexible and easy-to-mount interior fitting
- Flexibility in project development thanks to individual combination options with standard inserts for standard sections or standard components for different fields of application

Divided setups can now be equipped with a separate 200 mm or 400 mm wide vertical module. This type of module can either be used as a cable connection area or as a dropper bar area which can safely and conveniently be closed with a door made in one part. Step-type busbar carriers allow for easy connecting of outgoing cables. There are different modules available for ACBs, MCBs and MCCBs, but we also provide general modules for any type of requirements.

Combinations of air circuit breakers and Profi+ installation inserts are now possible too (both with MSW as a pivot-type mounting frame and on a fixed mounting frame). So, you can fully integrate IZM circuit breakers in a Profi+ setup and cover them perfectly with front panels. The height-related position of the circuit breakers can be freely selected within the grid. The carrier plate for circuit breakers can directly and safely be screw-fixed on horizontal profiles and on the frame. This provides the required stability which is a crucial feature for large and heavy switchgear of this type. IZM circuit breaker modules are prepared for the IZMX16 and 40 series, fixed and withdrawable, 3- and 4-pole and 3P+N. The switchgear can also be positioned next to each other.



Key selling points:

- A universal and stable system
- Rational in planning and project development
- Flexible and easy-to-mount interior fitting
- Individual module combination options
- Time-saving module mounting thanks to terminal/screw-type technology
- Robust front covers thanks to fibre-reinforced material



Key selling points:

- Fixed installation components with BPZ-MSW as a removable insert
- Time-saving setup of mounting inserts (which can be fully fitted and wired outside the cabinet)
- An easy and self-explanatory system
- Divided setups with fixed installation equipment and with removable Profi+ inserts
- Setups horizontally and vertically divided
- Modules prepared for accommodating compact circuit breakers

xEnergy Light

As a control cabinet

xEnergy Light is the perfect basis for control cabinets.

Mounting plates as high as the section can be ordered in 2- or 3-mm material thickness. There are mounting plates available as of a height of 100 mm for setup variants in different mounting heights. In order to ensure sufficient cooling, we offer cover panels with suitable cut-outs for ventilation or air-conditioning equipment for all enclosure sizes.

Individual door equipment

Can be equipped with air-conditioning devices, cover panels are available with the suitable cut-outs.



Key selling points:

- As a typical control cabinet with different mounting plates as well as mounting plates as high as the section.
- Door equipment is possible
- Transparent doors are available
- Individual setup options
- Setups with divided mounting plates are possible
- Position of the mounting plates can be adjusted according to the requirements
- Massive mounting plates in 2 or 3 mm thickness
- Can be combined with Smart-Wire-DT

xEnergy configurator

Eaton's xEnergy configurator is a pricing and configuration software that enables panel builders to design and calculate the costs of low voltage switchgear assemblies using Eaton's xEnergy enclosure families and IZM and NZM circuit breaker families.

Distribution board configuration

- Fast and reliable configuration of distribution board systems and circuit protection devices
- Define technical properties with continuous validation check
- Function-oriented dimensioning of the distribution board by means of neutral properties
- Optional transfer of the configured distribution board to ProPlan (detail engineering)

Preview

- View of the distribution board from different directions
- View of sections, modules and busbars including dimensioning and drawing sheet
- Move component via drag&drop
- Export as DXF file

Part lists

- Expandable with any user defined material (including material from "MatClass")

Documentation

- Access to xEnergy assembly manuals and installation instructions

Shopping cart

- As structure and summary part list
- Includes the calculation of metal surcharges
- Considers exchange rates
- Export to Microsoft Excel
- Includes recommendations for additionally required busbar material (copper lengths)

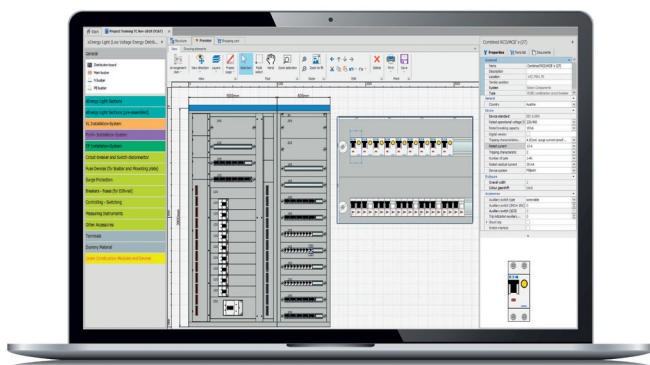
xE Elite	xEnergy Elite busbar back
xE Main	xEnergy Main Busbar Back (Low Voltage Main Distribution up to 5550A)
xE Main	xEnergy Main Busbar Top (Low Voltage Main Distribution up to 7100A)
xE Safety	xEnergy Safety (Insulating-Material Enclosure for Energy-distribution up to 1600A)
xE Light	xEnergy Light (Low Voltage Energy Distribution up to 1600A)
xE Basic	xEnergy Basic (Low Voltage Sub Distribution up to 630A)
FACBN	Eaton Air Circuit Breaker (ACB)
MCCB	Eaton Molded Case Circuit Breaker (MCCB)

The xEnergy configurator allows you to price and design Eaton switchgear within minutes.

Use Eaton's xEnergy configurator to design the following types of circuit breakers and low-voltage switchgear and calculate their costs:

- xEnergy Elite
- xEnergy Main
- xEnergy Safety
- xEnergy Light
- xEnergy Basic
- IZM air circuit breakers
- NZM, PDE molded case circuit breakers

You can create both a bill of materials (for steel work, device fitting kits and circuit breakers) as well as an individually adjustable front view for the creation of quotations. A suitable distributor is automatically recommended based on the chosen system function.



Within the low-voltage switchgear assemblies, all types of switchgear can be placed and configured:

- Air circuit breakers
- Molded case circuit breakers
- Miniature circuit breakers
- Residual current circuit breakers
- Residual current circuit breakers with overcurrent protection
- Control and monitoring devices

Accessories



Compact circuit breakers, with diagnosis included



Circuit breakers up to 1600A



Sasy 60i Modular busbar system

PIFT Plug In Fuse Terminal



Circuit breakers



RCCDs



AFDD+



RCBOs



Digital RCCDs



MCBs



Motor protection and tariff switches

Accessories for circuit breakers



Auxiliary switches



RCCD release modules



Surge protection devices



Measuring devices



Shunt releases



Undervoltage releases



Reset devices



Other accessories

Controlling and switching



Contactors



Main switches



Transformers



Signalling devices

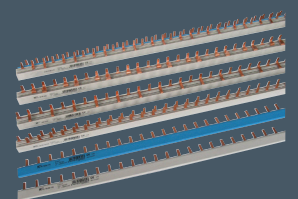


Relays



Control-relay Easy

Busbar systems



Plug-in and block busbars

Eaton's mission is to improve the quality of life and the environment through the use of power management technologies and services. We provide sustainable solutions that help our customers effectively manage electrical, hydraulic, and mechanical power – more safely, more efficiently, and more reliably. Eaton's 2020 revenues were \$17.9 billion, and we sell products to customers in more than 175 countries. We have approximately 85,000 employees.

For more information, visit [Eaton.com](https://www.eaton.com).



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Publication No. BR014024EN
Article number 182393-MK
March 2022

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