

EAT•N

Holec

Xiria 24 kV Ring Main Unit

Product Focus

- High operational safety
- Maintenance-free
- Safe visible isolation and earthing
- Environmentally friendly
- Compact
- Suitable for substation automation
- Vacuum technology



Eaton Electric B.V.

Eaton's Electrical business is a global leader in electrical control, power distribution, and industrial automation products and services. Through advanced product development, world-class manufacturing methods, and global engineering services and support, Eaton's Electrical business provides customer-driven solutions under brand names such as Cutler-Hammer®, Durant®, Heinemann®, Holec® and MEM®, which globally serve the changing needs of the industrial, utility, light commercial, residential, and OEM markets.

For more information, visit www.eatonelectrical.com.

Eaton Corporation is a diversified industrial manufacturer with 2004 sales of \$9.8 billion. Eaton is a global leader in electrical systems and components for power quality, distribution and control; fluid power systems and services for industrial, mobile and aircraft equipment; intelligent truck drivetrain systems for safety and fuel economy; and automotive engine air management systems, powertrain solutions and specialty controls for performance, fuel economy and safety. Eaton has 58,000 employees and sells products to customers in more than 125 countries. For more information, visit www.eaton.com and www.xiria.nl.

XIRIA : the smart solution

Xiria is the name of a new generation of ring main units from Eaton Holec. They are characterised by their high level of operational safety and are suitable for applications up to 24kV. Xiria units are also very compact. Xiria units can be supplied in three- or four-panel versions. Both the primary part of the unit and the mechanisms are housed in a fully enclosed housing which protects the system against environmental influences.

There is a choice of two basic panel 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 an extremely well designed and modern system. 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.

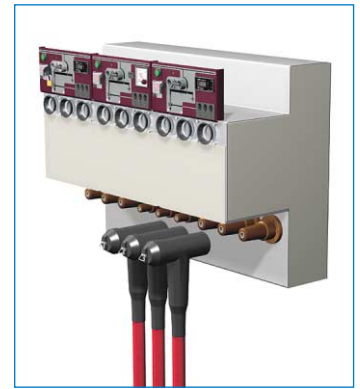
In addition it also makes Xiria very easy to use in an automated distribution network. These specific features make Xiria an easy-to-use system that responds perfectly to changing electricity distribution requirements, both now and in the future.



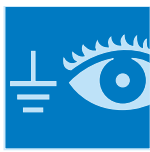


Maintenance-free

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.

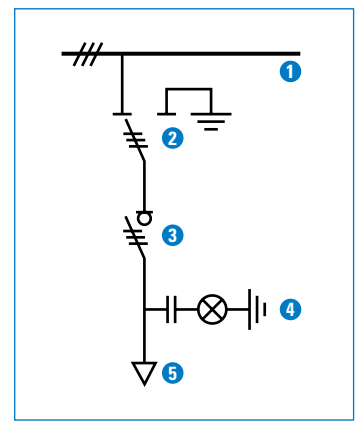


Sealed-for-life housing.

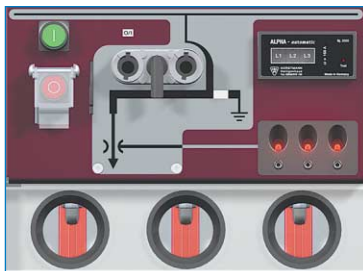


Intrinsically safe

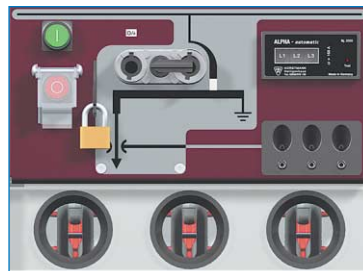
When carrying out operational actions and work on the cables, it is vital to have unambiguous status indications. When it comes to the safety of the operating personnel, Eaton Holec leaves nothing to chance. That is why Xiria is fitted with directly visible isolation by means of inspection windows in 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. Xiria is designed with a fully enclosed metal housing combined with single-phase insulation 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 KEMA-tested arc-proof housing also offers additional protection for operating personnel.



- 1 Busbar system
- 2 Busbar/earth disconnect
- 3 Vacuum load break switch or circuit-breaker
- 4 Voltage detector
- 5 Cable connection



Operating position.



Earth position.



Developments in electricity distribution

Electrical energy has become an indispensable part of modern society. Having a reliable, continuous supply of energy is becoming more and more important every day. From the point of view of energy companies and industry, this means that the distribution network has to meet ever more stringent demands. It goes without saying that safety and operational reliability play a major role.

As a result of the liberalisation of the energy market and the effect that this is having on the market, electricity is becoming an increasingly commercial product, with all that that entails. So when a distribution network is set



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 Holec – electrical field control, solid insulation 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.



Compact design.



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.



Easily adjustable electronic protection relay.



Clean and green

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.



Clear coding for recycling.

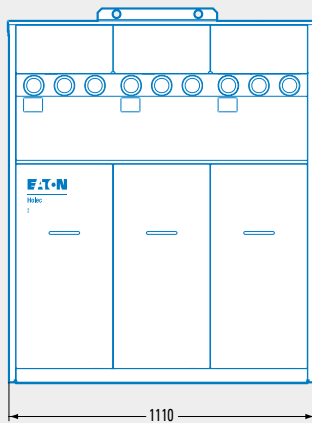
Xiria units can be used in compact transformer stations for energy distribution and in accessible stations in utilities and industry. They are also ideal for use in decentralised power generation systems such as wind farms.

up, far more attention is paid to the total costs over the life span of the network than before. The maintenance-free Xiria system is Eaton Holec's response to this. Sustainability and environmental friendliness are becoming more and more important in the choice of switch materials. Eaton Holec has taken this criterion as a starting point for the design of its new generation of ring main units - both in terms of production and during the entire service life of the unit, including the reuse of the materials used.

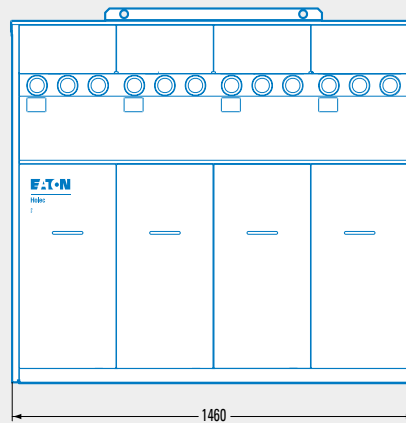
Based on these developments, Eaton Holec has launched Xiria, a system that responds to present and future developments in the liberalised energy market.



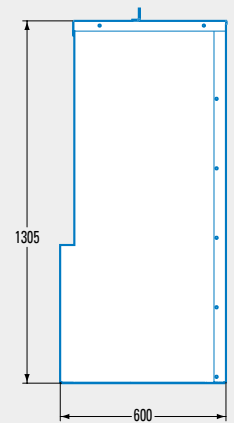
Dimensions (mm)



3-panel version, weight: 350 kg.



4-panel version, weight: 420 kg.



Technical data

Xiria

General

Rated voltage	kV	7.2	12	17.5	24
Impulse withstand voltage	kV	60	75	95	125
Power frequency withstand voltage	kV	20	28	38	50
Rated frequency	Hz	50/60	50/60	50/60	50/60
Internal arc resistance	kA-s	20-1	20-1	16-1	16-1

Busbar system

Rated normal current	A	630	630	630	630
Rated short-time withstand current	kA-s	20-1	20-1	16-1	16-1
Rated peak withstand current	kA	50	50	40	40

Circuit-breaker

Rated normal current	A	200	200	200	200
Rated breaking current	kA	20	20	16	16
Rated short-circuit making current	kA	50	50	40	40
Rated short-time withstand current ¹⁾	kA-s	20-1/0.4	20-1/0.4	16-1/0.6	16-1/0.6

¹⁾ Value depends on type of cable bushing.

Load break switch

Rated normal current	A	630	630	630	630
Rated mainly active load breaking current at cos. phi 0.7	A	630	630	630	630
Rated short-circuit making current	kA	50	50	40	40
Rated short-time withstand current	kA-s	20-1	20-1	16-1	16-1

Xiria complies with the following international standards

IEC 60694	Common specifications
IEC 60298	Metal-enclosed switchgear
IEC 62271-200	Metal-enclosed switchgear
IEC 60932	Severe climatic conditions
IEC 62271-100	Circuit-breakers (M1/E2)
IEC 60265-1	Switches (M1/E3)
IEC 62271-102	Disconnecter/Earthing switch (M0)
IEC 62271-102	Earthing via vacuum bottle (E2)
IEC 60529	Degree of protection
IEC 60044-1	Current transformers
EN 50181	Cable cones

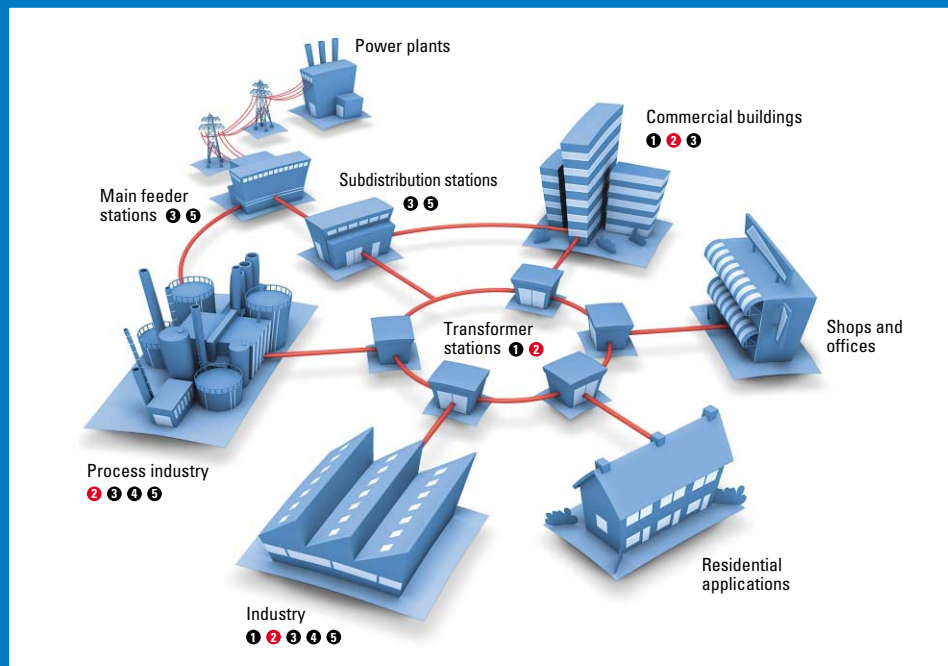


KEMA
REGISTERED QUALITY

Eaton's Electrical business is a global leader in electrical control, power distribution, and industrial automation products and services. Through advanced product development, world-class manufacturing methods, and global engineering services and support, Eaton's Electrical business provides customer-driven solutions under brand names such as Cutler-Hammer®, Durant®, Heinemann®, Holec® and MEM®, which globally serve the changing needs of the industrial, utility, light commercial, residential, and OEM markets. For more information, visit www.eatonelectrical.com.

Eaton Corporation is a diversified industrial manufacturer with 2004 sales of \$9.8 billion. Eaton is a global leader in fluid power systems and services for industrial, mobile and aircraft equipment; electrical systems and components for power quality, distribution and control; automotive engine air management systems, powertrain solutions and specialty controls for performance, fuel economy and safety; and intelligent truck drivetrain systems for safety and fuel economy. Eaton has 55,000 employees and sells products to customers in more than 125 countries. For more information, visit www.eaton.com.

Eaton Holec medium voltage products in the energy chain



Eaton Electric B.V.
P.O. Box 23
7550 AA Hengelo
The Netherlands
Tel. : +31 74 246 40 10
Fax : +31 74 246 40 25
holec-info@eaton.com



① Magnefix



② Xiria



③ SVS



④ Unitle



⑤ MMS



www.eatonelectrical.com
www.xiria.nl

© 2006 Eaton Electric B.V.
All rights reserved.

Printed in The Netherlands.
Form no. 994 153 C/2/SG
January 2006