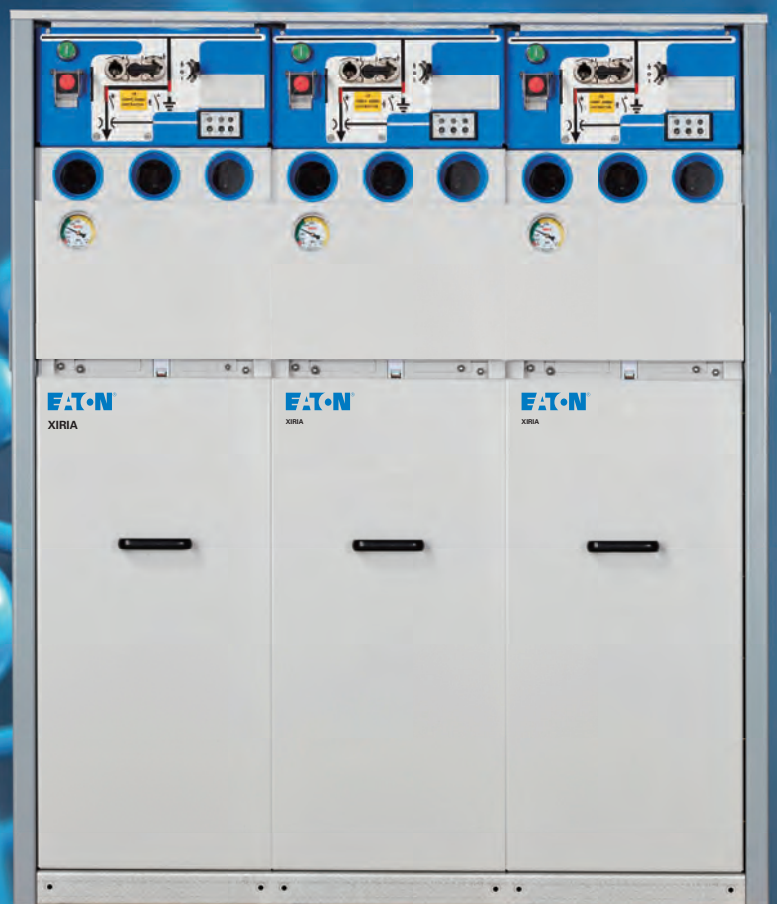


XIRIA green gas insulated RMU

XIRIA

Green, Smart,
Compact solution



EATON

Powering Business Worldwide



Automotive



Aerospace



Truck



Hydraulics



Electrical

Powering business worldwide

Eaton delivers the power inside hundreds of products that are answering the demands of today's fast changing world.

We help our customers worldwide manage the power they need for buildings, aircraft, trucks, cars, machinery and entire businesses. And we do it in a way that consumes fewer resources.

Next generation transportation

Eaton is driving the development of new technologies – from hybrid drivetrains and emission control systems to advanced engine components – that reduce fuel consumption and emissions in trucks and cars.

Higher expectations

We continue to expand our aerospace solutions and services to meet the needs of new aviation platforms, including the high-flying light jet and very light jet markets.

Building on our strengths

Our hydraulics business combines localised service and support with an innovative portfolio of fluid power solutions to answer the needs of global infrastructure projects, including locks, canals and dams.

Powering Greener Buildings and Businesses

Eaton's Electrical Group is a leading provider of power quality, distribution and control solutions that increase energy efficiency and improve power quality, safety and reliability. Our solutions offer a growing portfolio of "green" products and services, such as energy audits and real-time energy consumption monitoring. Eaton's Uninterruptible Power Supplies (UPS), variable-speed drives and lighting controls help conserve energy and increase efficiency.



MV switchgear technology is in our DNA

Eaton Corporation is a worldwide leader in the design, manufacture, and sale of safe, reliable and high-performance medium voltage power distribution equipment in accordance with IEC, ANSI and GB / DL standards

Complete Global Medium Voltage Switchgear Solutions

Eaton, a premier leader in designing and manufacturing power distribution and protection equipment in the electrical industry, offers a comprehensive range of medium voltage (MV) solutions to meet the needs of virtually every application. From products that feature cutting-edge design that allow for easy access, maintenance and space savings, to arc-resistant products that enhance safety, Eaton's medium voltage solutions provide a variety of products for every need. Additionally, Eaton's global service network provides maximum customer support in all regions of the world.

As one of the few completely vertically integrated and diversified industrial manufacturers in the world, Eaton designs not only MV assemblies, but also the key components that comprise the MV solutions – from steel housing and circuit breaker compartments to vacuum interrupters, circuit breakers, bus systems and fuses.

Eaton's MV heritage, strengthened by acquisitions such as Westinghouse DCBU, Cutler Hammer, MEM and Holec, has resulted in breakthrough MV technologies and numerous international patents over the years.

Part of Eaton's complete electrical PowerChain Solutions – which help businesses minimize risks while realizing greater reliability, cost efficiencies, capital utilization and safety – Eaton's medium voltage equipment meets all applicable standards and certifications such as IEC, NEMA / ANSI, GB / DL, UL, IEEE, KEMA and CSA.

When it comes to medium voltage solutions, you can trust the one name with a long history of proven performance: Eaton.

Eaton's range of
SF₆ free switchgear
for Medium Voltage



An Eaton Green Solution



XIRIA green gas insulated RMU

Product Feature

Green, Smart, Compact solution: XIRIA

XIRIA is Eaton's new generation of environmental-friendly type green gas insulated Ring Main units.

They are characterized by their high level of operational safety and applicable for 12kV power distribution system.

XIRIA units are also very compact and can provide modular single panel and combination block panel.

Both the primary and mechanical parts are housed in a fully sealed stainless steel tank with 0.02Mpa dry air which effectively protects the system against environmental influences.

Two basic function versions in our product range:

- a vacuum load break switch for ring cable connections
- a vacuum circuit breaker for protecting transformers and cable connections.

Both versions can be supplied in a unit in any desired combination and order.

XIRIA is a well designed environmental-friendly Ring Main Units.

For example, when developing the system we intentionally opted for protection in the form of a circuit breaker

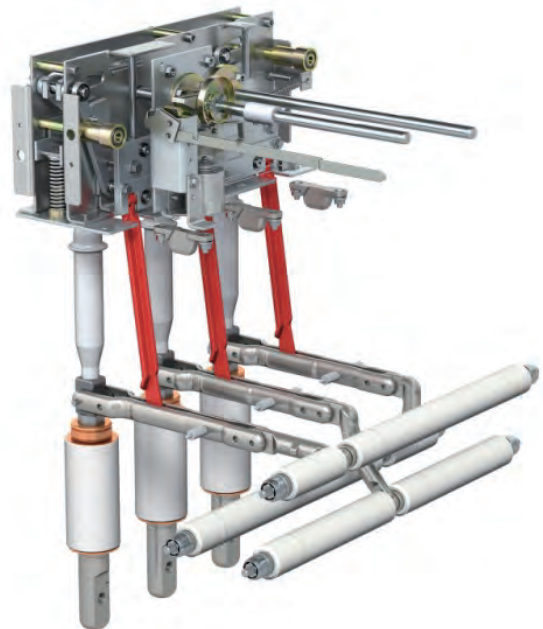
combined with an electronic relay. This is a modern, safe and flexible alternative to fuse protection.

In addition it also makes Xiria very easy to use in an automated distribution network. These specific features make Xiria an easy-to-use system that responds perfectly to changing electricity distribution requirements, both now and in the future.

Green and clean



Xiria is made exclusively of environmentally-friendly materials. The insulation medium is clean, dry air and the switching medium is vacuum. Thus Xiria responds to the demand for sustainability in energy distribution. The unit is easy to dismantle at the end of its service life as the materials used are clearly labelled and can be reused. This facilitates recycling and avoids excessive costs and environmental taxes when the unit is decommissioned.



Maintenance-free



All the live primary parts and mechanisms in a Xiria unit are installed in a fully enclosed housing. This prevents dust, moisture and other environmental influences from affecting the operation of the unit. The switching mechanism has been designed with a minimum number of parts, and is specifically intended for switching after a long period of inactivity – precisely the way it happens in practice. What is more, the mechanism does not use any lubricants, which also benefits its operational safety. As it is maintenance-free, Xiria significantly cuts inspection and maintenance costs without adversely affecting the operational safety of your distribution network. Which is something to look forward to in today's liberalised energy market.

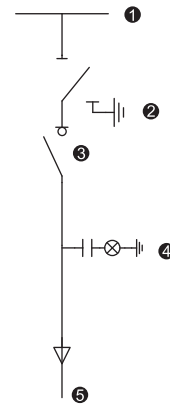


Intrinsically safe

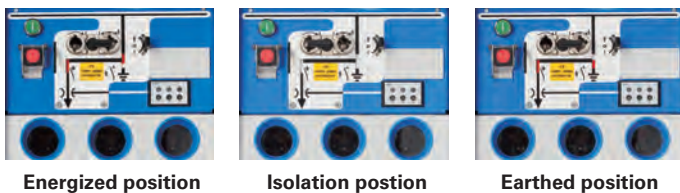


When carrying out operational actions and work on the cables, it is vital to have unambiguous status indications.

When it comes to the safety of the operating personnel, Eaton leaves nothing to chance. That is why Xiria is fitted with directly visible isolation by means of inspection windows in the front which makes the isolating distance between the cable and the busbar system directly visible. A visible, short-circuit proof earthing can take place via the load break switch or circuit-breaker.



1. Busbar system
2. three-position disconnect
3. Vacuum load break switch or circuit breaker
4. Voltage indicator
5. Cable connection



Xiria is designed with a fully sealed stainless steel housing combined with 0.02Mpa dry air of all primary live parts. This reduces the risk of an internal fault to an absolute minimum, thus providing a high degree of safety and availability. The tested arc-proof housing also offers additional protection for operating personnel.

XIRIA green gas insulated RMU

Compact



Xiria is one of the smallest ring main units of its kind. This high degree of compactness is a direct result of the combination of technologies used by Eaton – electrical field control and the use of extremely compact vacuum interrupters. This compactness offers direct financial benefits in new buildings and when refurbishing existing transformer stations because of the minimal floor area required.



Extensible design

Focusing to the requirements towards metering panels and extensible solutions in markets, modular single panel and extensible plugs are developed on the basis of original products, easy for users to conduct circuit extension and add functions such as metering.



Modular single panel

Ready for automated networks



Xiria is completely ready for use in fully-automated networks. There are various options available for the system, depending on the level of remote signalling and remote control required. These options are modular, so they can be quickly and easily added in the future. In this way Xiria anticipates future developments in automation and operational control, so you can be sure that you will not be left with control, display and communication standards that are too specific or possibly even obsolete.



Technical data

General

Rated voltage	kV	12
Impulse withstand voltage	kV	75/85
Power frequency withstand voltage	kV-1m	42/48
Rated frequency	Hz	50
Internal arc resistance (IAC)	kA/s	AFLR 20/1
Partial Discharge	pC	≤ 10 (1.1Ur)
Protection degree	Gas tank	IP67
	Whole panel	IP41
Green gas (Dry air)		Water content ≤ 300ppm
Rated gas pressure (20 C gauge)	Mpa	0.02
Min. function gas pressure (20 C Gauge)	Mpa	0
Annual leakage		≤ 0.05%

Busbar system

Rated current	A	630
Rated short-time withstand current	kA/s	20/4
Rated peak withstand current	kA	50

Load break switch

Rated current	A	630
Rated short circuit making current	kA	50
Rated short time current	kA/s	20/4
Rated cable charging break current	A	10
Main switch mechanic endurance		M2 10000 times
3-position disconnecter mechanic endurance		M1 3000 times
Load break switch electrical life		E3 200 times
Earthing making (By vacuum interrupter)		5 times

Circuit breaker

Rated current	A	630
Rated breaking current	kA	20
Rated short circuit making current	kA	50
Rated cable charging break current	A	25
Main switch mechanic endurance		M2 10000 times
3-position disconnecter mechanic endurance		M1 3000 times
Circuit breaker electrical life		30 times
Rated short time current	kA/s	20/4
Switching sequence		0-180s-CO-180s- CO or 0-0.3s-CO-180s- CO
Earthing making (By vacuum interrupter)		5 times

XIRIA green gas insulated RMU

XIRIA Standards

XIRIA type tests are based on below standards:

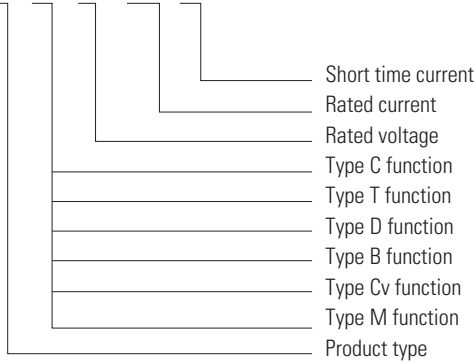
- GB 3906-2006 AC metal-enclosed switchgear and control gear for rated voltages from 3.6kV to 40.5kV
- GB 3804-2004 AC high voltage switches for rated voltages from 3.6kV to 40.5kV
- GB 1984-2003 AC high-voltage circuit-breakers



Configuration information

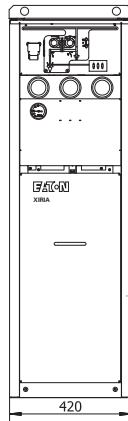
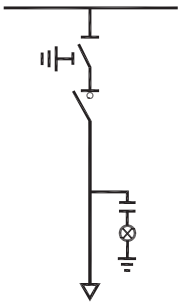
Order information

XIRIA - □ - 12 / 630 - 20



Load break switch panel

Type C function



Standard

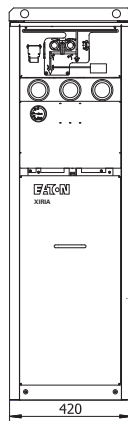
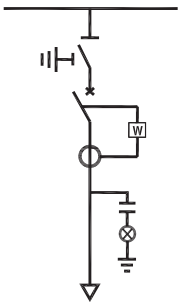
- 630A vacuum LBS
- Three-position disconnecter
- Voltage indicator
- 630A type C bushing

Options

- Motor operation
- Fault indicator
- Current transformer and meter
- LV compartment

Circuit breaker panel

Type T function



Standard

- 630A vacuum CB
- Three-position disconnecter
- Voltage indicator
- 630A type C bushing
- Protection CT
- CT powered relay

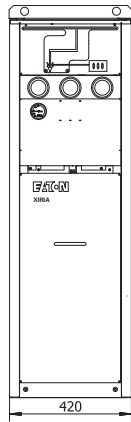
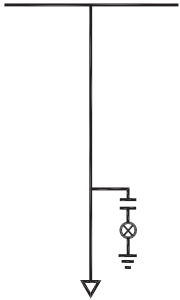
Options

- Motor operation
- Fault indicator
- external auxiliary supply relay
- Current transformer and meter
- LV compartment

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Cable connection panel

Type D function



Standard

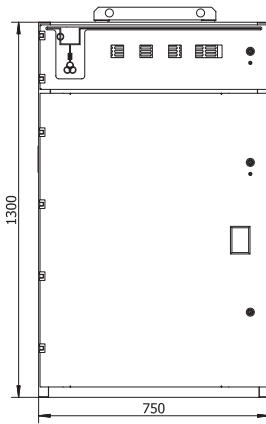
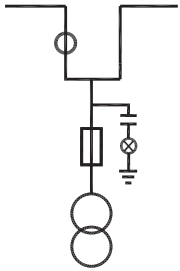
- Voltage indicator
- 630A type C bushing
- Padlock for cable compartment

Options

- Fault indicator
- Current transformer and meter
- LV compartment

Metering panel

Type M panel



Standard

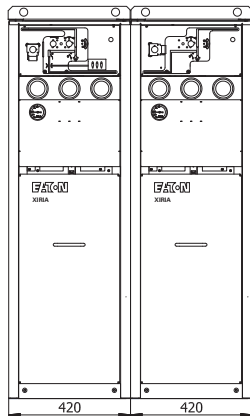
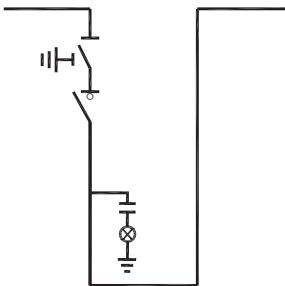
- Two 0.2s single phase metering PTs
- Two 0.2s single phase metering CTs
- Low voltage compartment

Options

- Moisture sensor and heater
- Electrical locking of energized HV compartment
- Voltage meter

Bus coupler

Type B function



Standard

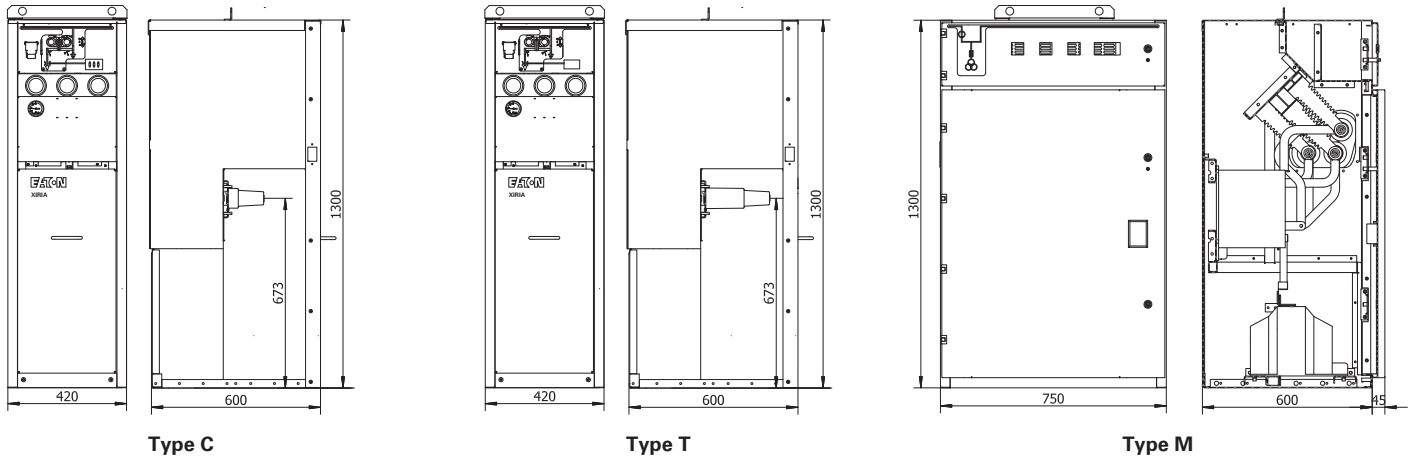
- 630A LBS
- molded busbar connection
- Voltage indicator

Options

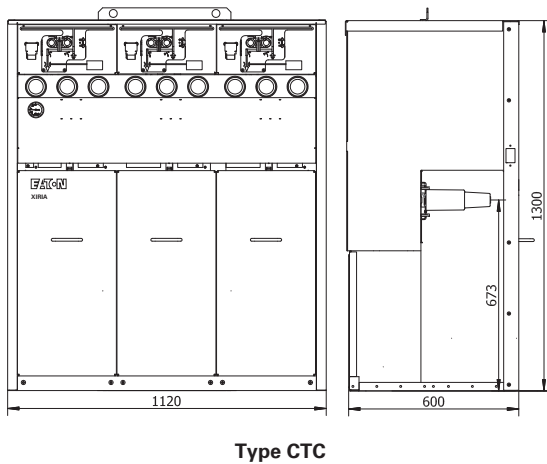
- 630A CB
- Motor operation
- Current transformer and meters
- LV compartment

Dimensions

Modular single panel



Combination block type



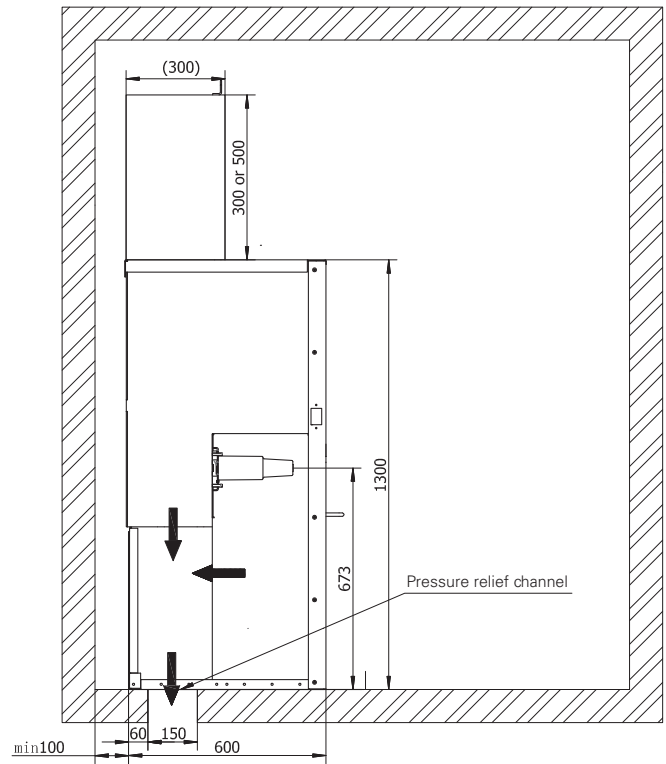
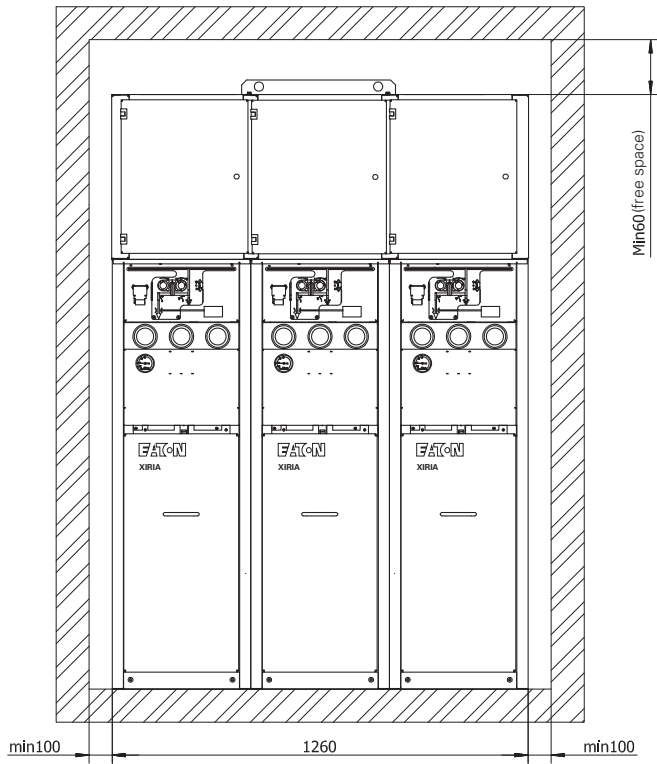
Example for combination:

Modular single panel	420*1300*600mm (W*H*D)	weight 150kg
Combination block type	1120*1300*600mm (W*H*D)	weight 350kg

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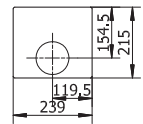
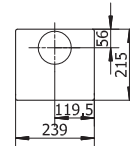
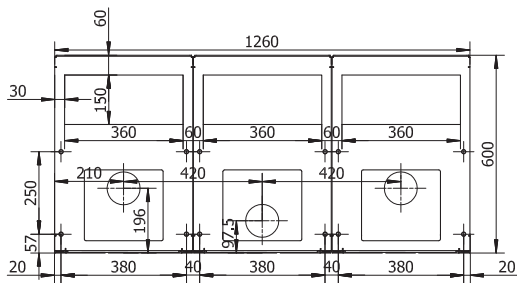
Floor plan

Modular single panel

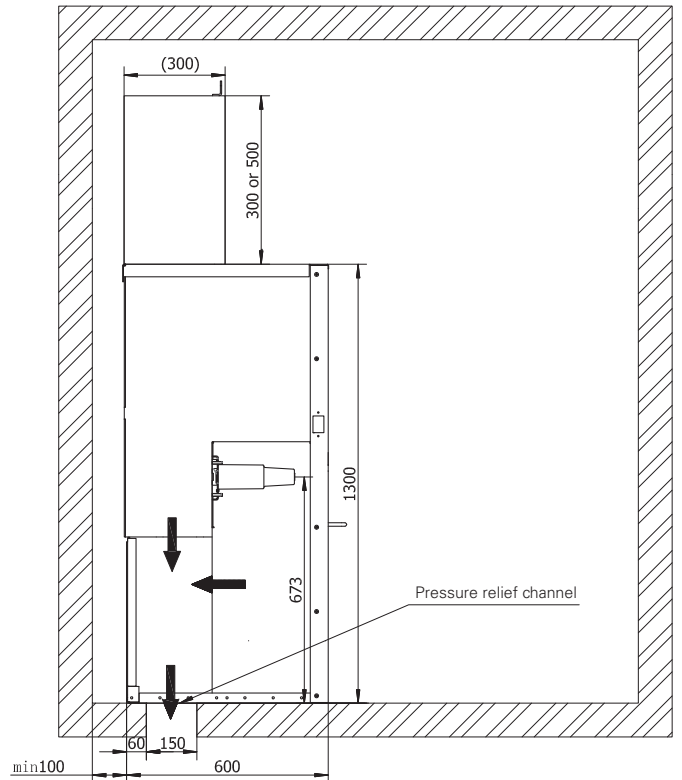
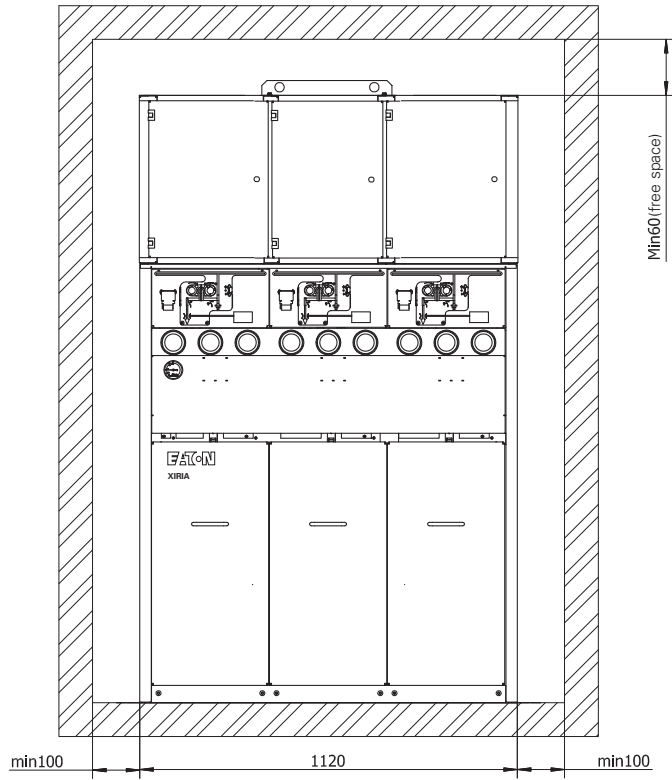


Cable cone type: C630
 Cable type: 1X3 35-400mm²
 Load break switch(C function)

Cable cone type: C630
 Cable type: 1X3 35-400mm²
 Circuit breaker(T function)

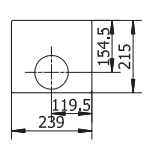
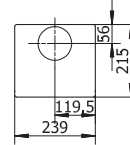
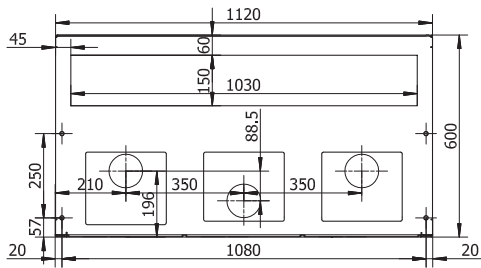


Combination block type



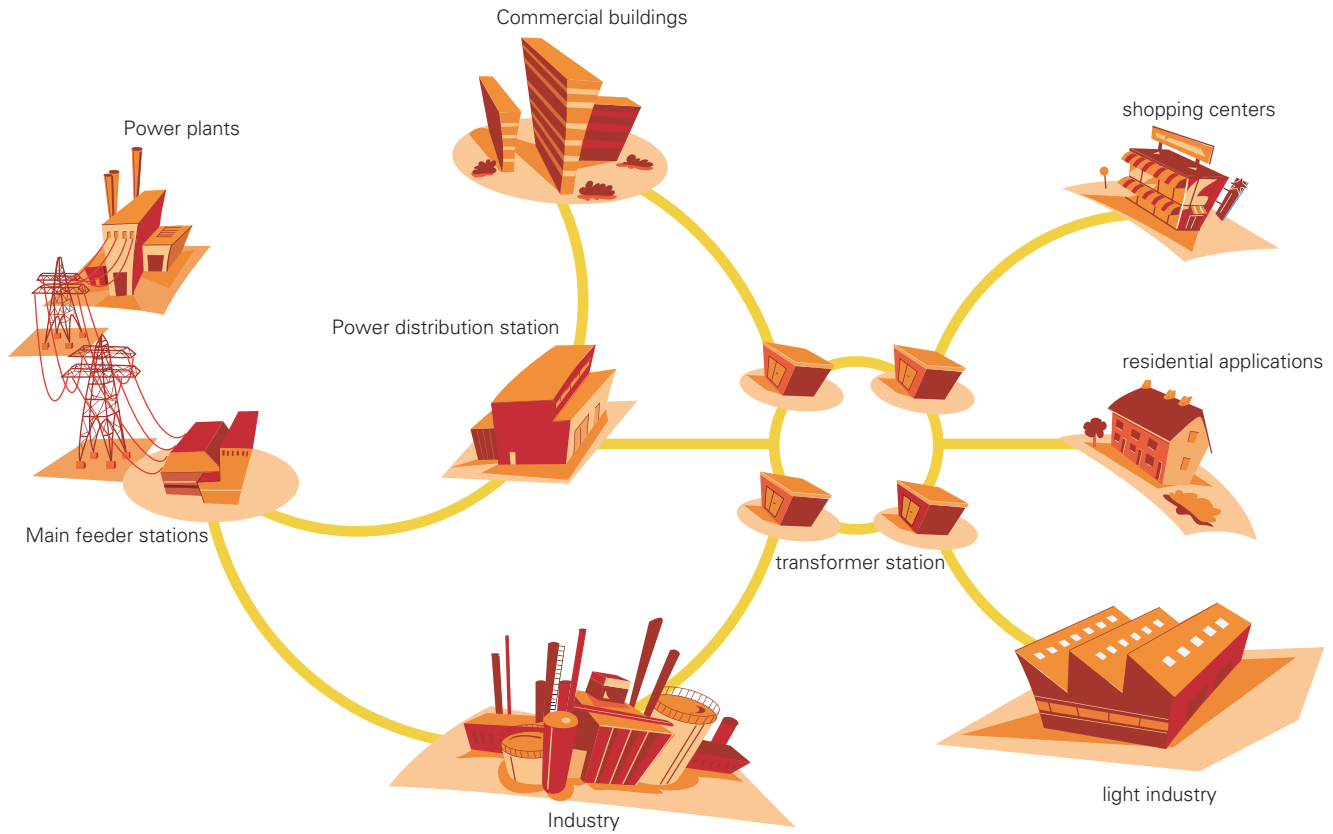
Cable cone type: C630
 Cable type: 1X3 35-400mm²
 Load break switch(C function)

Cable cone type: C630
 Cable type: 1X3 35-400mm²
 Circuit breaker(T function)



XIRIA green gas insulated RMU

Application field



Eaton provides power transmission and distribution products, from generation to supply to the consumer.

Eaton electrical

Eaton provides electrical system solutions designed to ensure a safe, reliable supply of energy. The development and production of its systems and components is based on the concept that they should always yield clear value-added for the customer. The products are designed in such a way that they can be fully integrated into their application. This approach enables you to achieve almost any solution you want with Eaton products.

Medium voltage business

Eaton's medium voltage business focus primarily on power distribution and industry systems. All Eaton systems are fitted with circuit breakers with Eaton manufactured vacuum interrupters. These high-tech systems are not only safe to operate, but are environmentally friendly as well.

Your total partner

In addition to the products already mentioned, Eaton can also provide key solutions. We can call upon a large number of specialists in all the required disciplines for this purpose. Working closely together with your organization and your selected partners, Eaton can handle your entire project from start to finish. In doing so, we offer you simplicity and convenience you would expect from an experienced partner.



Eaton is a power management company with 2017 sales of \$20.4 billion. We provide energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton is dedicated to improving the quality of life and the environment through the use of power management technologies and services. Eaton has approximately 96,000 employees and sells products to customers in more than 175 countries. For more information, visit www.eaton.com.

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