Prisma Plus *LV Switchboards*
Certified for more safety

The Guiding System

P System
Cubicles

a brand of Schneider Electric

Merlin Gerin

Prisma Plus, an offer thought out for greater professionalism

With the Prisma Plus P system, Schneider Electric proposes high-performance technical solutions to produce low voltage electrical distribution switchboards up to 3200 A, in tertiary and industrial buildings. From the simplest through to the most sophisticated, these solutions, both quick, open-ended and tailored to meet customers' needs, are designed with a strict eye to detail to ensure a professional result.

Simple like Prisma

Production of the Prisma Plus switchboards follows the wiring diagram step by step.

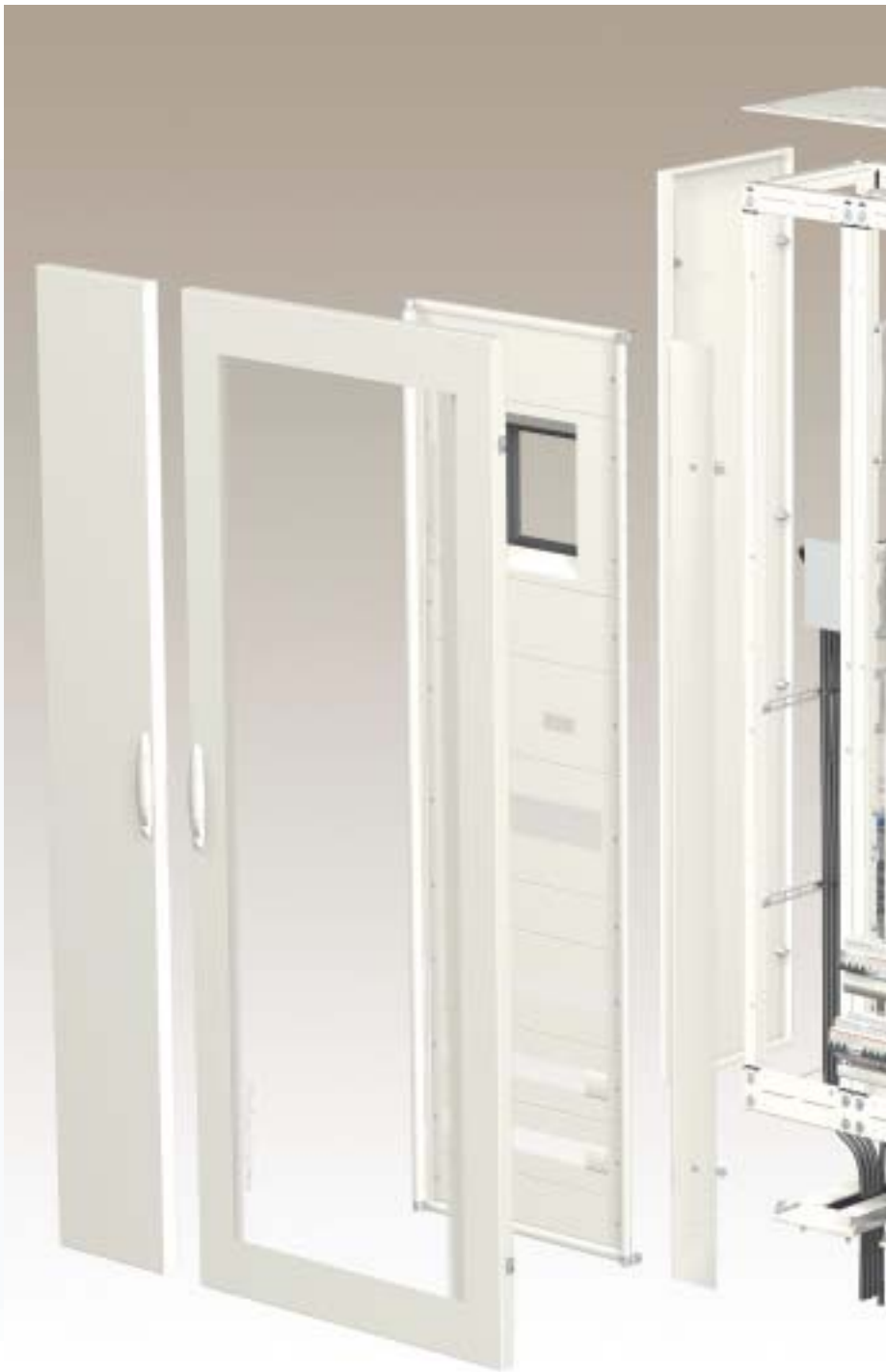
- Each feeder or group of feeders has a mounting plate/front plate functional assembly allowing optimised and safe installation of devices.
- The power circuit and connections of the switchboard can be produced using prefabricated and tested solutions.
- Enclosure size is determined simply according to the switchgear installed, the connection method and positioning and the required free rows.

Prisma Plus solutions conform to the specifications of standard IEC 60439-1:

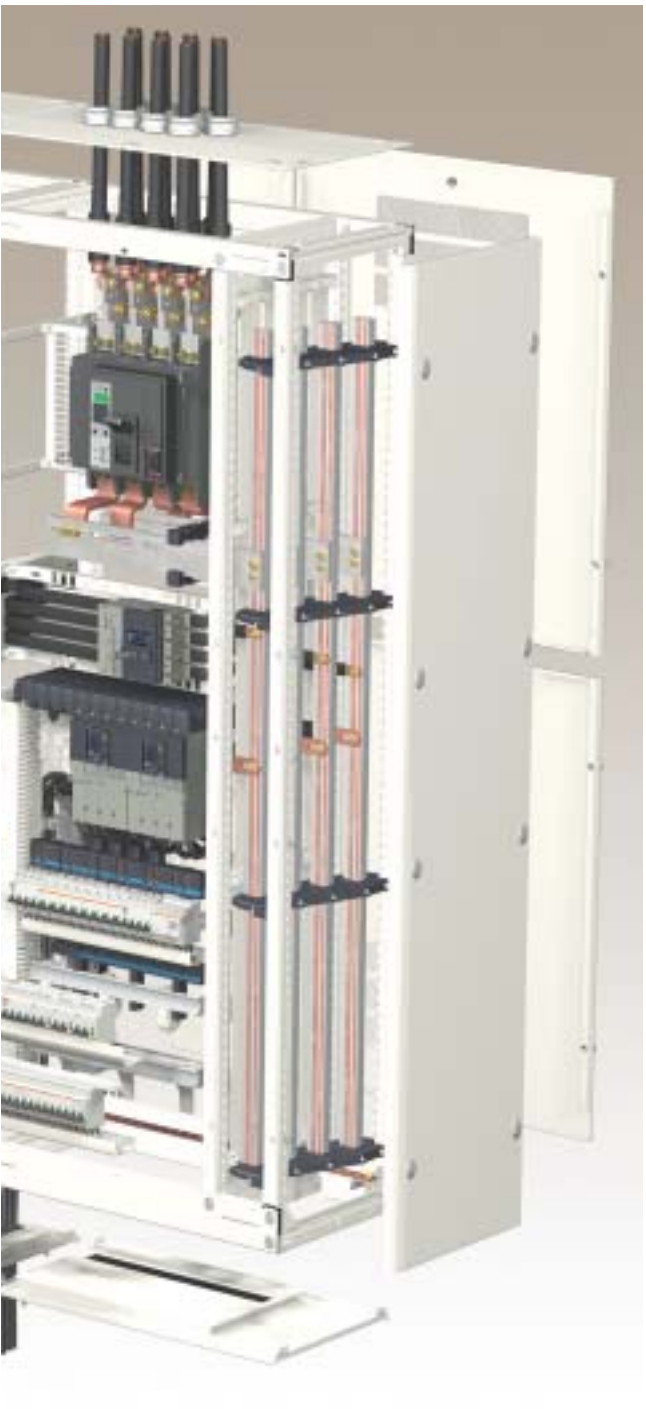
- temperature rise control
- dielectric properties
- short-circuit withstand
- protection circuit efficiency
- clearances and creepage distances
- mechanical operation
- IP withstand.

Installation, distribution and prefabricated connection systems have passed all tests successfully in the most restricting configurations.

Prisma Plus P System cubicles: open-ended switchboards suited to all functions



Device installation



Mounting plates dedicated to Merlin Gerin and Telemecanique devices for intuitive mounting

- Studs position the device vertically and horizontally to facilitate its mounting on the plate.
- Tapped holes allow front mounting of the device.
- Pins hold the mounting plate-device assembly in place on the framework before it is secured by self-tapping screws.
- For modular and Compact NS y 630A type switchgear, the mounting plates are secured to the front uprights of the framework. The volume freed thus facilitates cable insertion.
- Devices facilitate installation of terminal blocs for auxiliairies and trunking for fine wiring.

Mounting plate for Compact NS, fixing to the uprights at the front of the framework

One front plate per switchgear type for rapid installation

- For more safety, the front plates only allow access to the device setting and control devices.
- Each front plate is mounted on the supports by captive 1/8 turn screws.
- The front plate support frame is of the swivel type to ensure quick access to switchgear after installation.

Swivel type front plate support frame for quick access to switchgear

Ready to install fucntional units

«Power» and fine wiring connections

Busbars to respect the customer's freedom of choice

Linergy profile

Copper to copper contacts

Same bar support can be used up to 1600A

An outstanding technological breakthrough for the Linergy busbar

- The profiled aluminium bars with copper to copper contact pad combine lightness and rigidity.
- The aluminium creates profiled sections that are adapted to the various current strengths while also ensuring uniform positioning of the busbar and thus of implementation of connections.
- The busbar is installed in a 150 mm wide built-in bar compartment, that can be positioned to the left or right of the switchgear compartment.
- A unique support model is used to maintain the staggered bars. All the connection points are thus easily accessible from the front of the switchboard.
- Sliding screws allow connections without drilling throughout bar height.
- The connection with a horizontal busbar is possible without drilling.

Horizontal busbar connection

Linergy busbar support

Flat busbars, the essential element of tradition

- Two types of flat busbar are available, 5 or 10 mm thick:
  - a plain horizontal busbar,
  - a vertical slotted busbar installed in a side compartment or at the back of the cubicle.
- Fishplating between horizontal busbars is rapid and reliable. It is performed using breakable head nuts that guarantee tightening torque and avoid drilling through bars.

Perfectly dimensioned prefabricated connections and power supply

- The prefabricated connections allow current distribution on either side of the busbar.
- Their compactness is synonymous with rapidity of implementation.
- Their shapes, sizes and materials are adapted to the devices the various mounting cases.
- Tested in the most restrictive configurations, these prefabricated connections contribute to proper operation of the installation.

Incoming unit prefabricated connections on Linergy busbar

Busbar prefabricated connections to feeder unit

Reliable, open-ended distribution blocks for greater customer comfort

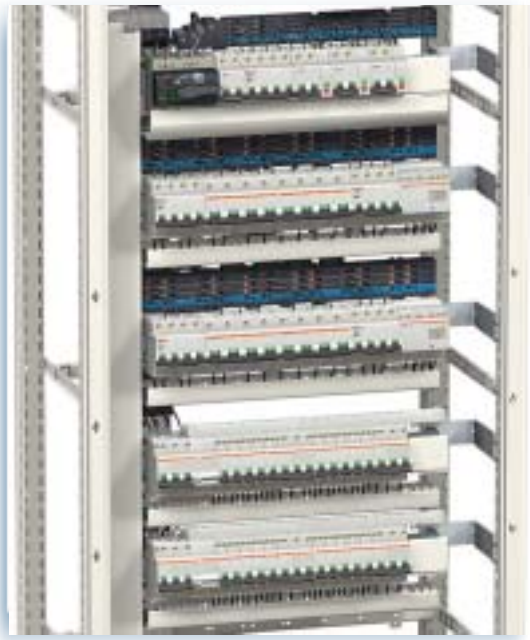
A fully insulated Polypact distribution block

■ Dedicated to Compact NS circuit-breakers and Interpact INS switches, this horizontal distribution block allows ultra-fast interchanging or addition of devices.

■ Tooth covers and blanking plates make free rows safer.

■ The Polypact distribution block includes a built-in trunking to organise auxiliary wiring routing.

Polypact 3 NS250 distribution block



Multiclip 80 and 200A distribution blocks
Comb busbars

Quick to implement
Multiclip distribution blocks

■ The Multiclip 80 and 200A distribution blocks are fully insulated.

■ The Multiclips are clipped onto the rear of the rails for modular switchgear.

■ The spring loaded terminal connection is reliable and maintenance-free.

■ The possibility of mixing all modular device types ensures maximum reliability of these distribution blocks.

■ In event of switchboard modification, devices can be interchanged easily and quickly.

Comb busbars for a flexible and economic solution

■ Comb busbars are fully insulated and can be cut into lengths.

■ The devices are plugged in with just one operation.

■ With the Clario system comb busbars, you can mix different devices and carry out modifications without taking the comb busbar apart.

Partitioning to provide even more safety for maintenance work

■ In most installations, Prisma Plus cubicles require no special partitioning.
The protection of users and installations is ensured by their construction:

□ front plates can only be opened with a tool

□ doors that give access to live parts can be locked

□ partitioning of the connection upstream of the incoming unit

■ To ensure safe work behind the front plate, it is possible to equip the devices with terminal covers and achieve forms 2b, 3b and 4a by means of partitioning.

Form 2 screen all heights with punched out holes for connection insertion

Connections

A power supply for each site

Upstream connection by Canalis Busbar Trunking

■ Switchboard upstream connection is adapted to the site power distribution. For each connection type, Prisma Plus provides simplicity and safety:
□ by the Canalis Busbar Trunking: the junction block is equipped with breakable nuts ensuring tightening torque,
□ by cables and Busbar Trunking: framework girders can be dismounted to facilitate cable insertion.

Upstream connection by cables

Feeder connections adapted to configurations

Mounting plates designed to include the entire device environment
The mounting plates are designed for cable flanging, trunking or strap fixing, fine wiring routing and terminal block fixing for auxiliaries…

Transferred connection

Connections transferred from the switchgear zone to the cable compartment
Transferred connection allows connection in the cable compartment. The volume of the cable compartment is adaptable to guarantee a maximum user comfort.
■ The cables directly enter the cable compartment without radius of curvature.
■ The areas of competence are identified and respected.

Vertical PE conductor made with Linergy profile

Connection on terminals and earth bar

Connection to terminals
■ The connection terminal blocks and earth bars, directly plugged in, allow a high degree of positioning flexibility for better accessibility.
■ The terminal blocks, equipped with spring loaded terminals, guarantee ease, speed and reliability of connection.
■ Horizontal and vertical trunkings and straps are used to route power wiring for enhanced switchboard organisation and quality.

Gland plates for insertion of cables organised to comply with IP
■ The gland plates are plain or in two-parts to prevent cut-outs.
■ All the fixing points, extremely accessible, facilitate their positioning.

Enclosures

Rapidity of framework mounting that can be timed!

- The closed profiled uprights of the framework are lightweight, rigid and easy to handle.
- The framework is assembled by 12 screws all accessible from the outside.
- The same framework is used to produce switchboards from IP30 to IP55.
- 8 framework sizes only cover all needs.

Framework assembly from the outside

Customised panelling in next to no time

- The panels are assembled after mounting and cabling, thus ensuring total accessibility of the switchboard components during its implementation.
- The richness of its «wardrobe» satisfies all customer requirements.
- Most of the panels are fixed by 1/4 turn screws.

Cubicles without door, with door and with transparent door

Controlled changes

Prisma Plus lets the customer upgrade his switchboard at any time according to his needs and requirements.

- The frameworks can be associated sideways, in depth or to form an angle.
- The panels are chosen according to the necessary degree of protection and can be easily modified.
- The front plate support swivel type frame and the doors, plain or transparent, are right/left reversible.
- The type of handle locking can be modified at any time to ensure the customer access control.

Everything has been foreseen…
even the unforeseeable!

IP55 framework side association

Technical data

	Icw	IP	IK	nbr mod.	height	width	depth	associability
cubicles	85KA rms /1s	30/31/55	07 08 10	36	2 000 mm	300 mm 400 mm 650 mm 800 mm	400 mm 600 mm	width and depth

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