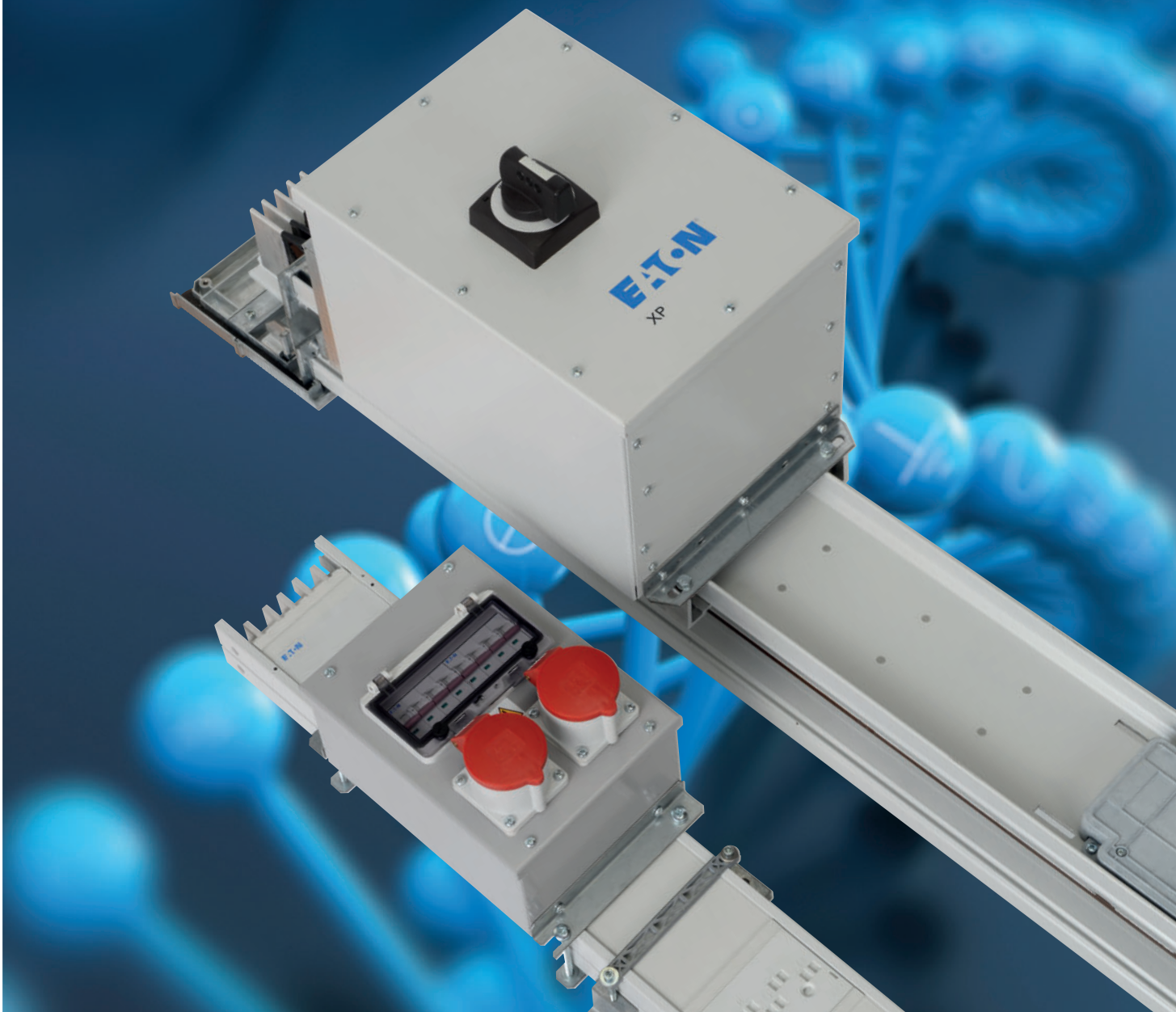


- LUX lighting range 25 - 63 A
- Low Power LP range 40 - 125 A
- Medium Power MP range 125 - 800 A
- Low Impedance XP range 800 - 6300 A

# The flexible design alternative to cable management





# Energizing a world that demands more.

## Discover today's Eaton.

### Powering business worldwide

As a global diversified power management company, we help customers worldwide manage the power needed for buildings, aircraft, trucks, cars, machinery and businesses.

Eaton's innovative technologies help customers manage electrical, hydraulic and mechanical power more reliably, efficiently, safely and sustainably.



*Powering Business Worldwide*



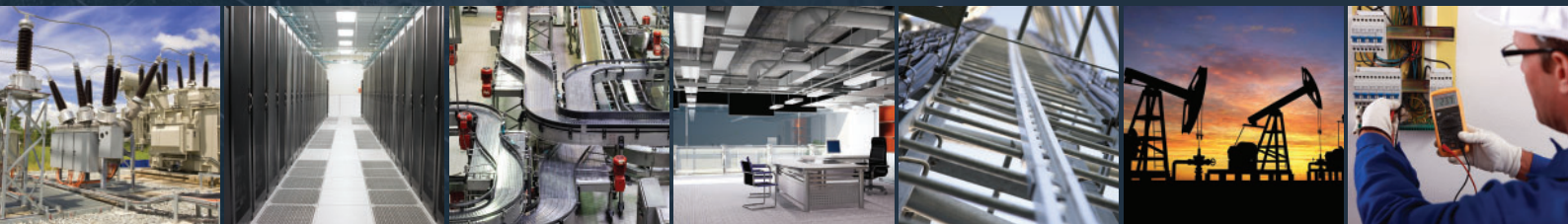


## We deliver:

- **Electrical solutions** that use less energy, improve power reliability and make the places we live and work safer and more comfortable
- **Hydraulic and electrical solutions** that enable machines to deliver more productivity without wasting power
- **Aerospace solutions** that make aircraft lighter, safer and less costly to operate, and help airports operate more efficiently
- **Vehicle drivetrain and powertrain solutions** that deliver more power to cars, trucks and buses, while reducing fuel consumption and emissions

We provide integrated solutions that help make energy, in all its forms, more practical and accessible.

With 2012 sales of \$16.3 billion, Eaton has approximately 103,000 employees around the world and sells products in more than 175 countries.



## Eaton's electrical business

### Eaton is a global leader with expertise in:

- Power distribution and circuit protection
- Backup power protection
- Solutions for harsh and hazardous environments
- Lighting and security
- Structural solutions and wiring devices
- Control and automation
- Engineering services

Eaton is positioned through its global solutions to answer today's most critical electrical power management challenges. With 100 years of electrical experience behind us, we're energized by the challenge of powering up a world that demands twice as much energy as today. We're anticipating needs, engineering products, and creating solutions to energize our markets today and in the future.

We are dedicated to ensuring that reliable, efficient and safe power is available when it's needed most.

[Eaton.com](http://Eaton.com)



# Switchgear Technology is in our DNA

Eaton's knowledge and understanding of industries, applications, technology, and products enables us to offer customers safe, reliable, and high performance solutions.

We have always been part of the creation of new Low and Medium Voltage Switchgear technology, and that experience is in each and every one of us.

## **Eaton's Low Voltage Systems can meet the needs of any installation**

Eaton Low Voltage Systems are designed to be as space and energy efficient as possible while maintaining easy access for installation, operation and maintenance. Low Voltage Systems from Eaton are highly standardized systems supported by quick configurations, quoting facilities, and fast deliveries.

Eaton's comprehensive low voltage system product portfolio has been specifically designed to meet the needs of all types of installations. The extensive portfolio includes: Power Supply and Control Assemblies, Package Substations, Main and Sub-Main Switchboards, Busbar Trunking, Motor Control Centres, Power Factor Correction, and Engineered Assemblies.

As might be expected from such a comprehensive portfolio, Eaton's low voltage power distribution and control systems have been used in applications, such as: Water industries, Pharmaceutical industries, Industrial facilities, Food & Beverage, Infrastructure projects, Mining & Steel industry and Commercial applications such as: Shops, Schools, Hospitals, Warehouses, Hotels, Prisons, Data centers, and Sport stadiums.

## **Reliable, safe and standardized design**

Eaton's range of low voltage systems not only provides you with optimum power distribution and motor control functionalities, they meet your most demanding requirements for safety and flexibility. When it comes to safety, Eaton's low voltage systems offer the highest level of protection.

It is Eaton's policy that all products are subjected to rigorous testing and verification programs by, or under the supervision of, internationally recognized and respected third party organizations including: KEMA, ASTA, LOVAG and UL (Underwriters Laboratories). In addition to third party performance and quality verification many Eaton low voltage systems hold specialist approvals from: DNV, Lloyds, UL and KEMA.





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### A complete range of 25 - 6300 A for any installation

Eaton's busbar Power Xpert® system is the obvious choice when searching for a combination of technical performance and attractive design. Constant development of the range for over 30 years has not only ensured economical and reliable solutions; Power Xpert® Busbar has evolved into an unsurpassed range able to adapt to virtually any installation.

Power Xpert® Busbar is an integral part of the product offering from Eaton. Complementing Eaton's range of low voltage distribution equipment from packaged substations and MV and LV distribution switchboards to a complete selection of fused switchgear, circuit breaker systems, motor control gear and OEM products.

Power Xpert® Busbar systems are thoroughly tested and comply fully with IEC 60439-2 (LUX, LP, MP Cu) and IEC 61439-6 (MP Alu, XP Cu, XP Alu). The range extends from 25 - 6300 A with lighting, low, medium and low impedance high power versions, together with a wide selection of accessories and tap-off units.

The straightforward and highly styled design makes Power Xpert® Busbar easy to both install and use – truly the system with style!

### Working with Power Xpert® Busbars brings you the following advantages

The Eaton range of Power Xpert® Busbar tested to the latest IEC 61439-6 standard makes for the perfect choice where flexibility and reliability are key to a project's success.

We have the ability to produce the busbars that meet the requirement of any indoor installation.

Eaton is a worldwide player in busbar systems. Delivering busbars to many countries globally.

The advantages of Power Xpert® busbars summarized:

- Complete range for Lighting (LUX), Low Power, Medium Power and High Power busbar up to 6300 A
- Verified by testing according to IEC 61439-6
- Complete product range in Copper and Aluminum
- Vertical ("Rising Main") or horizontal ("Distribution") configuration

### The feature-packed Power Xpert® Busbar system

The advantages of Power Xpert® Busbar are impressive, hence its popularity in replacing conventional cabling systems.

Not only does its unique design provide a neat and attractive alternative to cable, it also ensures flexibility and ease of installation in terms of jointing and fitting. With no requirement for cable trays and complicated terminations, all Power Xpert® Busbar ranges are supplied in convenient 3m lengths (alternative lengths if required), which can simply be 'tapped-off' where required.

An entire building can be fed from a single riser with no need for expensive and complicated cable runs to each floor. The Power Xpert® range has the ability to feed single and multi-phase loads simultaneously which means we can provide both space saving and cost-effective solutions.

The design is completely re-usable and can be easily assembled in any location in the minimum of time, while tap-off devices are located at any required point.

The options of circuit protection are themselves numerous with a comprehensive choice of tap-off devices including fuses (BS, NH, DIN), switch-disconnectors and switch-disconnector-fuses, MCCBs, MCBs, fuse-switch-disconnectors and industrial plugs and sockets (conforming to BS 1363, BSEN 60309-2, CEE 17, IEC 60309). Additionally, our wide range of angles and components can be combined to meet layout requirements without compromising on economy or space.

- Wide range of feed and tap-off units incorporating Eaton devices
- No de-rating in line with current standards
- Our busbars apply to IP55 in any orientation
- Tested Fire barriers kits available
- The Power Xpert® range ensures Ease of installation: we deliver with self-locating joints and any busbars lengths required up to 3 m
- High degree of flexibility
- Wide range of options and accessories
- Eaton busbars are fit-for-purpose for Eaton switchboards and panelboards
- Eaton has excellent customer service
- Eaton has worldwide references for busbar applications



**General construction**

- LUX Strong aluminium housing; tough moulded extrusion containing rigid copper wires
- LP, MP Aluminium profile with interlocking flame retardant plastic covers
- XP Aluminium housing, sandwich construction, high grade insulation

**Enclosure**

Degree of protection to IEC 60529 and BSEN 60529:

- LUX IP41 standard; IP55 on request
- LP IP4X standard
- MP IP4X standard; IP54 on request
- XP IP55 standard

**Conductor bars**

- LUX Four or six copper conductors
- LP Five copper conductors – three phases with separate neutral and earth providing facility for 'clean earth' where required
- MP Extruded copper or aluminium. Five copper or aluminium conductors – three phases with separate neutral and earth providing facility for 'clean earth' where required
- XP Extruded copper or aluminium 3 to 6 bars giving DP, TP, TP & N, TPN & E, TPN & E with 200% neutral

**Voltage drop**

- Refer to individual range technical data tables for details

**Insulation of tap-off points and support mouldings**

- LP Moulded polyester classified flammability grade UL-94-V-0
- MP, XP Low Smoke Halogen Free (LSHF) grade UL-94-V-0

**Conductor joints**

- Each length is supplied complete with all components necessary for connection to adjacent lengths or fittings

**Protective earth conductor**

- LUX Provided by the housing
- LP, MP Separate PE conductor included in the system
- XP Provided by the housing; an internal PE conductor can be supplied if required

**Straight lengths & fittings**

- Supplied as standard in 1 m, 2 m and 3 m lengths; shorter feeder and distribution lengths, angles, intersections and special bends are available on request

**Incoming feed arrangements**

- LUX Insulated cable end feed box with cable gland
- LP, MP Can be end or centre fed
- XP Transformer and switchboard flange connections plus end feed boxes for cables can be tailor-made to customer requirements

**Mounting and supports**

- LUX lighting range can be mounted in any plane; long-face vertical gives maximum strength for luminaire support on the LUX range
- The LP, MP and XP ranges can be mounted horizontally or vertically – universal mounting brackets are available suitable for wall mounting or suspension

**Conductor expansion**

- Generally any changes in relative lengths of conductors or housing are accommodated for by movement of the joint links and no special precautions are required

**Internal fire barriers**

- MP Factory fitted internal fire barriers are of the Intumescent Gasket type, 4 hr rated to BS476 Part 20
- XP No internal fire barriers are necessary with XP

**External fire barriers**

- MP, XP Tested with external fire barrier to EN1366-3/ DIN4102-9 S120 & I120  
Tested for circuit integrity according to DIN4102-12 E120  
External fire barriers available upon request

**Tap-off units**

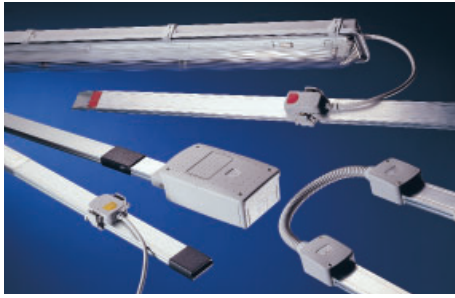
- LUX Insulated plug-in unit for Power Xpert® Busbar LUX
- LP, MP A variety of plug-in tap-off units are available for the LP & MP ranges which are simply clamped into position. LP units are insulated as standard (metalclad available) while MP are metalclad
- XP XP tap-off units are metalclad to IP55 as standard

**Tapping outlets**

- LUX Every 1 m along the face of the LUX range; simple plug-in fixing with tapping seal for unused outlets
- LP, MP Automatic shuttered outlets are provided every 0.33 of a metre on the front face of the busbar. The arrangement of tapping connections and apertures ensures the tap-off units are fitted correctly.
- XP Tapping outlets can be engineered to the required position

**Standards**

- LUX, LP, MP Copper Power Xpert® Busbar ranges conform to IEC 60439-2 and BSEN 60439-2. Testing will be updated to IEC 61439-6, before the current product standard IEC 60439-2 is withdrawn.
- MP Aluminium, XP Copper and XP Aluminium Power Xpert® Busbar ranges conform to IEC 61439-6 and BSEN 61439-6



### The feature-packed LUX lighting range, 25 - 63 A

Eaton's LUX lighting range is available in 25, 40 and 63 A versions. Used mainly for overhead installation it is suitable for all types of commercial lighting and is ideal for use in retail stores, offices and hotels due to its flexibility in creating specific lighting designs.

The aluminium-clad trunking is available in 4 pole and 6 pole configurations with tap-off positions every metre along a standard 3 m length. Simple to install, with no requirement for bolting lengths together the range also incorporates a flexible joint to accommodate changes in height or direction. The fused tap-off unit is phase interchangeable on site or at the factory and can be supplied with or without cable fitted.

A straightforward and highly styled answer to all of your lighting needs.

- 25, 40 & 63 A ratings
- Suitable for use at 400 V 3 phase 50 Hz
- Fully certified to IEC 60439-2 and BSEN 60439-2
- 4 pole & 6 pole
- Low weight Aluminium housing
- IP41 or IP55 when joint covers are fitted
- 1 m & 3 m standard lengths
- Single phase interchangeable tap-off
- Choice of end feeds
- Flexible lengths and accessories



### The feature-packed Low Power range, 40 - 125 A

Our low power range covers 40, 63, 80, 100 and 125 A ratings. With its attractive appearance and suitability for wall, bench, overhead, or underfloor installation it provides the obvious solution for a wide variety of institutional and commercial applications.

Supplied as standard in 1, 2 and 3 m lengths and complemented with a selection of angles and intersections it allows the layout of an installation to be arranged as required. The five bar configuration incorporates separate neutral and earth conductors providing the facility for a 'clean earth' where required. This, along with tap-off outlets every third of a metre and a variety of tap-off units, ensures the most efficient and flexible solution available - ideally suited for offices, banks, computer centres and light industrial applications.

- 40, 63, 80, 100 & 125 A ratings
- Suitable for use at 400 V 3 phase, 4 wire, 50 Hz
- Fully certified to IEC 60439-2 and BSEN 60439-2
- Low weight Aluminium housing
- IP4X ingress protection
- 5 Bar (internal 100% N)
- Standard 1, 2 & 3 m lengths, special lengths also available between 200 mm and 3000 mm
- Tap-offs outlets every 333 mm
- Wide selection of tap-off units fitted with MCBs or fuse links



### Power Xpert® MP-range, both Aluminium and Copper 125 - 800 A

Eaton's Power Xpert® Busbar MP system is available in 125, 160, 250, 400, 630 and 800 A ratings. Installed primarily in hotels, department stores, hospitals, offices and industrial installations the MP range is often used for vertical risers or as a supply system for the LP range, in addition to traditional overhead applications.

The Medium power range has options of either Aluminium or Copper conductor versions. The Aluminum conductor range is a new addition to the product family and is tested to the latest IEC 61439-6 and has ratings 160 A up to 630 A and now uses the 1 bolt cassette joint. The current copper range has ratings 125 – 800 A and is tested to IEC60439-2.

- Aluminum range from 160 - 630 A (tested IEC 61439-6)
- Copper range from 125 - 800 A (tested IEC 60439-2)

MP busbar is a 5 bar 3-phase system with a separate full neutral and integral earth conductor thereby removing the necessity to depend on the busbar housing for continuity.

Adaptable to virtually any design, changes in layout can be accommodated very easily:- a wide variety of angles and intersections are available, tap-off outlets are provided every third of a metre, and tap-off units are simply plugged into position – a popular and well-proven solution for industries where flexibility and adaptability are essential.

#### Features MP-range,

- Copper and Aluminium versions
- Fully certified to IEC 61439-6 (MP Alu) and IEC 60439-2 (MP Cu)
- Short Circuit Icw 25 kA
- No derating for whatever application or direction
- Medium Power protection IP4x & IP54
- Fire barriers available. Tested in accordance with EN 1366-3, DIN 4102-9 & DIN 4102-12
- MP design Aluminium busbar using cassette joint design for ease of installation
- No special mounting tools required
- Fixing brackets can be mounted anywhere on a 3 m length
- Lightweight Aluminium construction
- Complete range of tap-off units with Eaton devices
- Wide range of options and accessories
- Worldwide references



### Power Xpert® XP-range, both Aluminium and Copper 800 - 6300 A

The XP system brings the design of low impedance, sandwich construction busbar to a new superior level. The XP System is available in ratings from 800 - 6300 A.

The XP low impedance range has been newly tested to IEC 61439-6 and comes complete with IP55 as standard with short circuit capacities up to 100 kA.

- Aluminum range from 800 - 4000 A (tested to IEC61439-6)
- Copper range from 800 - 6300 A (tested to IEC61439-6)

XP busbar can be supplied in varying bar configurations from 3 bar to 6 bar. The system can be adapted to any building type with the wide variation of accessories available.

An easily assembled cassette type joint is provided for 800 - 6300 A ratings.

Adaptable to virtually any design, changes in layout can be accommodated very easily:- a wide variety of angles and intersections are available, tap-off outlets up to three per 3 m length, and tap-off units are simply plugged into position – a popular and well-proven solution for industries where flexibility and adaptability are essential.

#### Features XP-range,

- Copper and Aluminium versions
- Fully certified to IEC 61439-6 (XP Alu & XP Cu)
- Short Circuit Icw 100 kA
- XP Sandwich protection IP55 as standard
- Fire barriers available. Tested in accordance with EN 1366-3, DIN 4102-9 & DIN 4102-12
- XP new design has only 6 joint fixings, 62% less than previous design making installation even faster
- No special mounting tools required
- Fixing brackets can be mounted anywhere on a 3 m length
- Lightweight Aluminium construction
- Tap-off units with Eaton devices
- Low impedance and heat dissipation makes busbars an environmental friendly product
- Wide range of option and accessories
- Painted RAL7035
- Worldwide references





**Power Xpert® Busbars are a sustainable alternative**

- Power distribution with constant voltage and without energy loss
- Simple, resource-friendly installation and reconfiguration
- Minimal consumption of valuable materials, extremely durable

**Eaton's Services for Power Xpert® Busbar**

Due to the wide selection of ratings, components and tap-off units offered by the Power Xpert® Busbar range our specialised service includes a dedicated Autocad system used specifically for application design.

Eaton would be pleased to advise on any customer requirements, ensuring an accurate and cost-effective solution whatever the installation.

**Eaton can offer the following services:**

- **Site measurement**  
Upon receipt of an order an Eaton engineer will attend site to survey routes and discuss any technical detail or questions that you may have. This service normally applies to rising busbar systems and complex lateral runs where special lengths or angles maybe necessary to complete the project.
- **Engineering drawing**  
Eaton uses the latest Autocad based drawing packages to prepare full working drawings to make installations run smoothly.
- **Installation**  
we have an experienced site installation team that can provide competitive pricing for your installation works.
- **Commissioning**  
as part of our site services we can also offer the services for testing and commissioning of installations.

## LUX lighting application areas

Most common application areas for LUX lighting range are:

- Commercial Areas
  - Showrooms
  - Department Stores, etc.
- Industrial Areas
  - Factories
  - Distribution Warehouses

## LP Low Power application areas

Most common application areas for LP Low Power busbars are:

- Commercial Areas
  - Universities & College Workshops
  - Computer Suites
- Industrial Areas
  - Batteries Charge area
  - Roller Shutter doors
  - Feeder busbar to LUX lighting range

## MP Medium Power application areas

Most common application areas for MP Medium Power busbars are:

- Commercial Areas
  - Rising Mains Offices
  - Shopping Malls
  - Data Centres
  - Hospitals
  - Colleges
  - High Rise Buildings
- Industrial Areas
  - Manufacturing facilities / Factories
  - Distribution Warehouses

## XP Low Impedance application areas

Most common application areas for XP busbars are:

- Commercial Areas
  - Rising Mains Offices
  - Shopping Halls
  - Data Centres
  - Hospitals
  - Colleges
  - High Rise Buildings
- Industrial Areas
  - Manufacturing facilities / Factories
  - Switchboard / Transformer interlinks
  - Automotive





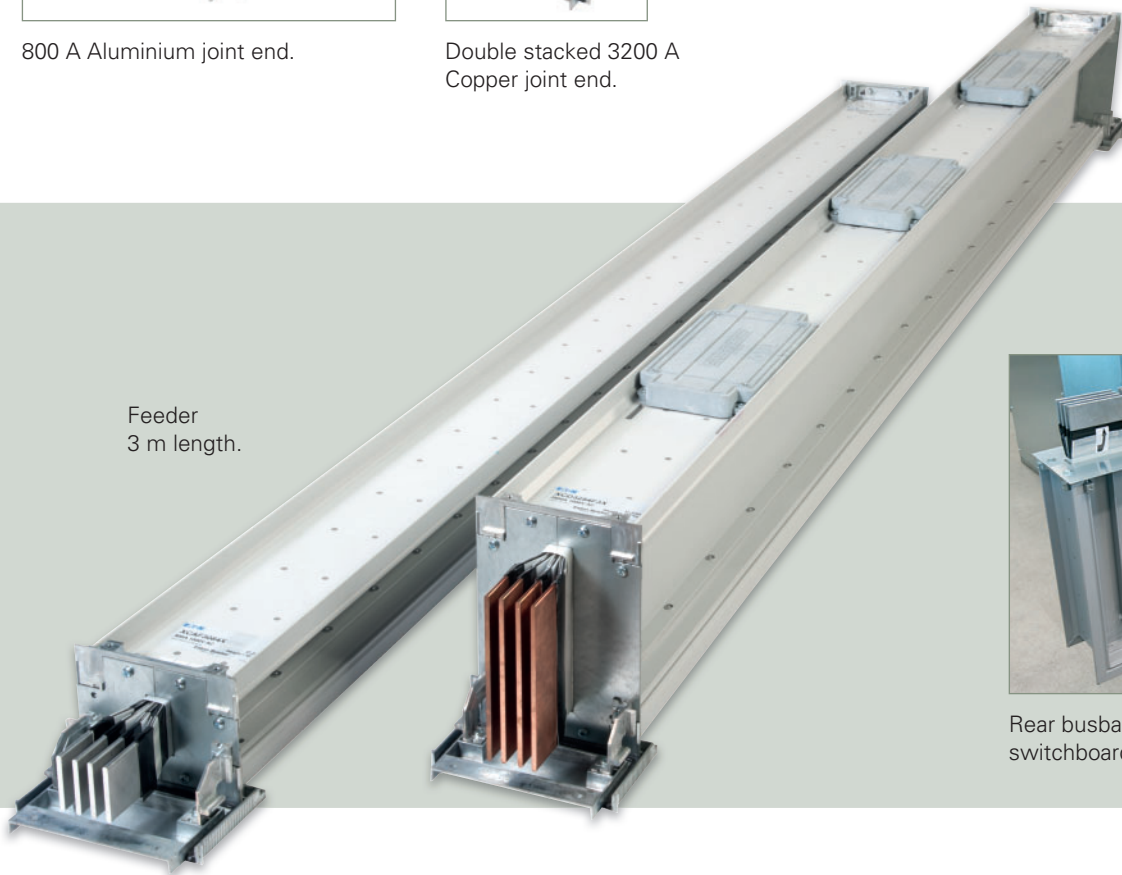
# Power Xpert® XP system overview



800 A Aluminium joint end.



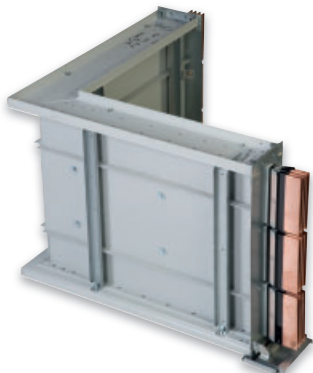
Double stacked 3200 A  
Copper joint end.



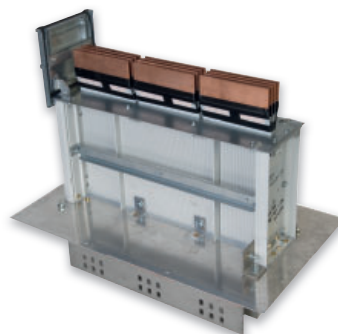
Feeder  
3 m length.



Rear busbar connection for  
switchboard.



6300 A Flat angle.

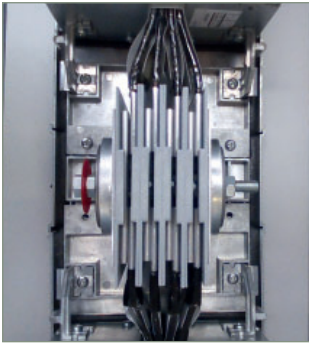


6300 A panel flange.

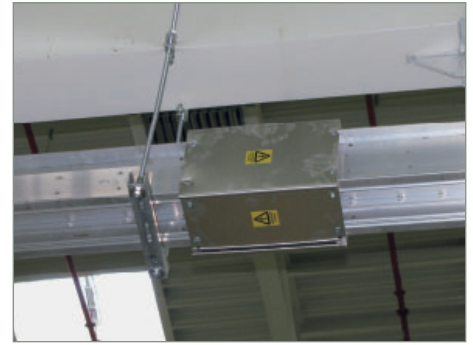
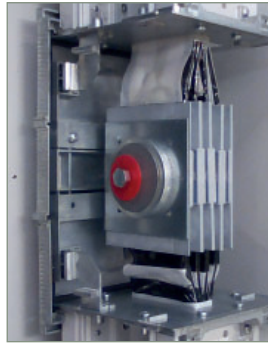


Long limbed angle edge.





Self locating joint assembly and cassette joint.



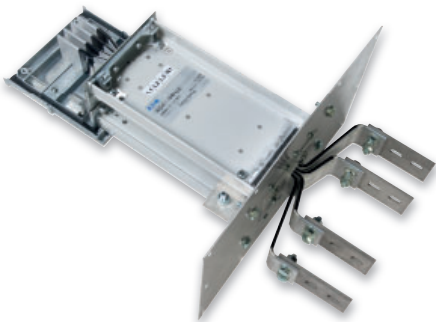
Busbar mounted on unistrut.



Tap-off mounted to busbar.



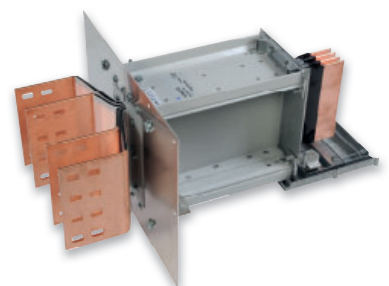
Plug-in tap-off unit.



Aluminium panel flange with tin plated copper connection pads.



4000 A cassette joint.



Copper panel flange.