

Prisma Plus *LV Switchboards* Devised to save time

The Guiding System

G System
Wall mount and
floor standing enclosure





Prisma Plus, an offer thought out for greater professionalism

With the Prisma Plus G system, Schneider Electric proposes high-performance technical solutions to produce low voltage electrical distribution switchboards up to 630 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 the 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 G System floor standing and wall mounted enclosures: open-ended switchboards suited to all functions

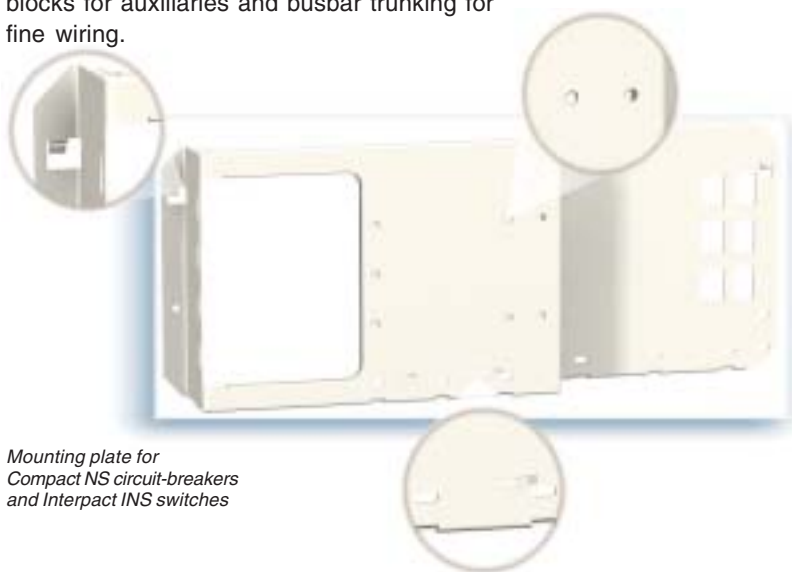




Device installation

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 functional uprights before being secured by screws.
- Devices facilitate installation of terminal blocks for auxiliaries and busbar trunking for fine wiring.



Mounting plate for Compact NS circuit-breakers and Interpact INS switches

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.
- All the front plates are removed in one single operation to allow direct access to switchgear after installation.



Front plates offer safe access to device switching apparatus



"Power" and fine wiring connections

Busbars to respect the customer's freedom of choice

The Powerclip 125 to 630A, compact, single-piece and fully insulated busbars for innovating distribution

- The Powerclip busbars, delivered pre-mounted, are composed of tapped copper bars, fitted into insulating supports.
- Positioned to the side of the switchboard, these busbars allow short connections, downstream of the incoming unit or to supply switchgear or distribution blocks.
- Connections are made by means of 6^{mm} and 10^{mm} tap-off terminals or directly by lugs.
- Clip-on translucent covers and end covers guarantee IP xxB. These covers can be cut-out to allow insertion of the connections with the switchgear.



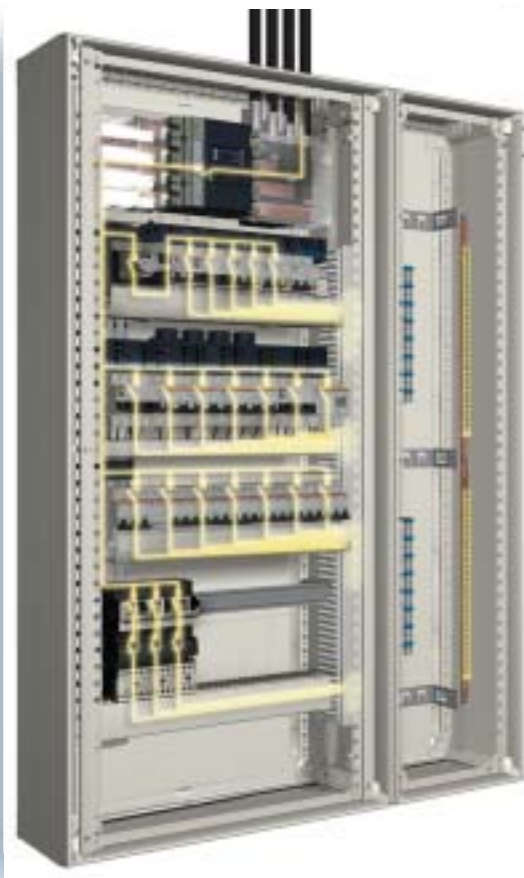
Powerclip compact and insulated busbar



Tap-off terminals and supply of switchgear



IPxxB protection cover



Power circuit obvious architecture

Flat busbars, for traditional distribution

- Tapped flat busbars are available for installation in the duct (from 160 to 630A) or at the back of the wall mounted enclosure (from 160 to 400A).
- The bars are mounted on insulated supports screwed onto the functional uprights.
- For mounting in ducts, supports ensure that the bars are staggered to optimise the number of connection points.

Perfectly dimensioned prefabricated connections

- Prefabricated connections ensure supply of the busbar and its downstream distribution.
- They are both compact and quick to implement.
- Their shapes, sizes and materials are perfectly adapted to the various mounting cases.
- These tested prefabricated connections contribute to proper operation of the installation.



630A and 250A supply modules upstream and downstream from the busbar



Polybloc for centralised distribution

Reliable, open-ended distribution blocks for greater customer comfort

Fully reworked Polybloc centralised distribution blocks

- The Polybloc 250A distribution blocks are installed directly downstream from the Compact circuit-breakers and the Interpact switches up to 250A, without need for additional vertical modules.
- Their spring loaded terminals ensure rapidity of implementation, simplify phase re-balancing and guarantee long-term connection clamping reliability.
- Contacts are sloping to ensure ergonomic connection and to comply with cable radii of curvature.
- Distribution blocks have 6 10² feeders and 3 16² feeders per phase.
- They can also accommodate additional 2x35² modules.



Sloping of the Polybloc contacts



Supply of a Multiclip 200A. maintaining IP xxB at the connection points



Supply of switchgear before distribution by Multiclip 80A.

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.



Comb busbar

Partitioning to provide even more safety for maintenance work

Prisma Plus offers two types of partitioning:

- Vertical partitioning between the switchgear zone and the duct.
- Horizontal partitioning between the functional units.



Connections

A power supply for each site

Incomer connection modules

- Dedicated to Compact NS100/250 and NS400/630 with horizontal mounting, the connection modules are positioned directly upstream from the device.
- The cables are connected directly and without bends to the connection module terminal pads.
- The cables run either into the wall mounted enclosure (NS100/250), or are connected in the duct (NS400/630).
- A translucent cover protects operators from live parts, while leaving the copper connection transparent.



Incomer connection modules (Top insertion of cables)



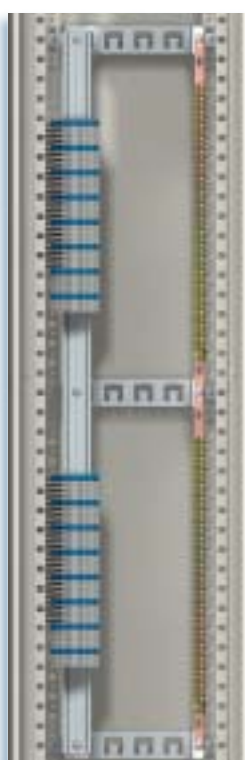
Incomer connection modules (Bottom insertion of cables)

Feeder connections adapted to configurations



Connection terminal block and earth bar in the switchgear zone

Earth bar with spring terminals



Connection terminal block and earth bar in the duct

Connections to terminals

- The connection terminal blocks and earth bars, directly plugged in, can be positioned in the duct opposite the switchgear.
- The terminal blocks, equipped with spring cages, guarantee ease, speed and reliability of connection.
- Horizontal and vertical trunkings and straps are used to route power wiring for enhanced switchboard legibility and quality.

Gland plates for insertion of cables organised to comply with IP

- Enclosures are delivered with a top or bottom dismountable plastic plate equipped with ribs as cutting guides.
- The plastic plate can be replaced by:
 - a plain metal plate,
 - a punched-out interface to accommodate specific plates.



Enclosures

Ensure mounting autonomy

Guides and references ensure self-positioning of the panelling parts. Everything has been designed so that only one person is needed to mount the enclosures. This mounting comfort results in a rapidity of implementation that can be timed!



Guides on pillar for panelling parts

Customised panelling in next to no time

- The panelling is assembled after mounting and cabling to maintain complete accessibility in the switchboard during its implementation
- The richness of its «wardrobe» satisfies all customer requirements.



Maximum accessibility

More solutions to install the switchboard

- An original wall mounting device compensates inaccurate drilling.
- Metal structures, self-supporting or wall mounted, are used to adapt to all environments and facilitate transport.
- Pre punch-outs at the wall mounted enclosure back are provided for rear cable insertion.
- A spreader is used for cable routing, while also ensuring a faultless finish.



Wall mounting from the bottom

Controlled changes

Prisma Plus lets you upgrade your switchboard at any time according to customers' needs and requirements.

- Doors, both plain and transparent, are right/left reversible.
- The partial doors are ideal for the installation of man-switchboard interfaces.
- A door can be added after the switchboard has been installed.
- The type of handle locking can be modified at any time to ensure the customer access control.
- The wall mounted enclosures can be associated horizontally and vertically.

Everything has been foreseen... even the unforeseeable!

Wall mounted and floor standing enclosures with plain door and transparent door



Technical data

| | A. | l _{cw} | l _{pk} | IP | IK | nbr rows | height | width | depth | associability |
|-------------------------------------|-------|-----------------|-----------------|----|-----|----------|----------------------------------|--|-----------------------|---------------------------------|
| Pack wall mounted enclosures | 160A. | 10kA rms / 1s | 30kA | 30 | 7/8 | 2 | 5 heights from 480 mm to 1080 mm | 555 mm (48 mod of 9 mm or 24 modules of 18 mm) | 157 mm (without door) | height with enclosure extension |
| | | | | | | 3 | | | | |
| | | | | | | 4 | | | | |
| | | | | | | 5 | | | | |
| | | | | | | 6 | | | | |

| | A. | l _{cw} | l _{pk} | IP | IK | nbr mod. | height | width | depth | associability |
|-------------------------------|-------|-----------------|-----------------|----------|-----|----------|----------------------------------|---|---|------------------|
| Wall mounted enclosure | 630A. | 25kA rms / 1s | 52.5kA | 30/31/43 | 7/8 | 6 | 8 heights from 330 mm to 1380 mm | 595 mm (enclosure) 305 mm (cable duct) | 205 mm (without door) 250 mm (with door) | width and height |
| | | | | | | 9 | | | | |
| | | | | | | 12 | | | | |
| | | | | | | 15 | | | | |
| | | | | | | 18 | | | | |
| | | | | | | 21 | | | | |
| | | | | | | 24 | | | | |
| | | | | | | 27 | | | | |

| | | | | | | | | | | |
|----------------------------------|-------|---------------|--------|----------|-----|----|--|---|------------------------------|--|
| Floor standing enclosures | 630A. | 25kA rms / 1s | 52.5kA | 30/31/43 | 7/8 | 27 | 3 heights from 1530 mm to 1830 mm (including plinth) | 595 mm (basic enclosure) 305 mm (cable duct) | 205 mm 250 mm (with door) | width and height (with w.m. enclosure above) |
| | | | | | | 30 | | | | |
| | | | | | | 33 | | | | |

| | | | | | | | | | | |
|--|-------|---------------|--------|----|----|----|----------------------------------|---|---|----------------------------------|
| Wall mounted and floor standing enclosures IP55 | 630A. | 25kA rms / 1s | 52.5kA | 55 | 10 | 7 | 7 heights from 450 mm to 1750 mm | 600 mm (basic enclosure) 325 mm or 595 mm (extensions) | 230 mm 290 mm (including 30 mm handle) | width height «square» «L» shaped |
| | | | | | | 11 | | | | |
| | | | | | | 15 | | | | |
| | | | | | | 19 | | | | |
| | | | | | | 23 | | | | |
| | | | | | | 27 | | | | |
| 33 | | | | | | | | | | |

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