Low Voltage electric distribution

Prisma Plus System G

Wall-mounted and floor standing enclosures up to 630 A

Catalogue
2008

Schneider Electric

Illustrated table of

Schneider Electric

contents Prisma Plus System G

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Alphabetical index

Catalogue number index

Catalogue number index

Catalogue number index

Catalogue number index

Catalogue number index

Catalogue number index

Catalogue number index

Our answers to your needs

System G

630 A

■ Small companies, etc.

■ Buildings
■ Offices
■ Residential, etc.

■ Laboratories
■ Healthcare centres, etc.

■ Shopping centres
■ Supermarkets
■ Malls, etc.

Pack enclosures

160 A

■ Schools
■ Hotels, etc.

System P

3200 A

■ Hospitals
■ Internet data centres, etc.

■ Food industry
■ Deary, etc.

■ Bottling factories
■ Packaging factories
■ Automobile factories, etc.

■ Logistics centres, etc.

Prisma Plus
electrical switchboards

Prisma Plus - a comprehensive range of enclosures and cubicles

PD395100

Prisma Plus - a tried and tested modular system

A dependable electrical installation
The total compatibility of Schneider devices with the Prisma Plus system is a key advantage in ensuring a high level of installation dependability.
System design has been validated by type tests as per standard IEC 60439-1 and benefits from the combined experience of Schneider customers over many years.

An upgradeable electrical installation
Thanks to modular design, Prisma Plus switchboards can be modified easily to integrate new functions as needed.
Maintenance operations, carried out with the switchboard de-energised, are fast and straight-forward due to easy access to devices.

Total safety for personnel
Work in a Prisma Plus switchboard is risk-free when carried out by qualified persons in compliance with all applicable safety regulations.
Devices are installed behind protective front plates and only the operating handles are accessible.
Additional internal separations protect against direct contact with live parts.
Terminal shields are mandatory for installation of Compact NSX and Interpact INS/INV devices in Prisma Plus enclosures.

Prisma Plus
electrical switchboards

PD390161

IP30/31 pack wall-mounted enclosures

■ Applications:
□ indoor enclosures containing all modular devices, for distribution switchboards in small and medium-sized commercial buildings (hotels, offices, shops), or for medium-sized and large residential installations (houses)
□ supplied mounted, with modular rails and front plates (48 modules (9 mm) per row)
■ rated operational current: 160 A
■ degree of protection: IP30 with or without door
■ degree of protection against mechanical impacts:
□ IK07 (without door)
□ IK08 (with door)
■ enclosure dimensions:
□ five heights: 480 mm to 1080 mm
□ width: 555 mm
■ depth: 157 mm without door
□ 186 mm with door and handle.

PD390162

IP30/31/43 wall-mounted and floor-standing enclosures

■ Applications:
□ indoor wall-mounted and floor-standing enclosures for all types of low-voltage switchboards (main, subdistribution and final) in commercial and industrial environments
□ supplied in kit form, can be combined side-by-side and one on top of another
■ rated operational current: 630 A
■ degree of protection:
□ IP30: with or without door
□ IP31: with door + canopy
□ IP43: with door + canopy + gasket
■ degree of protection against mechanical impacts:
□ IK07 (without door)
□ IK08 (with door)
■ enclosure dimensions:
□ eleven heights: 330 mm to 1830 mm (including the plinth for floor-standing enclosures)
□ two widths: 595 mm and 305 mm (duct)
□ depth: 205 mm without door
□ 250 mm with door + handle

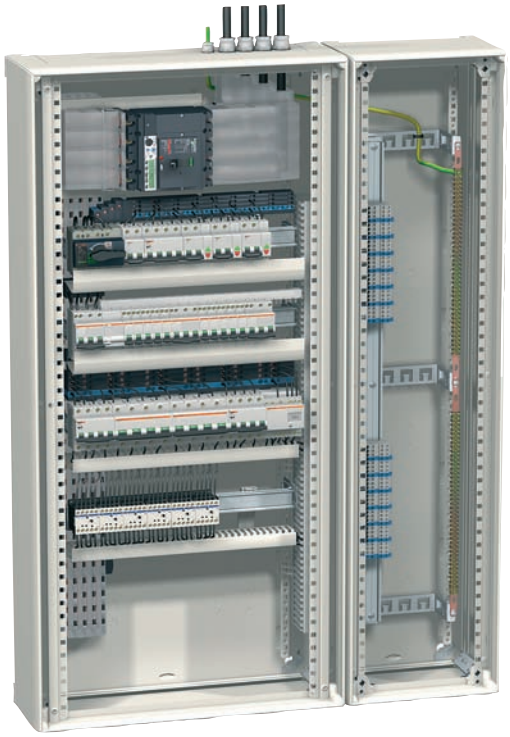
IP55 enclosures

■ Applications:
□ indoor enclosures for distribution, protection and process control in commercial and industrial applications
□ supplied in kit form, can be combined side-by-side and one on top of another
■ rated operational current: 630 A
■ degree of protection: IP55
■ degree of protection against mechanical impacts: IK10
■ enclosure dimensions:
□ seven heights: 450 mm to 1750 mm
□ width: basic enclosure: 600 mm
□ extensions: 575 and 325 mm (duct)
□ depth: 260 mm + 30 mm (handle).

Electrical switchboards up to 630 A

The Prisma Plus functional system

PD390227



The Prisma Plus functional system can be used for all types of low-voltage distribution switchboards up to 630 A, in commercial and industrial environments.

Switchboard design is very simple.
A functional structure for devices
made up of wall-mounted and floor-standing enclosures that can be used alone or combined.
A distribution system
made up of centralised distribution blocks and vertical busbars installed on the side or in the rear of the switchboard.
Complete functional units
Each device is part of a functional unit comprising:
- a dedicated mounting plate for device installation
- a front plate to block direct access to live parts
- prefabricated busbar connections
- systems for on-site connections and running of auxiliary wires.

The functional units are modular and are arranged rationally, one on top of another, within the enclosure.
The system includes everything required for functional unit mounting, supply and on-site connection.
The components of the Prisma Plus system and those of the functional units in particular have been designed and tested taking into account device characteristics. This design approach ensures a high degree of reliability in system operation and optimum safety for personnel.

PD390228

Functional units are arranged rationally, one on top of another.

Electrical switchboards up to 630 A

Prisma Plus enclosures

PD390240

■ steel sheet metal
■ electrophoresis treatment + hot-polymerised polyester epoxy powder, white colour RAL 9001.
■ **IP30 / 31 / 43 wall-mounted enclosures**
□ degree of protection:
- IP30: with or without door
- IP31: with door + canopy
- IP43: with door + canopy + IP43 gasket
□ IK07 (without door), IK08 (with door)
□ can be dismantled
□ can be combined side by side and one on top of another
□ eight heights from 330 to 1380 mm
□ width: 595 mm
□ width of duct: 305 mm, can be combined side by side
□ depth: 250 mm with door (205 mm without door)
■ **IP30 / 31 / 43 floor-standing enclosures**
□ degree of protection:
- IP30: with or without door
- IP31: with door + canopy
- IP43: with door + canopy + IP43 gasket
□ IK07 (without door), IK08 (with door)
□ can be dismantled
□ can be combined side by side
□ three heights: 1530, 1680 and 1830 mm
□ width: 595 mm
□ width of duct: 305 mm, can be combined side by side
□ depth: 250 mm with door (205 mm without door)
■ **IP55 enclosures**
□ IK10
□ can be dismantled
□ can be combined side by side and one on top of another
□ width: 600 mm
□ seven heights: 450 to 1750 mm
□ widths: 325 and 575 mm, can be combined side by side and one on top of another
□ depth: 260 mm with door + 30 mm (handle).

Advantages of Prisma Plus switchboards

A dependable electrical installation
The total compat bility of Schneider devices with the Prisma Plus system is a key advantage in ensuring a high level of installation dependability.
System design has been validated by type tests and benefits from the combined experience of Schneider customers over many years.

An upgradeable electrical installation
Thanks to modular design, Prisma Plus switchboards can be modified easily to integrate new functional units as needed.
Maintenance operations, carried out with the switchboard de-energised, are fast and straight-forward due to easy access to devices and the use of standard components.

Total safety for personnel
Devices are installed behind protective front plates; only the operating handles are accessible.
The electrical installation and operating personnel are fully protected.
In addition, all distribution components are protected by an IPxxB degree of protection.
Terminal shields are mandatory for installation of Compact NSX and INS/INV devices in Prisma Plus enclosures.

Electrical switchboards built using the Prisma Plus functional system and Schneider recommendations fully comply with international standard IEC 60439-1.

Electrical characteristics

Prisma Plus components comply with standard IEC 60439-1 and have the following electrical characteristics:
■ rated insulation level of main busbars at rear of enclosure: 1000 V
■ rated operational current Ie (40 °C): 630 A
■ rated peak withstand current Ipk: 53 kÂ
■ rated short-time withstand current Icw: 25 kA rms / 1 second
■ frequency: 50/60 Hz.

Examples of switchboard configurations

Incomer	
Compact NSX250 4P	
Fixed, front connection Toggle Incoming cables via bottom to incoming connection block	

Distribution
Polybloc distribution block

Outgoing devices	
Multi 9 devices	
Supply	80 A Multiclip Comb busbars
Cable running	Straps + cover
Connection	Terminal block at top of switchboard
Motor circuit breakers	
Supply	Comb busbars
Cable running	Straps + cover
Connection	Terminal block at top of switchboard

IP30 enclosure
Wall-mounted enclosure, W = 595 mm, H = 930 mm
Plain door
Partial plain door

PD390891

PD390287

Examples of switchboard configurations

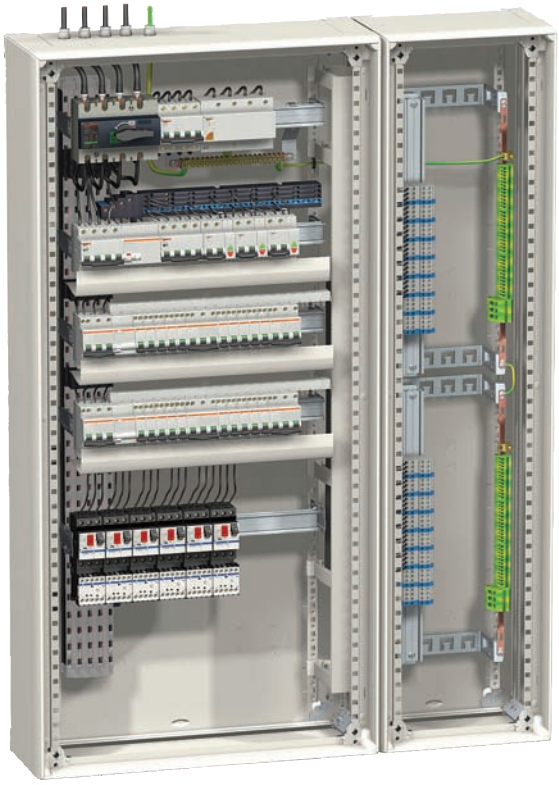
Incomer	
Interpact INS160 4P	
Incoming cables via top	

Distribution	
160 A Powerclip busbars	

Outgoing devices	
Multi 9 devices	
Supply	80 A Multiclip Comb busbars
Cable running	Straps + cover
Connection	Terminal block in duct, W = 300 mm
Motor circuit breaker + contactor combinations	
Supply	Cable wiring
Cable running	Straps + cover
Connection	Terminal block in duct, W = 300 mm

IP30 enclosure
Wall-mounted enclosure, W = 595 mm, H = 1230 mm
Transparent door
Duct, W = 305 mm, H = 1230 mm
Plain door

PD390446



PD395007

Examples of switchboard configurations

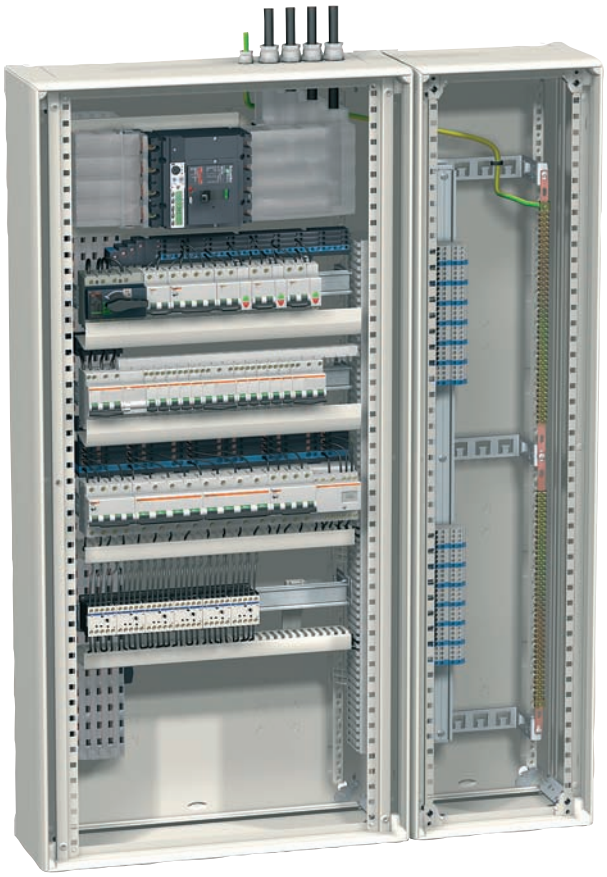
Incomer	
Compact NSX250	
Fixed, front connection Toggle Incoming cables via top to incoming connection block	

Distribution
Powerclip busbars

Outgoing devices	
Multi 9 devices	
Supply	80/200 A Multiclip Comb busbars
Cable running	Straps + cover Trunking
Connection	Terminal block in duct, W = 300 mm
Motor circuit breakers	
Supply	Cable wiring
Cable running	Trunking
Connection	Terminal block in duct, W = 300 mm

IP30 enclosure	
Wall-mounted enclosure, W = 595 mm, H = 1230 mm	Transparent door
Duct, W = 305 mm, H = 1230 mm	Plain door

PD390288



PD390289

Examples of switchboard configurations

Incomer	
Interpact INS160	
Lateral handle Incoming cables via bottom, directly to device	

Distribution	
Distribloc distribution block	

Outgoing devices	
Multi 9 devices	
Supply	Comb busbars
Cable running	Straps + cover
Connection	Terminal block at bottom of enclosure
Motor control and protection devices	
Supply	Comb busbars
Cable running	Trunking
Connection	Terminal block at bottom of enclosure

IP55 enclosure	
Wall-mounted enclosure, W = 595 mm, H = 1250 mm	Transparent door

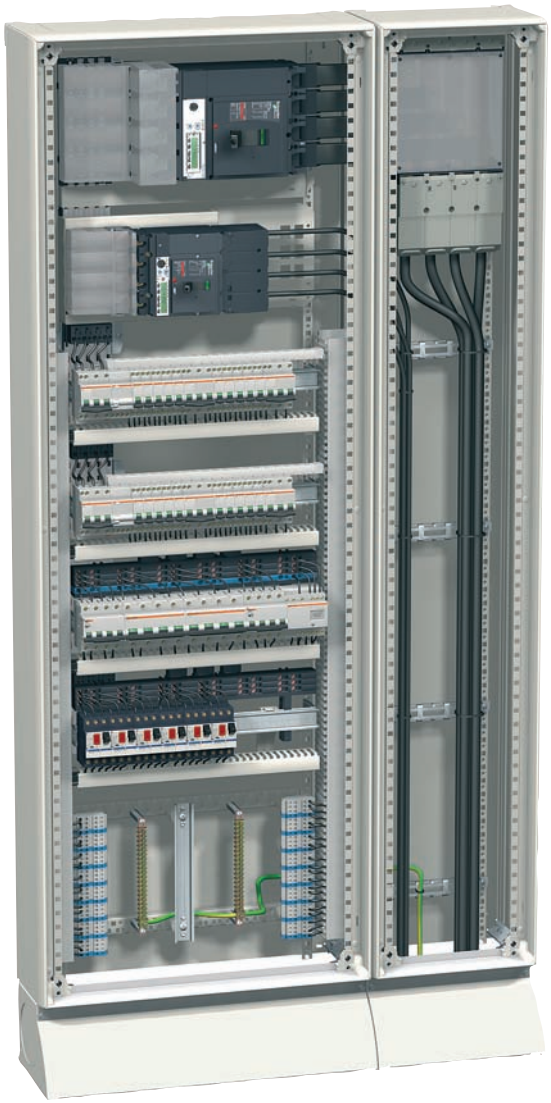
PD390450

PD390451

Examples of switchboard configurations

Incomer	
Compact NSX400	
Fixed, front connection Toggle Incoming cables via bottom in duct (W = 300 mm) to incoming connection block	
Distribution	
Powerclip busbars	
Outgoing devices	
Compact NSX250	
Fixed, front connection Toggle	
Supply	Powerclip busbars wi h power supply block
Multi 9 devices	
Supply	Comb busbars 200 A Mul iclip
Cable running	Trunking
Connection	Vertical terminal block at bottom of floor-standing enclosure
Motor control and protection devices	
Supply	200 A Mul iclip
Cable running	Trunking
Connection	Vertical terminal block at bottom of floor-standing enclosure
IP30 enclosure	
Floor-standing enclosure, W = 595 mm, H = 1830 mm	Transparent door
Duct, W = 305 mm, H = 1830 mm	Plain door

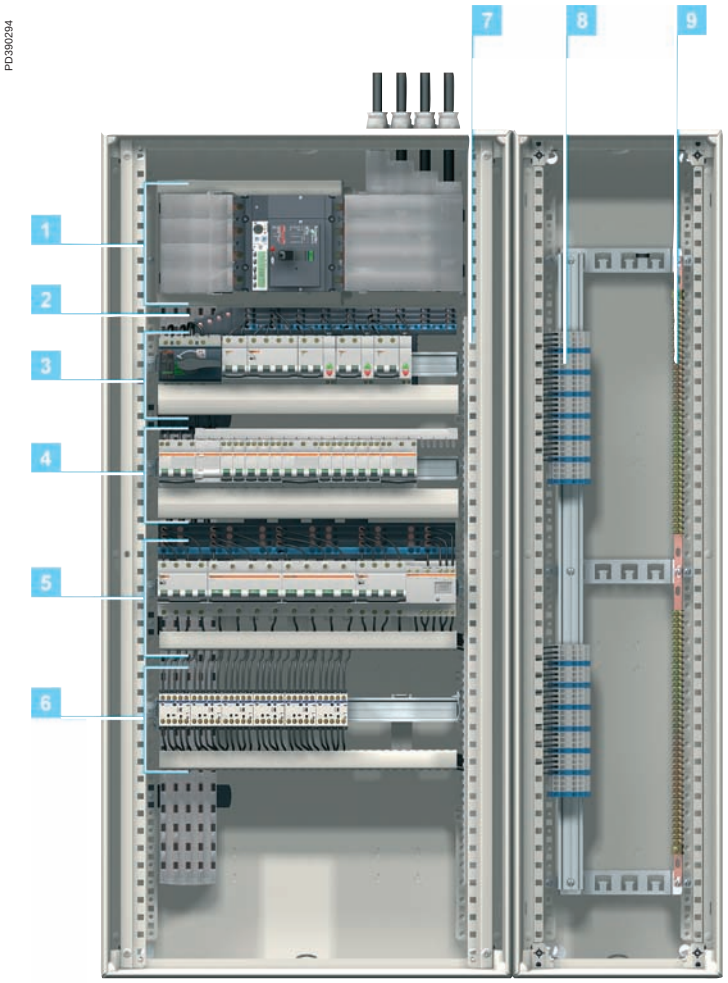
PD395034



Examples of switchboard configurations

PD390893

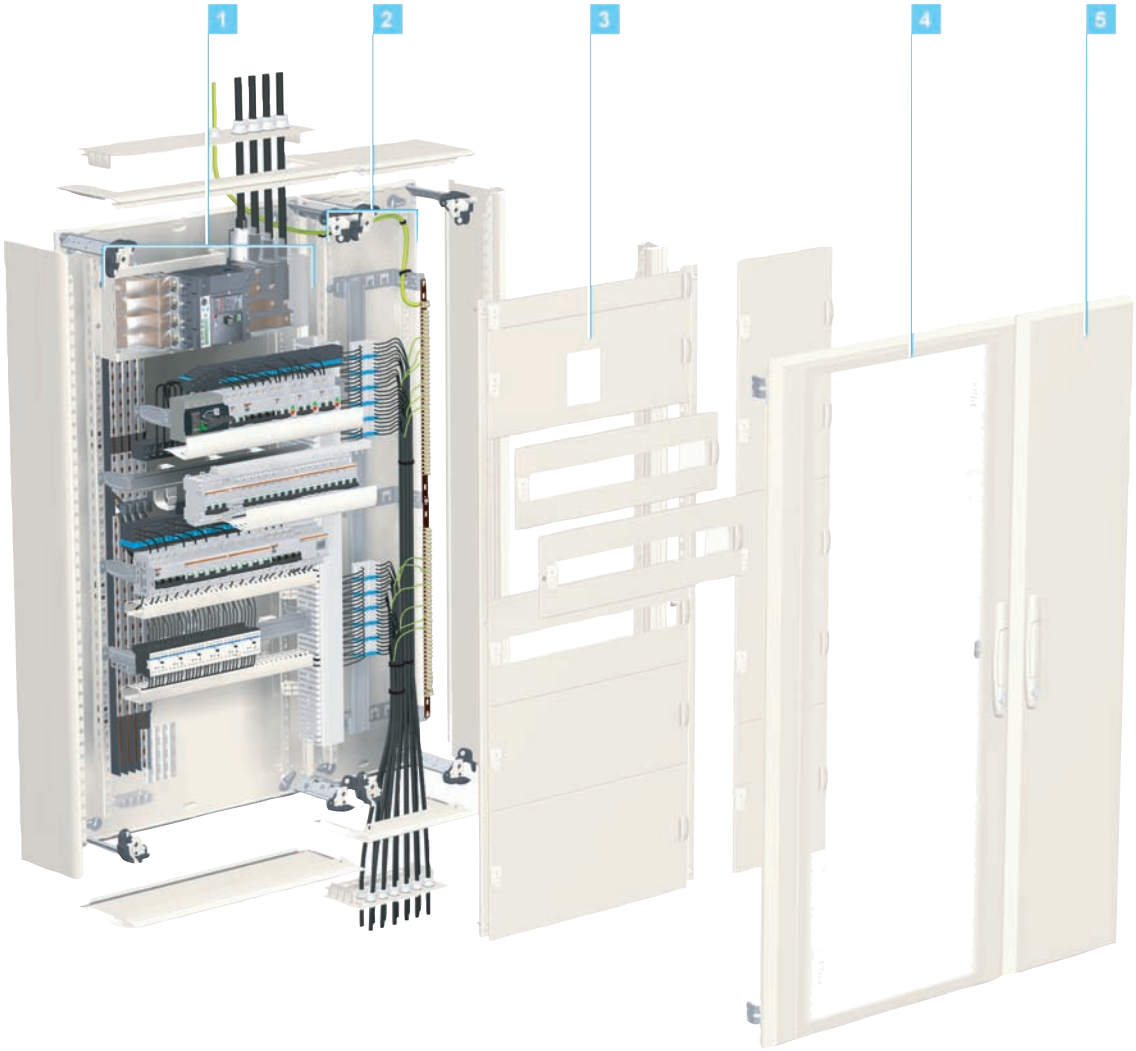
The functions of an electrical switchboard



1	NSX250 functional units	See page B-6
2	Main distribution using Powerclip busbars	See page C-5
3	Modular device functional units	See page B-16
	Distribution using 80 A Multiclip distribution blocks	See page C-17
	Horizontal cable running using straps	See page C-34
4	Modular device functional units	See page B-16
	Distribution using comb busbars	
	Horizontal cable running using straps	See page C-34
5	Modular device functional units	See page B-16
	Distribution using 200 A Multiclip distr bution blocks	See page C-18
	Horizontal cable running using trunking	See page C-35
6	Motor control and protection functional units	See page B-36
	Horizontal cable running using trunking	See page C-35
7	Vertical cable running using trunking	See page C-35
8	Terminal block	See page C-31 See page C-27
9	Earth bar	See page C-23

The functions of an electrical switchboard

PD3903300



1	Device compartment	See page D-2
2	Connection compartment	See page D-2
3	Front plate	See page D-2
4	Transparent door	See page D-6
5	Plain door	See page D-6

Pack wall-mounted enclosures

Presentation

PD390161-52

Pack electrical-distr bution enclosures are specially designed for modular devices up to 160 A.

Pack enclosures come mounted with:
- modular rails
- front plates
- blanking plates
- a plastic gland plate
- an earth bar
- a template for drilling wall-mounting holes.

Pack enclosures are supplied assembled and equipped, ready for device mounting. An equipped enclosure can be ordered with a single catalogue number.

Based on the System G wall-mounted and floor-standing enclosures, they are compatible with the same mounting components:
- current distribution systems made up of:
  - vertical busbars installed on the side or in the rear of the switchboard.
  - centralised distr bution blocks
  - distribution blocks for modular rows
- horizontal cable straps and trunking
- earth and neutral bars
- identification labels
- closing accessories (barrel locks and inserts).

The design of Pack enclosures ensures easy device access and mounting.

Optimised depth and an extra-thin door ensure perfect integration in all environments.

Models with 4, 5 and 6 rows are particularly well-suited for the incomer function:
- more space available for wiring of the incoming device
- optimised number of front plates.

A plain or transparent door can be added.

The modular rails are made of an aluminium alloy and their supports are crimp mounted in the factory.

A number of components clip directly on the rails:
- 63 and 80 A distribution blocks
- all horizontal cable-running accessories such as:
  - cable straps
  - trunking supports
- earth bar supports.

PD390210

The front plates are secured by two quarter-turn fasteners.
Electrical continuity is achieved naturally, without having to add clips or earthing braids.

The components of the Prisma Plus system and those of the functional units in particular have been designed and tested taking into account device characteristics. This design approach ensures a high degree of reliability in system operation and optimum safety for personnel.

Pack wall-mounted enclosures

Advantages of Prisma Plus switchboards

PD390526

A dependable electrical installation
The total compat bility of Schneider devices with the Prisma Plus system is a key advantage in ensuring a high level of installation dependability.
System design has been validated by type tests and benefits from the combined experience of Schneider customers over many years.
Maintenance operations, carried out with the switchboard de-energised, are fast and straight-forward due to easy access to devices and the use of standard components.

Total safety for personnel
Devices are installed behind protective front plates; only the operating handles are accessible.
The electrical installation and operating personnel are fully protected.
In addition, all distribution components are protected by an IPxxB degree of protection.
Terminal shields are mandatory for installation of Compact NSX and INS/INV devices in Prisma Plus enclosures.

Electrical switchboards built using the Prisma Plus functional system and Schneider Electric recommendations fully comply with international standard IEC 60439-1.

Characteristics

- rated operational current: 160 A
- degree of protection: IP30 (with or without door)
- degree of protection against mechanical impacts: IK07 (without door), IK08 (with door)
- insulation: class 1
- compliance with standards: IEC 60439-1
- dimensions:
  - H: see the table on the next page
  - W: 555 mm
  - D: 157 mm without door
    186 mm with sheet metal door
- electrophoresis treatment + hot-polymerised polyester epoxy powder, white colour RAL 9001
- capacity per row: 48 width modules (9 mm each).

Standards

IEC international standards

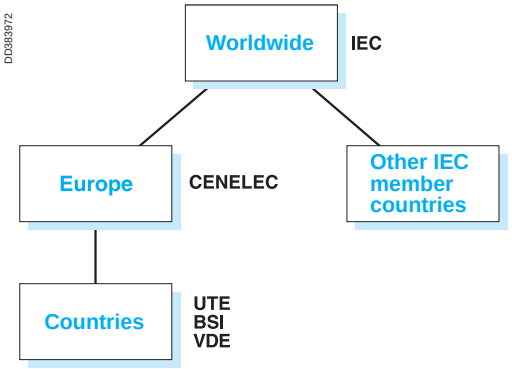
IEC member countries

Argentina	Luxemburg
Australia	Malaysia
Austria	Mexico
Belarus	Netherlands
Belgium	New Zealand
Brazil	Norway
Bulgaria	Pakistan
Canada	Poland
China	Portugal
Croa ia	Rumania
Czech Rep.	Russia
Denmark	Singapore
Egypt	Slovakia
Finland	Slovenia
France	South Africa
Germany	Spain
Greece	Sweden
Hungary	Switzerland
India	Thailand
Indonesia	Turkey
Iran	Ukraine
Ireland	United Kingdom
Israel	United States
Italy	Yugoslavia
Japan	
Korea (Rep. of)	

The IEC (International Electrotechnical Commission) is a worldwide organisation for standardisation comprising all national electrotechnical committees (IEC National Committees).

The object of the IEC is to promote international cooperation on all questions concerning standardisation in the electrical and electronic fields.
To that end, the IEC publishes International Standards.
Their preparation is entrusted to technical committees and any IEC National Committee interested in the subject dealt with may participate in the preparatory work.

National standards



CEI / IEC
Commission Electrotechnique Internationale
CENELEC
Comité Européen de Normalisation ELECtrotechnique
UTE
Union Technique de l'Électricité
VDE
Verband der Elektrotechnik, Elektronik und Informationstechnik e.v. (German electrotechnical, electronics and computer technology standardisation organisation)
BSI
British Standards Institution

In Europe
The IEC documents are first studied by CENELEC, which establishes:
■ either a European standard (EN), often identical to the IEC standard, which then becomes the applicable national standard in all the member countries
■ or, in the event of differences, a harmonisation document (HD).

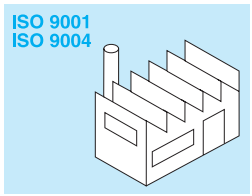
Other IEC member countries
Each country is autonomous and can accept the IEC standard as the national standard, with or without modifications.
Even though they are IEC members, countries such as Japan and the United States continue to develop their own standardisation systems.

Countries without a standardisation system
It is possible to refer to an IEC standard in the framework of a project.

Standards

The different types of standards

DD381775



Design and manufacture.

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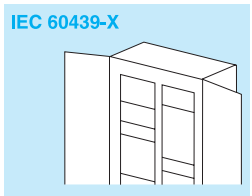
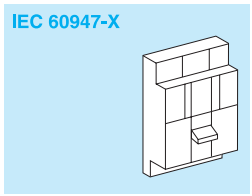


Switchgear and controlgear assemblies.

DD381777



Switchgear and controlgear.

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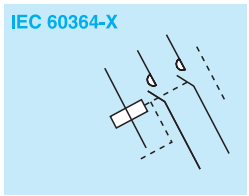


Installation.

There are different types of standards, including:
- management standards
- installation standards
- product standards.

Management standards

ISO 9004: Quality-management systems - guidelines for performance improvements. Used in setting up a quality-management system.

ISO 9001: Quality management systems - requirements. Used for certification audits.

ISO 14004: Environmental-management systems. General guidelines on the principles, systems and supporting techniques.

ISO 14001: Environmental-management systems. Specification with guidance for use

The majority of Schneider Electric development centres and factories are certified ISO 9001 and ISO 14001.

Installation standards

The set of IEC 60364-X standards defines the main principles and rules on:
- determining general characteristics of installations
- protection
- selection and installation of equipment
- verification and maintenance of installations.

Product standards

They apply to devices or assemblies and are aimed at ensuring correct operation and safety of the concerned products.
- standards on low-voltage switchgear and controlgear:
  - IEC 60947-1 : general rules
  - IEC 60947-2 : circuit breakers
  - IEC 60947-3 : switches and disconnectors
  - IEC 60947-4 : contactors
  - IEC 62208 / EN 50298: empty enclosures.

- standards on low-voltage switchgear and controlgear assemblies:
  - IEC 60439-1: general rules
  - IEC 60439-2: busbar trunking systems
  - IEC 60439-3: distribution boards
  - IEC 60439-4: assemblies on construction sites
  - IEC 60439-5: power distr bution in networks.

Regulations in a given country may make certain standards legally binding and may also create additional safety requirements.

In addition to providing proof of the conformity of its quality-management system, a product manufacturer can demonstrate the quality of products by providing proof that the design and manufacture comply with the requirements in the applicable standard.
Proof of conformity may be a declaration by the manufacturer or a certificate supplied by an independent organisation.

Standards

Enclosure standards

Standards IEC 62208 and EN 50298 lay down definitions, classifications, characteristics and test requirements for enclosures used for switchgear and controlgear assemblies.
They apply to empty enclosures before installation of the devices by the panelbuilder, as supplied by the manufacturer.
They apply to one-piece enclosures and to enclosures supplied in kit form.

Type tests of standard EN 50298

1 - Static load
2 - Hoisting
3 - Axial loads of metal inserts
4 - IK code
5 - IP code
6 - Thermal stability
7 - Resistance to heat
8 - Resistance to abnormal heat and to fire
9 - Dielectric strength
10 - Protective-circuit continuity
11 - Weather resistance
12 - Corrosion resistance
13 - Marking

CE marking

CE marking is a regulatory symbol attributed under the sole responsibility of the manufacturer and intended for the verification authorities of the European countries that enforce the European regulations.
It allows free circulation of a product in the European Union and certifies that it complies with the basic requirements in all the applicable European directives.
CE marking is not a quality symbol and does not indicate conformity with a standard

The CE declaration is intended exclusively for the authorities in charge of verifying compliance with the applicable regulations and it is drafted, signed and held for presentation to the authorities by the manufacturer.
For the Prisma Plus range, the declaration is the responsibility of the Schneider Electric unit that has designed and developed the product.
For LV switchboards, the declaration is the responsibility of the panelbuilder.

The following products receive CE marking:
■ all products that are liable to endanger the safety of persons, animals and property (LV directive)
■ all products likely to emit electromagnetic disturbances above a standardised threshold or to be disturbed during operation (EMC directive).

Consequences:
■ the Prisma Plus range falls under the LV directive only
■ LV switchboards are covered by the LV directive and may also fall under the EMC directive, depending on the type of devices incorporated.

CE

For the Prisma Plus range, CE marking is applied:
■ on the packing of "mechanical" components
■ on the product itself for "electrical" components.
For the LV assemblies created by the panelbuilder, CE marking is applied:
■ on the packing
■ on the rating plate (if applicable)
■ on one of the documents accompanying the switchboard when it is shipped.

Standards

Degree of protection

Standard IEC 60364-5-51 lists and codifies a large number of external influences to which electrical installations can be subjected, including the presence of water, solid objects, shocks, vibrations, corrosive substances, etc.

IP code

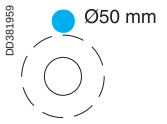
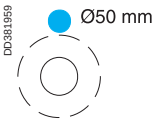
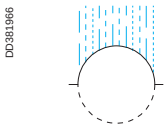
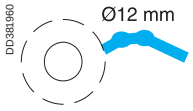
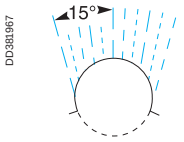
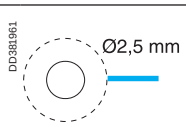
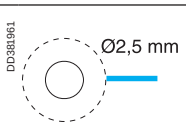
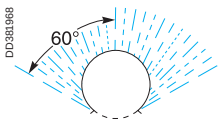
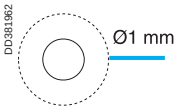
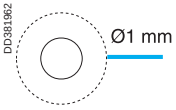
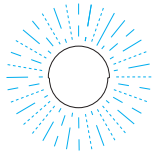
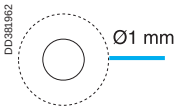
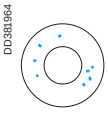
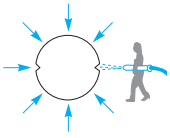
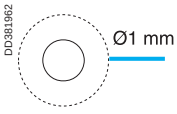
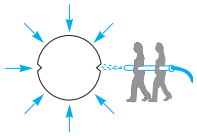
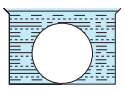
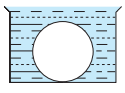
Standard IEC 60529 (IP code, February 2001) indicates the degrees of protection provided by an enclosure for electrical devices against access to hazardous parts, against penetration of solid foreign objects and against penetration of water.

These standards do not apply for the protection against the risks of explosion or conditions such a humidity, corrosive vapour, fungus or vermin.

The IP code is made up of two characteristic numerals and can include an additional letter when the actual protection for persons against access to the hazardous parts is better than that indicated by the first numeral.

The first numeral characterises the protection provided against the ingress of solid foreign objects and the protection of persons.

The second numeral characterises the protection provided against the ingress of water with harmful effects.

1st numeral			2nd numeral		
	Protection of persons	Protection against ingress of solid objects		Protection against ingress of water	
1	Protected against access with back of hand		Protection against solid foreign objects larger than 50 mm		1 Protected against vertically dripping water (condensation) 
2	Protected against access with a finger		Protection against solid foreign objects larger than 12 5 mm		2 Protected against dripping water up to 15° from vertical 
3	Protected against access with a tool		Protection against solid foreign objects larger than 2.5 mm		3 Protected against spraying water up to 60° from vertical 
4	Protected against access with a wire		Protection against solid foreign objects larger than 1 mm		4 Protected against splashing water from all directions 
5	Protected against access with a wire		Protected against dust (dust protected)		5 Protected against water jets from all directions 
6	Protected against access with a wire		Dust tight		6 Protected against powerful water jets from all directions 
					7 Protected against the effects of temporary immersion in water 
					8 Protected against the effects of continuous immersion in water 

Standards

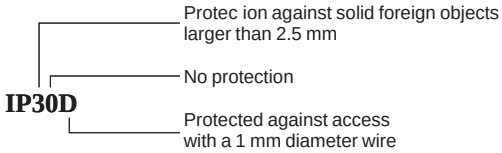
Additional letter

The additional letter is used only if the actual protection of persons is higher than that indicated by the first characteristic numeral of the IP code.

Additional letter	Protection
A	Protected against access with back of hand
B	Protected against access with a 12 mm diameter finger
C	Protected against access with a 2.5 mm diameter tool
D	Protected against access with a 1 mm diameter wire

If only the protection of persons is of interest, the two characteristic numerals are replaced by the letter "X", e.g. IPXXB.

Illustration of the above explanations:



Remarks

■ The degree of protection IP must always be read and understood numeral by numeral and not as a whole.
For example, an IP31 wall-mounted enclosure is suitable for an environment that requires a minimum degree of protection IP21. However an IP30 wall-mounted enclosure is not suitable.
■ the degrees of protection indicated in this catalogue are valid for the enclosures as presented. However, the indicated degree of protection is guaranteed only when installation and device mounting are carried out in accordance with professional standards that conserve the initial degree of protection.

IK code

Standard IEC 62262 defines an IK code characterising the capacity of products to resist mechanical impacts from all sides.

IK code	Impact energy (joules)
01	0.14
02	0.2
03	0.35
04	0.5
05	0.7
06	1
07	2
08	5
09	10
10	20

IK codes can be selected according to the risks of impacts on a given site.

	Site	Recommended IK
No risk of major impact	Technical premises	07
Significant risk of impact that can damage devices	Hallways	08 (switchboard with door)
Maximum risk of impact hat can damage the switchboard	Workshops	10

Prisma Plus tested switchboards

A switchboard must comply with the requirements of standard IEC 60439-1 to guarantee the safety and reliability of the installation.
Managers of installations, fully aware of the professional and legal liabilities weighing on their company and on themselves, demand a high level of safety for the electrical installation.
What is more, the serious economic consequences of prolonged halts in production mean that the electrical switchboard must provide excellent continuity of service, whatever the operating conditions.

The Schneider Electric solution

- specify switchboards that comply with standard IEC 60439-1
- guarantee a level of safety that has been 100% tested, from the day the switchboard is installed and throughout its service life
- ensure a lasting investment through easy upgrading of the installation in compliance with the standard
- guarantee that the switchboard complies with the technical specifications.

Prisma Plus tested switchboards

The conformity of the switchboard has been tested and proven.
A Prisma Plus switchboard is:
- made up of Schneider Electric low-voltage devices and components that all comply with the applicable standards
- based on configurations in our catalogue
- made up of Prisma Plus mechanical and electrical components that have been subjected to the seven "type" tests required by the standard
- mounted and wired by a pane builder in compliance with professional standards
- subjected to the three routine tests required by the standard.

Schneider Electric makes available to the pane builder everything required to create tested Prisma Plus switchboards, including the basic configurations in the low-voltage distr bution catalogue, all the documentation for switchboard design and mounting, calculation and design software, etc.

Pane builders can demonstrate conformity with standard IEC 60439-1 by presenting the declarations or certificates of conformity for type tests carried out by independent laboratories (ASEFA, ASTA, KEMA, etc.) and supplied by Schneider Electric.
The panelbuilder is responsible for the three routine tests and delivers the corresponding declarations of conformity.

DD210448

asefa

Certificat de conformité / *certificate of conformity* n°020-04BT

délivré à / *issued to* : SCHNEIDER ELECTRIC INDUSTRIES SAS
89, boulevard Franklin Roosevelt
92500 RUEIL MALMAISON
FRANCE

pour le matériel / *for the apparatus* : Ensemble basse tension / *low-voltage assembly*

référence / *reference* : LINERGY Busbar – PRISMA PLUS System P
(marques commerciales / *trade marks* : MERLIN GERIN – SQUARE D - TELEMECANIQUE)

constructeur / *manufacturer* : SCHNEIDER ELECTRIC SA

selon le(s) référentiel(s) / *according to standard(s)* :
IEC 60439-1 (1999), tenue au court-circuit du circuit principal / *short-circuit withstand strength of main circuit* (§ 8.2.3)

caractéristiques assignées / *rated characteristics* :

Tension d'isolement / *Insulation voltage*	: 1000 V
Tension d'emploi / *Operational voltage*	: ≤1000 V
Fréquence / *Frequency*	: 50/60 Hz
Courant / *current*	: 630 A à/to 1600 A pour barres simples/ *for single bars* : 2000 A à/to 3200 A pour barres doubles/ *for double bars*
Courant de courte durée (1s) / *Short-time withstand current (1s)*	: 25 kA / 15 kA à/to 85 kA / 51 kA (3-phase/1-phase)
Courant de crête admissible / *Peak withstand current*	: 52.5 kA / 30 kA à/to 187 kA / 112.2 kA (3-phase/1-phase)

document(s) pris en compte (s) / *relevant document(s)* :
Rapport(s) d'essai / Test report(s) : F01.03.16

Ce certificat ne s'applique qu'à l'échantillon soumis à l'essai de type / *This certificate applies only to the sample submitted to the type test.*

Fontenay-aux-Roses,
Le / on : 2004-03-08

Le Président de l'ASEFA / *The chairman of ASEFA,*

I. HELLER

cofrac

Prisma Plus
tested switchboards

The object of standard IEC 60439-1 is to lay down the definitions and to state the service conditions, construction requirements, technical characteristics and tests for low-voltage switchgear and controlgear assemblies (U < 1000 V).
All elements making up the electrical switchboard are concerned.

Note. *The standard defines a low-voltage assembly (the electrical switchboard) as "a combination of one or more low-voltage switching devices together with associated control, measuring, signalling, protective, regulating equipment, etc., completely assembled under the responsibility of the manufacturer with all the internal electrical and mechanical inter-connections and structural parts".*

PD390917

Standard IEC 60439-1 defines ten mandatory tests
■ 7 type tests carried out on typical configurations
□ no. 1 - temperature rise limits
□ no. 2 - dielectric properties
□ no. 3 - short-circuit withstand strength
□ no. 4 - effectiveness of the protective circuit
□ no. 5 - clearances and creepage distances
□ no. 6 - mechanical operation
□ no. 7 - degree of protection.
■ 3 routine tests carried out on the finished switchboard (their purpose is to check that the characteristics validated by the type tests were not altered during manufacturing operations):
□ no. 8 - wiring and electrical operation
□ no. 9 - insulation/dielectric test
□ no. 10 - protective measures.

7 type tests

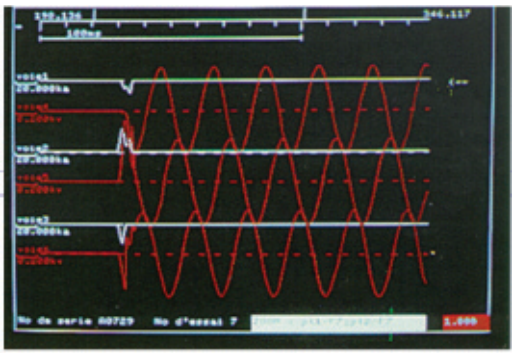
1 - Temperature-rise limits

Each device is loaded to its rated current, multiplied by the diversity factor. Once the temperature has stabilised, the temperature rise must not exceed the permissible temperatures for materials or risk causing burns:
70 K for terminals for external insulated conductors
15 K or 25 K , according to material type, for manual operating means
30 K or 40 K for access ble external enclosures and covers.

2 - Dielectric properties

The test voltage is applied between all live parts and the interconnected exposed conductive parts, as well as between each pole and all the other poles connected for this test to the interconnected exposed conductive parts.
■ 3500 V for a rated insulation voltage of 1000 V for busbars in cubicles and rear busbars in enclosures
■ 750 V for a rated insulation voltage of 3000 V according to the type of busbars in the enclosure
■ 500 V for a rated insulation voltage of 2500 V according to the type of busbars in the enclosure
■ test duration: 1 minute.

PD391285



Short-circuit withstand strength.

3 - Short-circuit withstand strength

In the event of a short-circuit, whether inside or outside the switchboard, the latter must handle the resulting constraints (temperature rise, attraction or repulsion forces exerted on conductors, etc.).
The capacity to handle the constraints is above all the means to avoid danger (rupture and projection of components, electric arcs and their propagation outside the switchboard).
However, it is also the means to ensure a rapid return to operation after the incident.
Maximum rated short-time current obtained on the busbars: Icw 85 kA rms/1 s.

4 - Effectiveness of the protective circuit

The effectiveness of the protective circuit is verified by two tests :
■ short-circuit withstand test carried out between the protective conductor and the nearest phase conductor
■ resistance measurement of the connection between the exposed conductive parts and the protective circuit.
Result: 51 kA rms.

Prisma Plus
tested switchboards

5 - Clearance and creepage distances

The minimum clearance in air depends on the rated impulse withstand voltage and the degree of pollution in the switchboard.
The minimum creepage distance depends on the rated insulation voltage, the degree of pollution and the material group of the insulating material separating the live parts.
The tests carried out on typical Prisma Plus configurations, equipped with standard main busbars, confirm compliance with minimum clearances and creepage distances for a voltage of 1000V, degree of pollution 3 and material group IIIa:
- minimum clearance: 14 mm
- minimum creepage distance: 16 mm.

6 - Mechanical operation

The mechanical operation test is carried out on an assembled switchboard.
The standard requires that 50 operating cycles be carried out.
Verification of locking mechanisms are included in this range of tests.
For Prisma Plus:
- After 50 operating cycles, the interlocking mechanisms and other moving parts of the switchboard conserve their initial properties
- Certain more solicited moving parts (door handles, hinges, etc.) have have been subjected to 10000 operating cycles with success.

7 - Degree of protection

The tests carried out define the capacity of an equipped switchboard to :
- protect persons against contact with live parts
- protect equipment against penetration of solid objects and liquids.

Results of tests confirm the characteristics of Prisma Plus switchboards: IP30 to IP55 and IK7 to IK10 depending on the configuration.

PD390933

Degree of protection.

3 routine tests

The 3 routine tests must be carried out by the pane builder. They are fast and easy:
- inspection of the assembly according to the mounting instructions and technical documents (right device ratings, tightening torques, etc.)
- insulation checking by a dielectric test
- checking of protective measures and of the electrical continuity of the protective circuit.

They supplement the manufacturer type tests and guarantee the professionalism and responsibility of the panelbuilder.

Schneider Electric supplies a full range of tools for assistance in carrying out these tests:
- quality inspection guide
- installation guide
- assembly guides.

8 - Wiring and electrical operation

This test includes:
- Checking of conformity with:
  - drawings, part lists and diagrams
  - cabling (power and auxiliary connection)
  - wiring quality (cross-sectional areas of conductors, crimping, etc.)
  - marking of cables and devices.
- Visual inspection of :
  - degree of protection (presence of canopy, gaskets and front plates and absence of open cut-outs, holes, etc.) and creepage distances and clearances for connections and busbars
  - technical data document : diagrams, characteristics (voltage, current, system earthing arrangement, Isc, IP, switchboard dimensions and weights, etc.), name of the manufacturer, project number, etc.
- Mechanical and/or electrical functioning test :
  - check of wiring and most sensitive parts of the switchboard (mechanical control components, mechanical and electrical interlocks, relays, measurement and monitoring systems, etc.)

The design of Prisma Plus switchboards, based on functional units, ensures conformity to this test.

Prisma Plus
tested switchboards

PD390929

9 - Insulation resistance and dielectric test

To carry out either of these tests:
- all electrical equipment must be connected (except those apparatus which are designed for a lower test voltage)
- the test voltage must be applied:
  - between each pole and the interconnected exposed conductive parts
  - between each pole of the main circuit and the other poles
  - between each auxiliary control circuit and the main circuit and the exposed conductive parts
  - between the power side and the withdrawable part of a switchgear in disconnected position.

Insulation test: insulation measurement using an insulation measuring device at a voltage of at least 500V (e.g. Megger type tester).
The test is passed if there is no puncture or disruptive discharge between the different tested parts

Dielectric test: for a rated operational voltage of 240/400 V, the dielectric test voltage of 2500 V must be applied during 1 s.
The test is passed if the insulation resistance between circuits and exposed conductive parts is at least 1000 Ohms/V.

PD390914

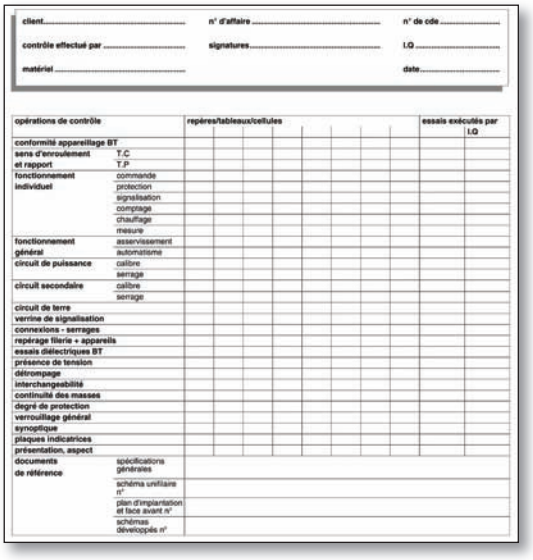
10 - Protective measures

This test involves checking the electrical continuity of the protective circuit connecting the various metal assemblies.
The presence of barriers protecting against direct and indirect contact with live parts must be checked and the following points must be inspected visually:
- the presence of earthing wires on the doors
- the presence of the PE conductor and contact washers on all metal assemblies.

Once the tests have been completed, the following operations must be carried out :
- clean the inside of the switchboard
- check that the switchboard identification markings are present
- check the outside appearance (scratches, paintwork, etc.)
- prepare the reports.

The first report must list any missing components or equipment that will be shipped separately from the switchboard.
The second report must indicate any problems detected during testing and the corrective action required.
A test report (available from the panelbuilder) certifies that all the tests have been carried out.

DD383920



client..... n° d'affaire ..... n° de cde .....

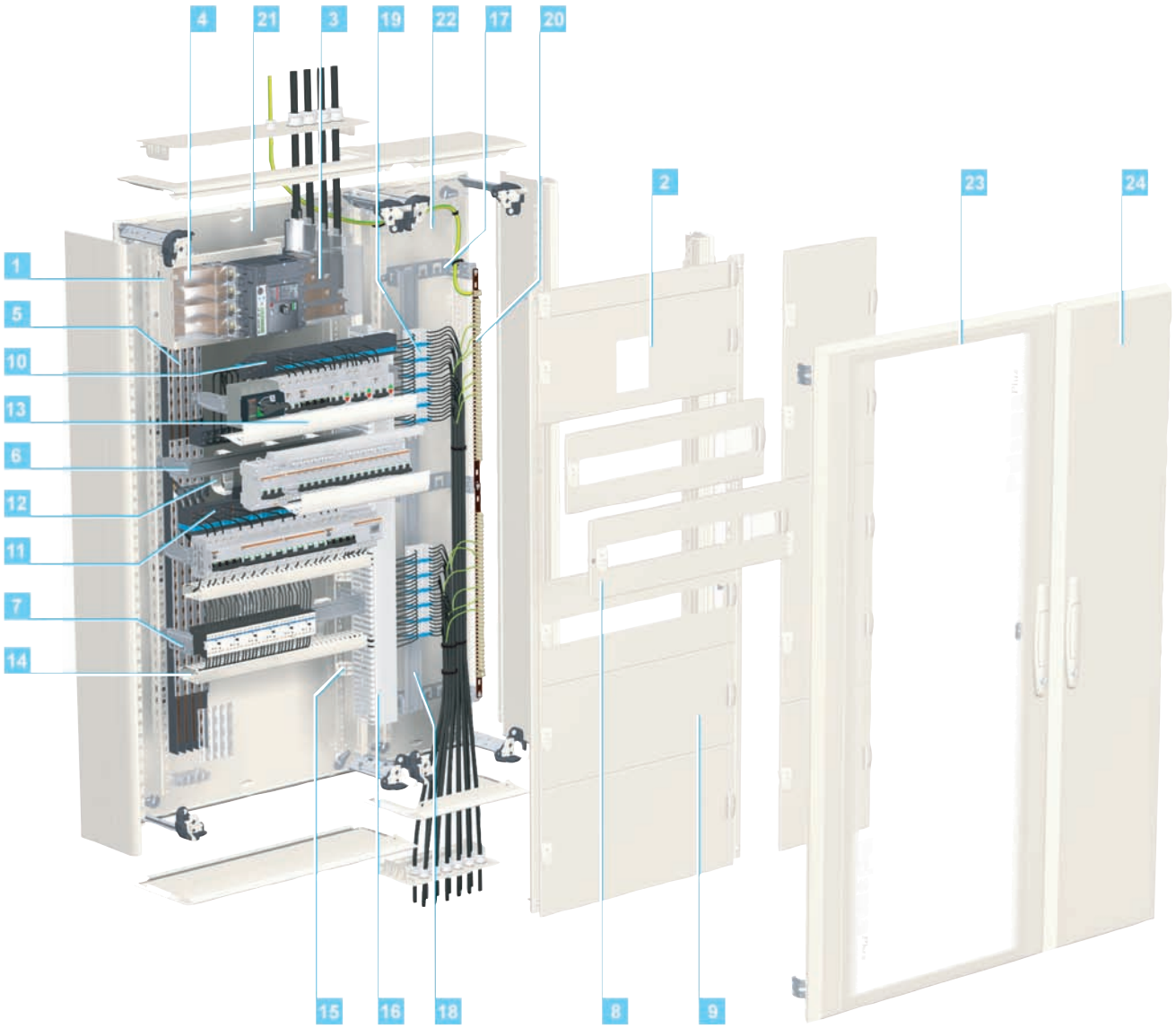
contrôle effectué par ..... signatures..... I.Q .....

matériel ..... date.....

opérations de contrôle		repères/tableaux/cellules	essais exécutés par I.Q
conformité appareillage BT			
sens d'enroulement et rapport	T.C		
	T.P		
fonctionnement individuel	commande		
	protection		
	signalisation		
	comptage		
	chauffage		
	mesure		
fonctionnement général	asservissement		
	automatisme		
circuit de puissance	calibre		
	serrage		
circuit secondaire	calibre		
	serrage		
circuit de terre			
verrine de signalisation			
connexions - serrages			
repérage filerie + appareils			
essais diélectriques BT			
présence de tension			
détrompage			
interchangeabilité			
continuité des masses			
degré de protection			
verrouillage général			
synoptique			
plaques indicatrices			
présentation, aspect			
documents de référence	spécifications générales		
	schéma unifilaire n°		
	plan d'implantation et face avant n°		
	schémas développés n°		

Typical configuration with catalogue numbers

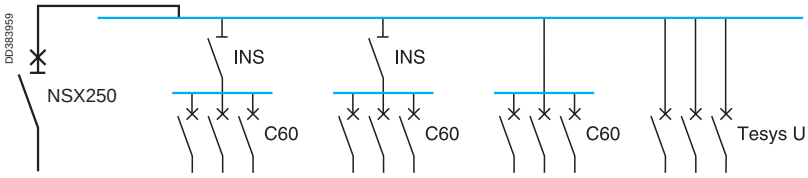
PD390312



1	Mounting plate for horizontal Compact NSX100/250 with toggle	**03030**	See page B-6
2	Front plate for horizontal Compact NSX100/250 with toggle	**03232**	See page B-6
3	Incoming connection block	**04066**	See page B-6
4	250 A power supply block	**04060**	See page B-6
5	Powerclip busbars 250 A, 4P, L=1000 mm	**04122**	See page C-5
6	Modular rail	**03001**	See page B-17
7	Modular rail (adjustable)	**03002**	See page B-36
8	Modular front plate, 3 modules	**03203**	See page B-17
9	Plain front plate, 4 modules	**03804**	See page B-52
10	80 A Multiclip distribution block, 4P	**04004**	See page C-17
11	200 A Multiclip distribution block, 4P	**04014**	See page C-18
12	12 horizontal cable straps	**04239**	See page C-34
13	4 covers for horizontal cable straps	**04243**	See page C-34
14	4 horizontal trunking sections, 60 x 30 mm	**04257**	See page C-36
15	12 vertical trunking supports	**04265**	See page C-35
16	Vertical trunking section, 60 x 80 mm	**04267**	See page C-36
17	Support for terminal block and earth bar	**04220**	See page C-31
18	Modular rail, L=1600 mm	**04226**	See page C-31
19	Terminal block		See page C-27
20	Earth bar with 40 clamps	**04200**	See page C-23
21	Wall-mounted enclosure, 24 modules	**08108**	See page D-4
22	Duct, 24 modules	**08178**	See page D-4
23	Transparent door for wall-mounted enclosure, 24 modules	**08138**	See page D-4
24	Plain door for duct, 24 modules	**08188**	See page D-4

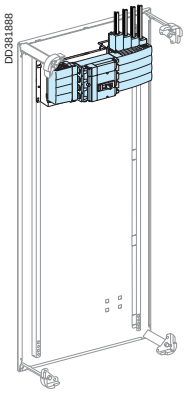
Determining catalogue numbers

Starting with the electrical diagram: IP30 switchboard



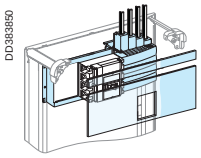
Install the incomer

See page B-6



- order the mounting plates and the front plates
- the incoming connection block
- the power supply block for the Powerclip busbars.

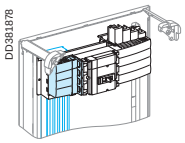
1 Installation/connection



DD383960

Device	No. of vertical modules	Mounting plate	Cut-out front plate	Upstream front plate	Connection block: cables via top	Connection block: cables via bottom
Fixed Compact NSX						
NSX100/250	5	03030	03232	03801	04066	ou 04067

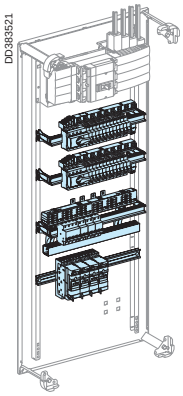
2 Distribution using Powerclip busbars



DD383961

Device	Power supply block	Terminal shields (set of 2)	Powerclip busbars
Fixed Compact NSX and Vigicompact NSX			
NSX100/250	04060		

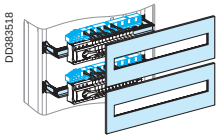
Install the modular devices



Order the mounting plates and front plates taking into account:
- supply to the rows
- cable running.

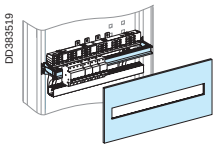
1 Multi 9

See page B-16



DD383962

Device	No. of vertical modules	Modular rail	Modular front plate
All Multi 9 devices			
All supply systems (comb busbars, Multiclip) with cable straps and trunking sections	4	03001	03204
Multi 9 devices ⩽ 40 A			
Supply via 63/80 A Multiclip or comb busbars with cable straps	3	03001	03203

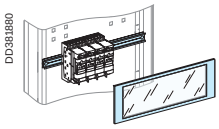


DD381977

Device	No. of vertical modules	Modular rail	Modular front plate
All Multi 9 devices			
All supply systems (comb busbars, Multiclip) with cable straps and trunking sections	4	03001	03204
Multi 9 devices ⩽ 40 A			
Supply via 63/80 A Multiclip or comb busbars with cable straps	3	03001	03203

2 TeSys "U"

See page B-36



DD381978

Device	No. of vertical modules	Useful length of rail (mm)	Rear modular rail	Transparent front plate
TeSys U model				
TeSys U model	4	432	03004	03342

- Multiclip distr bution block. See page C-17
- cable running. See page C-34.

Determine the size of the switchboard

- count the number of occupied modules

19 modules

- determine the corresponding wall-mounted enclosure

21 modules

- order the additional plain front plate.

Plain front plate

See page B-54

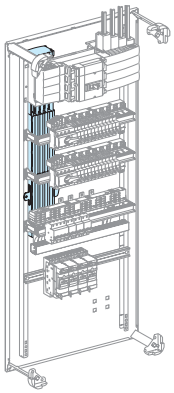
DD381979

500 mm wide plain front plate	Cat. no.
1 module (H = 50 mm)	03801
2 modules (H = 100 mm)	03802
3 modules (H = 150 mm)	03803

Determining catalogue numbers

Plan the distribution system

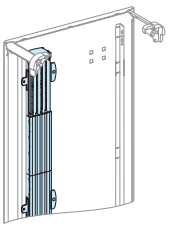
DD383522



Powerclip busbars

See page C-5

DD381882



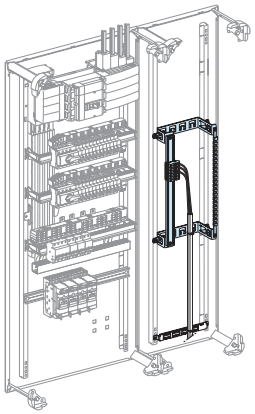
DD381980

Powerclip busbars		160 A	250 A	400 A	630 A
Three-pole	L = 1000 mm	04111	04112	04113	04114
	L = 1400 mm	04116	04117	04118	04119
Four-pole	L = 1000 mm	04121	04122	04123	04124
	L = 1400 mm	04126	04127	04128	04129

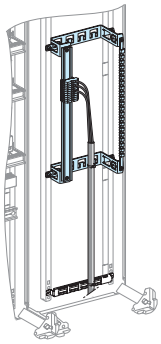
Select the terminal blocks and the earth bar

See page C-23

DD383523



DD383520



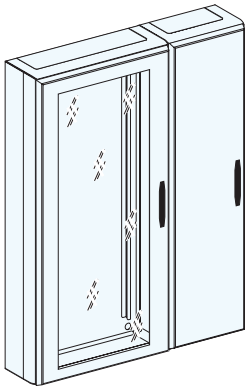
DD381981

Designation	Cat. no.
Mounting plate for terminal block and earth bar	04220
Modular rail, L = 1600 mm	04226
Bare earth bar, 12 x 3 mm with 330 mm of connection space, equipped with a 35 mm² tunnel terminal (for earth blocks with spring terminals)	04201
4 earth blocks with 12 x 4 mm² spring terminals (L = 75 mm)	04214
4 earth blocks with 3 x 16 mm² spring terminals (L = 37 mm)	04215

Select the enclosures

See page D-15

DD381892



1 IP wall-mounted enclosure

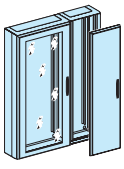
DD381884

DD381982

No. of vertical modules	*Height of enclosure*	*Enclosure*	*Plain door*	*Transparent door*
Wall-mount enclosure (IP30)				
6	330	08102	08122	08132
9	480	08103	08123	08133
12	630	08104	08124	08134
15	780	08105	08125	08135
18	930	08106	08126	08136
21	1080	08107	08127	08137

2 Duct, W = 300 mm

DD381885



DD381983

No. of vertical modules	*Height of duct*	*Duct, W = 300 mm*	*Plain door*	*Transparent door*
Duct (IP30)				
6	330	08172	08182	
9	480	08173	08183	
12	630	08174	08184	
15	780	08175	08185	
18	930	08176	08186	
21	1080	08177	08187	08197

3 Cable tie supports

DD381985

Designation	Cat. no.
4 cable-tie supports for 300 mm wide ducts	08868

4 Accessories for lifting, handling, wall mounting, finishing parts, etc.

TOOLS

schneider-electric.com

This international site allows you to access all the Schneider Electric products in just 2 clicks via comprehensive range data-sheets, with direct links to:

- complete library: technical documents, catalogs, FAQs, brochures...
- selection guides from the e-catalog.
- product discovery sites and their Flash animations.

You will also find illustrated overviews, news to which you can subscribe, the list of country contacts...

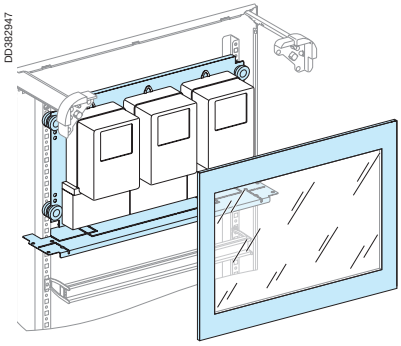
The technical guide

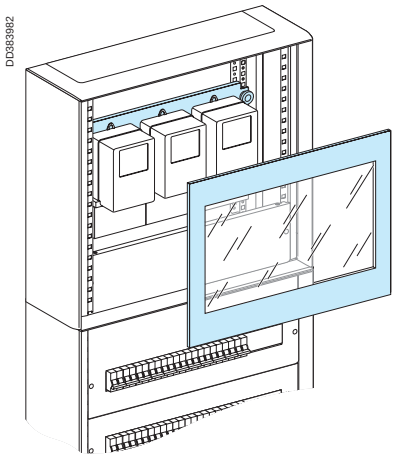
These technical guides help you comply with installation standards and rules i.e.: the electrical installation guide, the protection guide, the switchboard implementation guide, the technical booklets and the co-ordination tables all form genuine reference tools for the design of high performance electrical installations.
For example, the LV protection co-ordination guide - discrimination and cascading - optimises choice of protection and connection devices while also increasing markedly continuity of supply in the installations.

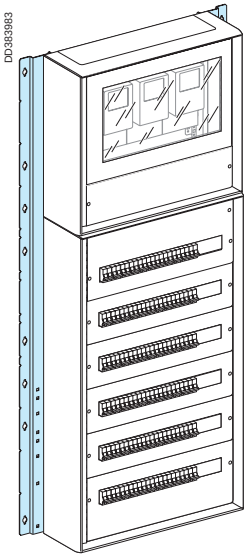
Contents

Pack wall-mounted enclosures
Single-phase kilowatt-hour meters
Class 2

Installation

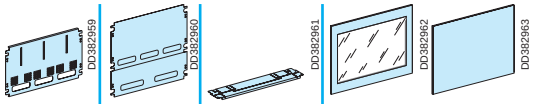






Meters can be installed at different levels on the functional uprights of enclosures.
Class 1: Depending on preferences and needs, meters can be installed directly on mounting plates equipped with earthing braids and combined with partitioning or front plates.
The mounting plates can be raised using M5 spacers: see page B-54.

Meters behind front plate at the top of a Pack enclosure

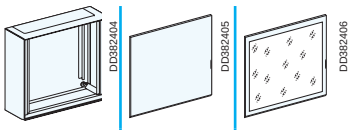


Device	No. per row	No. of vertical modules	Mounting plate	Insulating plate	Horizontal partitioning (1)	Front plate transparent	Front plate or plain
Meter							
Ph + N	3	6	**03157**	**03154**	**04333**	**03343**	**03806**

(1) *If not installed at the top of a Pack enclosure, order an addition horizontal partition (04333).*

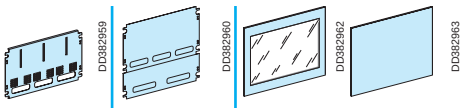
Earthing wire, 6mm²: cat. no. **08911.**

In an enclosure extension



Designation	Enclosure height (mm)	Enclosure	Full door	transparent door
Enclosure extension	480	**08012**	**08082**	**08092**

Reversible doors (opening to left or right), equipped with a handle (without barrel lock).
For barrel locks and inserts, see page D-16.



Device	No. per row	No. of vertical modules	Mounting plate	Insulating plate	Front plate transparent	Front plate or plain
Meter						
Ph + N	3	6	**03157**	**03154**	**03343**	**03806**

Earthing wire, 6mm²: cat. no. **08911**

Combination uprights

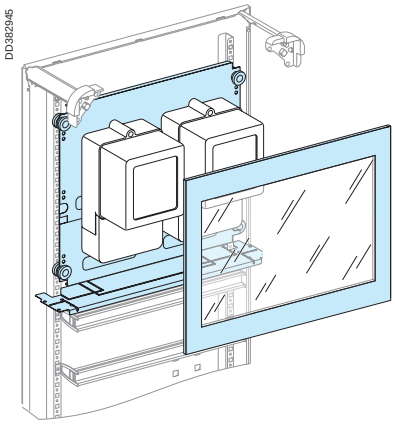
To make the combination more rigid, particularly during transport, it is mandatory to use a set of combination uprights secured to the rear of the switchboard.

Designation	Cat. no.
2 combina ion uprights	**08817**

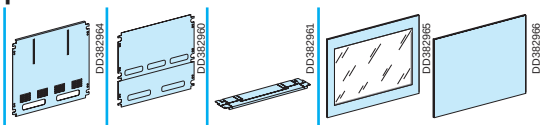
Pack wall-mounted enclosures
3-phase kilowatt-hour meters
Class 2

Installation

Meters can be installed at different levels on the functional uprights of enclosures.
Class 1: Depending on preferences and needs, meters can be installed directly on mounting plates equipped with earthing braids and combined with partitioning or front plates.
The mounting plates can be raised using M5 spacers: see page B-54.



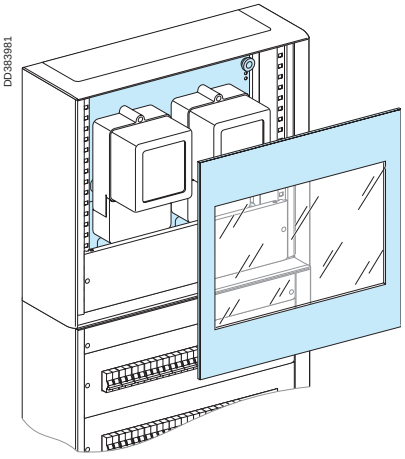
Meters behind front plate



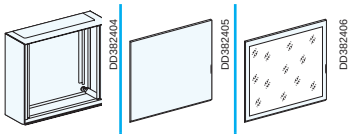
Device	No. per row	No. of vertical modules	Mounting plate	Insulating plate	Horizontal partitioning (1)	Front plate transparent	Front plate or plain
Meter							
3 Ph + N	2	9	**03152**	**03154**	**04333**	**03344**	**03807**

(1) *If not installed at the top of a Pack enclosure, order an addition horizontal partition (04333).*

Earthing wire, 6mm²: cat. no. **08911**

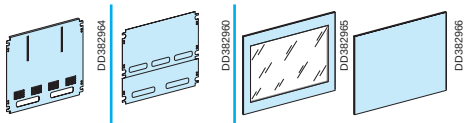


In an enclosure extension



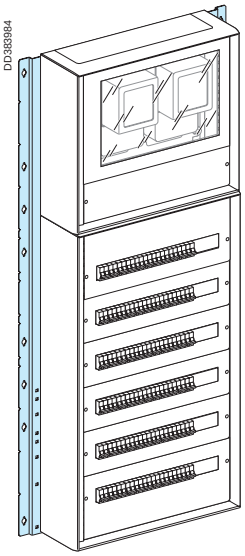
Designation	Enclosure height (mm)	Enclosure	Full door	transparent door
Enclosure extension	630	**08013**	**08083**	**08093**

Reversible doors (opening to left or right), equipped with a handle (without barrel lock).
For barrel locks and inserts, see page D-16.



Device	No. per row	No. of vertical modules	Mounting plate	Insulating plate	Front plate transparent	Front plate or plain
Meter						
3 Ph + N	2	9	**03152**	**03154**	**03344**	**03807**

Earthing wire, 6mm²: cat. no. **08911**



Combination uprights

To make the combination more rigid, particularly during transport, it is mandatory to use a set of combination uprights secured to the rear of the switchboard.

Designation	Cat. no.
2 combination uprights	**08817**

Modular devices in Pack wall-mounted enclosures
General

Presentation

The components for switchboard and row incomers are the same.
At the head of a switchboard, the incoming device can be supplied by one of the following:
- busbars mounted in rear of the enclosure
- centralised distr bution blocks
- row distribution blocks

125/160 A Powerclip busbars
They are small in size, fully insulated (IPxxB) and supplied ready for installation.
They are designed to receive one-piece connections.

PD391213

Distribution by Polybloc

PD391204

Distribution by Distribloc

Polybloc 160 A and Distribloc 125/160 A centralised distribution blocks
Downstream circuits are connected from the front, without screws, to spring terminals.
A reliable electrical connection, no maintenance required.
Fast connections make phase balancing very easy.
Rewiring is very easy if the switchboard is expanded or modified.

PD391212

63/80 A Multiclip distribution blocks
Fast and secure front connection using spring terminals.
Particularly reliable connections, will not loosen over time, insensitive to vibrations and thermal variations.
All types of modular devices can be mixed.
Easy balancing of phases.
Interchangeable devices.
Easy installation upgrades.
Fully insulated.

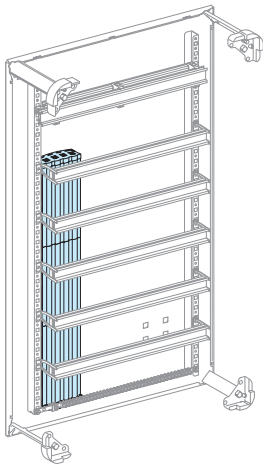
PD390543

Comb busbars
Direct connection to device terminals or via a connector.
Fully insulated.
Can be cut to length.

Modular devices in Pack wall-mounted enclosures
Powerclip busbars

160 A Powerclip busbars
See page C-4.

DD383293



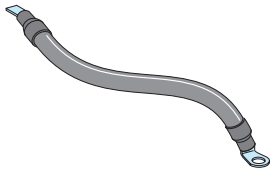
Powerclip busbars distribute energy over the full height of the enclosure.
Available in two lengths (450 and 750 mm) in three and four-pole versions.
The busbars can be cut to length every 150 mm.
They are supplied with clip-on covers that block off the connected cable lugs and can be cut as needed.

Cat. no. selection

125 A Powerclip busbars		Cat. no.
Three-pole	L = 450 mm	04103
	L = 750 mm	04107
Four-pole	L = 450 mm	04104
	L = 750 mm	04108
160 A Powerclip busbars		**Cat. no.**
Three-pole	L = 1000 mm	04111
Four-pole	L = 1000 mm	04121

Busbar connection

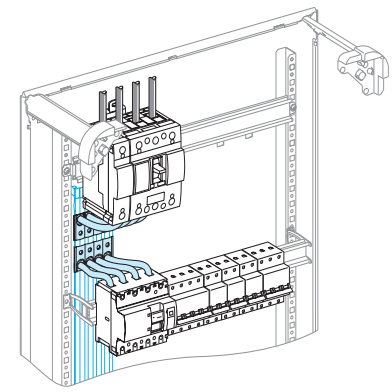
DD381379



For NG125, and INS40/160 equipped with tunnel terminals
A 35 mm² ferrule for connection to tunnel terminals is crimped to one end.
A 45° ring lug is crimped to the other end.
95 mm² tunnel terminals for INS : cat. no. 28947 (set of 3) or cat. no. 28948 (set of 4).

Designation	Cat. no.
Four 125 A connections, L = 230 mm	04145

DD383294



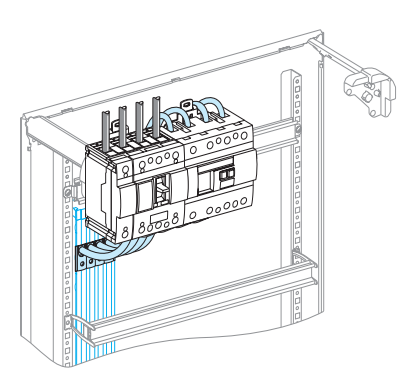
Device/Powerclip one-piece connections
Respects the degree of protection IpxxB on both busbar and device ends.
Neutral is clearly indicated (blue).

NG160 incoming device (located on left-hand side), NG125, INS160, C120
One-piece 3/4 P fast connection to busbars, equipped with male fittings one end for tunnel terminals .

Designation	Cat. no.
One-piece connection, 160A, L = 150 mm	04147

A multi-purpose connection for:
- Supply to Powerclip busbars from a switchboard incomer
- Supply to a row incomer from Powerclip busbars.

DD383295



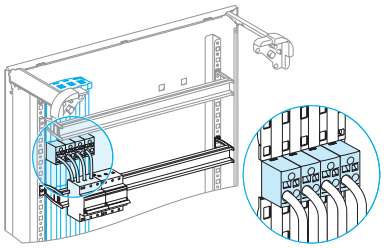
NG160 Vigi incoming device (located on left-hand side)
NG160 (without Vigi) incoming device (located in the middle)
NG125, INS160, C120
One-piece 3/4 P fast connection to busbars, equipped with male fittings one end for tunnel terminals .

Designation	Cat. no.
One-piece connection, 160A, L = 440 mm	04148

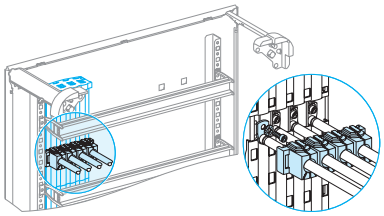
Modular devices in Pack wall-mounted enclosures
Powerclip busbars

160A Powerclip busbars

DD391816



DD391817



Powerclip tap-off blocks

Each block can be used to connect:
- one 6 mm² and one 10 mm² cable (04151)
- one 16 mm² cables (04152).

Equipped with spring terminals.

Designation	Cat. no.
12 Powerclip tap-off blocks with 6 mm² + 10mm² terminals	**04151**
12 Powerclip tap-off blocks with 16 mm² terminals	**04152**

Connection cover

Clip-on covers that block off the connected cable lugs and can be cut as needed. They maintain the IPxxB value for cables from 10 to 25 mm² with 90° angle lugs.

Designation	Cat. no.
8 IPxxB covers for Powerclip busbars	**04150**

8.8 class mounting hardware

Used for electrical connections to the copper bars.

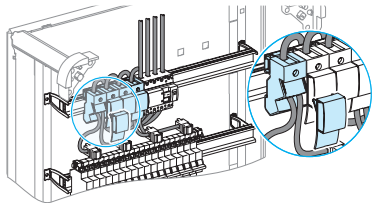
Designation	Cat. no.
Set of 20 CHC M6 x 12 mm screws for Powerclip busbars	**04158**

Modular devices in Pack wall-mounted enclosures
Centralised distribution

160 A Polybloc distribution block

See page C-20.

DD381200



Distribution block

Designation	Cat. no.
160 A Polybloc distribution block, 1P	04031

Note: *installation on a raised DIN rail.*

Connection for NG125, NG160, INS40/160 with or without Vigi

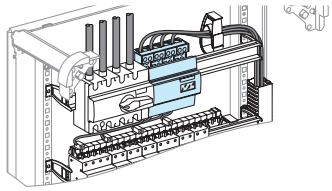
Two 45 mm² end fittings for tunnel terminals

Designation	Cat. no.
Four 160 A connections for modular devices, L = 380 mm	04149

125/160 A Distribloc distribution block

See page C-14.

DD381818



125 A distribution block

Designation	Cat. no.
125 A Distribloc distribution block	04045

Note: *installation on a raised DIN rail.*

Connection for NG125, INS40/160, C120 with or without Vigi

A male ferrule for a tunnel terminal is crimped on one end.
A 45° angle lug with a hole is crimped on the other end.

Designation	Cat. no.
4 NG-INS125 connections for Distribloc, L = 210 mm	04047

160 A distribution block

Designation	Cat. no.
160 A Distribloc distribution block	04046

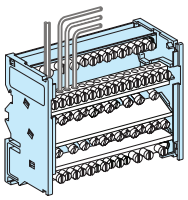
Note: *installation on a raised DIN rail.*

Connection for NG160, INS100/160 with or without Vigi

The Distribloc 160 A distr bution block comes with device connections.

40/125 A multi-stage distribution blocks

DD382313



Designation	Cat. no.
100 A two-pole multi-stage distribution block (2 x 7 holes)	13506
125 A two-pole multi-stage distribution block (2 x 13 holes)	13507
40 A four-pole multi-stage distribution block (4 x 13 holes)	13508
100 A four-pole multi-stage distribution block (4 x 7 holes)	13510
125 A four-pole multi-stage distribution block (4 x 13 holes)	13512
125 A four-pole multi-stage distribution block (4 x 17 holes)	13514

Rated insulation voltage: 500 V.
Rated operational current: 40/100/125 A (40 °C).

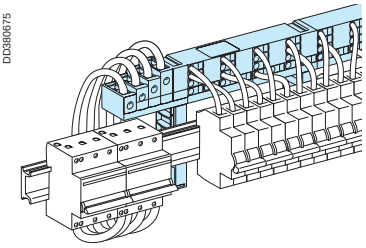
Additional neutral bar	Cat. no.
For cat. no. 13508	13516
For cat. no. 13510	13515
For cat. no. 13512	13517
For cat. no. 13514	13518

Modular devices in Pack wall-mounted enclosures
Row distribution blocks

Multiclip distribution block

See page C-17.

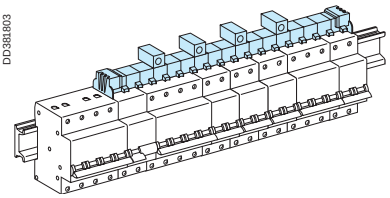
DD380675



Designation	Cat. no.
80 A Multiclip distribution block, 4P	**04004**
63 A Multiclip distribution block, 4P, 1/2 row	**04008**

Comb busbars

DD381803



48 modules comb for C60 circuit breaker	Cat. no.
One-pole	**14891**
Two-pole	**14892**
Three-pole	**14893**
Four-pole	**14894**

Rated insulation voltage: 500 V.
Rated operational current: 1 point: 80 A (40 °C)
2 points: 100 A (40 °C)

Comb accessories

Designation		Cat. no.
40 end-caps	1P/2P/1P + N, for comb busbars	**14886**
	3P/4P/3P + N, for comb busbars	**14887**
40 tooth-caps for comb busbar teeth		**14888**
4 insulated connectors for 25 mm² cables		**14885**

Modular devices in Pack wall-mounted enclosures

NG160, NG125, INS40/160, C120 incoming devices

Installation in 4, 5 and 6-row enclosures

PD391206

NG160 circuit breaker

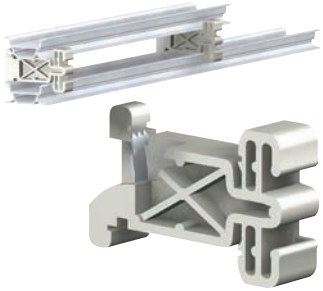
An NG 160 circuit breaker, with or without a Vigi earth leakage protection module, can be installed as an incoming device on the top row of a Pack enclosure, behind a front plate with a modular opening.

The incoming device occupies 5 modules and can easily take cable of up to 70 mm². It can be positioned either on the left-hand side or in the middle of the enclosure.

A removable raised DIN rail optimises available space to allow installation of additional modular devices on both sides of the incoming device.

The raised DIN rail is designed for clip mounting with full electrical continuity ensured between the two supports.

PD391209



NG125, C120 circuit breakers and INS40/160 switch-disconnectors

The top row equipped with the raised DIN rail (432 mm long) can be used to install NG125 and C120 circuit breakers or INS 40/160 switch-disconnectors..

Other solutions

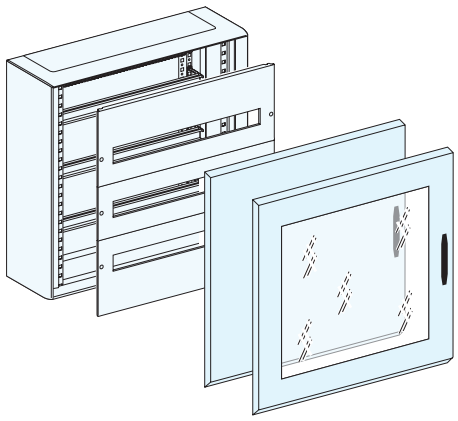
See page B-56.

Pack wall-mounted enclosures

Enclosures

2 and 3-row enclosures

DD383985



2 and 3-row enclosures include:
- DIN rails for modular devices
- earth bar
- top and bottom front plates with cut-outs = 4.5 modules (225 mm)
- front plate with cut-out = 3 modules (150 mm)
- plastic gland plate
- 3 divisible blanking plates.

DD383986 DD381801 DD381802

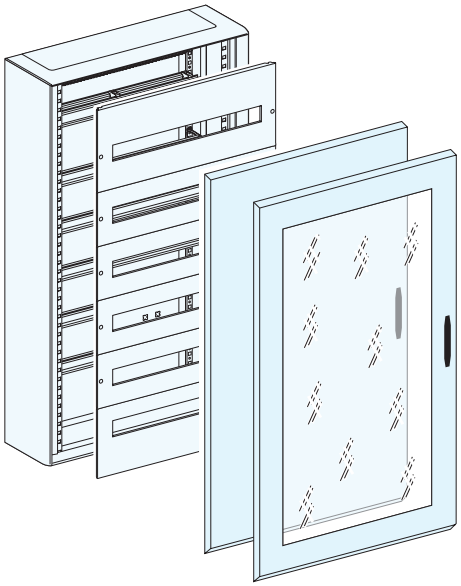
No. of rows	Height of enclosure	Enclosure	Plain door	Transparent door
2	480	**08002**	**08082**	**08092**
3	630	**08003**	**08083**	**08093**

Revers ble doors (opening to left or right), equipped with a handle (without barrel lock).

For barrel locks and inserts, see page D-16

4, 5 and 6-row enclosures

DD383298



4, 5 and 6-row enclosures include:
- 1 DIN rail for an NG160 at the top of the enclosure
- 1 DIN rail (L = 432 mm) and 4 raisers for installation of modular devices at the top of the enclosure
- DIN rails for modular devices
- earth bar
- 1 top front plate with cut-outs = 5 modules (250 mm)
- front plates with cut-outs = 3 modules (150 mm)
- 1 bottom front plate with cut-outs = 4 modules (200 mm)
- plastic gland plate
- 6 divisible blanking plates.

DD383299 DD381801 DD381802

No. of rows	Height of enclosure	Enclosure	Plain door	Transparent door
4	780	**08004**	**08084**	**08094**
5	930	**08005**	**08085**	**08095**
6	1080	**08006**	**08086**	**08096**

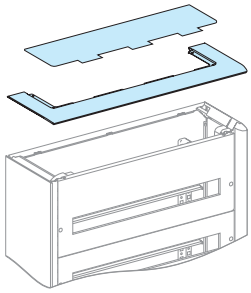
Revers ble doors (opening to left or right), equipped with a handle (without barrel lock).

For barrel locks and inserts, see page D-16.

Pack wall-mounted enclosures
Accessories

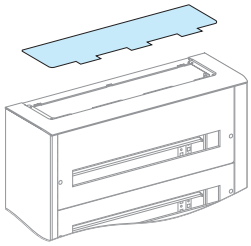
Gland plates

DD383989



08878.

DD383990

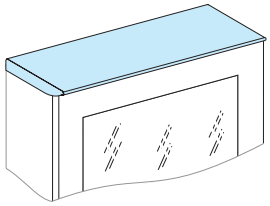


08879.

Designation	Cat. no.
Top or bottom plate with additional plastic gland plate	08878
Plain metal gland plate	08879

Canopy

DD383933



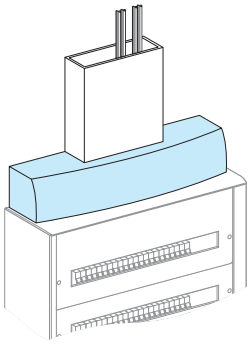
08823.

Designation	Cat. no.
Pack IP31 canopy	08823

The canopy cannot be mounted on the existing top plate.
It therefore comes with a special top plate that must be mounted in place of the existing top plate.
The existing top plate is remounted at the bottom of the enclosure to allow cable entry and exit via the bottom.

Trunking spreader

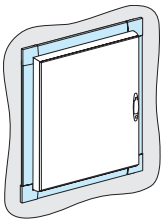
DD383991



Designation	Cat. no.
Trunking spreader	08821

Flush-mount kit

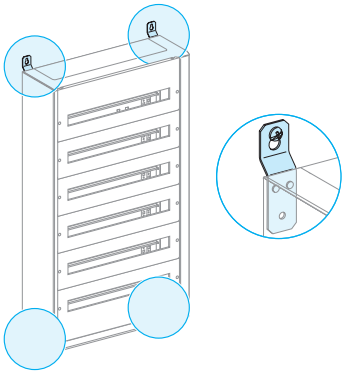
DD381256



Designation	Cat. no.
Flush-mount kit	08822

Wall mounting

DD383992



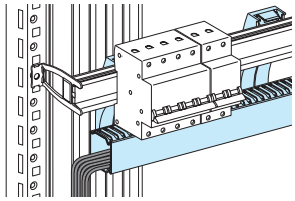
Designation	Cat. no.
4 external wall-mounted brackets	08803

Pack wall-mounted enclosures
Accessories

Cable running

see page C-34.

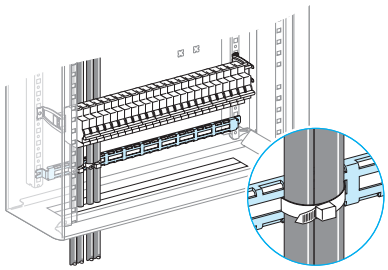
DD381819



Designation	Cat. no.
Cable straps	
12 horizontal cable straps	**04239**
4 covers for horizontal cable straps, L = 430 mm	**04243**
Trunking	
4 horizontal sections, 60 x 30 mm, L = 450 mm + supports	**04257**
12 horizontal trunking supports	**04255**
2 fixing brackets, H = 15 mm (for ver ical trunking)	**04206**

Cable-tie supports

DD381820

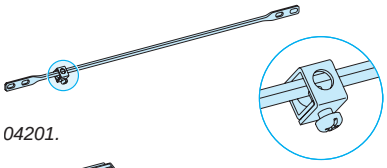


Designation	Cat. no.
2 cable-tie supports	**08867**

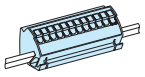
Earth bar

see page C-23.

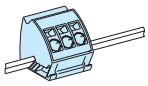
DD381560



04201.

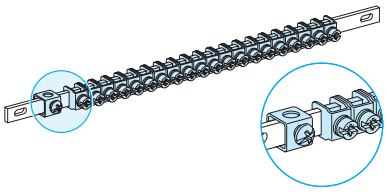


04214.



04215.

DD381516



04200.

Presentation

The earth bar can be:

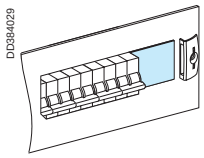
- a bare earth bar, 12 x 3 mm with 330 mm of connection space, equipped with a 35 mm² tunnel terminal and on which earth blocks with spring terminals can be clipped
- an earth bar (200 or 450 mm long), equipped with clamps with captive screws.

Earth bar with spring terminals	Cat. no.
Bare earth bar, 12 x 3 mm with 330 mm of connection space, equipped with a 35 mm² tunnel terminal (for earth blocks with spring terminals)	**04201**
4 earth blocks with 12 x 4 mm² spring terminals (L = 75 mm)	**04214**
4 earth blocks with 3 x 16 mm² spring terminals (L = 37 mm)	**04215**
2 fixing brackets, H = 15 mm (for ver ical earth bar)	**04206**

Earth bar with clamps	Cat. no.
Ear h bar with 40 clamps + one 35 mm² terminal (L = 450 mm)	**04200**

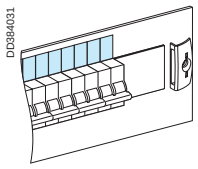
Pack wall-mounted enclosures
Accessories

Blanking plates
see page D-11.

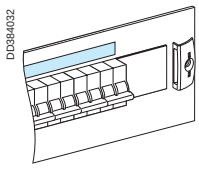


Designation	Cat. no.
Blanking strip, H = 46 mm, L = 1 m	03220
4 divisible blanking plates, H = 46 mm, L = 90 mm	03221

Identification labels
see page D-12.



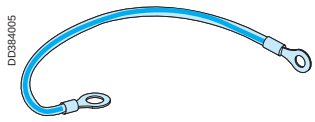
Clip-on labels.



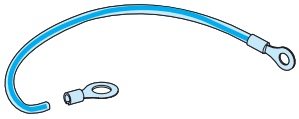
Adhesive labels.

Designation		Cat. no.
Clip-on labels		
12 clip-on labels	18 x 35	08913
	18 x 72	08915
	25 x 85	08917
12 engraving plates	18 x 35	08914
	18 x 72	08916
	25 x 85	08918
Adhesive labels		
12 label holders, W = 432 mm	H = 24 mm	08903
	H = 36 mm	08904
Symbol sheets		
Set of ten adhesive symbol sheets	standard	13735
	special	13736

Enclosure accessories
see page D-16.



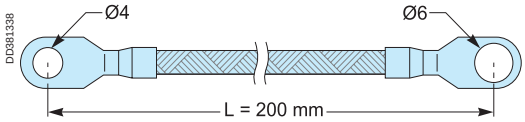
08910.

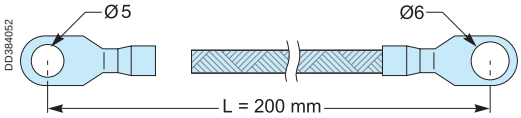


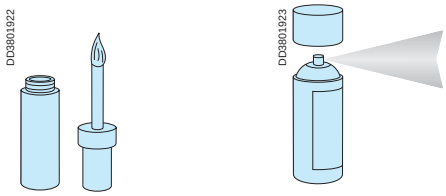
08911.

The braid or wire is equipped with a 4 mm diameter lug (08910) or a 5 mm diameter lug (08911) at one end and a 6 mm diameter lug on the other.
It is used to earth a door or wicket door with devices.

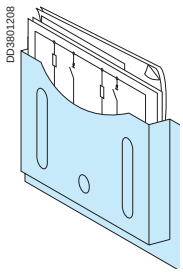
Designation	Cat. no.
Earthing braid, 6 mm²	08910
Earthing wire, 6 mm²	08911







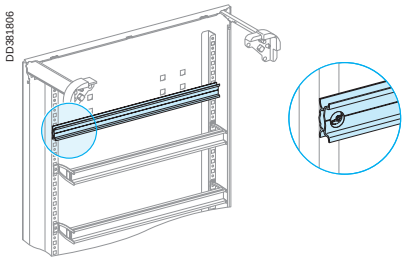
Designation	Cat. no.
Touch-up spray paint, RAL 9001	08962
Touch-up paint brush, RAL 9001	08961



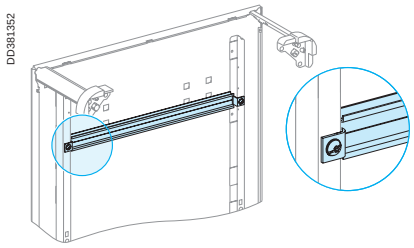
Designation	Cat. no.
Adhesive drawing holder	08963

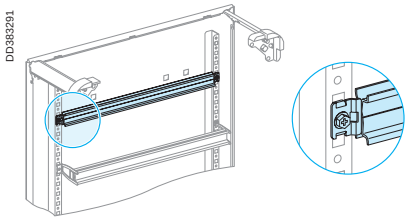
Pack wall-mounted enclosures
Accessories

Installation on a modular rail

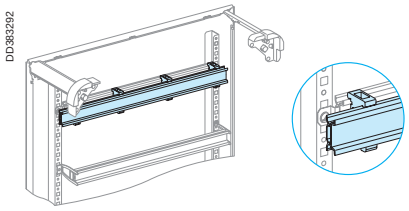


Designation	*Depth behind front plate (mm)*	*Useful length (mm)*	Cat. no.
Rear modular rail	79	432	**03004**
Recessed modular rail	110	432	**03003**



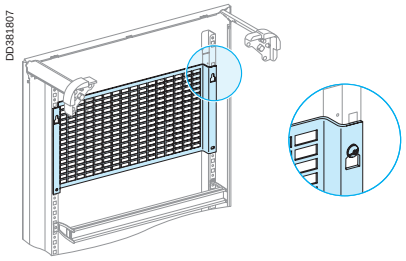


Designation	*Useful length (mm)*	Cat. no.
Modular device rail	432	**03008**



Designation	*Useful length (mm)*	Cat. no.
DIN rail and 4 modular raisers	432	**04227**

Installation on a slotted mounting plate

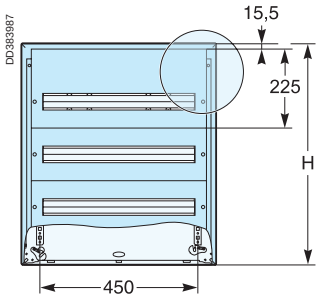


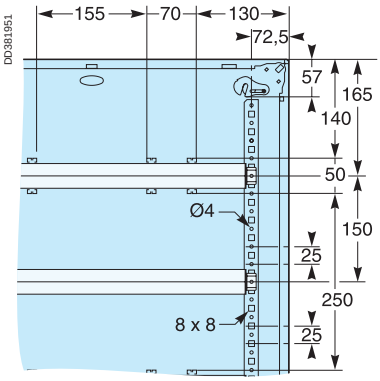
Designation	*No. of vertical modules*	*Useful height (mm)*	*Useful width (mm)*	*Depth behind front plate*	Cat. no.
Recessed slotted mounting plate	6	300	420	112	**03172**

Pack wall-mounted enclosures

Dimensions

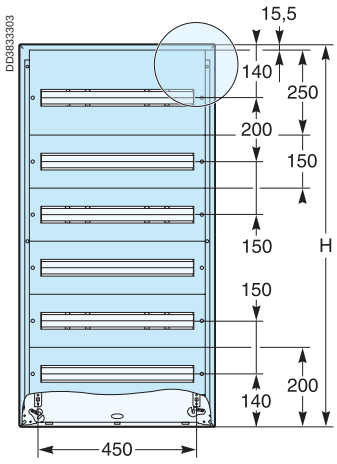
Wall-mounted enclosures of 2 and 3 rows

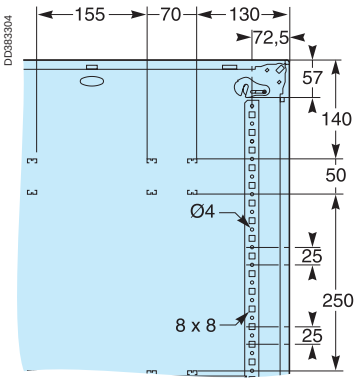




No. of rows	2	3
H	480	630

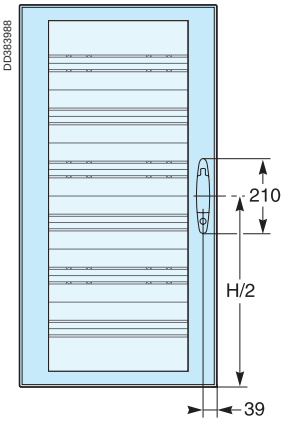
Wall-mounted enclosures of 4, 5 and 6 rows

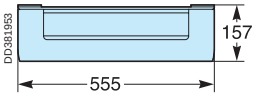


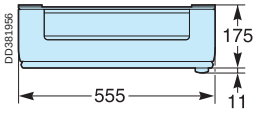


No. of rows	4	5	6
H	780	930	1080

Door



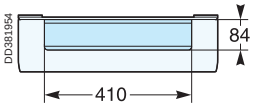




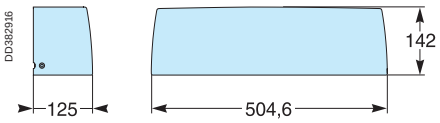
Pack wall-mounted enclosures

Dimensions

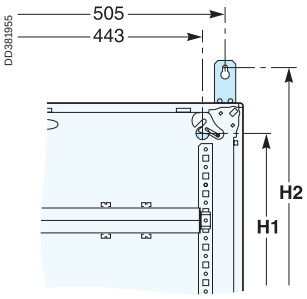
Gland plates



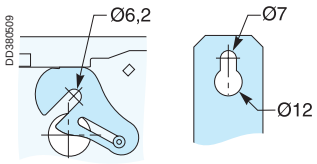
Trunking spreader



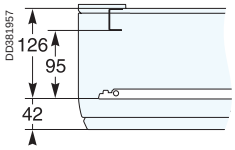
Wall mounted

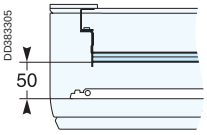


No. of rows	2	3	4	5	6
H1	396	546	696	846	996
H2	546	696	846	996	1146

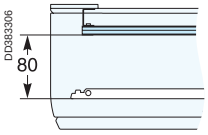


Depth behind front plate

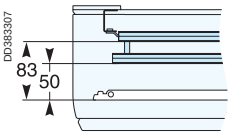




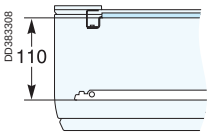
Delivred with rail set up



03004



Upper rail in wall-mounted enclosures of 4, 5 and 6 rows



03003

TOOLS

schneider-electric.com

This international site allows you to access all the Schneider Electric products in just 2 clicks via comprehensive range data-sheets, with direct links to:

- complete library: technical documents, catalogs, FAQs, brochures...
- selection guides from the e-catalog.
- product discovery sites and their Flash animations.

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Last but not least, they optimise use of our products while also complying with standards and proper procedures.

Contents

Presentation of Compact NSX circuit breakers for Prisma Plus

PB103371-25

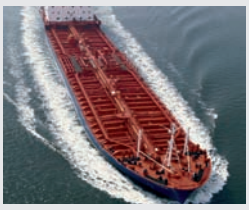
PB103351-25

The latest generation of a range that has set the standard in moulded-case circuit breakers, Compact NSX steps even further ahead to meet your needs in continuity of service and optimised energy use.

A high-performance range for each application

Breaking capacity at 415V	25 kA	36 kA	50 kA	70 kA	100 kA	150 kA
Performance level	NSX-B	NSX-F	NSX-N	NSX-H	NSX-S	NSX-L

Applications

Usual applications with low short-circuit levels, e.g. service sector applications, retail stores, etc.	Small industrial installations	High performance at a reasonable cost	Demanding applications, e.g. merchant marine, metallurgy, etc.
			

A range of intelligent circuit breakers

PD391292

Compact NSX improves management of electrical installations

In addition to protection functions, the new generation of Compact NSX moulded-case circuit breakers provides new features (analysis, measurements and communication) with access to information:

- either directly on the LCD screen of the trip unit to set the circuit breaker or read the main electrical values, including U, I, f, P(W) and E (kWh)
- or on the FDM 121 display on the front of the Prisma Plus switchboard (duct door with special front plate) for quick access to a greater wealth of information.

A cable connects the display to the trip unit without any special settings or configuration, making it easy to personalise alarms and displays or read event logs and maintenance indicators.

Presentation of Compact NSX circuit breakers for Prisma Plus

Integration of Compact NSX in Prisma Plus

PD391288-65

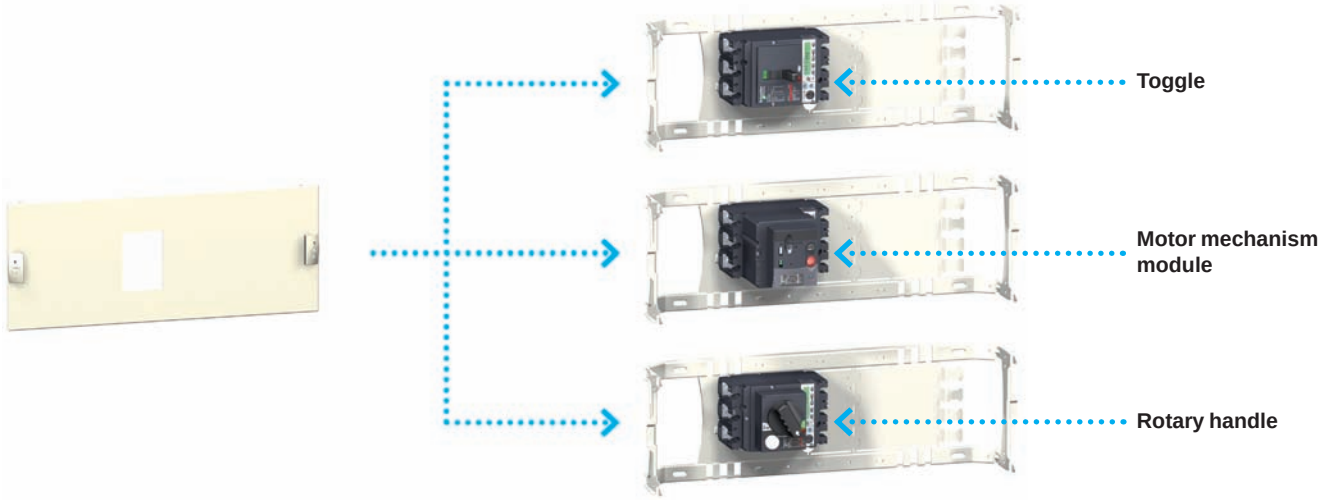
The Compact NSX range is perfectly **interchangeable** with Compact NSX.
As for Compact NS, installation of Compact NSX devices in a Prisma Plus functional switchboard is very easy, based on the same functional-unit system:
- same mounting plates as for the Compact NSX
- same power connections (Polypact distribution block and prefabricated connections)
- identical control connections
- identical partitioning (form 2b to 4b)
- same modularity (taking into account the safety clearances).

This greatly facilitates extension, maintenance and retrofitting operations in Prisma Plus switchboards.
- Only the front plates have been changed for this new range.

A new front plate for a new circuit breaker

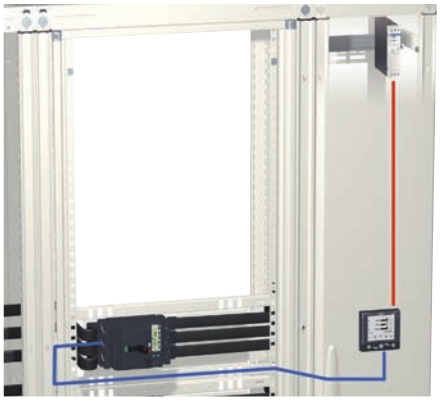
The front of Compact NSX circuit breakers has an eye-pleasing curved profile, making Prisma Plus switchboards even more attractive. This change is perfectly in step with the new cut-out for Prisma Plus front plates (the same cut-out for all types of controls).

PD391289-134

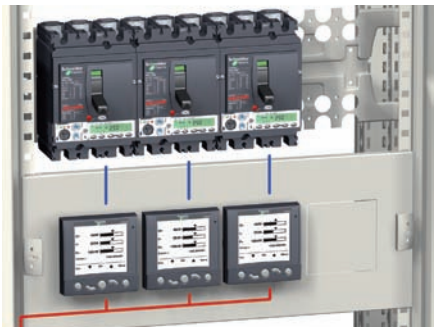


Installation architectures for the measurement function

PD391290-60



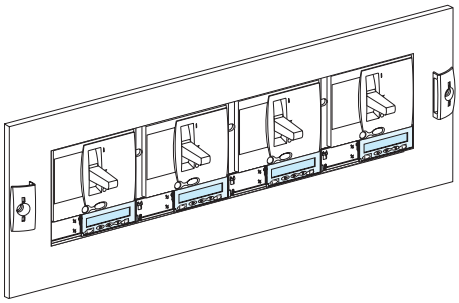
PD391291-57



As mentioned above, Compact NSX circuit breakers equipped with Micrologic 5/6 A or E trip units provide measurements that can be read on the FDM 121 display module or directly on the circuit breaker. This makes it poss ble to optimise the space required by the functional unit.
Installation times have also been reduced with respect to a system with current transformers.
What is more, installation and connections are made easier because the FDM 121 is installed just like the 96 x 96 mm Power Meter PM devices:
- direct cut-out in a plain door
- on a front for one or four 96 x 96 devices in the functional unit or the 300 mm wide duct door.

Note: *a single 24 V DC power supply is required to power both the FDM 121 display and the Micrologic trip unit.*

DD384027

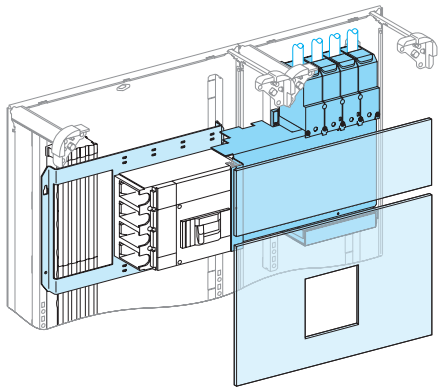


For more information on the communication functions of Compact NSX, see the ULP-system user manual, doc. no. TRV99100, and the Compact NSX catalogue, doc. no. LVPED208001_EN.

Compact NSX400/630
Horizontal
Fixed
Toggle

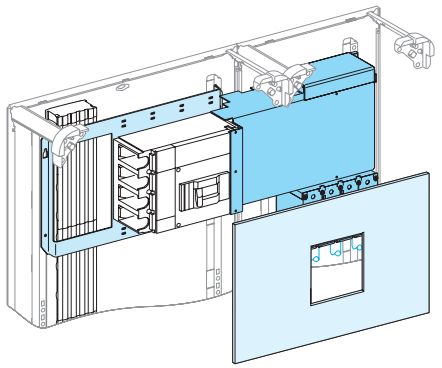
Installation

DD383852



Cables via top to in-duct incoming connection block.

DD383851



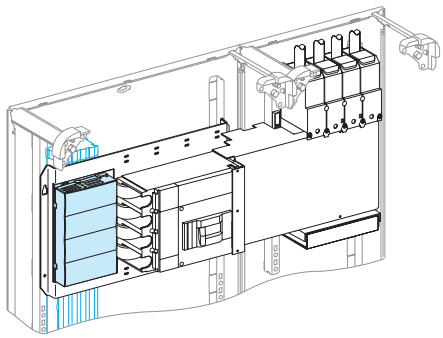
Cables via bottom to in-duct incoming connection block.

Connection to the in-duct incoming connection block

Device	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Upstream front plate*	*Incoming connection block*
Compact NSX installed at top of switchboard					
NSX400/630 *(cables via top)*	9	**03070**	**03296**	**03803**	**04076**
NSX400/630 *(cables via bottom)*	6	**03070**	**03296**		**04076**
Compact NSX installed at bottom of switchboard					
NSX400/630 *(cables via bottom)*	9	**03070**	**03296**	**03803**	**04076**
NSX400/630 *(cables via top)*	6	**03070**	**03296**		**04076**

Distribution

DD380783



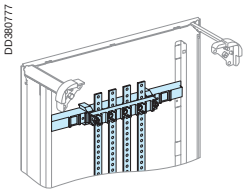
Powerclip insulated busbars, supplied by 400 A power supply block (04070).

Powerclip insulated busbars

Device	*Power supply block*	*Powerclip insulated busbars*
Compact NSX		
NSX400	**04070**	*see page C-5*
NSX630	**04071**	*see page C-5*

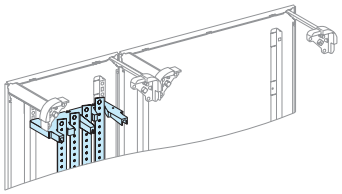
Other distribution solutions

DD380777



Rear busbars
see page C-9.

DD380761

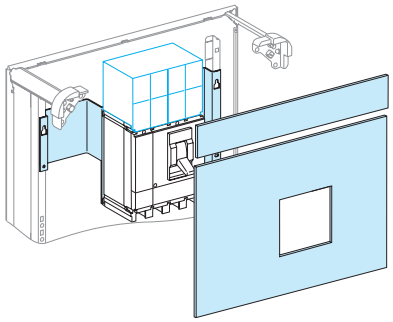


Multi-stage busbars
see page C-7

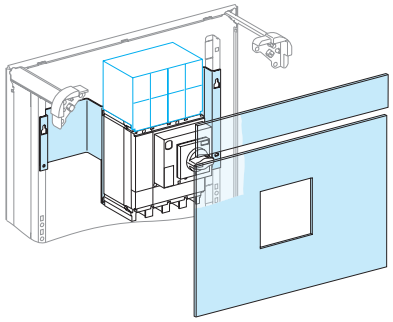
Compact NSX400/630
Vertical
Fixed
Toggle or direct rotary handle

Installation

DD383853



DD383854



Toggle

Device	No. of vertical modules (1)	Mounting plate	Cut-out front plate	Upstream front plate	Downstream frontplate	Long terminal shields
Compact NSX and Vigicompact NSX						
NSX400	11	**03073**	**03275**	**03802**		*LV432593 (3P)* *LV432594 (4P)*
NSX630	12	**03073**	**03275**	**03802**	**03801**	*LV432593 (3P)* *LV432594 (4P)*
Vigi NSX400	13	**03073**	**03297**	**03802**		*LV432593 (3P)* *LV432594 (4P)*
Vigi NSX630	14	**03073**	**03297**	**03802**	**03801**	*LV432593 (3P)* *LV432594 (4P)*

(1) *With or without spreaders.*

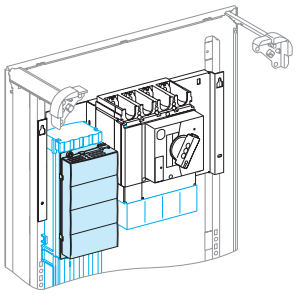
Direct rotary handle

Device	No. of vertical modules (1)	Mounting plate	Cut-out front plate	Upstream front plate	Downstream front plate	Long terminal shields
Compact NSX and Vigicompact NSX						
NSX400	14	**03074**	**03275**	**03802**	**03803**	*LV432593 (3P)* *LV432594 (4P)*
NSX630	14	**03074**	**03275**	**03802**	**03803**	*LV432593 (3P)* *LV432594 (4P)*
Vigi NSX400	17	**03074**	**03297** *+ LV429285 (collar)*	**03802**	**03804**	*LV432593 (3P)* *LV432594 (4P)*
Vigi NSX630	17	**03074**	**03297** *+ LV429285 (collar)*	**03802**	**03804**	*LV432593 (3P)* *LV432594 (4P)*

(1) *With or without spreaders.*

Distribution

DD383825



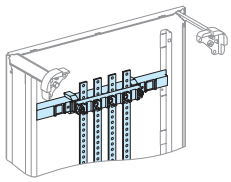
Powerclip insulated busbars, supplied by power supply block (04074) (supplied without connection).

Powerclip insulated busbars

Device	Power supply block (without connection)	Short terminal shields	Powerclip insulated busbars
Compact NSX and Vigicompact NSX			
NSX400/630 and Vigi 3P	**04074**	*32562*	*see page C-5*
4P	**04074**	*32563*	

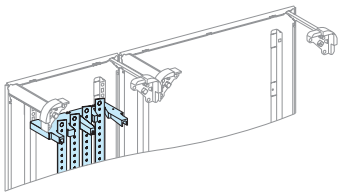
Other distribution solutions

DD380777



Rear busbars
see page C-9.

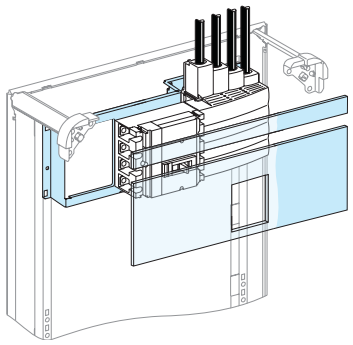
DD380761



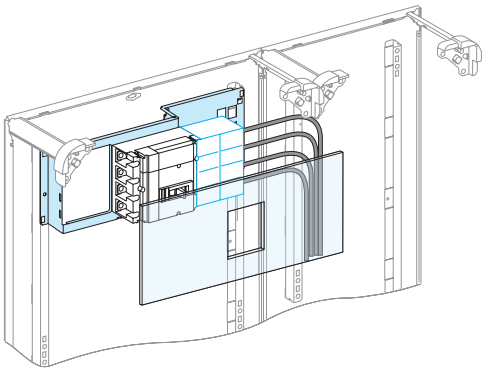
Multi-stage busbars
see page C-7

Compact NSX100/250
Horizontal
Fixed or plug-in
Toggle

Installation


DD383856

Compact circuit breaker with incoming connection block (04066).


DD383855

Direct connection to the Compact circuit breaker.

Without cable duct: with incoming connection block

Device	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Upstream front plate*	*Connection block cables via top*		*cables via bottom*
Fixed Compact NSX							
NSX100/250	5	**03030**	**03232**	**03801**	**04066**	**or**	**04067**

Without cable duct: connection directly by cable

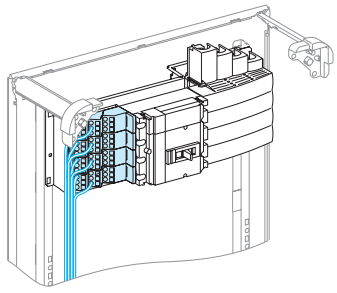
Device	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Upstream front plate*	*Long terminal shields*	*Cable tying*
Fixed Vigicompact NSX						
Vigi NSX100/250	6	**03033**	**03292**	**03802**	*LV429517 (3P)* *LV429518 (4P)*	**08867**

Maximum size of connection cables: 70 mm².
For cable cross-sections greater than 70 mm², use of a cable duct is recommended.

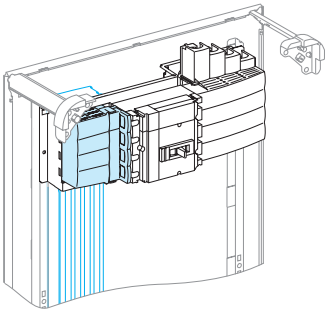
With cable duct: direct connection to the device

Device	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Long terminal shields*	*Adaptator*
Fixed Compact NSX and Vigicompact NSX					
NSX100/250	4	**03030**	**03232**	*LV429517 (3P)* *LV429518 (4P)*	
NSX100/250 with ammeter module	4	**03033**	**03292**	*LV429517 (3P)* *LV429518 (4P)*	
Vigi NSX100/250	4	**03033**	**03292**	*LV429517 (3P)* *LV429518 (4P)*	
Compact NSX, plug-in					
NSX100/250	4	**03032**	**03290**	*LV429517 + LV429306 (3P)* *LV429518 + LV429307 (4P)*	

Distribution


DD380587

Distribution using Polybloc (04034).


DD380522

Distribution via Powerclip insulated busbars and NS250 power supply block (04060).

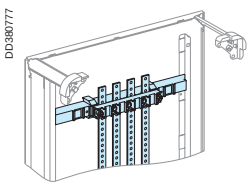
Polybloc

Device		*Polybloc 250 A*
Fixed Compact NSX and Vigicompact NSX		
NSX100/250	3P	**04033**
	4P	**04034**
Vigi NSX100/250	3P	**04033**
	4P	**04034**
Compact NSX, plug-in		
NSX100/250	3P	**04033**
	4P	**04034**

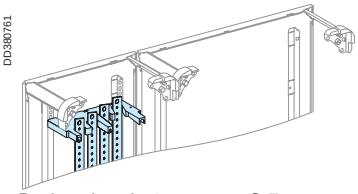
Powerclip insulated busbars

Device	*Power supply block*	*Terminal shields*	*Powerclip busbars*
Fixed Compact NSX and Vigicompact NSX			
NSX100/250	**04060**		*see page C-5*
NSX100/250 with ammeter module	**04060**	*LV429515 (3P)* *LV429516 (4P)*	*see page C-5*
Vigi NSX100/250	**04060**	*LV429515 (3P)* *LV429516 (4P)*	*see page C-5*

Other distribution solutions


DD380777

Rear busbars, see page C-9.

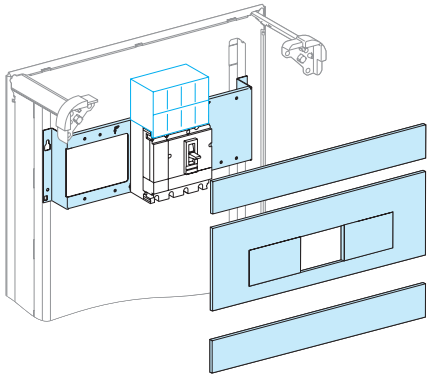

DD380761

Busbars in a duct, see page C-7.

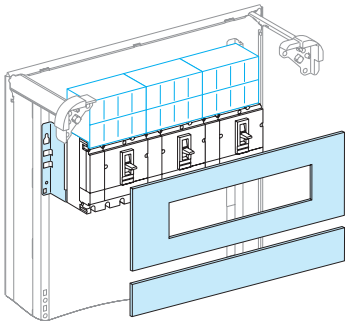
Compact NSX100/250
Vertical
Fixed
Toggle

Installation

DD383871



DD380666



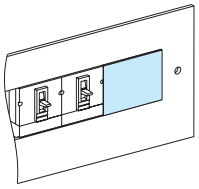
Fixed Compact NSX and Vigicompact NSX

Device	No. of devices per row	No. of vert. mod. (1)	Mounting plate	Cut-out front plate	Upstr. front plate	Downst. front plate	Long terminal shields
NSX100/160							
Toggle	1 4 x 3P, 3 x 4P	7	**03040**	**03243**		**03802**	*LV429517 (3P)* *LV429518 (4P)*
Rotary handle motor mech.	1 4 x 3P, 3 x 4P	7	**03041**	**03243**		**03802**	*LV429517 (3P)* *LV429518 (4P)*
NSX250							
Toggle	1 4 x 3P, 3 x 4P	9	**03040**	**03243**	**03802**	**03802**	*LV429517 (3P)* *LV429518 (4P)*
Rotary handle motor mech.	1 4 x 3P, 3 x 4P	9	**03041**	**03243**	**03802**	**03802**	*LV429517 (3P)* *LV429518 (4P)*
Vigi NSX100/160							
Toggle	1 4 x 3P, 3 x 4P	8	**03040**	**03241**		**03801**	*LV429517 (3P)* *LV429518 (4P)*
Rotary handle motor mech.	1 4 x 3P, 3 x 4P	8	**03041**	**03244 +** *LV429285* *(collar)*		**03801**	*LV429517 (3P)* *LV429518 (4P)*
Vigi NSX250							
Toggle	1 4 x 3P, 3 x 4P	11	**03040**	**03241**	**03802**	**03802**	*LV429517 (3P)* *LV429518 (4P)*
Rotary handle motor mech.	1 4 x 3P, 3 x 4P	11	**03041**	**03244 +** *LV429285* *(collar)*	**03802**	**03802**	*LV429517 (3P)* *LV429518 (4P)*

(1) *With or without spreaders, whatever the distribution solution (Powerclip insulated busbars, Polybloc distribution block, etc.).*

Accessories

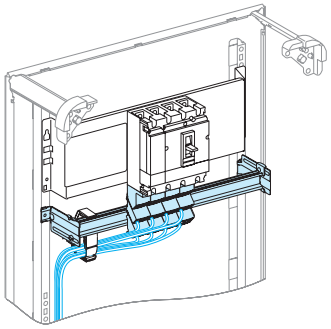
DD381339



Blanking plate for vertical NSX100/250 (03249):
see page D-27.

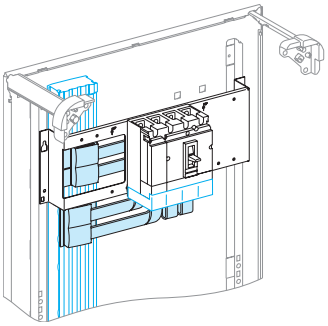
Distribution

DD380780



Distribution using a Polybloc distribution block (04034) on an adjustable modular device rail (03002).

DD380593



Distribution via Powerclip insulated busbars and a 250 A universal power supply block (04061) (without connection) + connection (04062).

Polybloc

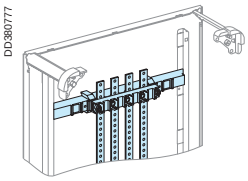
Device		Polybloc 250 A	Modular rail (adjustable)
Fixed Compact NSX and Vigicompact NSX			
NSX100/250	3P	**04033**	**03002**
	4P	**04034**	**03002**
Vigi NSX100/250	3P	**04033**	**03002**
	4P	**04034**	**03002**

Powerclip insulated busbars

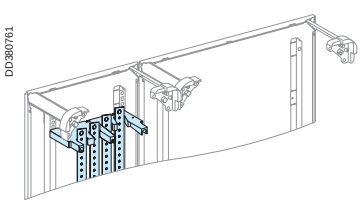
Device	Univ. power supply block (w/o connection)	+ connection	Short terminal shields	Powerclip busbars
Fixed Compact NSX and Vigicompact NSX (1 device centred on mounting plate)				
NSX100/250	**04061**	**+ 04062**	*LV429515 (3P)* *LV429516 (4P)*	*see page C-5*
Vigi NSX100/250	**04061**	*must be made*	*LV429515 (3P)* *LV429516 (4P)*	*see page C-5*

Other distribution solutions

DD380777



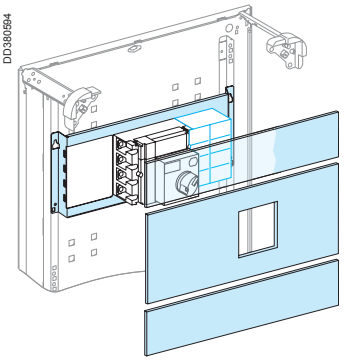
DD380761



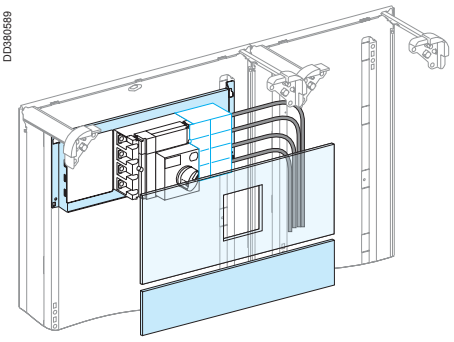
Compact NSX100/250
Horizontal, fixed
Direct rotary handle or motor mechanism

Installation

DD380594



DD380589



Without cable duct

Device	No. of vertical modules (1)	Mounting plate	Cut-out front plate	Upstream front plate	Downstr. front plate	Long terminal shields
Compact NSX, Vigicompact NSX, fixe						
NSX100/250 *Dir. rotary handle*	8	**03031**	**03232**	**03802**	**03802**	*LV429517 (3P) LV429518 (4P)*
NSX100/250 *Motor mech.*	8	**03032**	**03234**	**03802**	**03802**	*LV429517 (3P) LV429518 (4P)*
Vigi NSX100/250 *Dir. rotary handle*	8	**03031**	**03292** + *LV429285 (collar)*	**03802**	**03802**	*LV429517 (3P) LV429518 (4P)*

(1) Distribution using Polybloc.
Size reduced two modules, lower front plate (03802) not needed.

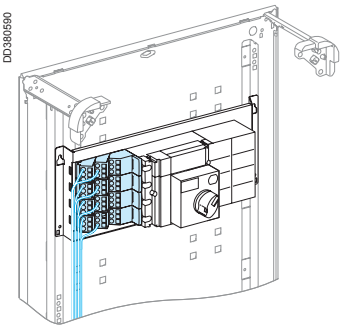
With cable duct

Device	No. of vertical modules (1)	Mounting plate	Cut-out front plate	Downstr. front plate	Long terminal shields
Compact NSX, Vigicompact NSX, fixe					
NSX100/250 *Dir. rotary handle*	6	**03031**	**03232**	**03802**	*LV429517 **(3P)** LV429518 **(4P)***
NSX100/250 *Motor mech.*	6	**03032**	**03234**	**03802**	*LV429517 **(3P)** LV429518 **(4P)***
Vigi NSX100/250 *Dir. rotary handle*	6	**03031**	**03292** + *LV429285 (collar)*	**03802**	*LV429517 **(3P)** LV429518 **(4P)***

(1) Distribution using Polybloc.
Size reduced two modules, lower front plate (03802) not needed.

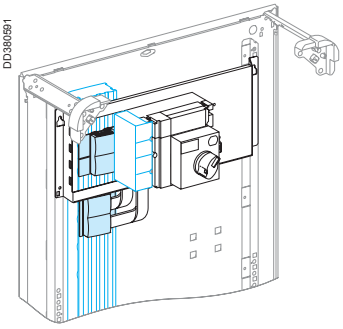
Distribution

DD380590



Distribution using Polybloc (04034).

DD380591



Distribution via Powerclip insulated busbars and a 250 A universal power supply block (04061) (supplied without connection).

Polybloc

Device		Polybloc 250 A
Fixed Compact NSX and Vigicompact NSX		
NSX100/250	3P	**04033**
	4P	**04034**
Vigi NSX100/250	3P	**04033**
	4P	**04034**

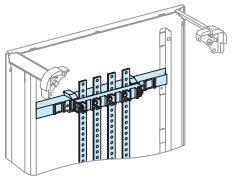
For cable cross-sections greater than 70 mm², use of a cable duct is recommended.

Powerclip insulated busbars

Device	Univ. power supply block (w/o connection)	Short terminal shields	Powerclip busbars
Fixed Compact NSX and Vigicompact NSX			
NSX100/250	**04061**	*LV429515 (3P) LV429516 (4P)*	*see page C-5*
Vigi NSX100/250	**04061**	*LV429515 (3P) LV429516 (4P)*	*see page C-5*

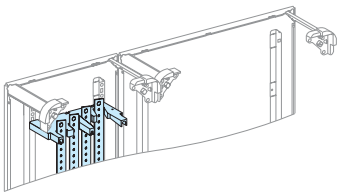
Other distribution solutions

DD380777



Rear busbars, see page C-9.

DD380761

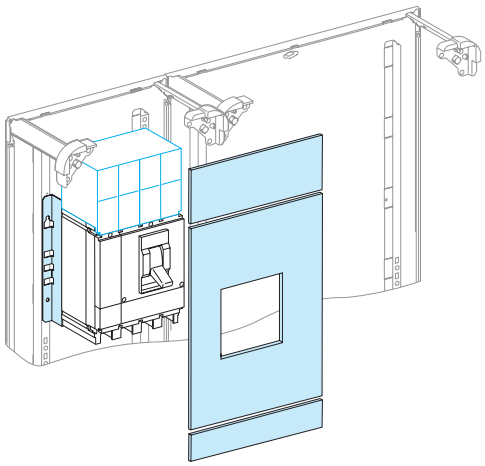


Busbars in a duct, see page C-7.

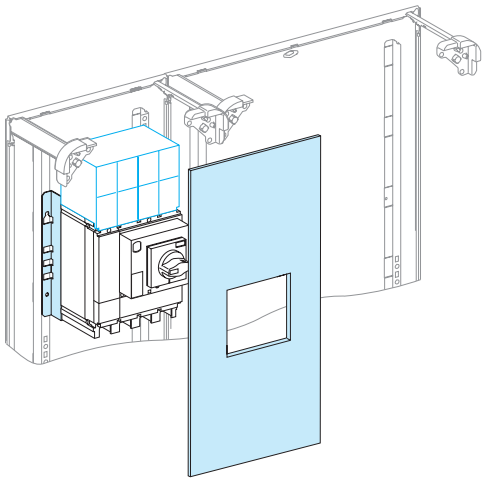
Compact NSX100/630
Vertical
Fixed
Toggle or direct rotary handle

Installation

DD383857



DD383858



Toggle

Device	*No. of vertical modules (1)*	*Mounting plate*	*Cut-out front plate*	*Upstream front plate*	*Downstream front plate*	*Long terminal shields*
Compact NSX						
NSX100/250	9	**03050**	**03253**			*LV429517 (3P)* *LV429518 (4P)*
NSX400	11	**03080**	**03298**	**03812**	**03811**	*LV432593 (3P)* *LV432594 (4P)*
NSX630	12	**03080**	**03298**	**03812**	**03812**	*LV432593 (3P)* *LV432594 (4P)*
Vigi Compact NSX						
Vigi NSX100/250	11	**03050**	**03293**			*LV429517 (3P)* *LV429518 (4P)*
Vigi NSX400/630	14	**03080**	**03299**	**03812**	**03812**	*LV432593 (3P)* *LV432594 (4P)*

(1) *With or without spreaders.*

Direct rotary handle

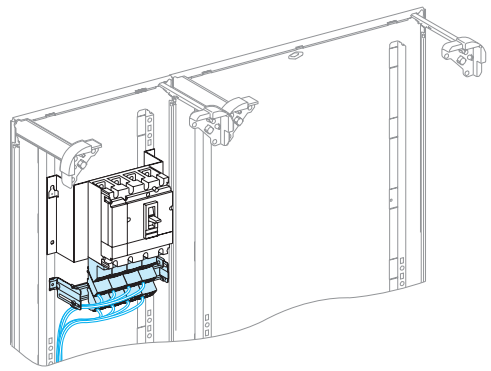
Device	*No. of vertical modules (1)*	*Mounting plate*	*Cut-out front plate*	*Long terminal shields*
Compact NSX				
NSX100/250	9	**03051**	**03253**	*LV429517 (3P)* *LV429518 (4P)*
NSX400/630	12	**03081**	**03283**	*LV432593 (3P)* *LV432594 (4P)*

(1) *With or without spreaders.*

Compact NSX100/630
Vertical
Fixed
Toggle or direct rotary handle

Distribution

DD380745

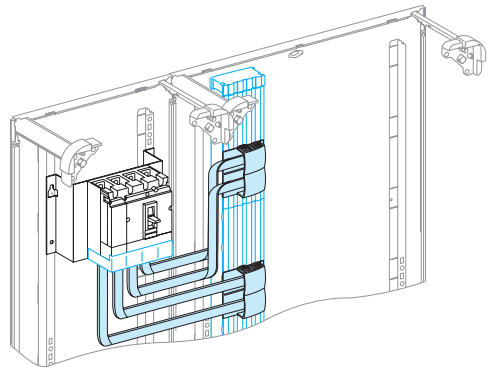


*Distribution via a Polybloc distribution block (**04034**) on a modular device rail (**03011**).*

Polybloc

Device		*250 A Polybloc*	*Modular rail (adjustable)*
Compact NSX and Vigi Compact NSX			
NSX100/250 and Vigi	3P	**04033**	**03011**
	4P	**04034**	**03011**

DD381365



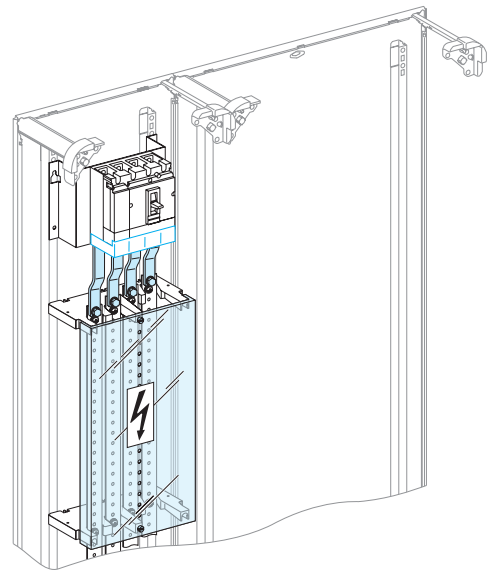
*Distribution via Powerclip insulated busbars and a 250 A universal power supply block (**04061**) (without connection) + connection (**04064**).*

Powerclip insulated busbars

Device	*Univ. power supply block (w/o conn)*	*+ connection*	*Short terminal shields*	*Powerclip busbars*
Compact NSX and Vigi Compact NSX				
NSX100/250 and Vigi	**04061**	**+ 04064**	*LV429515 (3P)* *LV429516 (4P)*	*see page C-5*
NSX400/630 and Vigi	**04074**	**+ 04073**	*LV432591 (3P)* *LV432592 (4P)*	

Note: *space available at the top of the enclosure after mounting the universal power supply block:*
NSX100/630 = 7 modules
Vigi NSX100/630 = 9 modules.
Space required by power supply block on Powerclip busbars = 5 modules.

DD382305

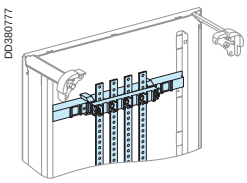


Multi-stage busbars

Device	*Connection*	*Short terminal shields*	*Multi-stage busbars*
Designation			
NSX100/250 and Vigi	**04065**	*LV429515 (3P)* *LV429516 (4P)*	*see page C-7*
NSX400/630 and Vigi	**04075**	*LV432591 (3P)* *LV432592 (4P)*	*see page C-7*

Other distribution solutions

DD380777

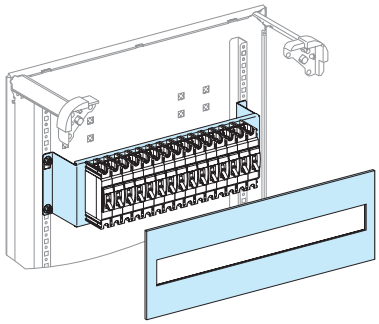


Rear busbars, see page C-9.

Easypact EZC100
Vertical
Fixed
Toggle

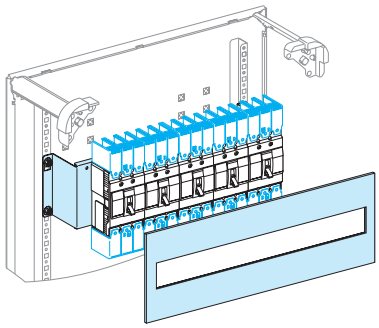
Installation

DD388110



Easypact EZC100 1P.

DD388044



Easypact EZC100 3P.

Device	*No. of devices per row*	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Long terminal shields (set of 2)*
Easypact					
EZC100	15 x 1P	5	**03102**	**03303**	
	5 x 3P	5	**03102**	**03303**	EZATSHD3P
	3 x 4P	5	**03102**	**03303**	EZATSHD4P

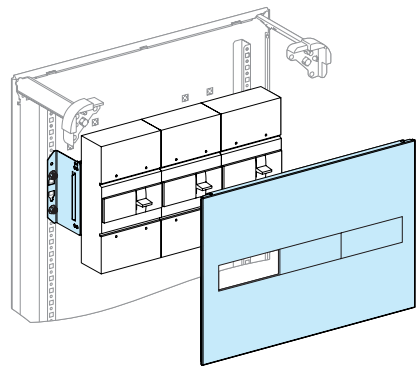
Accessories

Designation	**Cat. no.**
1 divisible blanking plate, H = 85 mm, L = 147 mm colour: white RAL 9001	**03249**

Easypact EZC250
Easypact EZC400

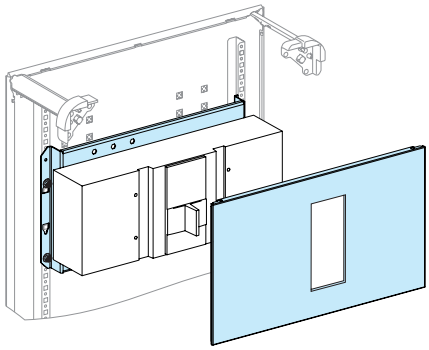
Installation

DD383993



Easypact EZC250.

DD383994



Easypact EZC400.

Vertical devices

Device	*No. of devices per row*	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Long terminal shields (set of 2)*
Easypact					
EZC250	4 x 3P	6	**03104**	**03305**	EZETSHD3PN
	3 x 4P	6	**03104**	**03305**	EZETSHD4PN
EZC400	1 x 3P	10	**03105**	**03307**	EZ4TSHD3P
	1 x 4P	10	**03105**	**03307**	EZ4TSHD4P

Horizontal devices

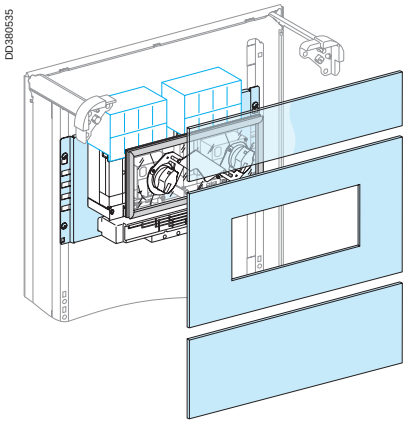
Device	*No. of devices per row*	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Long terminal shields (set of 2)*
Easypact					
EZC250	1 x 3P	3	**03104**	**03304**	EZETSHD3P
	1 x 4P	3	**03104**	**03304**	EZETSHD4P
EZC400	1 x 3P	5	**03105**	**03306**	EZ4TSHD3P
	1 x 4P	5	**03105**	**03306**	EZ4TSHD4P

Manual source changeover system

Fixed NSX100/250

Direct rotary handle

Source changeover system with mechanical interlocking



Device	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Upstream front plate*	*Downstream front plate*
Compact NSX with direct rotary handle, front connection					
NSX100/250	10	**03043**	**03245**	**03802**	**03803**

Designation	*Cat. no.*
Long terminal shields	*LV429517 (3P)*
	LV429518 (4P)
Mechanical interlock	*LV429369*
Coupling accessory	*29358 (for 3P device)*
	29359 (for 4P device)

Widths of modular devices

Circuit breakers

Widths of Multi 9 devices (in number of 9 mm modules)

Description		Width in 9 mm modules			
		1P	1P + N 2P	3P 3P + N	4P
Alarm, ATo4x technical		8			
Ammeter, AMP analogue		8			
Ammeter, mul i-rating		4			
Ammeter, AMP digital		4			
Auxiliaries, for ID, C60, C120		1-2-4			
Auxiliaries, for C32H-DC		1-2			
Auxiliaries, NO/NC		2			
Auxiliaries, ACTp and ACTr for contactor		2			
Auxiliaries, ACTo+f for contactor		1			
Auxiliaries, NTVo and TTVo for remote dimmer		2			
Bell or buzzer		2			
Circuit breaker, D'clic, D'clic XE			2		
Circuit breaker, D'clic Vigi			4		
Circuit breaker, DT40, DT40N			2	6	
Circuit breaker, DT40 Vigi			4		
Circuit breaker, C32H-DC		2	4		
Circuit breaker, C60/N/H/L/LMA		2	4	6	8
Circuit breaker, C120/N/H		3	6	9	12
Circuit breaker, NG125		3	6	9	12
	Auxiliary 2 OF or OF + SD	1			
	Auxiliary MX + OF or MN	2			
	Auxiliary MN s	4			
Circuit breaker, NG125 Vigi s			11	18	21
Circuit breaker, NG125 Vigi I/S/R			11	20	23
Circuit breaker, P25M				5	
	Auxiliary MN	1			
	Auxiliary MX + OF	2			
Circuit breaker, Reflex XC40			8	10	12
Contactor, CT 16/25 A		2	2	4	4
Contactor, CT 40/63/100 A			4-6	4-6	6-12
Contactor, ACTc auxiliary		2			
Contactor, CDS 1-ph load shedder		10			
Contactor, CDSc 1-ph load shedder		16			
Contactor, CDS 3-ph load shedder				16	
Contactor, CT+ silent		2			
Cooling spacer		1			
Counter, CI pulse		4			
Counter, CH time		4			
Dimmer, Vo1000		10			
Extension, ETL for TL impulse relay		2			
Extension, ERL		2			
Frequency meter, FREQ		4			
Fuse carriers, STI, SF'clic		2	2-4	6	6
Fuse-holder, SBI 14 x 51		3	6	9	12
Fuse-holder, SBI 22 x 58		4	8	12	16
Impulse relay, TL 16 A and 32 A, ETL 16 and 32 A		2	2		
Impulse relay, TLI 16 A and TLc		2			
Impulse relay, TLm and TLs		2			
Impulse relay auxiliaries, ATLc+c and ATLc+s		2			
Impulse relay auxiliaries, ATLt and ATLz		2			
Impulse relay auxiliaries, ATL4		4			
Impulse relay,TL+ silent		2			
Insulation monitor, SM21		8			
Kilowatt-hour meter, CE, CEr		12			
Load shedder, DSE'clic 2-channel		6			
Load shedder, DSE'clic 4-channel		8			
Multimeter, PM9		8			
Optical repeater, RPo		2 + 2			
Power sockets, PC, 10 A and 16 A			5		
Power sockets, PC, 20 A		8			
Pushbuttons		2			
Rccb, ID'clic		4			
Rrcb, ID'clicXE		4			
Rccb, ID			4		8
Rccb, ITG40			4		
Regulator, REGad1/REGad2		12			
Relay, RBN low level		2			

Widths of modular devices

Circuit breakers

Description	Width in 9 mm modules			
	1P	1P + N 2P	3P 3P + N	4P
Relay, RCI/RCU/RCP and RCC	4			
Relay, timed-delayed, RTA, RTB, RTC, RTH, RTL, RTMF	2			
Relay, RLI	2			
Remote control, TBS	8			
Remote control, Tm60-Tm120		7	7	
Remote dimmer, TVo1000	10			
Remote dimmer, TVBo	6			
Remote dimmer, TV700, TVe700	6			
Selector switches, CM	2	4		
Selector, 2-position with return to OFF	4			
Selector switch, CMA for ammeters	4			
Selector switch, CMV for voltmeters	4			
Selector switch, CME 2-way	4			
Selector switch, CMD 4-way	4			
Signal lamps	2			
Surge arrester, PF'clic Combi		6		
Surge arrester, 2P, PF8, PF15		4		
Surge arrester, 2P, PF30 (r)		6		
Surge arrester, 4P, PF8, PF15, PF30 (r)			8	
Surge arrester, 4P, PF65 (r)			14	
Surge arrester, 1P, PE65/40/15/8	2			
Surge arrester, PRC'clic telephone	2			
Surge arrester, PRD	2	4	6	8
Switch, 20 A and 32 A	2	2	4	4
Switch, 40, 63, 100 and 125 A	2	4	6	8
Switch, IB double junction		4		
Switch, astronomic light sensitive	5			
Switch, IC200 light sensitive	5			
Switch, IC2000 light sensitive	7			
Switch, IC2000P light sensitive	10			
Switch, INA		5		9
Switch, ISO	6			
Switch-fuse combinations	2	4	6	8
Switch-off warning, PRE	2			
Thermostat, TH3 and TH6	8			
Thermostat, THP1	10			
Thermostat, THP2	10			
Time switch, IHP, IHH, IH	2			
Time switch, IH	6			
Time switch, IH	12			
Time switch, ITM multifunctional	10			
Time switch, IHP 24-hr/7-day. IHP'clic	5			
Time switch, IHP impulse 24-hr/7-day	5			
Time switch, IHP 3-4 ch., impulse	10			
Time switch, IHP, annual	10			
Timer, MIN	2			
Timer, MINe, MINp, MINs	2			
Transformer, TR, 4 VA	4			
Transformer, TR, 8 and 16 VA	4			
Transformer, TR, 25 VA	6			
Transformer, TR, 16 VA to 63 VA	10			
Vigilohm, EM (9, 9B)	8			
Vigilohm, TRS5A and SM21	11			
Vigirex, RH (10A/AP, 320A/AP, 328A/AP)	8			
Vigi module C60 y 25 A		3	6	6
Vigi module C60 y 40 and 63 A		4	7	7
Vigi module C120 all ratings		7	10	10
Vigi module NG125		5	9	11
Vigi module XC40		3	4	5
Vigi module XC40 (30 mA)		3	5	5
Vigi module DT40		2	4	
Vigi module TG40		2	6	
Voltage adaptor module, MDU	1			
Voltmeter, VLT analogue	8			
Voltmeter, VLT digital	4			
Watt-hour meters, ME1, ME1z, ME1zr	4			
Watt-hour meters, ME3, ME3zr, ME3zrt			8	
Watt-hour meters, ME4, ME4zr, ME4zrt				8

Modular devices
Multi 9
NG160, NG125, C120, INS40/160

Presentation

PD391215

Very rigid modular rails
Made using an aluminium alloy, the rail design is extremely rigid.
The rails come crimped to their supports.
The rail supports can be either:
- adjustable and indexed to receive the different types of incoming devices
- fixed to receive modular devices.

Fast mounting
The pre-mounted rail supports have positioning studs to guide the rail at the rear of the enclosure.
Only two mounting screws are required.

PD391214

A removable raised DIN rail
This accessory optimises available space to allow installation of modular devices on both sides of the incoming device.

The raised DIN rail is designed for clip mounting with full electrical continuity ensured between the two supports.Multiple functions
A number of devices clip directly onto the rear of the rails, including 80 A and 200 A Multiclip distribution blocks, all horizontal cable-running accessories such as cable straps and trunking supports, as well as the supports for earth bars.

Supply from all directions
Supply to the rows, using comb busbars or Multiclip distribution blocks, can be via:
- a Polybloc distribution block installed beside the incoming device
- Powerclip insulated busbars installed behind the devices
- multi-stage busbars installed in a lateral duct
- flat busbars installed at the rear of the enclosure.

PD391207

Polybloc and Distribloc centralised distribution blocks
Downstream circuits are connected from the front, without screws, to spring terminals.
a reliable electrical connection, no maintenance required.
fast connections make phase balancing very easy.
rewiring is very easy if the switchboard is expanded or modified.

PD391207

PD391211

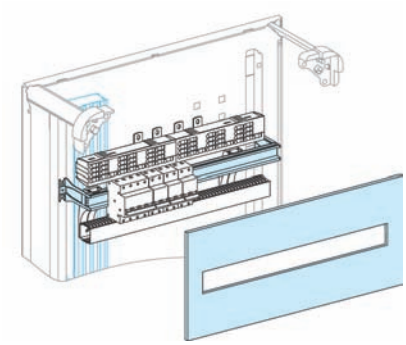
Multiclip distribution blocks
Fast and secure front connection using spring terminals.
Particularly reliable connections, will not loosen over time, insensitive to vibrations and thermal variations.
All types of modular devices can be mixed.
Easy balancing of phases.
Interchangeable devices.
Easy installation upgrades.
Fully insulated.

Comb busbars
Connection by screws.
Direct connection to device terminals or via a connector.
Fully insulated.
Can be cut to length.

Modular devices
Multi 9 ≤ 63A

Multi 9 devices

DD383264



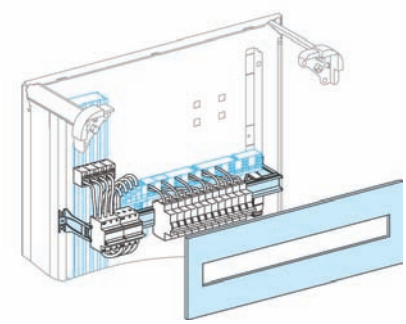
Supply: 200 A Multiclip.
Cable running: trunking.
Mounting requires 4 vertical modules.

Device	*No. of vertical modules*	*Modular rail*	*Modular front plate*
All Multi 9 devices			
All supply systems (comb busbars, Multiclip) with cable straps and trunking sections	4	**03001**	**03204**
Multi 9 devices ≤ 40 A			
Supply via 63/80 A Multiclip or comb busbars with cable straps	3	**03001**	**03203**

Capacity of modular rail: 48 Multi 9 modules.

Note: *For a modular row with a 160 A (half row) and 200 A Multiclip distribution block positioned directly below a non-modular mounting plate (Compact, Interpact, etc), or at the top of a switchboard, add one vertical module (i.e. 4 + 1) and a plain upstream front plate (03801).*

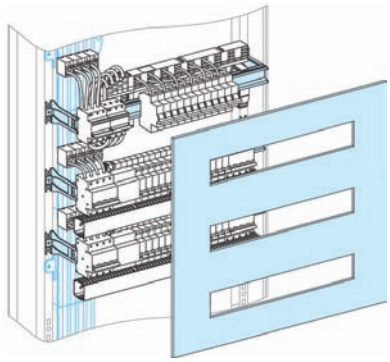
DD383265



Supply: 80 A Multiclip.
Cable running: cable straps.
Mounting requires 3 vertical modules.

3 rows of Multi 9 device

DD383266



Device	*No. of vertical modules*	*Modular rail*	*Modular front plate 3 rows*
Designation			
3 rows of Multi 9 devices ≤ 40 A supply via comb busbars or Multiclip distribu ion blocks (63/80 A) Cable running using cables straps	8	**03001 x 3**	**03223**

Capacity of modular rail: 48 Multi 9 modules.

Modular devices

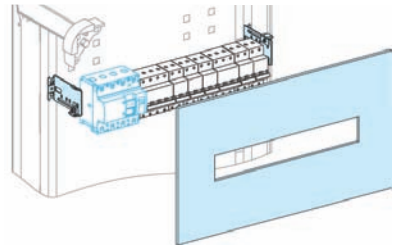
80/160A incoming devices

NG160, NG125, C120 circuit breakers

INS40/160 switch-disconnectors

NG160 circuit breaker

DD383268



Device	No. of vertical modules	Adjustable modular rail (1)	Modular front plate
NG125 circuit breaker			
NG160, Vigi NG160	5	**03002 + 04227**	**03205**

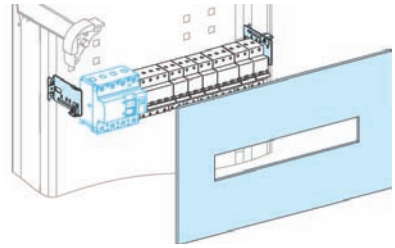
(1) *To add modular devices to the row, order a raised DIN rail (04227).*

Capacity of modular rail: 48 Multi 9 modules.

Width of NG160 circuit breakers:
NG160 3P: 10 Multi 9 modules
NG160 4P: 14 Multi 9 modules
Vigi NG160 3P: 24 Multi 9 modules
Vigi NG160 4P: 27 Multi 9 modules

NG125, C120 circuit breaker

DD383268



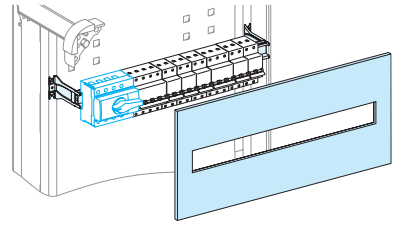
Device	No. of vertical modules	Adjustable modular rail	Modular front plate
NG125 circuit breaker			
NG125, Vigi NG125 C120, Vigi C120	5	**03001**	**03205**

Capacity of modular rail: 48 Multi 9 modules.

Width of NG125/C120 circuit breakers:
NG125 3P: 9 Multi 9 modules
NG125 4P: 12 Multi 9 modules
Vigi NG125 3P 63 A: fixed sensitivity 18 Multi 9 modules
adjustable sensitivity 20 Multi 9 modules
> 63 A: fixed sensitivity 20 Multi 9 modules
adjustable sensitivity 20 Multi 9 modules
Vigi NG125 4P 63 A: fixed sensitivity 21 Multi 9 modules
adjustable sensitivity 23 Multi 9 modules
> 63 A: fixed sensitivity 23 Multi 9 modules
adjustable sensitivity 23 Multi 9 modules
C120 3P: 9 Multi 9 modules
C120 4P: 12 Multi 9 modules
Vigi C120 3P: 19 Multi 9 modules
Vigi C120 4P: 22 Multi 9 modules

INS40/160 switch-disconnector

DD383995



Device	No. of vertical modules	Adjustable modular rail	Modular front plate
INS40/160			
INS40/160	4	**03001**	**03204**
INS100/160 with long terminal shields	5	**03001**	**03205**

Capacity of modular rail: 48 Multi 9 modules.

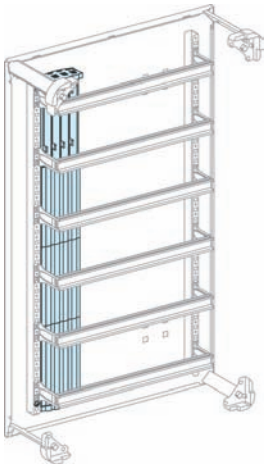
Width of devices: *INS40/80: width 10 Multi 9 modules*
INS100/160: width 15 Multi 9 modules

Modular devices
Powerclip busbars

125 A Powerclip busbars

See page C-4.

DD383270



Available in two lengths (450 and 750 mm) in three and four-pole versions.
The busbars can be cut to length every 150 mm.
They are supplied with clip-on covers that block off the connected cable lugs and can be cut as needed.

Cat. no. selection

125 A Powerclip busbars		Cat. no.
Three-pole	L = 450 mm	**04103**
	L = 750 mm	**04107**
Four-pole	L = 450 mm	**04104**
	L = 750 mm	**04108**

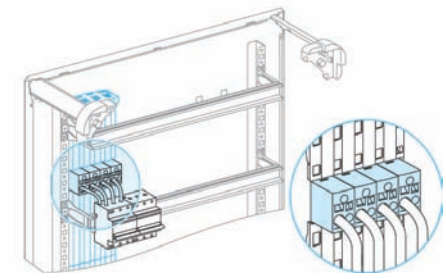
160/630 A Powerclip busbars

Available in two lengths (1000 and 1400 mm) in three and four-pole versions. The busbars can be cut to length every 200 mm.
Prefabricated connections are available for the devices.

Powerclip busbars		160 A	250 A	400 A	630 A
Three-pole	L = 1000 mm	**04111**	**04112**	**04113**	**04114**
	L = 1400 mm	**04116**	**04117**	**04118**	**04119**
Four-pole	L = 1000 mm	**04121**	**04122**	**04123**	**04124**
	L = 1400 mm	**04126**	**04127**	**04128**	**04129**

Powerclip accessories

DD383271



Powerclip tap-off blocks

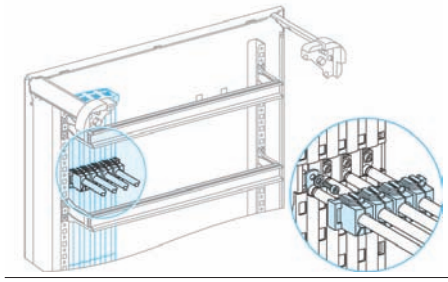
Each block can be used to connect:
- one 6 mm² and one 10 mm² cable (04151)
- one 16 mm² cables (04152).

Equipped with spring terminals.

Designation	Cat. no.
12 Powerclip tap-off blocks wi h 6mm² + 10mm² terminals	**04151**
12 Powerclip tap-off blocks with 16 mm² terminals	**04152**

Connection cover
Clip-on covers that block off the connected cable lugs and can be cut as needed.
They maintain the IPxxB value for cables from 10 to 25 mm² with 90° angle lugs.

DD383272



Designation	Cat. no.
8 IPxxB covers for Powerclip busbars	**04150**

8.8 class mounting hardware

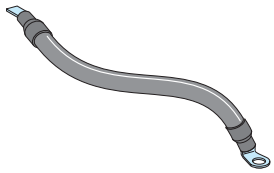
Used for electrical connections to the copper bars.

Designation	Cat. no.
Set of 20 CHC M6 x 12 mm screws for Powerclip busbars	**04158**

Modular devices
Connections to Powerclip busbars

Busbar connection

DD381379

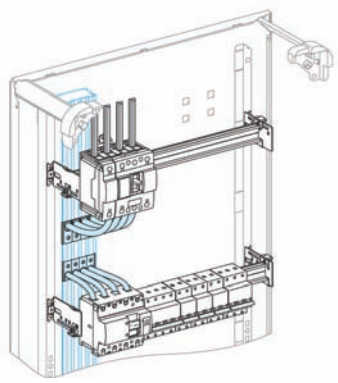


For NG125, and INS40/125 equipped with tunnel terminals

A 35 mm² ferrule for connection to tunnel terminals is crimped to one end.
A 45° ring lug is crimped to the other end.
95 mm² tunnel terminals for INS : cat. no. 28947 (set of 3) or cat. no. 28948 (set of 4).

Designation	Cat. no.
Four 125 A connections, L = 230 mm	**04145**

DD383273



One-piece device/Powerclip connection

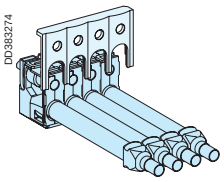
Respects the degree of protection IpxxB on both busbar and device ends.
Neutral is clearly indicated (blue).

NG160 incoming device (located on left-hand side), NG125, INS160, C120
One-piece 3/4 P fast connection to busbars, equipped with male fittings one end for tunnel terminals .

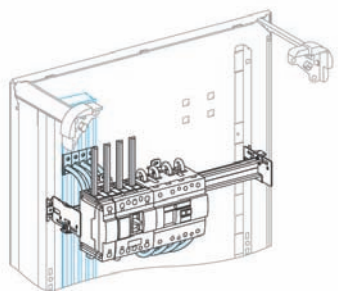
Designation	Cat. no.
One-piece connection, 160A, L = 150 mm	**04147**

A multi-purpose connection for:
- Supply to Powerclip busbars from a switchboard incomer
- Supply to a row incomer from Powerclip busbars.

DD383274



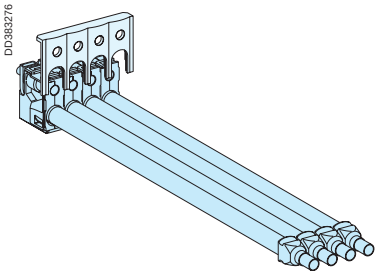
DD383275



NG160 Vigi incoming device (located on left-hand side)
NG160 (without Vigi) incoming device (located in the middle)
NG125, INS160, C120
One-piece 3/4 P fast connection to busbars, equipped with male fittings one end for tunnel terminals .

Designation	Cat. no.
One-piece connection, 160A, L = 440 mm	**04148**

DD383276

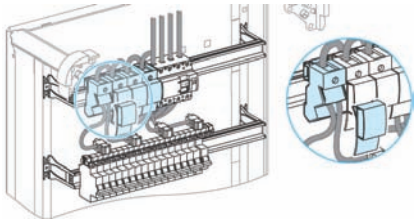


Modular devices
Centralised distribution

160 A Polybloc distribution block

See page C-20.

DD383300



160 A distribution block

Designation	Cat. no.
160 A Polybloc distribution block, 1P	04031

Note: *installation on a raised DIN rail.*

Connection for NG125, NG160, INS40/160 with or without Vigi

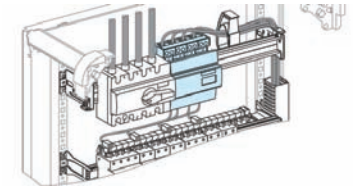
Two 45 mm² end fittings for tunnel terminals

Designation	Cat. no.
Four 160 A connections for modular devices, L = 380 mm	04149

125/160 A Distribloc distribution block

See page C-14.

DD383301



125 A distribution block

Designation	Cat. no.
125 A Distribloc distribution block	04045

Note: *installation on a raised DIN rail.*

Connection for NG125, INS40/160, C120 with or without Vigi

A male ferrule for a tunnel terminal is crimped on one end.
A 45° angle lug with a hole is crimped on the other end.

Designation	Cat. no.
4 NG-INS125 connections for Distribloc, L = 210 mm	04047

160 A distribution block

Designation	Cat. no.
160 A Distribloc distribution block	04046

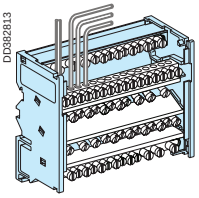
Note: *installation on a raised DIN rail.*

Connection for NG160, INS100/160 with or without Vigi

The Distribloc 160 A distr bution block comes with device connections.

40/125 A multi-stage distribution blocks

DD382813



Designation	Cat. no.
100 A two-pole multi-stage distribution block (2 x 7 holes)	13506
125 A two-pole multi-stage distribution block (2 x 13 holes)	13507
40 A four-pole multi-stage distribution block (4 x 13 holes)	13508
100 A four-pole multi-stage distribution block (4 x 7 holes)	13510
125 A four-pole multi-stage distribution block (4 x 13 holes)	13512
125 A four-pole multi-stage distribution block (4 x 17 holes)	13514

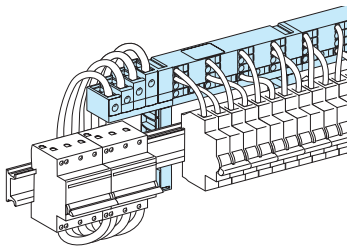
Rated insulation voltage: 500 V.
Rated operational current: 40/100/125 A (40 °C).

Additional neutral bar	Cat. no.
For cat. no. 13508	13516
For cat. no. 13510	13515
For cat. no. 13512	13517
For cat. no. 13514	13518

Modular devices
Distribution blocks for modular rows

Multiclip distribution blocks

DD380675



Distribution block

Designation	Cat. no.
Multiclip, 80 A, 4P	04004
Multiclip, 63 A, 4P, 1/2 row	04008
Multiclip, 200 A, 2P	04012
Multiclip, 200 A, 3P	04013
Multiclip, 200 A, 4P	04014
Multiclip, 160 A, 4P, 1/2 row	04018

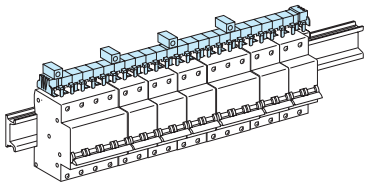
Connections

Designation	Cat. no.
Connection between 200 A Multiclip and Powerclip insulated busbars	04021
Connection between 160 A Multiclip (1/2 row) and devices	04030

See page C-17

Comb busbars

DD380755



For C60 circuit breakers

Designation		Cat. no.
1P	24-module comb busbar (9 mm modules)	14481
	Two 48-module comb busbars (9 mm modules)	14891
2P	24-module comb busbar (9 mm modules)	14482
	Two 48-module comb busbars (9 mm modules)	14892
3P	24-module comb busbar (9 mm modules)	14483
	Two 48-module comb busbars (9 mm modules)	14893
4P	24-module comb busbar (9 mm modules)	14484
	Two 48-module comb busbars (9 mm modules)	14894

For C120 and NG125 circuit breakers

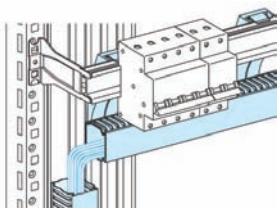
Designation		Cat. no.
1P	(W = 430 mm, 16 poles)	14811
2P	(W = 430 mm, 16 poles)	14812
3P	(W = 430 mm, 16 poles)	14813
4P	(W = 430 mm, 16 poles)	14814
Tooth caps (set of 20)		14818

Comb accessories

Designation		Cat. no.
40 end-caps	1P/2P/1P + N, for comb busbars	14886
	3P/4P/3P + N, for comb busbars	14887
40 tooth-caps for comb busbar teeth		14888
4 insulated connectors for 25 mm² cables		14885

Cable running

DD383388

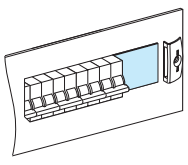


Designation	Cat. no.
Cable straps 12 vertical cable straps	04264
2 covers, 1-meter long, for vertical cable straps	04263
12 horizontal cable straps	04239
4 covers, 430 mm long, for horizontal cable straps	04243
Trunking 4 horizontal sections, 60 x 30 mm, L = 450 mm	04257
Vertical section, 80 x 60 mm, L = 2 m	04267
12 horizontal trunking supports	04255
10 adaptable horizontal trunking supports	04256
12 vertical trunking supports	04265

See page C-34

Blanking plates

DD384029



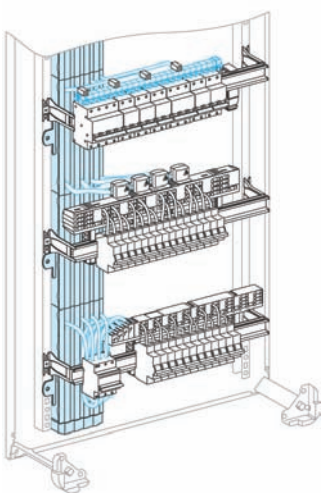
Designation	Cat. no.
Blanking strip, H = 46 mm, L = 1 m	03220
4 divisible blanking plates, H = 46 mm, L = 90 mm	03221

See page D-27

Modular devices
Distribution

Powerclip insulated busbars

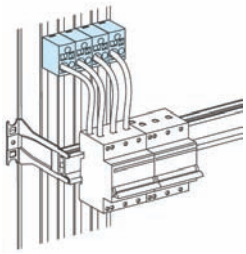
DD383217



Busbar selection

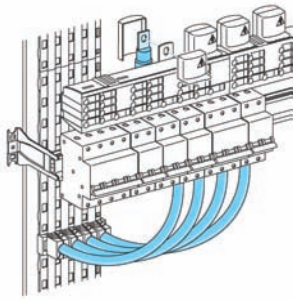
See page C-5.

DD383278



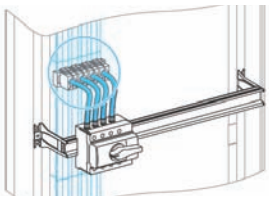
Tap-off blocks for insulated busbars (04151).

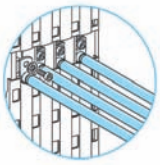
DD383279



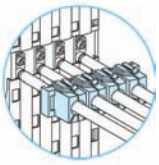
Supply to a 200 A Multiclip distribution block (04021).

DD383280





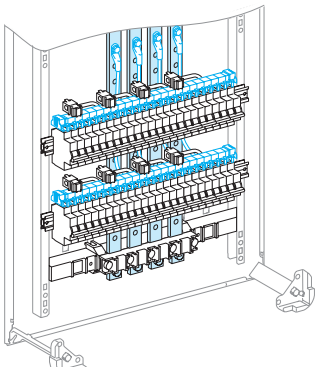
Connection 04145.



Cover for connection 04150.

Rear busbars

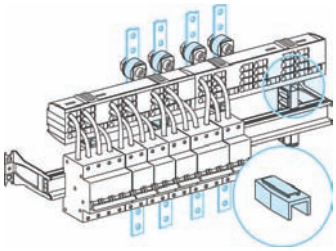
DD381213



Busbar selection

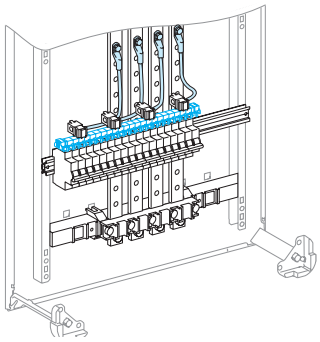
See page C-9.

DD383281



200 A Multiclip connection (04029).

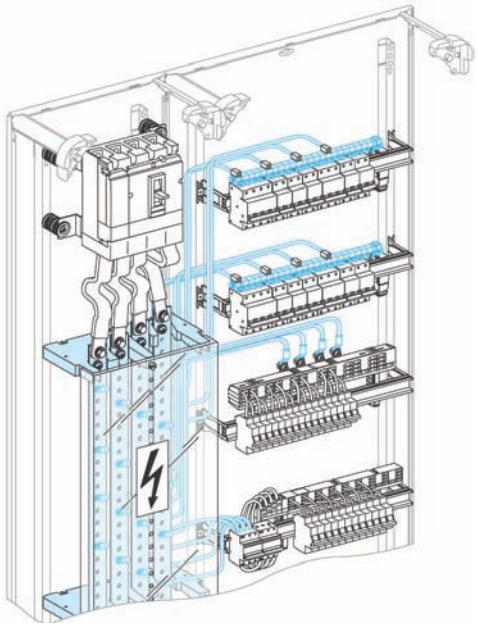
DD381215



125 A connection to a comb busbar (04145).

Busbars in a duct

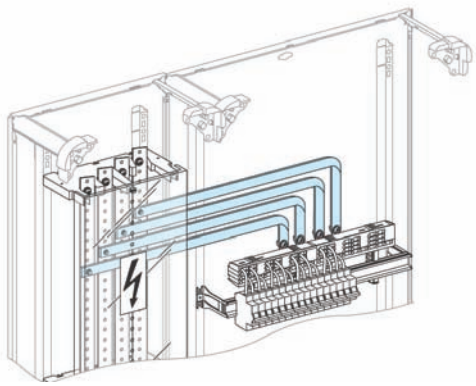
DD383282



Busbar selection

See page C-7.

DD383283

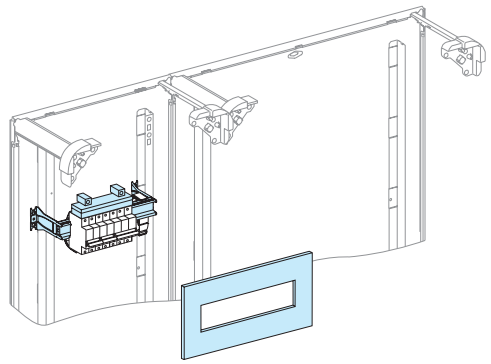


Supply to a 200 A Multiclip distribution block (04024).

Modular devices
NG160 circuit breakers
INS40/160 switch-disconnectors

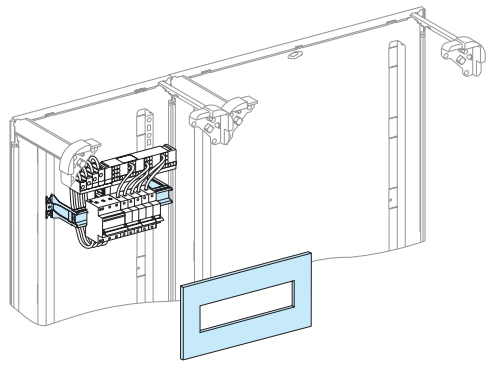
Multi 9 devices

DD383490



Supply via comb busbars.

DD383489



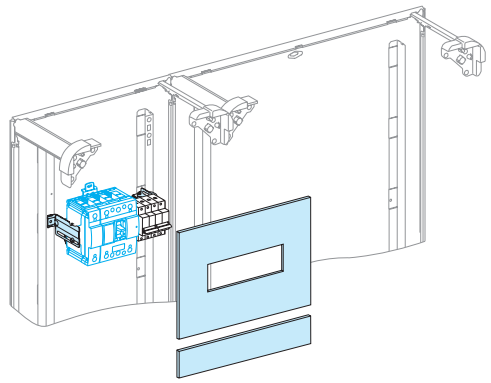
Supply via 63 A Multiclip.

Device	*No. of modules*	*Modular rail*	*Modular front plate*
All Multi 9 devices			
All supply systems with cable straps or trunking	4	**03010**	**03214**
Multi 9 devices ⩽ 40 A			
Supply via 63 A Multiclip or comb busbars with cable straps	3	**03010**	**03213**

Capacity of modular rail: 20 Multi 9 modules.

NG160 circuit breaker

DD383626



Device	*No. of vertical modules*	*Modular rail (adjustable)*	*Modular front plate*	*Downstream front plate*
NG160 circuit breaker				
NG160	5	**03011**	**03214**	**03811**

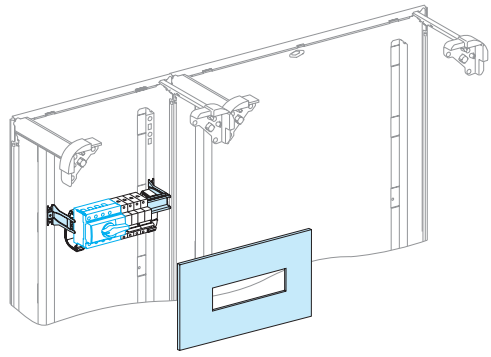
Capacity of modular rail: 20 Multi 9 modules.

Note: *to mix a NG160 circuit breaker with Multi 9 modular devices, order (with the device) the symmetrical rail + raiser set (28041).*

Width of devices: *NG160 3P : 10 pas*
NG160 4P : 14 pas

INS switch-disconnector

DD383496



Device	*No. of modules*	*Modular rail*	*Modular front plate*	*Downstream front plate*
INS160				
INS40/160	4	**03010**	**03214**	
INS100/160 with long terminal shields	5	**03010**	**03214**	**03811**

Capacity of modular rail: 20 Multi 9 modules.

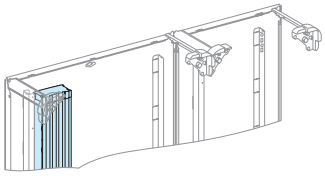
Width of devices: *INS40/80: width 10 Multi 9 modules*
INS100/160: width 15 Multi 9 modules

Modular devices
NG160 circuit breakers
INS40/160 switch-disconnectors

Powerclip insulated busbars

See page C-4.

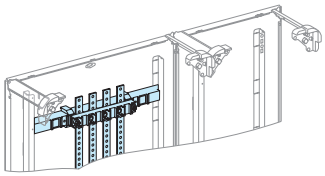
DD381211



Rear busbars

See page C-9.

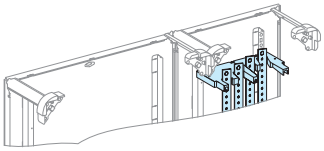
DD380813



Multi-stage busbars

See page C-7.

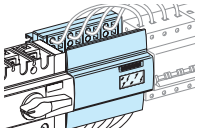
DD380816



Distribloc distribution blocks

See page C-14.

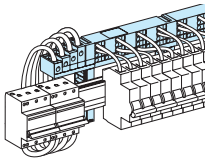
DD381308



Multiclip distribution blocks

See page C-17.

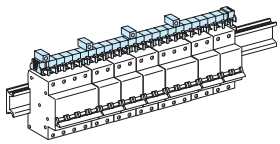
DD380817



Comb busbars

See page B-20.

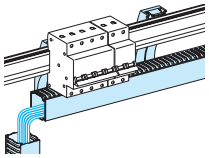
DD380820



Cable running

See page C-34.

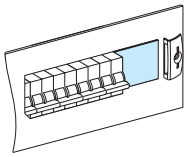
DD380818



Blanking plates

See page B-53.

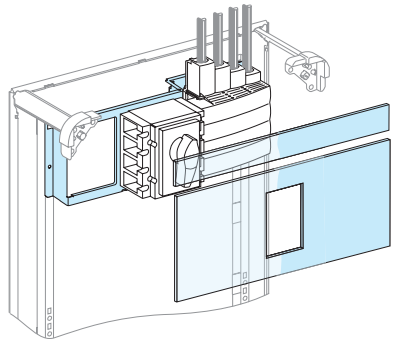
DD384029



Interpact INS-INV250/630
Horizontal
Direct front handle

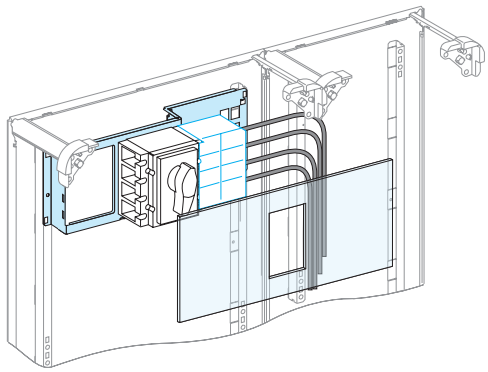
Installation

DD380669



Interpact INS-INV250 with incoming connection block (04066).

DD380670



Direct connection to Interpact INS-INV250.

Without cable duct: with connection block

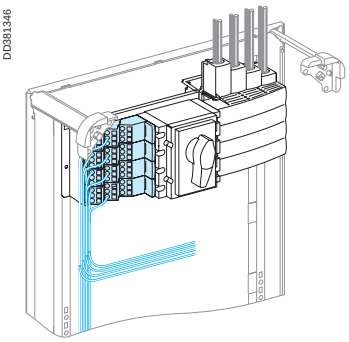
Device	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Upstream front plate*	*Connection block* *cables via top*	*cables via bottom*
Interpact INS-INV						
INS-INV250	5	**03030**	**03231**	**03801**	**04066**	or **04067**

With cable duct: direct connection to the device

Device	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Upstream front plate*	*Long terminal shields*
Interpact INS-INV					
INS-INV250	4	**03030**	**03231**		*29324*
INS-INV250/630 cables via top	9	**03070**	**03271**	**03803**	*32565*
INS-INV250/630 cables via bottom	6	**03070**	**03271**		*32565*

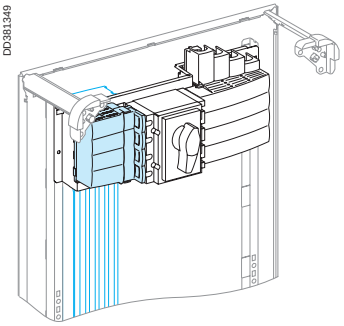
Distribution

DD381346



Distribution using Polybloc (4P).

DD381349



Distribution via Powerclip insulated busbars and NSX250 power supply block (04060).

Polybloc

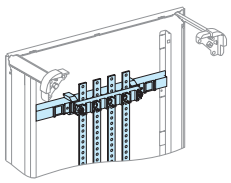
Device		*Polybloc* *250 A*
Interpact INS-INV		
INS-INV250	3P	**04033**
	4P	**04034**

Powerclip insulated busbars

Device	*Power supply block*	*Powerclip busbars*
Interpact INS-INV		
INS-INV250	**04060**	*see page C-5*
INS-INV250/400	**04070**	*see page C-5*
INS-INV500/630	**04071**	*see page C-5*

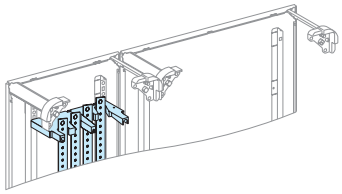
Other distribution solutions

DD380777



Rear busbars,
see page C-9.

DD380761

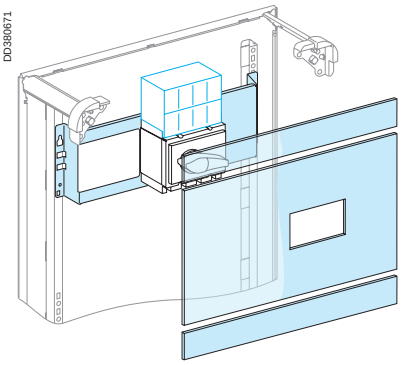


Multi-stage busbars,
see page C-7.

Interpact INS-INV250/630
Vertical
Direct front handle
Lateral handle

Installation

DD380671

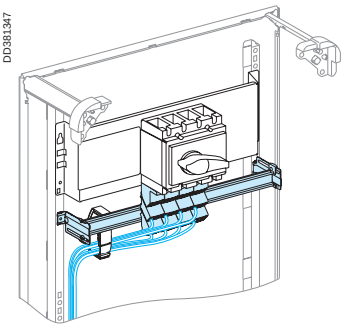


Device	No. of vertical modules (1)	Mounting plate	Cut-out front plate	Upstream front plate	Downstream front plate	Long terminal shield
Interpact INS-INV						
INS-INV250 *front handle*	8	**03040**	**03248**	**03801**	**03802**	*29324*
INS-INV250 *lateral handle*	8	**03032**		**03806**	**03802**	*29324*
INS-INV250/400 *front handle*	10	**03073**	**03274**			*32565*
INS-INV500/630 *front handle*	12	**03073**	**03274**	**03802**		*32565*

(1) *With or without spreaders.*

Distribution

DD381347



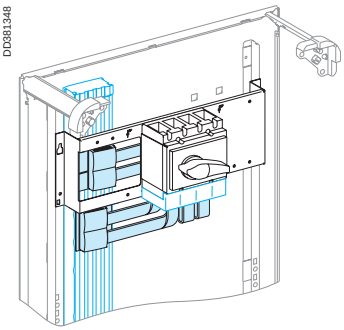
Distribution using a Polybloc distribution block (04034) on an adjustable modular device rail (03002).

Polybloc

Device		Polybloc 250 A	Modular rail adjustable
Interpact INS-INV			
INS-INV250 *front handle*	3P	**04033**	**03002**
	4P	**04034**	**03002**
INS-INV250 *lateral handle*	3P	**04033 + 04037**	**03003**
	4P	**04034 + 04037**	**03003**

04037: copper spacer.

DD381348



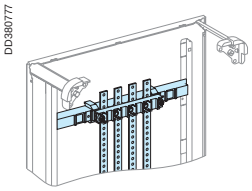
Distribution via Powerclip insulated busbars and a 250 A universal power supply block (04061) (without connection) + connection (04062).

Powerclip insulated busbars

Device	Power supply block (w/o connection)	+ connection	Short terminal shield	Powerclip busbars
Interpact INS-INV				
INS-INV250	**04061**	**+ 04062**	*29322*	*see page C-5*
INS-INV250/630	**04074**	*must be made*	*32563*	*see page C-5*

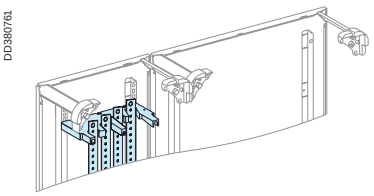
Other distribution solutions

DD380777



Rear busbars, see page C-9.

DD380761

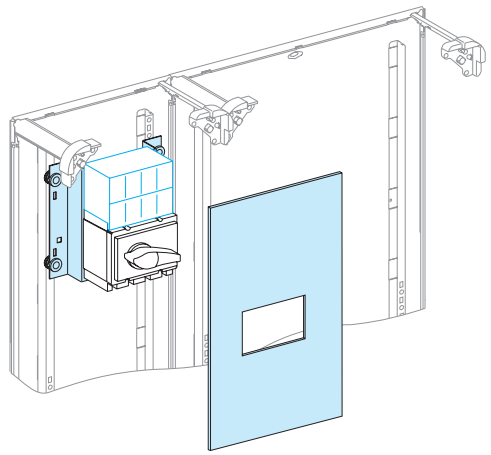


Multi-stage busbars, see page C-7.

Interpact INS-INV250/630
Vertical
Front, direct rotary handle

Installation

DD380773



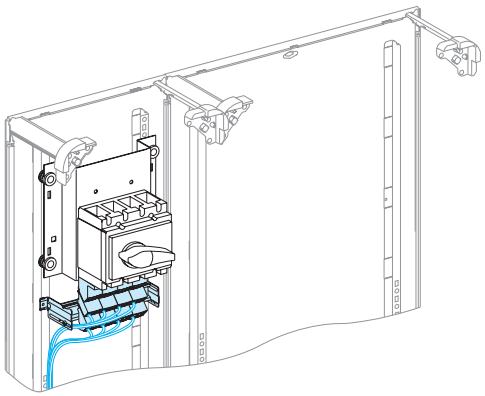
Device	*No. of vertical modules* [1]	*Mounting plate*	*Cut-out front plate*	*Downstream front plate*	*Long terminal shields*
Interpact INS-INV					
INS-INV250	9	**03050**	**03251**		*29324*
INS-INV250/400	10	**03080**	**03281**		*32565*
INS-INV500/630	12	**03080**	**03281**	**03812**	*32565*

(1) *With or without spreaders.*

Interpact INS-INV250/630
Vertical
Front, direct rotary handle

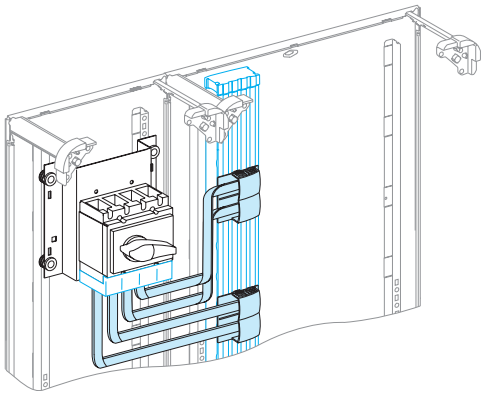
Distribution

DD380774



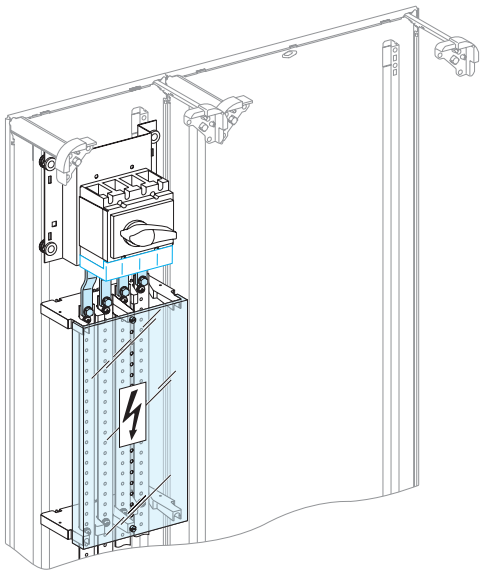
Distribution via a Polybloc distribution block (04034) on an adjustable modular device rail (03011).

DD381366



Distribution via Powerclip insulated busbars and a 250 A universal power supply block (04061) (without connection) + connection (04064).

DD382306



Polybloc

Device		*Polybloc 250 A*	*Modular rail (adjustable)*
Interpact INS-INV			
INS-INV250	3P	**04033**	**03011**
	4P	**04034**	**03011**

Powerclip insulated busbars

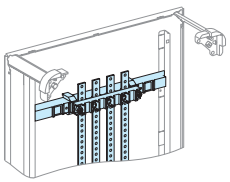
Device	*Univ. power supply block (w/o conn)*	*+ connection*	*Short terminal shields (set of 2)*	*Powerclip busbars*
Interpact INS-INV				
INS-INV250	**04061**	**+ 04064**	*29322*	*see page C-5*
INS-INV250/630	**04074**	**+ 04073**	*32563*	

Multi-stage busbars

Device	*Connection*	*Short terminal shields (set of 2)*	*Multi-stage busbars*
Interpact INS-INV switch-disconnector			
INS-INV250	**04065**	*29322*	*see page C-7*
INS-INV250/630	**04075**	*32563*	*see page C-7*

Other distribution solutions

DD380777



Rear busbars, see page C-9.

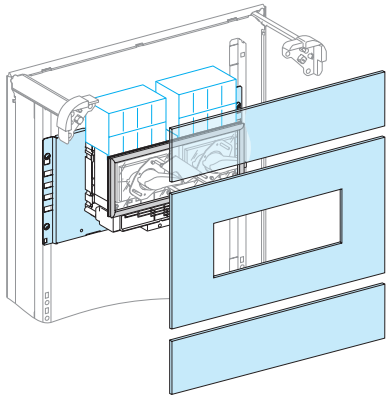
Manual source changeover system

INS-INV250

Front direct rotary handle, fixed

Source changeover system with mechanical interlocking

DD380536

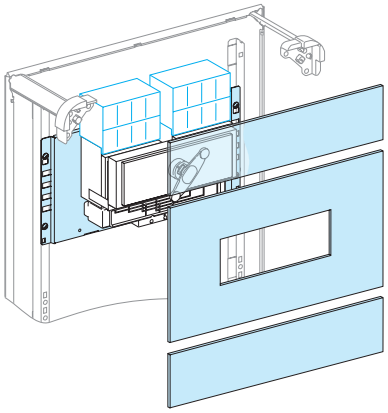


Device	No. of vertical modules	Mounting plate	Cut-out front plate	Upstream front plate	Downstream front plate
Source changeover system with mechanical interlocking					
INS-INV250 changeover system	9	**03043 +** *31064 x 2*	**03235**	**03802**	**03802**

Designation	Cat. no.
Long terminal shields (set of 2)	*29324*
Mechanical interlock	*31073*
Coupling accessory	*29358 (for 3P device)*
	29359 (for 4P device)

Complete source changeover assembly

DD380537



Device	No. of vertical modules	Mounting plate	Cut-out front plate	Upstream front plate	Downstream front plate
Complete source changeover assembly					
INS250 changeover system	9	**03043**	**03247**	**03802**	**03802**

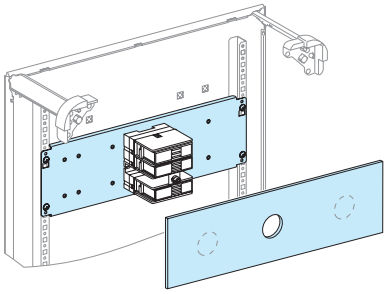
Designation	Rating	For 3P device	For 4P device
Complete source changeover assembly	*100 A*	*31140*	*31141*
	160 A	*31144*	*31145*
	200 A	*31142*	*31143*
	250 A	*31146*	*31147*

Designation	Cat. no.
Coupling accessory	*29358 (for 3P device)*
	29359 (for 4P device)
Long terminal shields (set of 2)	*29324*

Fupact INF
Horizontal
Extended rotary handle

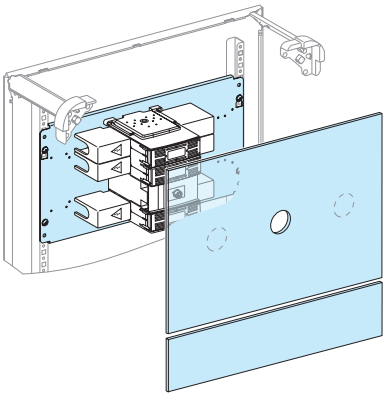
Installation

DD382474



INF32/40.

DD382475



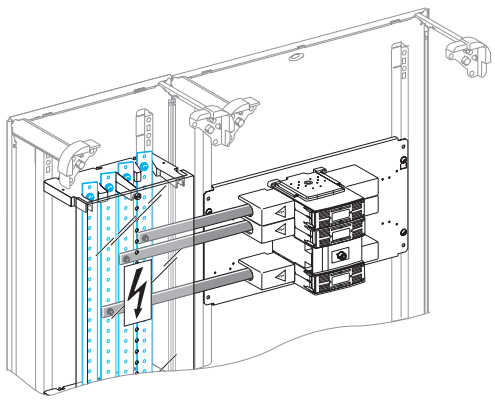
INF100/160.

Device	*No. of devices per row*	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Downstream front plate*	*Long terminal shields (qty per device)*
Switch-disconnector fuses						
INF32/40	1 x 3/4P	3	**03113**	**03313**		
INF63	1 x 3P	5	**03114**	**03314**		*49658*
	1 x 4P	5	**03114**	**03314**		*49658 x 2*
INF100/160 (1)	1 x 3P	7	**03114**	**03314**	**03802**	*49659 x 6*
	1 x 4P	7	**03114**	**03314**	**03802**	*49659 x 8*

***(1)** For direct distribution, downstream front plate (03802) not needed.*

Distribution

DD382946



Multi-stage busbars in a duct

Device	*connection*	*Multi-stage busbars*
Switch-disconnector fuses		
INF32/40	*must be made*	see page C-7
INF63	*must be made*	see page C-7
INF100/160	*must be made*	see page C-7

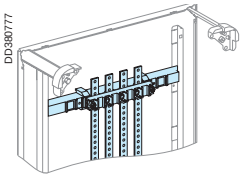
Powerclip busbars (1)

Device		*Additional 35 mm² block*	+	*connection*	*Powerclip busbars*
Switch-disconnector fuses					
INF100/160	3P	**04155**	+	*must be made*	see page C-5
	4P	**04156**	+	*must be made*	

***(1)** Incoming device; the distribution system is installed under the functional unit.*

Other distribution solutions

DD380777

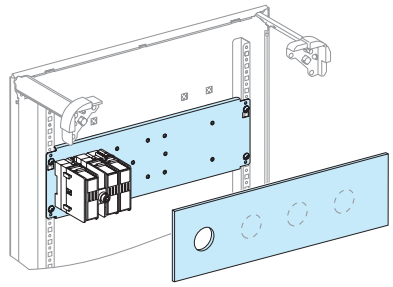


Rear busbars (1), see page C-9.

Fupact INF
Vertical
Extended rotary handle

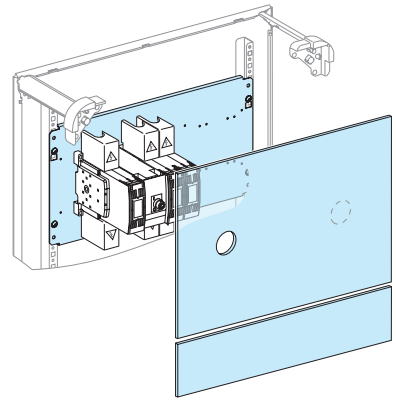
Installation

DD382477



INF32/40.

DD382478



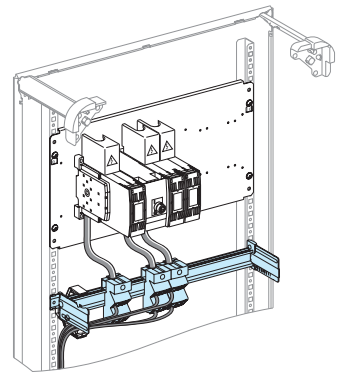
INF100/160.

Device	*No. of devices per row*	*No. of vertical modules*	*Mounting plate*	*Cut-out front plate*	*Downstream front plate*	*Long terminal shields (qty per device)*
Switch-disconnector fuses						
INF32/40	4 x 3P	3	**03113**	**03312**		
	3 x 4P	3	**03113**	**03313**		
INF63	3 x 3P	5	**03114**	**03314**		*49658*
	2 x 4P	5	**03114**	**03315**		*49658 x 2*
INF100/160 (1)	2 x 3P	7	**03114**	**03315**	**03802**	*49659 x 6*
	2 x 4P	7	**03114**	**03315**	**03802**	*49659 x 8*

***(1)** For direct distribution, downstream front plate (03802) not needed.*

Distribution

DD383658



Polybloc distribution block

Device		*Polybloc*	+	*connection*	*Adjustable modular device rail*
Switch-disconnector fuses					
INF100/160	3P	**04031** x 3		*must be made*	**03002**
	4P	**04031** x 4		*must be made*	**03002**

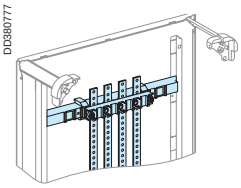
Powerclip busbars (1)

Device	*Universal power supply block*	+	*connection*	*Powerclip busbars*
Switch-disconnector fuses				
INF100/160	**04061**	+	*must be made*	see page C-5

***(1)** Incoming device; the distribution system is installed under the functional unit.*

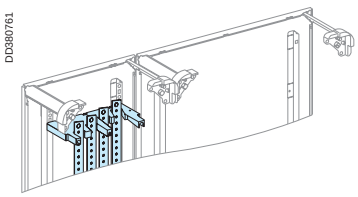
Other distribution solutions

DD380777



Rear busbars (1), see page C-9.

DD380761

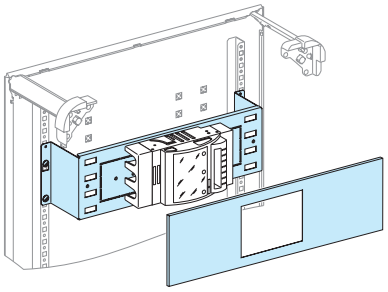


Multi-stage busbars in a duct, see page C-7.

Fupact ISFT
Horizontal
3P
Installation on mounting plate

Installation

DD382480

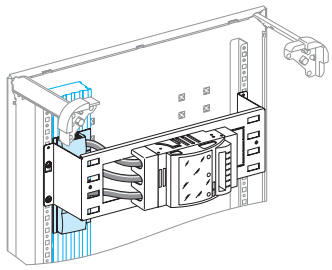


Device	No. of devices per row	No. of vertical modules occupied	Mounting plate	Cut-out front plate	Long terminal shields	Upstr. front plate	Downstr. front plate
Fuse-switch disconnectors							
ISFT160 (1)	1	6	**03121**	**03326**	*49869 x 2*	**03801**	**03802**
ISFT250	1	6	**03124**	**03328**	*49872 x 2*		**03801**

(1) *For direct distribution, downstream front plate (03802) not needed.*

Distribution

DD382481

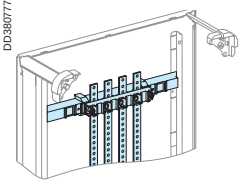


Powerclip busbars

Device	Universal power supply block (w/o connection)	+	connection	Powerclip busbars
Fuse-switch disconnectors				
ISFT160	**04061**	+	*must be made*	see page C-5
ISFT250	**04061**	+	*must be made*	see page C-5

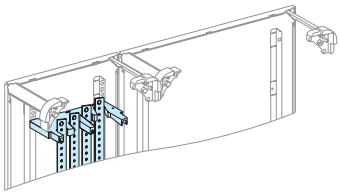
Other distribution solutions

DD380777



Rear busbars,
see page C-9.

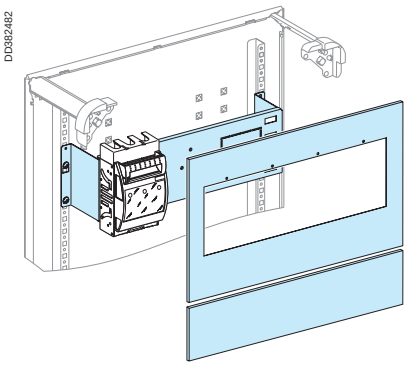
DD380761



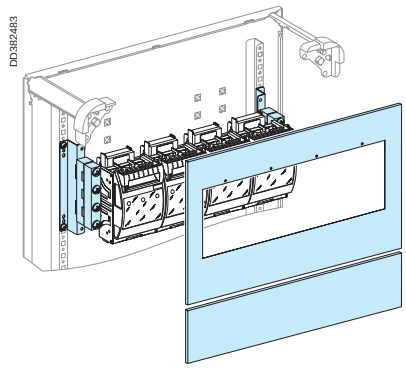
Multi-stage busbars in a duct,
see page C-7.

Fupact ISFT
Vertical
3P
Installation on mounting plate or busbars

Installation



ISFT160: installation on mounting plate.

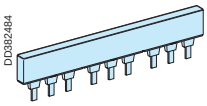


ISFT160: installation on busbars.

Device	*No. of devices per row*	*No. of vertical modules occupied*	*Mounting plate*	*Cut-out front plate*	*Downstr. front plate*	*Long terminal shields (qty per device)*
Fuse-switch disconnectors (1)						
ISFT100 *(installation on mounting plate)*	5	7	**03120**	**03320**	**03801**	
ISFT160 *(installation on mounting plate)*	4	8	**03121**	**03321**	**03802**	*49869 x 2*
ISFT160*(installation on busbars)*	4	8	**03122**	**03321**	**03802**	*49869 x 2*

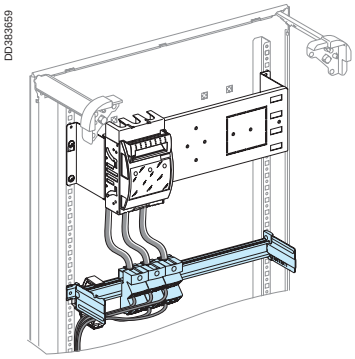
(1) *For direct distribution, downstream front plate (03802) not needed.*

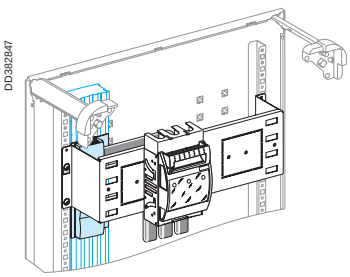
Accessories



Comb busbars for ISFT100	
for 2 devices	*49861*
for 3 devices	*49862*
for 4 devices	*49863*
Coupler to connect 2 busbars	*49890*
Tooth cover	*49864*
Set of 3 connectors (25 to 95 mm²)	*49865*
Set of 3 distribution connectors 3 x 10 mm²	*49860*

Distribution





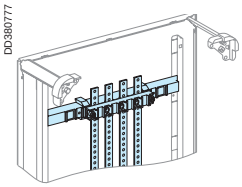
Polybloc distribution block

Device		*Polybloc*	*+ connection*	*Adjustable modular device rail*
Fuse-switch disconnectors				
ISFT100	3P	**04031** x 3	**+** *must be made*	**03002**
ISFT160	3P	**04031** x 3	**+** *must be made*	**03002**

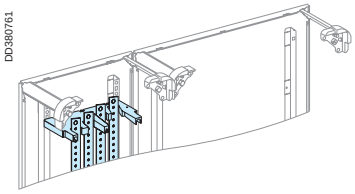
Powerclip busbars

Device	*Universal power supply block (w/o connection)*	*+ Iconnection*	*Powerclip busbars*
Fuse-switch disconnectors			
ISFT100	**04061**	**+** *must be made*	see page C-5
ISFT160	**04061**	**+** *must be made*	see page C-5

Other distribution solutions



Rear busbars, see page C-9.

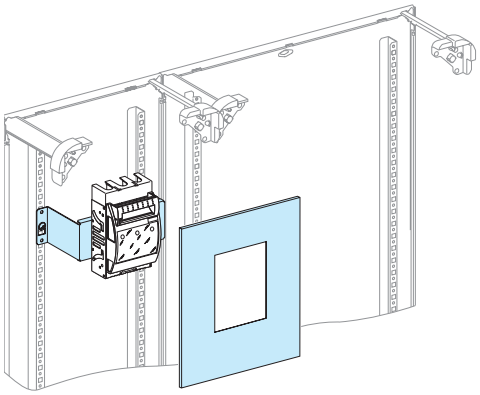


Multi-stage busbars in a duct, see page C-7.

Fupact ISFT
Vertical
3P
Installation on mounting plate

Installation

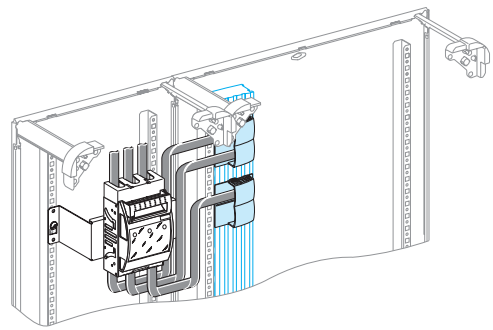
DD382488



Device	No. of devices per row	No. of vertical modules occupied	Mounting plate	Cut-out front plate	+ Long terminal shields
Fuse-switch disconnectors					
ISFT160	1	6	**03123**	**03327**	+ *49869 x 2*
ISFT250	1	9	**03125**	**03329**	+ *49872 x 2*

Distribution

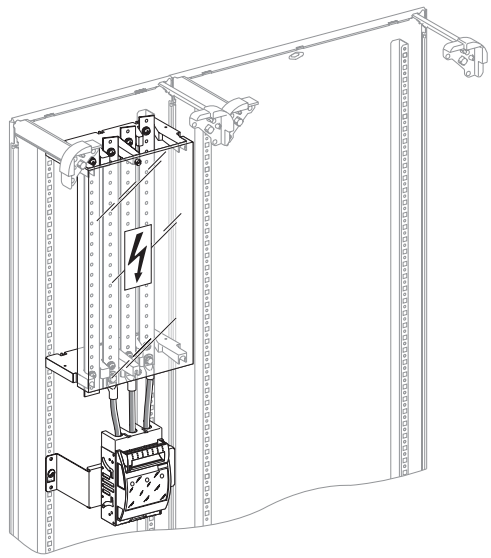
DD382843



Powerclip busbars

Device	Universal power supply block (w/o connection)	+ connection	Powerclip busbars
Fuse-switch disconnectors			
ISFT160	**04061**	+ *must be made*	see page C-5
ISFT250	**04061**	+ *must be made*	see page C-5

DD382490



Multi-stage busbars

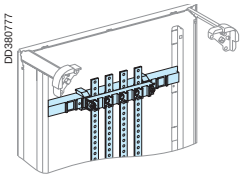
Device	Connection	Multi-stage busbars
Fuse-switch disconnectors		
ISFT160	*must be made*	see page C-7
ISFT250	*must be made*	see page C-7

Polybloc distribution block

Device	Polybloc	+ connection	Adjustable modular device rail
Fuse-switch disconnectors			
ISFT160	**04031** x 3	+ *must be made*	**03011**

Other distribution solutions

DD380777



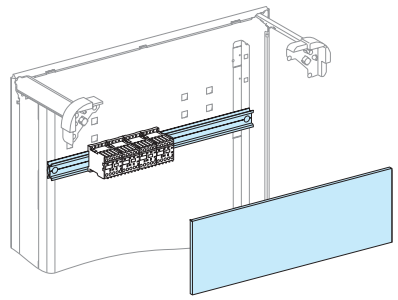
Rear busbars, see page C-9.

Industrial control devices

Others

Series D and K contactors

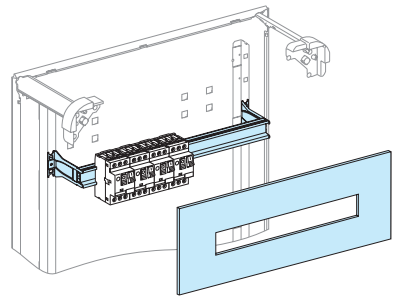
DD381613



Device	No. of vertical modules	Useful rail length (mm)	Rear modular rail	Plain front plate
Series D and K contactors				
Series D and K contactors ≤ 40 A	3	432	**03004**	**03803**

GV2/GV3 circuit breakers

DD383494

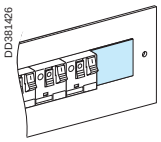


Device	No. of vertical modules	Useful length of rail (mm)	Modular rail	Cut-out front plate
GV2/GV3 circuit breakers				
GV2	3	432	**03001**	**03203**
GV3	5	432	**03002**	**03205**

Width of devices without lateral auxiliaries: 5 x M9 modules.

Accessories

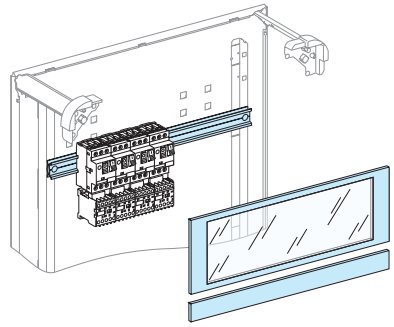
DD381426



Modular blanking plates: see page D-27.

GV2 + contactor combination

DD381318

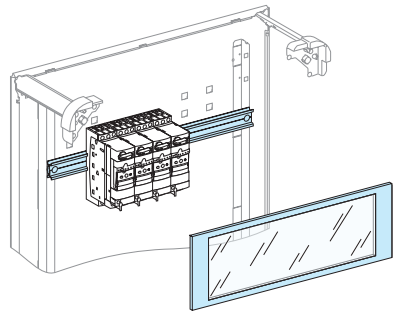


Device	No. of vertical modules	Useful length of rail (mm)	Rear modular rail	Transparent front plate	Plain front plate
GV2 + contactor combination					
GV2 + Series D or K contactor ≤ 40 A	5	432	**03004**	**03342**	**03801**

Width of devices without lateral auxiliaries: 5 x M9 modules.

TeSys U model

DD381319



Device	No. of vertical modules	Useful length of rail (mm)	Rear modular rail	Transparent front plate
TeSys U model				
TeSys U model	5	432	**03004**	**03205**
TeSys U model (1)	4	432	**03004**	**03342 - 03804**

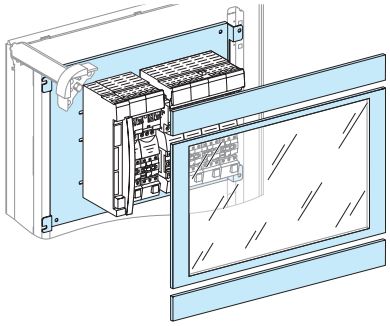
(1) *Version without communication module auxiliary contact and reversing module.*

Width of devices without lateral auxiliaries: 5 x M9 modules.

Others

Tego Power

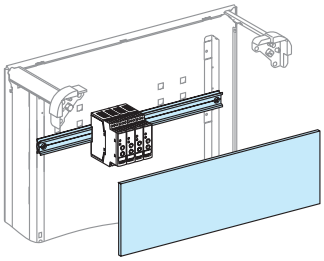
DD382815



Device	No. of vertical modules	Mounting plate	Transparent front plate	Upstream front plate	Downstream front plate
Tego Power					
Tego Power 2 to 8 feeders	8	**03168**	**03343**	**03801**	**03801**

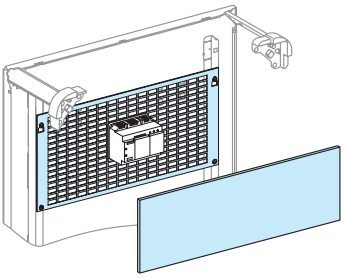
ATS01 soft starters

DD382603



Device	No. of vertical modules	Useful length of rail (mm)	Modular rail	Plain front plate
On a modular rail				
ATS01N103/106FT	4	432	**03004**	**03804**
ATS01N109/112FT	5	432	**03003**	**03805**
ATS01N206 to 212	5	432	**03003**	**03805**
ATS01N222 to 232	6	432	**03003**	**03806**
ATS01N230LY	5	432	**03003**	**03805**
ATS01N244LY	5	432	**03003**	**03805**
ATS01N244Q	5	432	**03003**	**03805**

DD382604

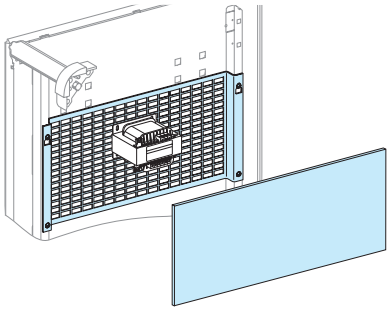


Device	No. of vertical modules	Recessed slotted mounting plate	Plain front plate
On a slotted plate			
ATS01N272LY	6	**03172**	**03806**
ATS01N285LY	6	**03172**	**03806**
ATS01N272Q	6	**03172**	**03806**
ATS01N285Q	6	**03172**	**03806**

Width of devices (in number of 9 mm modules):
ATS01N103/106FT: 2.5
ATS01N109/112FT: 5
ATS01N206 to 212: 5
ATS01N222 to 232: 5
ATS01N230LY: 20
ATS01N244LY: 20
ATS01N244Q: 20
ATS01N272LY: 20
ATS01N285LY: 20
ATS01N272Q: 20
ATS01N285Q: 20

Alimentation and LV/LV transformer

DD382816



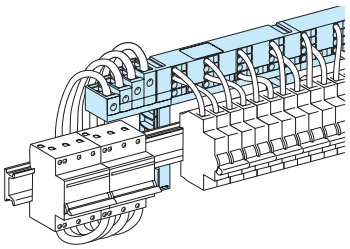
Device	No. of vertical modules	Recessed slotted mounting plate	Plain front plate
LV/LV transformer			
ABL6-TS/TD up to 630 VA	4	**03171**	**03804**
LV/LV alimentation			
ABL6-RF up to 120 W	4	**03171**	**03804**

Cable running and distribution

Multiclip distribution blocks

see page D-27

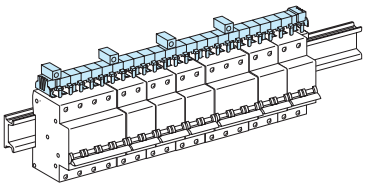
DD380675



Comb busbars

see the Telemecanique catalogue

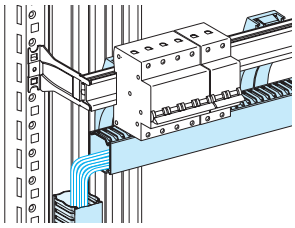
DD380755



Cable running

see page C-34

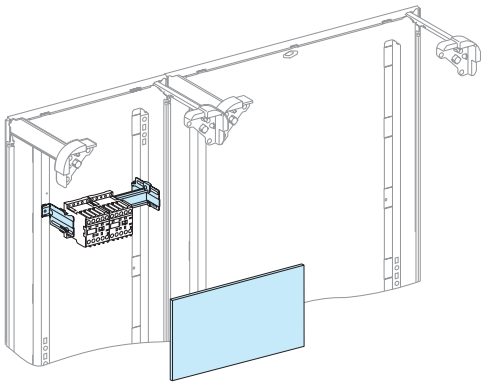
DD383491



Others

Series D and K contactors

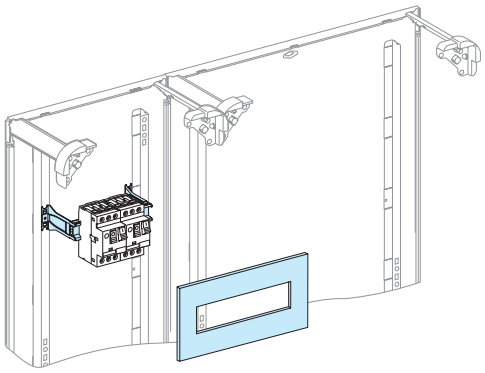
DD380708



Device	No. of vertical modules	Useful rail length (mm)	Modular rail (adjustable)	Plain front plate
Series D and K contactors				
Series D and K contactors ≤ 40 A	3	180	**03011**	**03813**

GV2/GV3 circuit breakers

DD383492

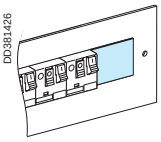


Device	No. of vertical modules	Useful rail length (mm)	Modular rail	Cut-out front plate	Upstream front plate	Downstream front plate
GV2/GV3 circuit breakers						
GV2	3	180	**03010**	**03213**		
GV3	5	180	**03011**	**03213**	**03811**	**03811**

Width of devices without lateral auxiliaries: 5 x M9 modules.

Accessories

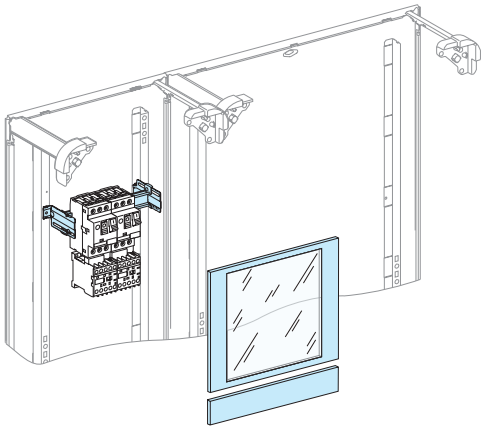
DD381426



Modular blanking plates, see page D-27.

GV2 + contactor combination

DD381189

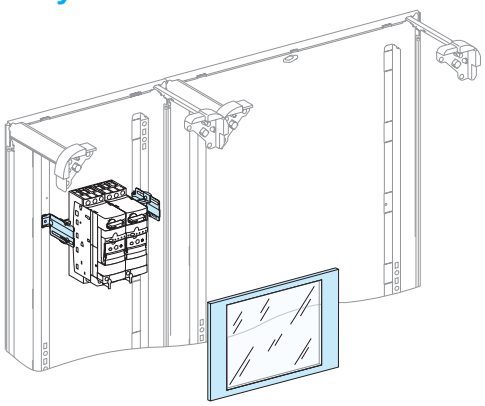


Device	No. of vertical modules	Useful rail length (mm)	Modular rail (adjustable)	Transparent front plate	Plain front plate
GV2 + contactor combination					
GV2 + Series D or K contactor ≤ 40 A	5	180	**03011**	**03352**	**03811**

Width of devices without lateral auxiliaries: 5 x M9 modules

TeSys U model

DD381190



Device	No. of vertical modules	Useful rail length (mm)	Modular rail (adjustable)	Transparent front plate
TeSys U model				
TeSys U model	4	180	**03011**	**03352**

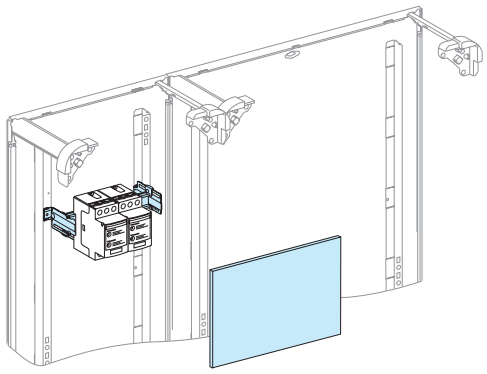
Width of devices without lateral auxiliaries: 5 x M9 modules.

Industrial control devices

Others

LH4 soft starters

DD381191

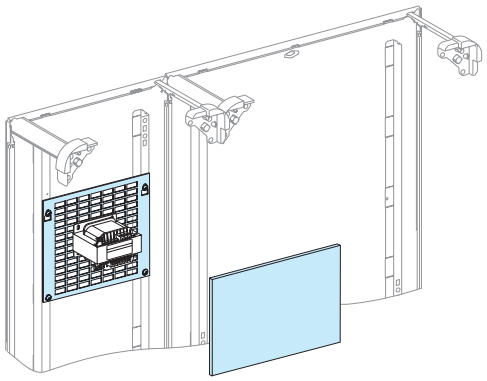


Device	No. of vertical modules	Useful rail length (mm)	Modular rail (adjustable)	Plain front plate
LH4 soft starters				
LH4 N1 LH4 N2	4	180	**03011**	**03814**

Width of devices:
LH4 N1 : 5 x M9 modules
LH4 N2: 10 x M9 modules.

Alimentation and LV/LV transformer

DD380709



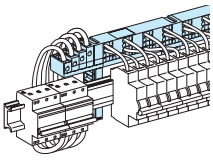
Device	No. of vertical modules	Slotted mounting plate	Plain front plate
LV/LV transformer			
ABL6-TS/TD up to 630 VA	4	**03175**	**03814**
LV/LV alimentation			
ABL-6RF up to 120 W	4	**03175**	**03814**

Cable running and distribution

Multiclip distribution blocks

see page D-27

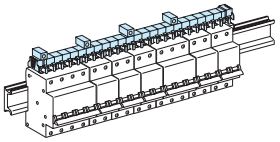
DDD380819



Comb busbars

see the Telemecanique catalogue

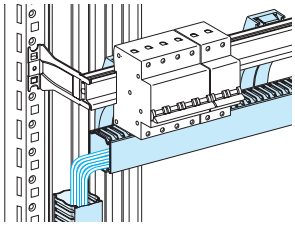
DD380820



Cable running

see page C-34

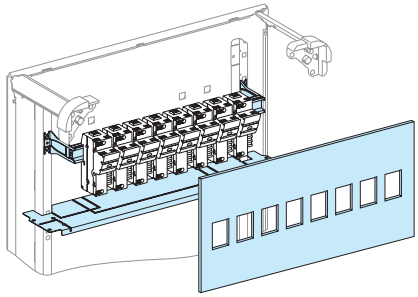
DD383491



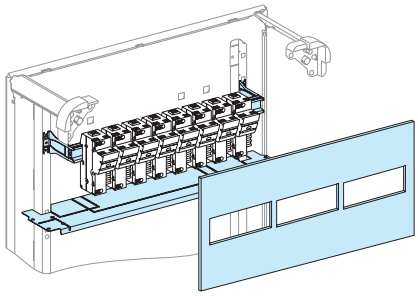
Service connection
Modular incoming fusegear

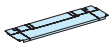
Installation

DD383530



DD383531



Device	No. per row	No. of vertical modules	 DD382978 Modular rail	 DD382982 Cut-out front plate	 DD382968 Horizontal partitioning[1]
Fusegear					
1 Ph	8	4	**03001**	**03359**	**04331**
3 Ph	3	4	**03001**	**03159**	**04331**

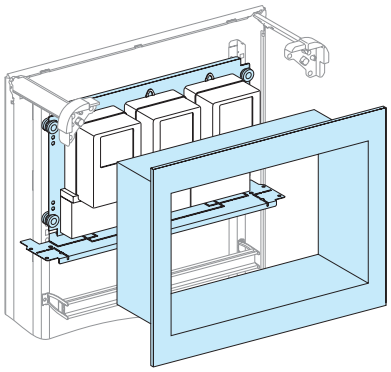
(1) *If not installed at the top of the enclosure, order an addition horizontal partition (04331).*

Metering
Single-phase kilowatt-hour meters
Class 2

Installation

Meters can be installed at different levels on the functional uprights of enclosures.
Class 1: Depending on preferences and needs, meters can be installed directly on mounting plates equipped with earthing braids and combined with partitioning or front plates.
The mounting plates can be raised using M5 spacers: see page B-54.

DD382948



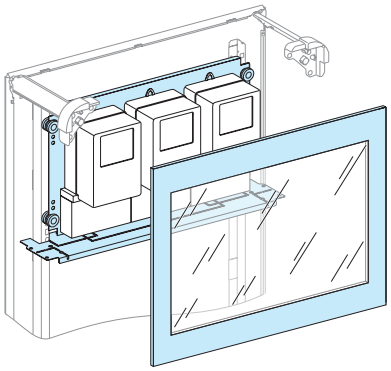
Meters accessible at the top of an enclosure

Device	No. per row	No. of vertical modules	Mounting plate DD382959	Insulating plate DD382960	Metering front plate DD382967	Horizontal partitioning (1) DD382968
Meter						
Ph + N	3	6	**03157**	**03154**	**03155**	**04331**

Earthing wire, 6mm² : cat. no. **08911**

(1) *If not installed at the top of an enclosure, order an addition horizontal partition (04331).*

DD382950



Meters behind front plate at the top of an enclosure

Device	No. per row	No. of vertical modules	Mounting plate DD382959	Insulating plate DD382960	Horizontal partitioning (1) DD382968	Front plate transparent DD382962	Front plate or plain DD382963
Meter							
Ph + N	3	6	**03157**	**03154**	**04331**	**03343**	**03806**

Earthing wire, 6mm² : cat. no. **08911**

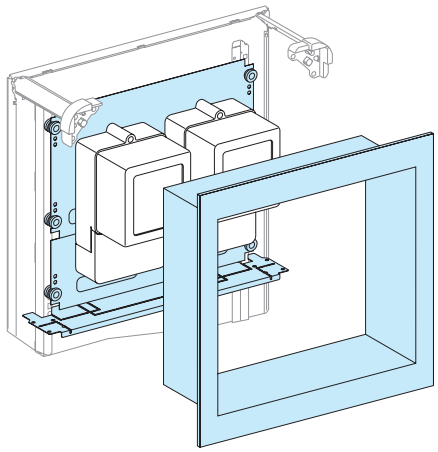
(1) *If not installed at the top of an enclosure, order an addition horizontal partition (04331).*

Metering
3-phase kilowatt-hour meters
Class 2

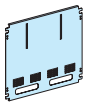
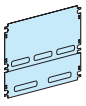
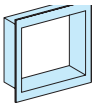
Installation

Meters can be installed at different levels on the functional uprights of enclosures.
Class 1: Depending on preferences and needs, meters can be installed directly on mounting plates equipped with earthing braids and combined with partitioning or front plates.
The mounting plates can be raised using M5 spacers: see page B-54.

DD382949



Meters accessible at the top of an enclosure


DD382964

DD382969

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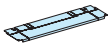
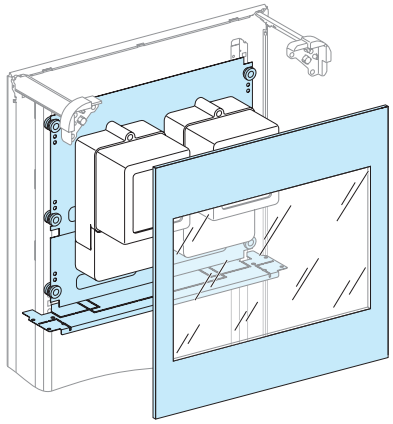

DD382968

Device	Qty per row	No. of vertical modules	Mounting plate	Insulating plate	Metering front plate	Horizontal partitioning (1)
Meter						
3 Ph + N	2	9	**03152**	**03154**	**03158**	**04331**

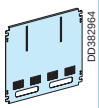
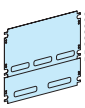
Earthing wire, 6mm² : cat. no. **08911**

(1) *If not installed at the top of an enclosure, order an addition horizontal partition (04331).*

DD382951



Meters behind front plate at the top of an enclosure


DD382964

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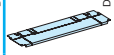
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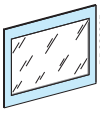
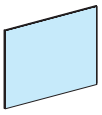

DD382965

DD382966

Device	No. per row	No. of vertical modules	Mounting plate	Insulating plate	Horizontal partitioning (1)	Front plate transparent	or plain
Meter							
3 Ph + N	2	9	**03152**	**03154**	**04331**	**03344**	**03807**

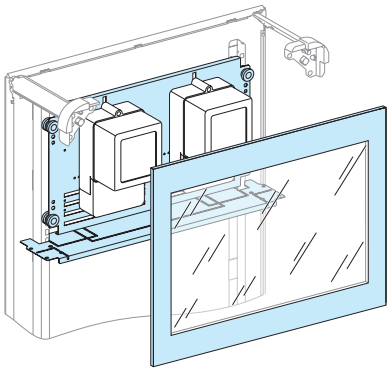
Earthing wire, 6mm² : cat. no. **08911**

(1) *If not installed at the top of an enclosure, order an addition horizontal partition (04331).*

Metering
3-phase kilowatt-hour meters

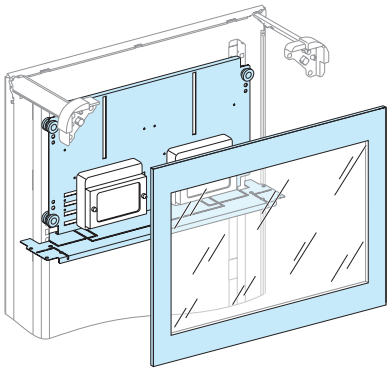
Installation

DD383045



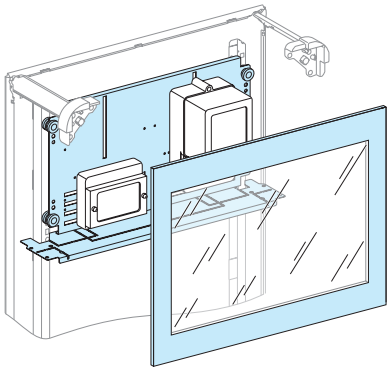
2 meters

DD383046



2 connection blocks

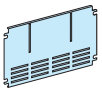
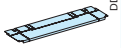
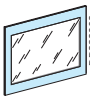
DD383047



1 meter + 1 connection block

Meters can be installed at different levels on the functional uprights of enclosures. The mounting plates can be raised using M5 spacers: see page B-54.

Meters behind front plate at the top of an enclosure

Device	*No. per row*	*No. of vertical modules*	 DD383111 *Mounting plate*	 DD382968 *Horizontal partitioning*(1)	 DD382962 DD382963 *Front plate transparent or plain*	
Meter and connection block						
Meter 3 Ph + N	2	6	**03160**	**04331**	**03343**	**03806**
Connection block	2					
Meter + connection block	1 + 1					

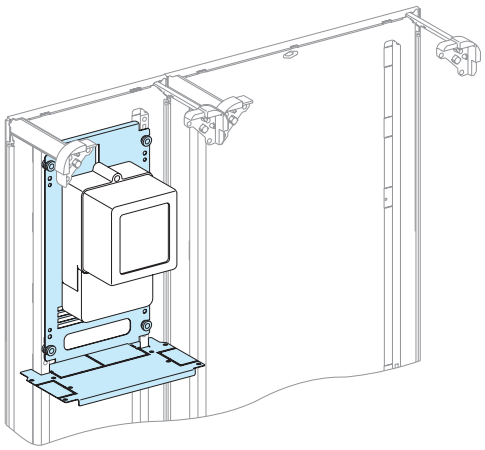
Earthing wire, 6 mm² : cat. no. **08911**.

(1) *If not installed at the top of an enclosure, order an addition horizontal partition (04331).*

Metering
3-phase kilowatt-hour meters

Installation

DD382956



Meters can be installed at different levels on the functional uprights of ducts.Class 1: Depending on preferences and needs, meters can be installed directly on mounting plates equipped with earthing braids and combined with partitioning or front plates.
The mounting plates can be raised using M5 spacers: see page B-54.

Meters behind the front plate at the top of a duct

Device	*No. per row*	*No. of vertical modules*	DD382970  *Mounting plate*	DD382971  *Horizontal partitioning (1)*	DD382972  *Front plate transparent or plain*	DD382973 
Meter						
3 Ph + N	1	9	**03156**	**04332**	**03354**	**03817**

Earthing wire, 6 mm² : cat. no. **08911.**

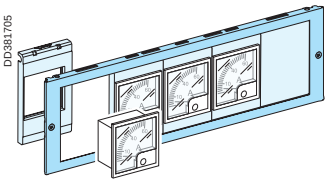
(1) *If not installed at the top of an enclosure, order an addition horizontal partition (04332).*

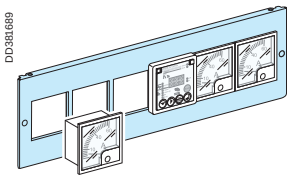
Human-switchboard interface
72 x 72 and 96 x 96 mm devices

The human-switchboard interface mounting plates have been modified to ensure compat bility with the new front plates (catalogue numbers unchanged). The visor has also been changed to ensure compat bility with the new mounting plates.

The old human-switchboard interface mounting plates and visor are not compatible with the new front plates.

Presentation



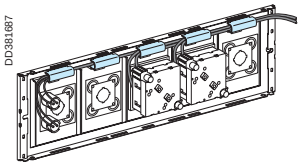


Device mounting

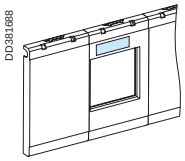
On an interface with plastic mounting plates, H = 150 mm (3 modules)

The interface is made up of a metal front plate and plastic mounting plates that clip onto the front plate:

- the devices are attached in the cut-outs of the plastic mounting plates and insulated from the front plate
- a system at the rear of the mounting plates guides the wires
- each mounting plate can receive an adhesive label
- plain mounting plates are available to blank off any unused locations.



The mounting plates have guides for auxiliary wires.



Mounting plates can be identified by a label.

On a metal front plate with cut-outs, H = 150 mm (3 modules)

- devices are attached directly to the metal front plate
- blanking plates are available to blank off any unused locations
- economical solution.

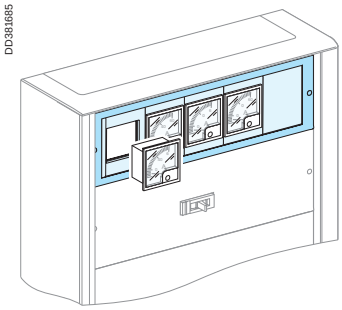
Installation in a switchboard

The mounted assembly can be installed:

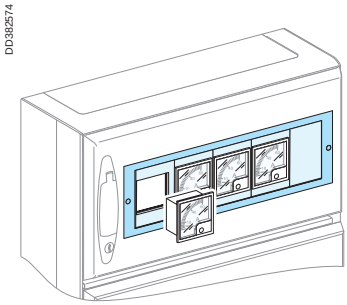
- in the device zone of enclosures and cubicles, like a front plate
- on a door with cut-outs in a 300 or 400 mm wide cubicle
- on a partial door with cut-outs in wall-mounted and floor-standing enclosures (except IP55).

The degree of protection for installed devices is IP30.

***Note:** to maintain the IP55 degree of protection, the measurement devices must be installed behind a transparent door.*
If they are installed on a plain door, use the corresponding mounting plates (see page D-36).



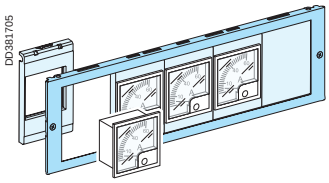
Mounting in the device compartment of an enclosure.



Mounting on a partial door with cut-outs.

Human-switchboard interface
72 x 72 and 96 x 96 mm devices

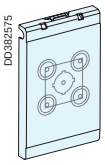
72 x 72 mm measurement devices



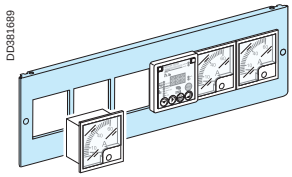
On an interface with plastic mounting plates

Cat. no. selection

Designation	Cat. no.
Front plate with cut-outs, 3 modules (for 5 plastic mounting plates)	03904
Plastic mounting plate with cut-out (for 72 x 72 mm device)	03902
Plain plastic mounting plate	03900



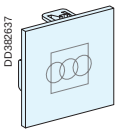
The plain plastic mounting plates have knock-outs:
- *4 holes, 16 mm diameter*
- *5 holes, 22 mm diameter*
- *1 hole, 45 x 45 mm*



On a metal front plate with cut-outs

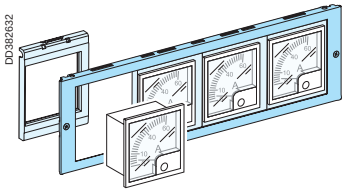
Cat. no. selection

Designation	Cat. no.
Metal front plate with cut-outs, 3 modules (for six 72 x 72 mm devices)	03910
Blanking plate (for 72 x 72 mm hole)	03907



The blanking plates have knock-outs:
- *3 holes, 22 mm diameter*
- *1 hole, 45 x 45 mm*

96 x 96 mm measurement devices

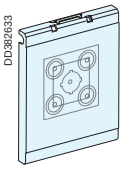


On an interface with plastic mounting plates

Cat. no. selection

Designation	Cat. no.
Front plate with cut-outs, 3 modules (for 4 plastic mounting plates)	03904
Plastic mounting plate with cut-out (for 96 x 96 mm device)	03903 (1)
Plain plastic mounting plate	03901

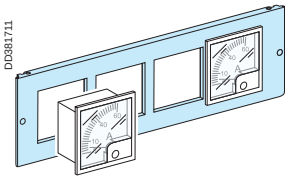
(1) *Not designed for Power meter PM700/800 installation.*



The plain plastic mounting plates have knock-outs:
- *4 holes, 16 mm diameter*
- *5 holes, 22 mm diameter*
- *1 hole, 45 x 45 mm*
- *1 hole, 72 x 72 mm*

Human-switchboard interface
72 x 72 and 96 x 96 mm devices

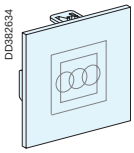
96 x 96 mm measurement devices



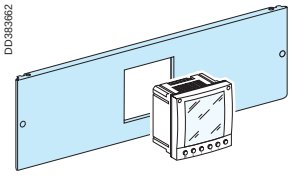
On a metal front plate with cut-outs

Cat. no. selection

Designation	Cat. no.
Metal front plate with cut-outs, 3 modules (for four 96 x 96 mm devices)	**03911**
Blanking plate (for 96 x 96 mm hole)	**03908**



The blanking plates have knock-outs:
- *3 holes, 22 mm diameter*
- *1 hole, 45 x 45 mm*
- *1 hole, 72 x 72 mm*



On a metal front plate with cut-outs

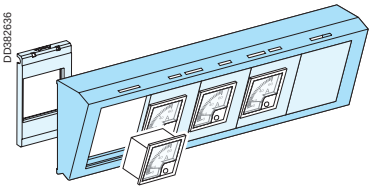
Cat. no. selection

Designation	Cat. no.
Metal front plate with cut-outs, 3 modules (for one 96 x 96 device)	**03913**

Visor for measurement devices on an interface with plastic mounting plates

The human-switchboard interface mounting plates have been modified to ensure compat bility with the new front plates (catalogue numbers unchanged). The visor has also been changed to ensure compat bility with the new mounting plates.

The old human-switchboard interface mounting plates and visor are not compatible with the new front plates.

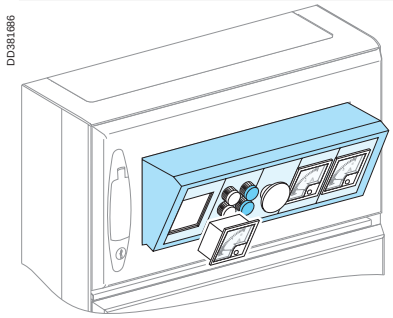


Presentation

A visor can be used to incline 72 x 72 or 96 x 96 mm devices by 30°.
The devices are mounted on a cut-out plastic mounting plate (see previous page) that clips directly to the visor.
The visor can be installed on 300 and 400 mm wide doors with cut-outs in cubicles or on partial doors with cut-outs, in wall-mounted and floor-standing enclosures.
It is supplied with a drilling diagram for mounting on a plain door.

Cat. no. selection

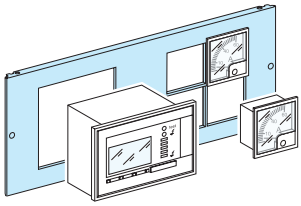
Designation	Cat. no.
Visor	**03928**



Human-switchboard interface
144 x 144 mm devices
22.2 mm diameter lamps, pushbuttons

One 144 x 144 mm device + four 72 x 72 mm devices

DD381712



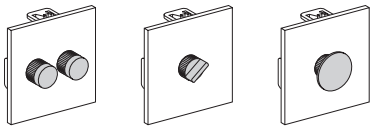
Installation

Devices are installed in the device compartment on a metal front plate with cut-outs. Blanking plates clip onto the unused 72 x 72 mm holes.

Cat. no. selection

Designation	Cat. no.
Metal front plate with cut-outs, 4 modules (for one 144 x 144 mm device + four 72 x 72 mm devices)	**03912**
Blanking plate (for 72 x 72 mm hole)	**03907**

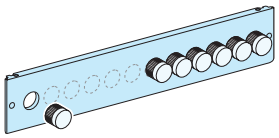
DD382635



The blanking plates have knock-outs (22 mm diameter) to install:
- *1 to 2 lamps or pushbuttons*
- *1 switch*
- *1 emergency off (EPO) pushbutton.*

Pushbuttons or lamps

DD381690



Installation

In the device compartment on a metal front plate with cut-outs.

Cat. no. selection

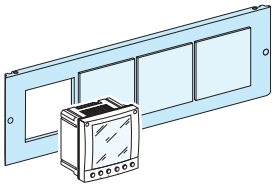
Designation	Cat. no.
Metal front plate with knock-outs (2 modules) for twelve 22 mm diameter lamps or pushbuttons	**03914**

Human-switchboard interface

Others

Powerlogic system

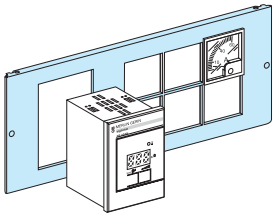
DD384051



Device	*No. of vertical modules*	*Cut-out front plate*
PowerMeter PM		
Power Meter PM400/500/800 (96 x 96 mm case)	3	**03911**
FDM121	3	**03911**

Vigilohm

DD384050



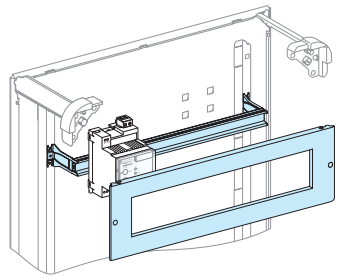
03934.

Installation in the device compartment.

Device	*No. of vertical modules*	*Modular rail*	*Cut-out front plate*
Vigilohm			
TR22A/AH (1 TR + 6 measurement devices, 72 x 72 mm)	4		**03934**
EM9, TR5A, SM21 (modular devices)	3	**03001**	**03203**

Vigirex

DD383479

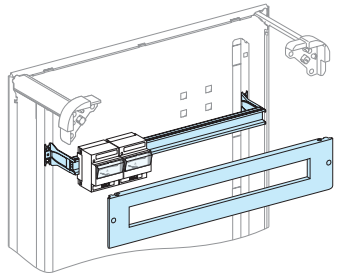


Installation in the device compartment.

Device	*No. of vertical modules*	*Modular rail*	*Cut-out front plate*
Vigirex			
RH10/RH21/RH99 relays			
Modular device	3	**03001**	**03203**
72 x 72 mm cases	*see page B-46*		
RHU relay (72 x 72 mm cases)	*see page B-46*		
RMH relay and RM12T multiplexer			
RMH (modular devices)	3	**03001**	**03203**
RM12T (72 x 72 mm cases)	*see page B-46*		

Multi 9 measurement device

DD383480



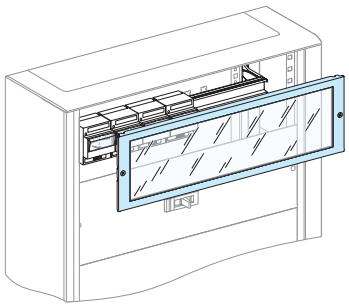
Installation in the device compartment.

Device	*No. of vertical modules*	*Modular rail*	*Cut-out front plate*
Multi 9 measurement device			
Lamps, pushbuttons, etc.	2	**03001**	**03202** (1)
Ammeter, voltmeter, etc.	3	**03001**	**03203**

(1) *For installation at the top or bottom of the enclosure, use a 3-module modular front plate (03203).*

Device behind transparent front plate

DD383481

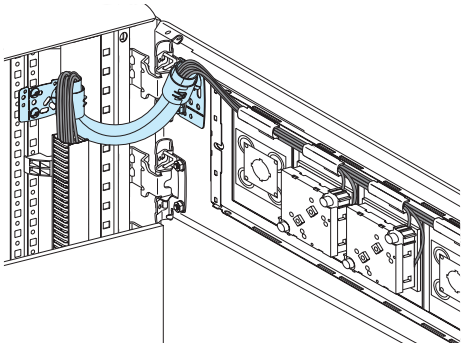


Installation in the device compartment.

500 mm wide transparent front plate	
Transparent front plate, 4 modules, H = 200 mm	**03342**
Transparent front plate, 6 modules, H = 300 mm	**03343**
Transparent front plate, 9 modules, H = 450 mm	**03344**
Transparent front plate, 12 modules, H = 600 mm	**03345**

Cable running

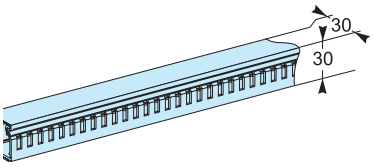
DD381756



Auxiliary wiring on partial door with cut-outs.

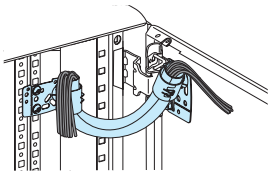
Designation	Cat. no.
Cable trunking for doors, L = 2000 mm	**04233**
Flexible trunking for wiring to door	**04235**
Terminal block for auxiliaries	**04228**
10 grommets for wiring through front	**04234**

DD381641



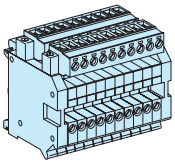
Trunking for a door.

DD381643



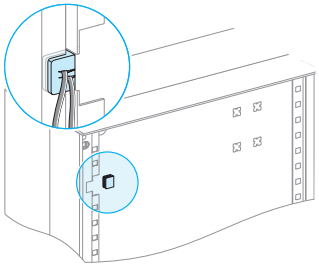
Flexible trunking to protect and guide wires.

DD381644



Terminal block for auxiliaries.

DD381755



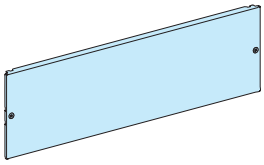
Grommets.

Reserve space

Others

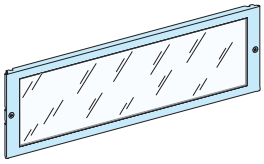
Device compartment, W = 600 mm

DD381583



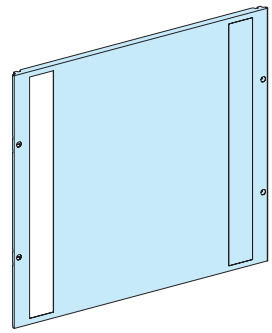
500 mm wide plain front plate	Cat. no.
1 module (H = 50 mm)	03801
2 modules (H = 100 mm)	03802
3 modules (H = 150 mm)	03803
4 modules (H = 200 mm)	03804
5 modules (H = 250 mm)	03805
6 modules (H = 300 mm)	03806
9 modules (H = 450 mm)	03807
12 modules (H = 600 mm)	03808

DD381582



500 mm wide transparent front plate	Cat. no.
4 modules (H = 200 mm)	03342
6 modules (H = 300 mm)	03343
9 modules (H = 450 mm)	03344
12 modules (H = 600 mm)	03345

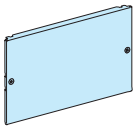
DD383121



500 mm wide vertical modulair front plate	Cat. no.
9 modules (H = 450 mm)	03228
12 modules (H = 600 mm)	03229

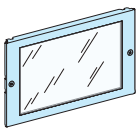
Lateral compartment W = 300 mm

DD381584



250 mm wide plain front plate	Cat. no.
1 module (H = 50 mm)	03811
2 modules (H = 100 mm)	03812
3 modules (H = 150 mm)	03813
4 modules (H = 200 mm)	03814
5 modules (H = 250 mm)	03815
6 modules (H = 300 mm)	03816
9 modules (H = 450 mm)	03817

DD381585

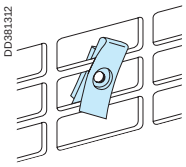


250 mm wide transparent front plate	Cat. no.
4 modules (H = 200 mm)	03352
6 modules (H = 300 mm)	03353
9 modules (H = 450 mm)	03354

Fixing accessories

Others

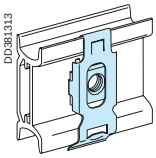
Clip-nuts for slotted mounting plates



These nuts are used to install various devices (contactors, transformers) on a slotted mounting plate.
They can also be installed on the cable-tie supports in enclosures and cubicles, as well as on the universal lateral and longitudinal cross-members in cubicles.

Designation	Cat. no.
20 clip-nuts for slotted mounting plates	
M4	**03180**
M5	**03181**
M6	**03182**

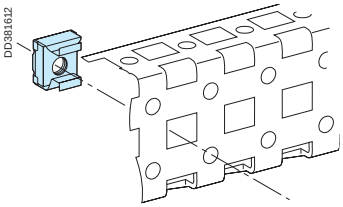
Clip-nuts for modular rails



These nuts are used to install various devices on a modular rail.

Designation	Cat. no.
20 clip-nuts for modular rails	
M4	**03164**
M5	**03165**
M6	**03166**

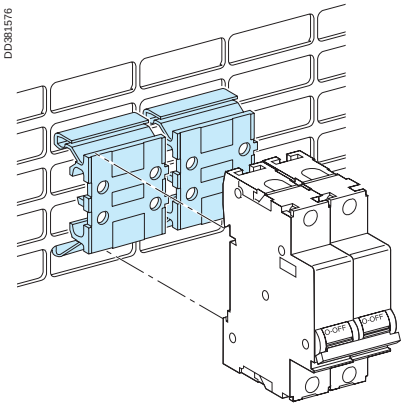
Clip-nuts for lateral and longitudinal cross-members

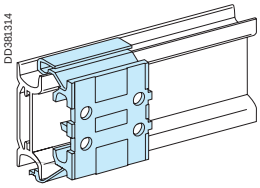


These nuts can be installed on the universal lateral and longitudinal cross-members in cubicles, as well as on the functional uprights in IP30/55 wall-mounted and floor-standing enclosures.

Designation	Cat. no.
20 M6 captive nuts	**03194**

Pratic raiser





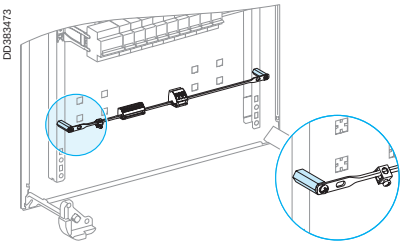
Colour RAL 9001.
The raiser clips onto a slotted mounting plate or a modular rail.
It is 27 mm wide and serves to raise a device 10 mm.
It is made of an insulating material and can directly receive terminal blocks, modular devices, etc.

Designation	Cat. no.
5 Pratic raisers	**04224**

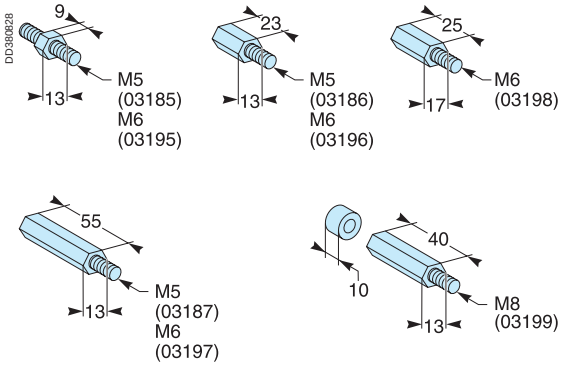
Fixing accessories

Others

Hexagonal spacers



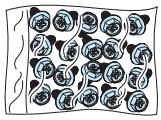
Designation		Cat. no.
M5 hexagonal spacers		
4 spacers	H = 9 mm	**03185**
	H = 23 mm	**03186**
	H = 55 mm	**03187**
M6 hexagonal spacers		
4 spacers	H = 9 mm	**03195**
	H = 23 mm	**03196**
	H = 25 mm	**03198**
	H = 55 mm	**03197**
M8 hexagonal spacers		
4 spacers	H = 40 + 10 mm	**03199**



Other devices
Accessories

M5 self-tapping screws

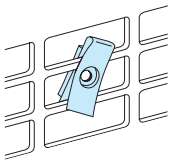
DD384035



Designation	Cat. no.
B-550 M5 self-tapping screws for mounting on functionnal uprights	**03183**

Clip-nuts for slotted mounting plates

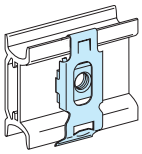
DD381312



Designation	Cat. no.
20 clip-nuts for slotted mounting plates *M4 (03180)* *M5 (03181)* *M6 (03182)*	*see page B-53*

Clip-nuts for modular rails

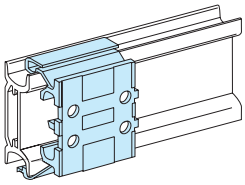
DD381313



Designation	Cat. no.
20 clip-nuts for modular rails *M4 (03164)* *M5 (03165)* *M6 (03166)*	*see page B-53*

Pratic raiser

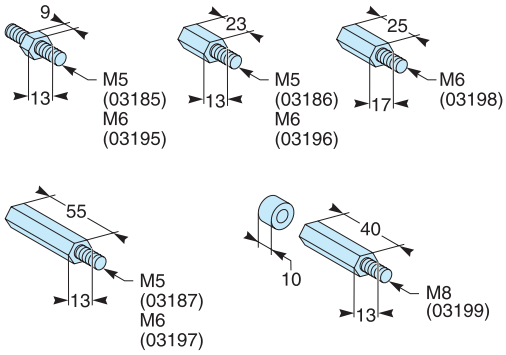
DD381314



Designation	Cat. no.
5 Pratic raisers *(04224)*	*see page B-53*

Hexagonal spacers

DD381315

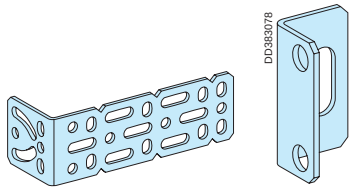


Designation	Cat. no.
M5 hexagonal spacers 4 spacers H = 9 mm *(03185)* H = 3 mm *(03186)* H = 55 mm *(03187)*	*see page B-54*
M6 hexagonal spacers 4 spacers H = 9 mm *(03195)* H = 23 mm *(03196)* H = 2 5 mm *(03198)* H = 55 mm *(03197)*	
M8 hexagonal spacers 4 spacers H = 10 + 40 mm *(03199)*	

Universal angle bracket

DD381311

DD383078

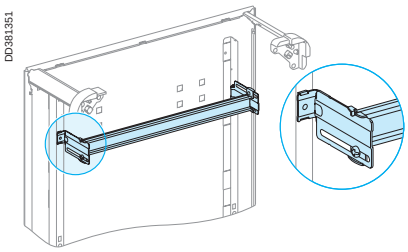


03581 03583

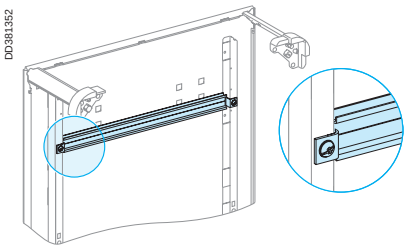
Designation	Cat. no.
2 universal angle brackets	**03581**
6 universal angle brackets	**03583**

Other devices
On a modular rail
On a slotted plate

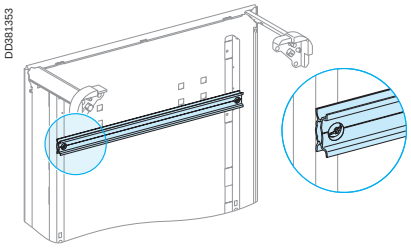
Installation on a modular rail



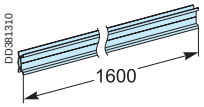
Modular rail (adjustable) (03002).



Recessed modular device rail (03003).

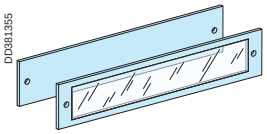


Rear modular rail (03004).



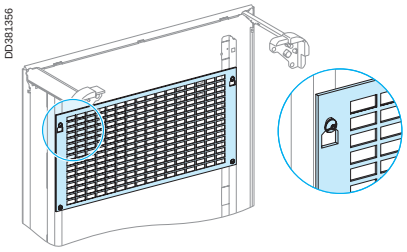
Modular rail, L = 1600 mm (04226).

Designation	*Depth behind front plate (mm)*	*Useful length (mm)*	*Cat. no.*
Modular rail			
Modular rail (adjustable)	47 to 114	432	**03002**
Recessed modular rail	158	432	**03003**
Rear modular rail	128	432	**03004**
2 modular rails, with 4 holes, dia. 6.4 mm, 450 mm between centres		1600	**04226**

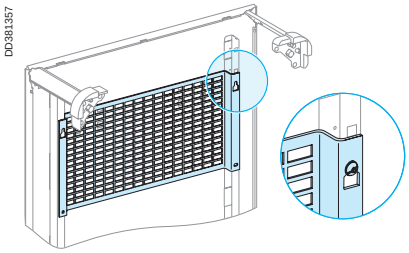


Plain and transparent front plates: see page B-52.

Installation on a slotted plate

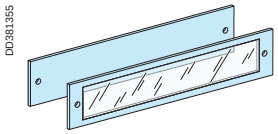


Flat slotted mounting plate (03170).



Recessed slotted mounting plate (03171).

Designation	*No. of vertical modules*	*Useful height (mm)*	*Useful width (mm)*	*Depth behind front plate*	*Cat. no.*
Slotted mounting plate					
Flat slotted moun ing plate	4	200	440	140	**03170**
Recessed slotted mounting plate	4	200	420	160	**03171**
	6	300	420	160	**03172**
	9	450	450	160	**03173**

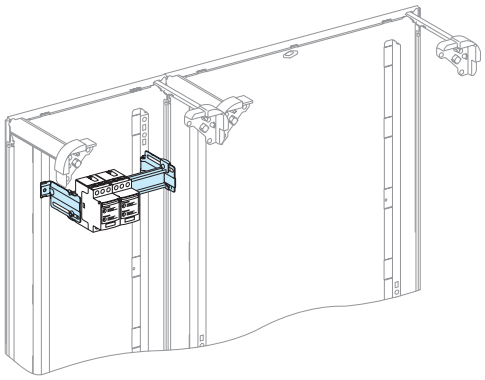


Plain and transparent front plates: see page B-52.

Other devices
On a modular rail
On a slotted mounting plate

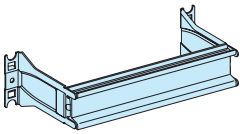
Installation on a modular rail

DD381370



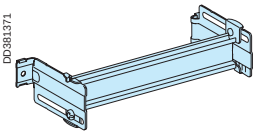
Designation	*Cat. no.*
Modular rail	
Modular rail	**03010**
Adjustable modular rail	**03011**
2 modular rails, L = 1600 mm with 4 holes, dia. 6.4 mm, 450 mm between centres	**04226**

DD383497



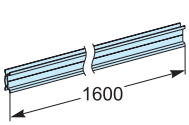
Modular rail (03010).

DD381371



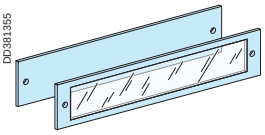
Adjustable modular rail (03011).

DD381310



Modular rail, L = 1600 mm (04226).

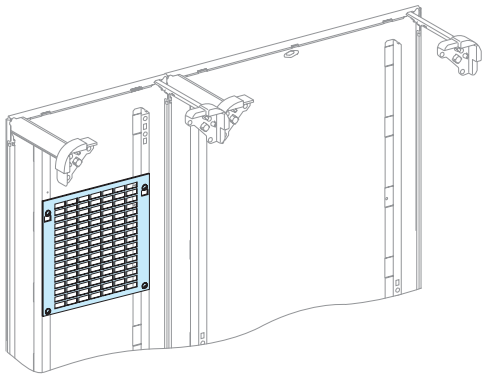
DD381355



Plain and transparent front plates, see page B-52.

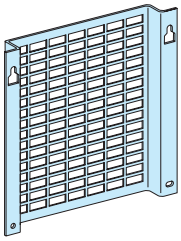
Installation on a slotted mounting plate

DD381374



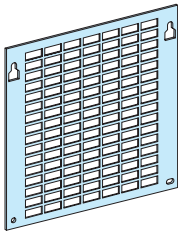
Designation	*No. of modules*	*Useful height (mm)*	*Useful width (mm)*	*Depth behind front plate*	*Cat. no.*
Slotted mounting plate					
Flat slotted mounting plate	4	200 mm	172	140	**03175**
Recessed slotted mounting plate	4	200 mm	172	160	**03176**
	6	300 mm	172	160	**03177**
	9	450 mm	172	160	**03178**

DD381375



Recessed slotted mounting plate.

DD381369

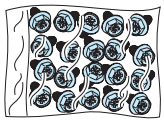


Flat slotted mounting plate.

Other devices
Accessories

M5 self-tapping screws

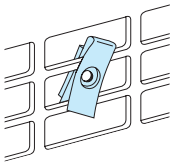
DD384035



Designation	Cat. no.
20 M5 self-tapping screws for mounting on functional uprights	**03183**

Clip-nuts for slotted mounting plates

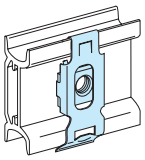
DD381312



Designation	Cat. no.
20 clip-nuts for slotted mounting plates *M4 (03180)* *M5 (03181)* *M6 (03182)*	*see page B-53*

Clip-nuts for modular rails

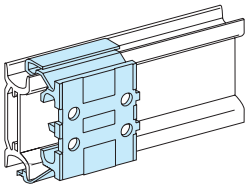
DD381313



Designation	Cat. no.
20 clip-nuts for modular rails *M4 (03164)* *M5 (03165)* *M6 (03166)*	*see page B-53*

Pratic raiser

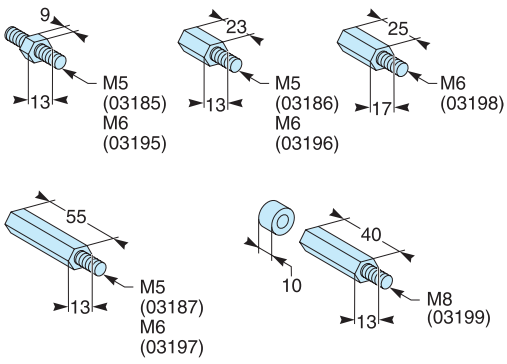
DD381314



Designation	Cat. no.
5 Pratic raisers (*04224*)	*see page B-53*

Hexagonal spacers

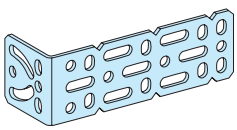
DD381315



Designation	Cat. no.
M5 hexagonal spacers 4 spacers H = 9 mm (*03185*) H = 23 mm (*03186*) H = 55 mm (*03187*)	*see page B-54*
M6 hexagonal spacers 4 spacers H = 9 mm (*03195*) H = 23 mm (*03196*) H = 25 mm (*03198*) H = 55 mm (*03197*)	
M8 hexagonal spacers 4 spacers H = 10 + 40 mm (*03199*)	

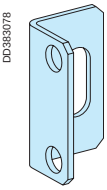
Universal angle bracket

DD381311



03581

DD383078



03583

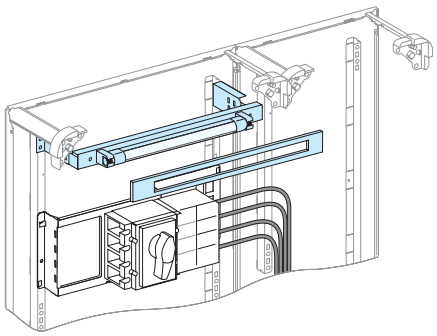
Designation	Cat. no.
2 universal angle brackets (*03581*) 6 universal angle brackets (03583)	*see page B-55*

Switchboard lighting

Others

Switchboard lighting

DD381719



Installation in a wall-mounted or floor-standing enclosure.

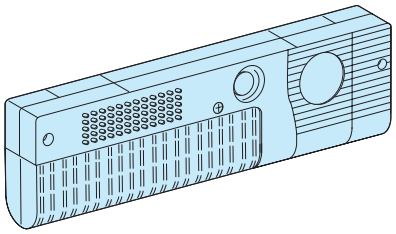
This system is generally used to illuminate the front of a switchboard.
The kit is made up of:
- a base
- a neon tube
- a front plate with cut-out (1 module)
- a door contact.

Characteristics
- supply voltage: 220/240 V
- power rating: 8 W.

Designation	No. of modules	Cat. no.
Switchboard lighting	1	**08964**

Switchboard portable lamp

DD381675



Lamp with a magnetic base for installation behind a door or directly on the cubicle framework.
Supplied without a power cord.
It does not take up any useful space in the switchboard.

Designation	Cat. no.
Switchboard portable lamp	**08965**

Characteristics
- supply voltage: 220/240 V
- power rating: 11 W.

TOOLS

schneider-electric.com

This international site allows you to access all the Schneider Electric products in just 2 clicks via comprehensive range data-sheets, with direct links to:

- complete library: technical documents, catalogs, FAQs, brochures...
- selection guides from the e-catalog.
- product discovery sites and their Flash animations.

You will also find illustrated overviews, news to which you can subscribe, the list of country contacts...

Training

Training allows you to acquire the Schneider Electric expertise (installation design, work with power on, etc.) for increased efficiency and a guarantee of improved customer service.
The training catalogue includes beginner's courses in electrical distribution, knowledge of MV and LV switchgear, operation and maintenance of installations, design of LV installations to give but a few examples.

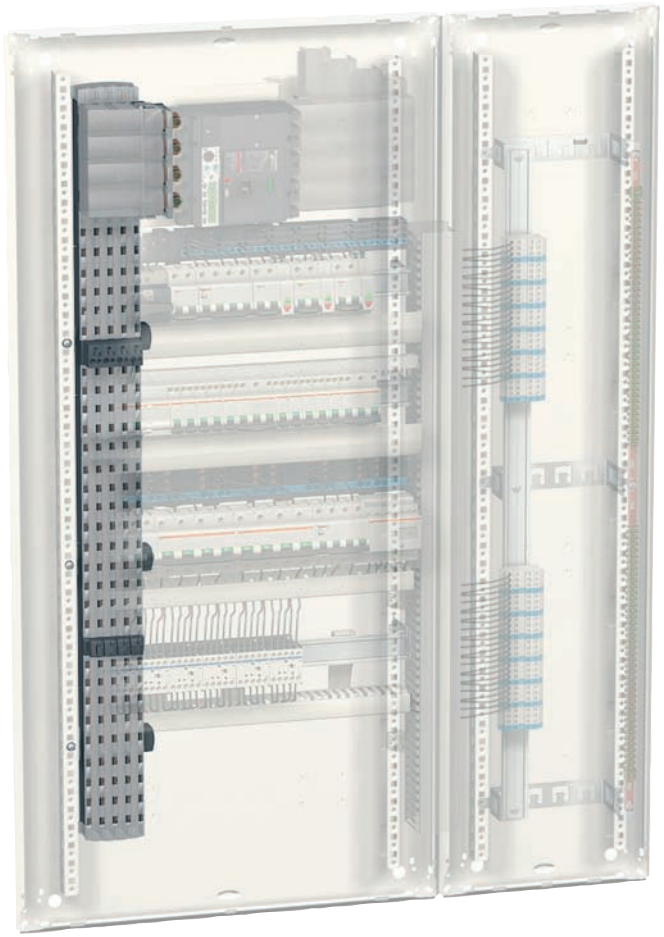
Contents

Main distribution
Powerclip busbars

Powerclip busbars

Powerclip busbars are compact and fully insulated (IPxxB).
They are supplied ready for installation in the switchboard.
There are three and four-pole versions with ratings from 125 to 630 A.
Available in four lengths, they can by cut every 150 or 200 mm, depending on the rating (see page C-5).

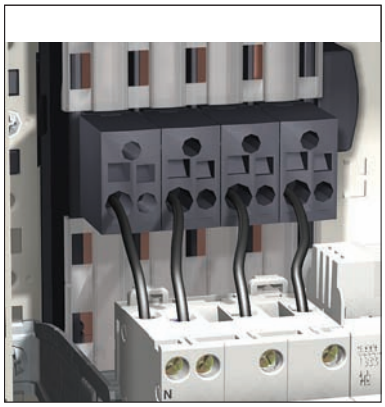
PD390337



PD390340

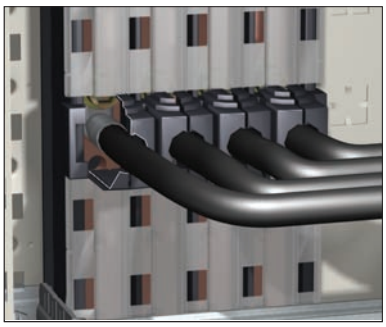
Additional 35 mm² blocks installed on the connection between the device and the busbars.

PD390545



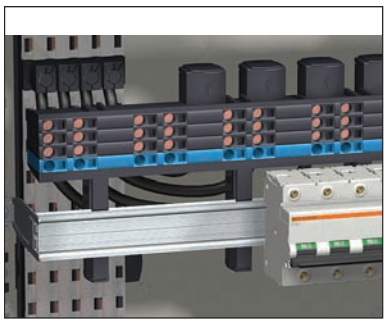
Powerclip tap-off blocks for 6 and 10 mm² cables.

PD390546



Clip-on covers insulate the cable lugs.

PD391009



200 A connection for a Multiclip distribution block.

Main distribution

Polybloc centralised distribution block
400 A rear busbars
630 A multi-stage busbars

Polybloc centralised distribution block

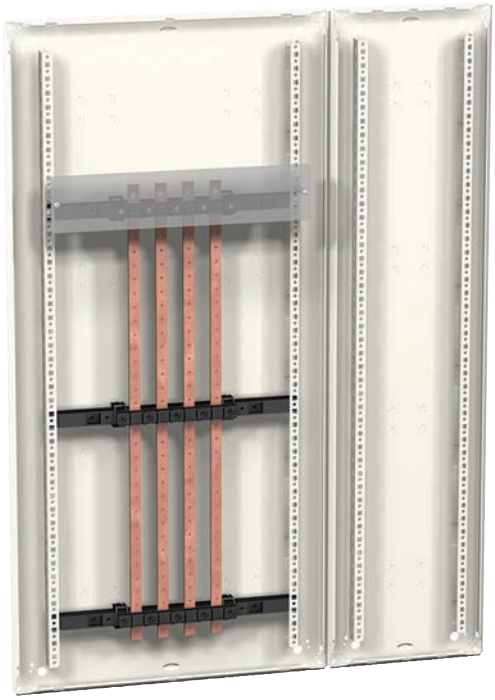
The Polybloc distr bution block is designed for optimum installation directly downstream of horizontal Compact NSx100/250 and Interpact INS250 devices.
Mounting is very fast. It simply hooks onto the device mounting plate. Electrical connections are made directly to the device terminals.
It has the same width as the devices and does not require extra space in the switchboard.
The connection terminals are slanted to facilitate cable entry and reduce the space required behind the front plate (see page C-20).

PD390341

400 A rear busbars

The rear busbars are mounted directly on the rear of enclosures.
There are three and four-pole versions with ratings from 160 to 400 A.
Available in two lengths, 1000 and 1400 mm, they can be cut as needed (see page C-9).

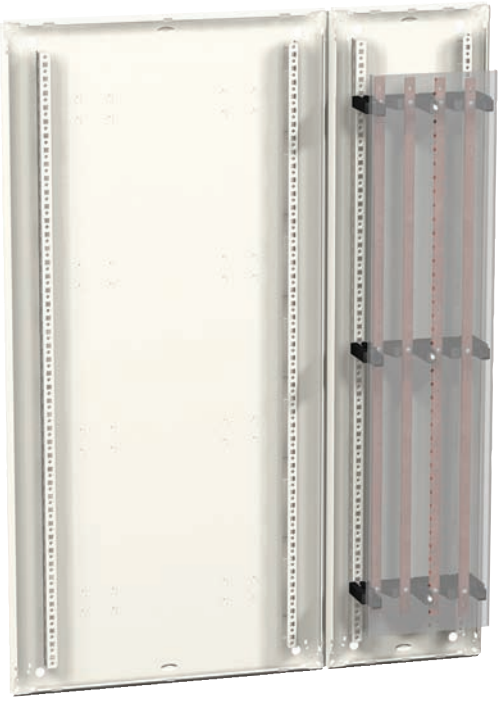
PD390532



630 A multi-stage busbars

The multi-stage busbars are installed in a 300 mm wide duct.
They are particularly useful for distr bution to two enclosures on each side of the duct.
All connection points are easily access ble from the front.
The inclination of the bars facilitates connections and improves cable running.
There are three and four-pole versions with ratings from 160 to 630 A.
Available in two lengths, 1000 and 1400 mm, they can be cut as needed (see page C-7).

PD390533



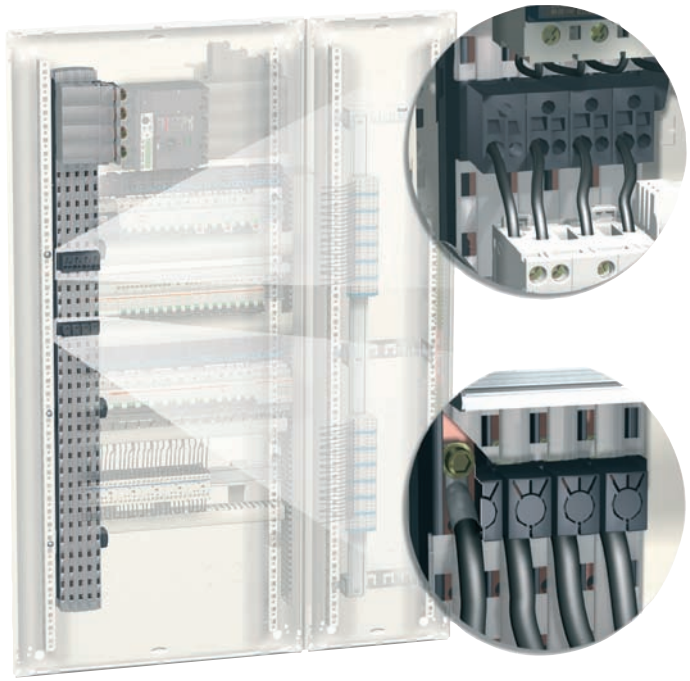
630 A Powerclip busbars

Non-centralised distribution

Presentation

Powerclip busbars are compact and fully insulated (IPxxB).
They are supplied ready for installation in the switchboard.
There are three and four-pole versions with ratings from 125 to 630 A.
Available in four lengths, they can be cut every 150 or 200 mm, depending on the rating.

PD390349



Composition

Powerclip busbars are made up of ETP H12 channelled copper bars with threaded M6 holes every 25 mm.
They are mounted on insulated bases and can be cut every 150 or 200 mm, depending on the rating.
The ends of the busbars are plugged.
Clip-on covers protect against direct contact from the front. The covers can be easily cut for the connections to the devices.

Installation

The busbars are supplied with supports that screw to the functional uprights of enclosures or to an adapter in a cubicle.
They can be cut every 150 or 200 mm, depending on the rating.

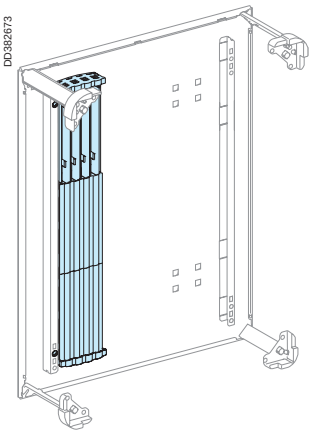
Electrical characteristics

Permissible current of the busbars (A)	Rated short-time withstand current Icw (kA rms / 1 s)	Rated peak withstand current Ipk (kÂ)
125	8.5	20
160	10	30
250	13	30
400	20	52.5
630	25	52.5

■ rated insulation voltage:
□ Powerclip 125 A busbars: Ui = 500 V
□ Powerclip 160/400 A busbars: Ui = 750 V
□ Powerclip 630 A busbars: Ui = 1000 V
■ impulse withstand voltage:
□ Powerclip 125/630 A busbars: Uimp = 8 kV.

125 A Powerclip busbars

DD382673



Available in two lengths (450 and 750 mm) in three and four-pole versions.
The busbars can be cut to length every 150 mm.
They are supplied with clip-on covers that block off the connected cable lugs and can be cut as needed.

Cat. no. selection

Powerclip busbars 125 A		Cat. no.
Three-pole	L = 450 mm	**04103**
	L = 750 mm	**04107**
Four-pole	L = 450 mm	**04104**
	L = 750 mm	**04108**
Busbar connection		
Four 125 A connections, L = 230 mm (for NG125, NSA and INS equipped with tunnel terminals)		**04145**

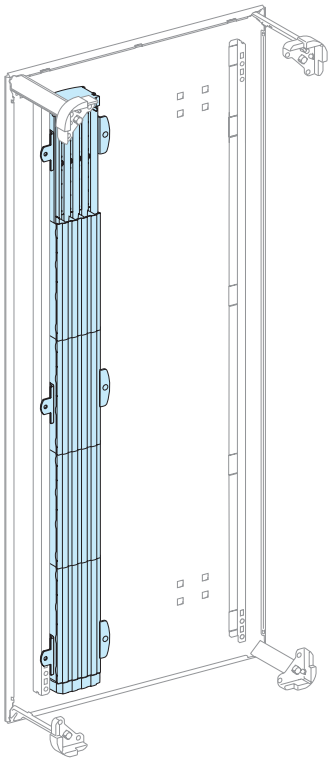
A 35 mm² ferrule for connection to tunnel terminals is crimped to one end.
A 45° ring lug is crimped to the other end.
*95 mm² tunnel terminals for INS : cat. no. **28947** (set of 3)*
*cat. no. **28948** (set of 4)*

630 A Powerclip busbars

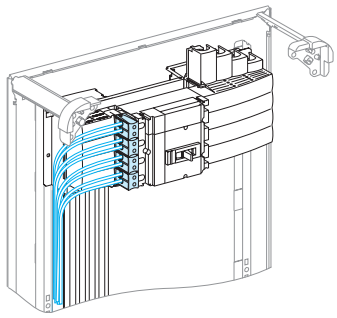
Non-centralised distribution

160/630 A Powerclip busbars

DD381380



DD381405



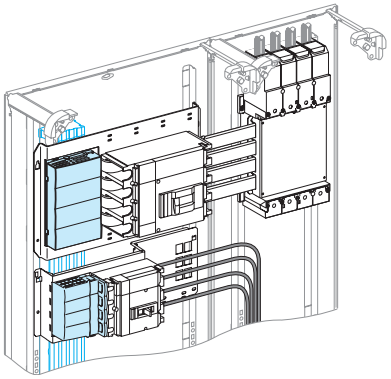
35 mm² 4P additional blocks (04156).

Available in two lengths (1000 and 1400 mm) in three and four-pole versions. The busbars can be cut to length every 200 mm.
Prefabricated connections are available for the devices.

Powerclip busbars		**160 A**	**250 A**	**400 A**	**630 A**
Three-pole	L = 1000 mm	**04111**	**04112**	**04113**	**04114**
	L = 1400 mm	**04116**	**04117**	**04118**	**04119**
Four-pole	L = 1000 mm	**04121**	**04122**	**04123**	**04124**
	L = 1400 mm	**04126**	**04127**	**04128**	**04129**

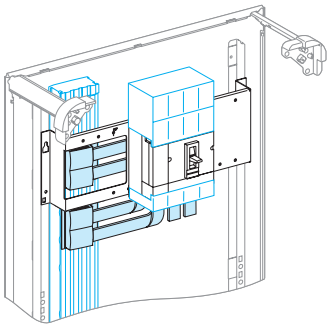
Connection between incoming device and Powerclip busbars		**Cat. no.**
Power supply block (with connection)	NSX250	**04060**
	NSX400	**04070**
	NSX630	**04071**
Universal power supply block (without connection)	100/250 A	**04061**
	400/630 A	**04074**
Connection for universal power supply block	Vertical NSX100/250	**04062**
	Vertical NSX100/250 in duct	**04064**
	Vertical NSX400/630 in duct	**04073**

DD381381



*NSX400 power supply block (**04070**) between incoming device and busbars.*
*NSX250 power supply block (**04060**) between busbars and Compact NS250.*

DD381382



*250 A universal power supply block (**04061**) + 250 A connection (**04062**) between incoming device and busbars.*

Connection between 200 A Multiclip and Powerclip busbars	**Cat. no.**
200 A 4P connection for Multiclip (supplied with mounting hardware)	**04021**

35 mm² additional blocks		**Cat. no.**
35 mm² additional blocks	3P	**04155**
	4P	**04156**

Busbar connection	**Cat. no.**
4 160 A connections, L = 230 mm (for NSA160)	**04146**

A 45 mm² ferrule for connection to tunnel terminals is crimped to one end.
A 45° ring lug is crimped to the other end.

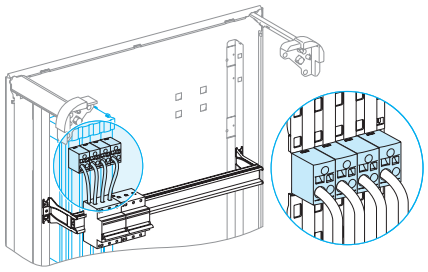
Cable lugs
Bare tubular elbow cable lugs: see page E-8

630 A Powerclip busbars

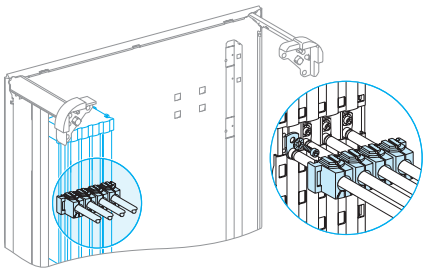
Non-centralised distribution

Accessories

DD383498



DD381385



Powerclip tap-off blocks

Each block can be used to connect:
- one 6 mm² and one 10 mm² cable (04151)
- one 16 mm² cables (04152).

Equipped with spring terminals.

Designation	Cat. no.
12 Powerclip tap-off blocks with 6 mm² + 10 mm² terminals	**04151**
12 Powerclip tap-off blocks with 16 mm² terminals	**04152**

Connection cover

Clip-on covers that block off the connected cable lugs and can be cut as needed.
They maintain IPxxB with 90° angle lugs and/or cable sizes from 10 to 25 mm².

Designation	Cat. no.
8 IPxxB covers for Powerclip busbars	**04150**

8.8 class mounting hardware

Used for electrical connections to the copper bars.

Designation	Cat. no.
Set of 20 CHC M6 x 12 mm screws for Powerclip busbars	**04158**

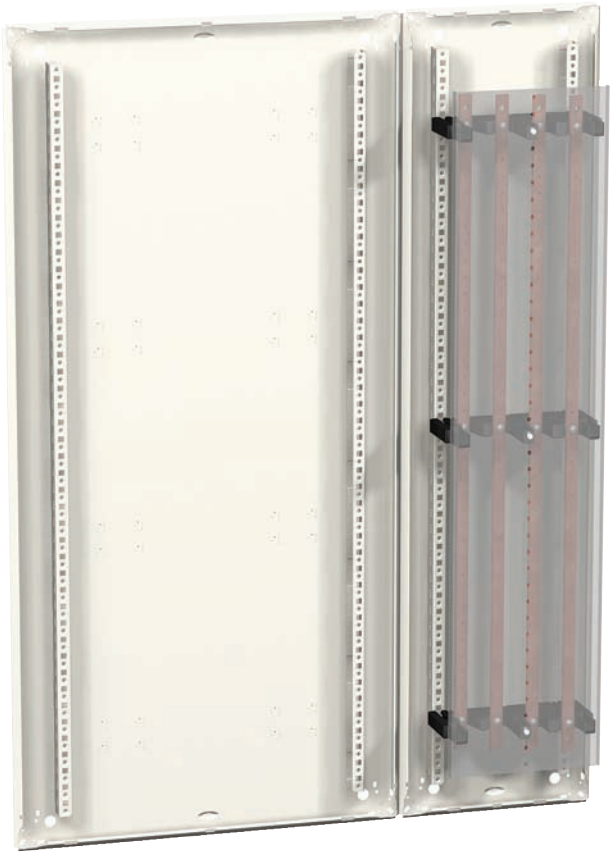
630 A multi-stage busbars

Non-centralised distribution

Presentation

The multi-stage busbars are installed in a 300 mm wide duct.
They are particularly useful for distribution to two enclosures on each side of the duct.
All connection points are easily access ble from the front.
The inclination of the bars facilitates connections and improves cable running.
There are three and four-pole versions with ratings from 160 to 630 A.
Available in two lengths, 1000 and 1400 mm, they can be cut as needed.

PD390535



Composition
Flat, copper bars with threaded M6 holes every 25 mm for connection along the entire length of the busbars. There are 8.2 mm diameter holes at each end for supply. The staggered supports are made of an insulating material.
An optional, insulating, front barrier is available to protect against direct contact from the front.

Installation
The busbars are installed in a 300 mm wide duct for the enclosures.

Connection
- 16 mm² to 50 mm² flexible cables, with crimped lugs
- insulated flexible bars (see page C-11).

Electrical characteristics
- rated peak withstand current Ipk (kÂ)
  - 30 kÂ for 160 A busbars
  - 40 kÂ for 250 A busbars
  - 55 kÂ for 400 A busbars
  - 55 kÂ for 630 A busbars
- rated insulation level Ui = 750 V.

Busbar calculation

Busbar size and distance between supports
The table below indicates:
- the size of the bars to be used, depending on the permissible current level in the busbars
- the distance between supports, depending on the rated short-time withstand current (Icw).

Rating (A)	Size of bars (mm)	Distance between support centres (mm)				
		Icw (kA rms / 1 s)				
		10	13	15	20	25
160	15 x 5	**450**				
250	20 x 5					
400	32 x 5				**300**	**300** (1)
630	32 x 8					

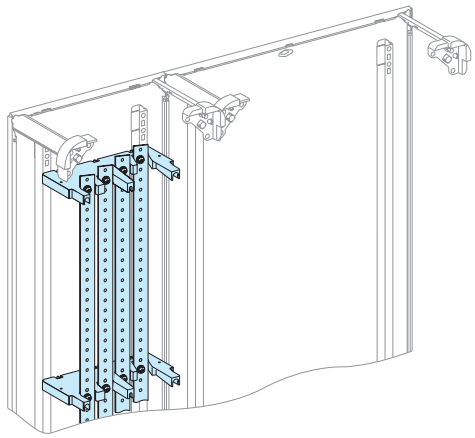
(1) *Icw (kA rms/0.6 s).*

630 A multi-stage busbars

Non-centralised distribution

Busbar selection

DD381393

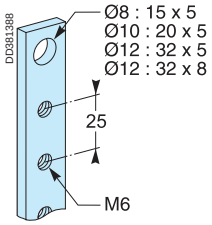


Copper bars

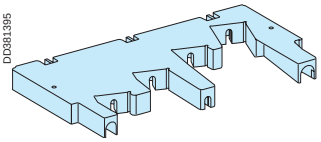
Copper bars	Rating (A)	Size of bars (mm)	Cat. no.
Four copper bars, L = 1000 mm	160	15 x 5	04161
	250	20 x 5	04162
	400	32 x 5	04163
Four copper bars, L = 1400 mm	160	15 x 5	04171
	250	20 x 5	04172
	400	32 x 5	04173
	630	32 x 8	04174
Busbar supports			
Multi-stage busbar support			04192 (1)

(1) *Supplied with mounting hardware for barrier, cat.no. 04197.*

DD381388



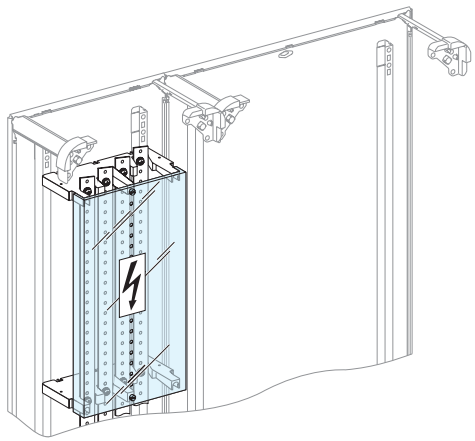
DD381395



04192.

Accessories

DD381396

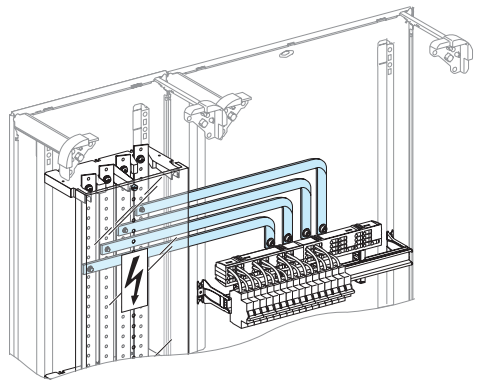


Multi-stage busbar barrier

Protects against direct contact with the busbar connections from the front.

Designation	Cat. no.
Multi-stage busbar barrier, L = 1500 mm	04197

DD383499

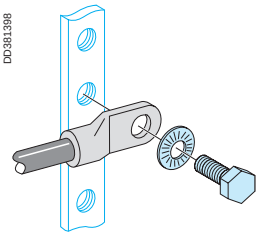


Multiclip connection

For supply to a 200 A Multiclip.

Designation	Cat. no.
Multi-stage busbar 4P connection for 200 A Multiclip distribution block	04024

DD381398



8.8 class mounting hardware

Designation	Cat. no.
Set of 20 M6 x 20 bolts (20 bolts + 20 nuts + 40 contact washers)	04194
Set of 40 M6 x 16 screws (40 screws + 40 contact washers)	04195

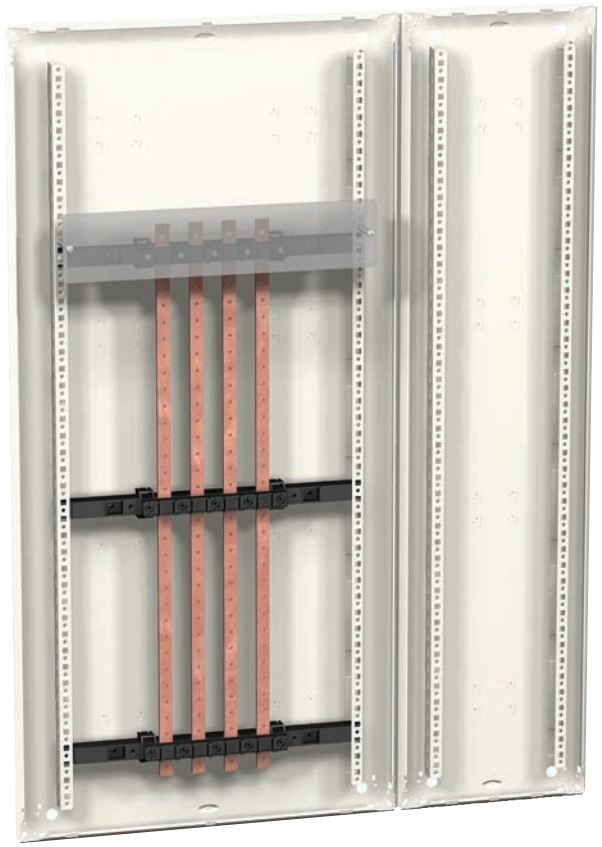
400 A rear busbars

Non-centralised distribution

Presentation

The rear busbars are mounted directly on the uprights of the framework.
There are three and four-pole versions with ratings from 160 to 400 A.
Available in two lengths, 1000 and 1400 mm, they can be cut as needed.
The connection with a Compact or Interpact incoming device occupies two vertical modules (50 mm each).

PD390548



Composition
Flat, copper bars with threaded M6 holes every 25 mm for connection along the entire length of the busbars.
The insulating supports can receive a fifth bar, 15 x 5 mm or 20 x 5 mm, to create an earth bar.

Installation
The busbars are mounted directly on the functional uprights of enclosures or on an adapter (03595) in a cubicle.

Connection
- 16 mm² to 50 mm² flexible cables, with crimped lugs
- insulated flexible bars (see page C-22).

Electrical characteristics
- rated peak withstand current Ipk (kÂ)
  - 30 kÂ for 160 A busbars
  - 40 kÂ for 250 A busbars
  - 55 kÂ for 400 A busbars
- rated insulation level Ui = 1000 V

Busbar calculation

Busbar size and distance between supports
The table below indicates:
- the size of the bars to be used, depending on the permissible current level in the busbars
- the distance between supports, depending on the rated short-time withstand current (Icw).

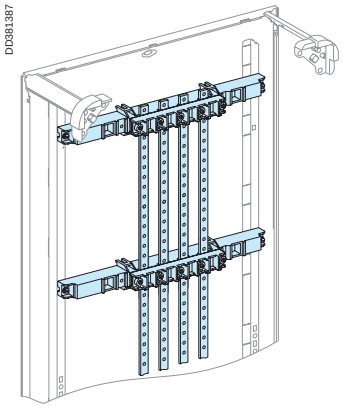
Rating (A)	**Size of bars** (mm)	**Distance between support centres** [1] (mm)				
		Icw (kA rms / 1 s)				
		10	13	15	20	25
160	15 x 5	**450**			**300**	**225**
250	20 x 5					
400	32 x 5					

(1) *Multiclip 200 A distribution blocks equipped with connections (04029) can be used as intermediate supports (200 mm max. distance between centres) in addition to the top and bottom supports.*

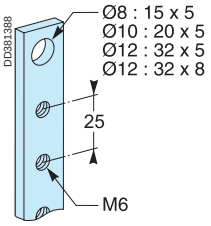
400 A rear busbars

Non-centralised distribution

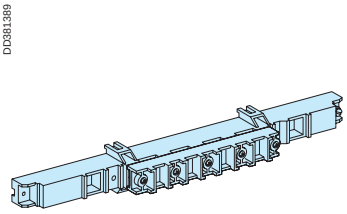
Busbar selection



Copper bars	Rating (A)	Size of bars (mm)	Cat. no.
Four copper bars, L = 1000	160	15 x 5	**04161**
	250	20 x 5	**04162**
	400	32 x 5	**04163**
Four copper bars, L = 1400	160	15 x 5	**04171**
	250	20 x 5	**04172**
	400	32 x 5	**04173**
Busbar supports			
Rear busbar support			**04191**

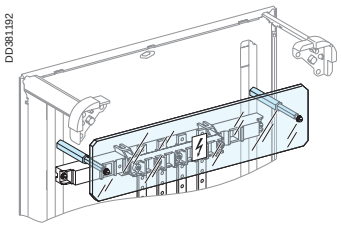


Copper bars.



Busbar supports.

Accessories

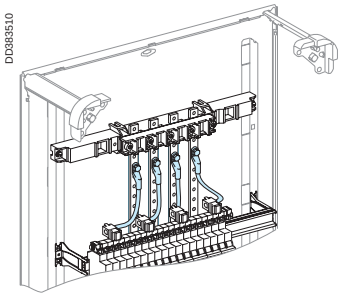


04198.

Rear busbar barrier

Protects against direct contact with the busbar connections.
Supplied with mounting hardware.

Designation	Cat. no.
Rear busbar barrier, H = 100 mm	**04198**



04145.

125 A connection

For direct supply to comb busbars from the rear busbars in the switchboard.

Designation	Cat. no.
Four 125 A connections, L = 230 mm (for NG125, NSA and INS equipped with tunnel terminals)	**04145**

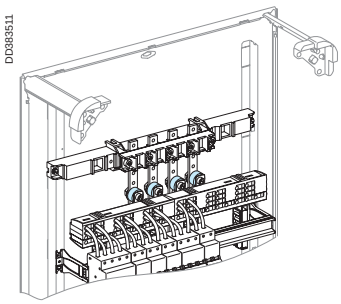
A 35 mm² ferrule for connection to tunnel terminals is crimped to one end.
A 45° ring lug is crimped to the other end.
*95 mm² tunnel terminals for INS : cat. no. **28947** (set of 3)*
*cat. no. **28948** (set of 4)*

160 A connection

For direct supply to an NSA160 from the rear busbars in the switchboard.

Designation	Cat. no.
4 160 A connections	**04146**

A 45 mm² ferrule for connection to tunnel terminals is crimped to one end.
A 45° ring lug is crimped to the other end.

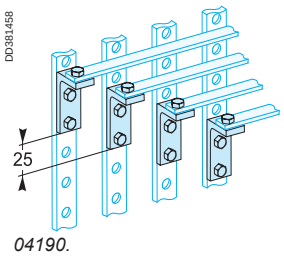


04029.

200 A connection

For supply of a 200 A Multiclip distribution block from the rear busbars in the switchboard.

Designation	Cat. no.
Rear busbar connection for 200A Multiclip distribution block	**04029**



04190.

Connection between busbars

For electrical connections between two sets of rear busbars.

Designation	Cat. no.
4 copper angle brackets, 250A	**04190**

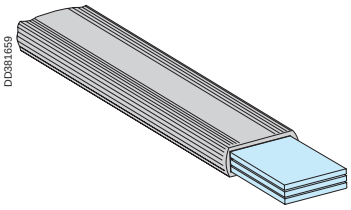
8.8 class mounting hardware

Designation	Cat. no.
Set of 20 M6 x 20 bolts (20 bolts + 20 nuts +40 contact washers)	**04194**
Set of 40 M6 x 16 screws (40 screws + 40 contact washers)	**04195**

Insulated flexible bars

Non-centralised distribution

Presentation



The insulated flexible bars are tested in a type-tested switchboard environment. Their design takes into account the switchboard architecture where they are often in close proximity to a protection device (circuit breaker or fuse) with significant heat losses.
In-depth knowledge of switchboard architecture and the connected devices led to the establishment of a selection table based on the type of device.
Flexible bars are 1800 mm long and made of copper with an insulating sheath.
Rated insulation level Ui = 1000 V.
The sizes for the flexible bars indicated below take into account the heat losses of Schneider devices in a Prisma Plus switchboard.

Catalogue number selection

Connection between device and busbars

The flexible bars are determined taking into account the connected device, whatever the internal temperature of the switchboard.
The bar sizes indicated below take into account the derating curves of devices.

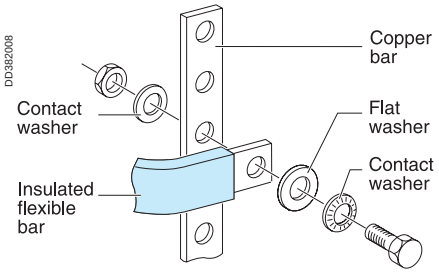
Device	Size (mm)	Cat. no.
NSX100	20 x 2	**04742**
NSX160/250	20 x 3 (1)	**04743**
NSX400	32 x 5	**04751**
NSX630	32 x 8	**04753**
INS125/160	20 x 2	**04742**
INS250	20 x 3	**04743**
INS400	32 x 5	**04751**
INS630	32 x 6	**04752**
200 A Multiclip	20 x 3	**04743**
Polypact, 3P (2)	32 x 8	**04753**
Polypact, 4P (2)	32 x 8	**04753**
Fupact 250	24 x 5	**04746**
Fupact 400	32 x 5	**04751**
Fupact 630	32 x 8	**04753**

(1) *To connect a Compact NSX250 to Powerclip busbars, use a 24 x 5 mm flexible bar (04746).*
(2)*The connection of a Polypact distribution block using insulated flexible bars is not compatible with Form 2 partitioning (04922).*
In this case, use the form 2 restoration kit 04924.

Connection between busbars

Flexible bars are designed for connections between busbars taking into account the following characteristics:
a maximum temperature of 60 °C inside the switchboard. This corresponds to the average temperature inside a switchboard for an ambient temperature of 35 °C
■ the maximum withstand temperature for the insulating material is 125 °C.

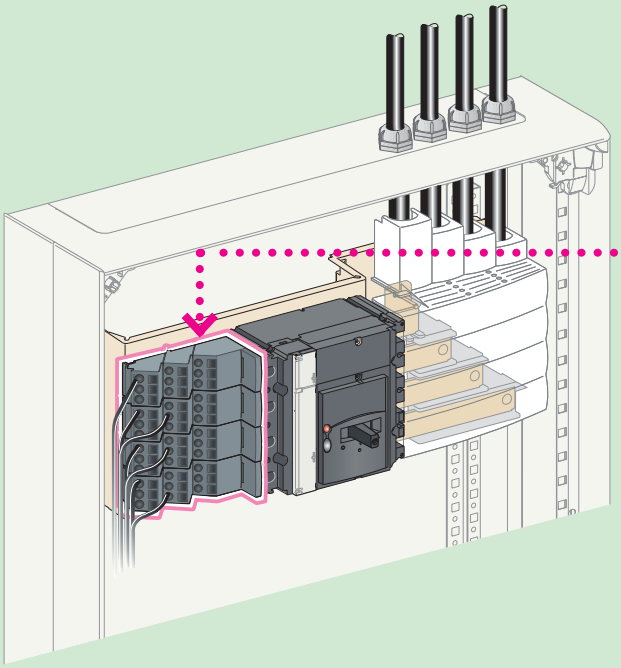
Ie max. (A)	Size (mm)	Cat. no.
200	20 x 2	**04742**
250	20 x 3	**04743**
400	24 x 5	**04746**
520	32 x 5	**04751**
580	32 x 6	**04752**
660	32 x 8	**04753**

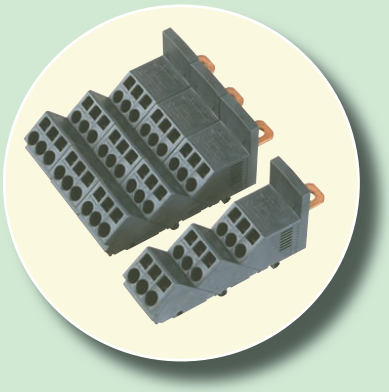


Prisma Plus System G

For incoming devices

160 to 250 A Polybloc

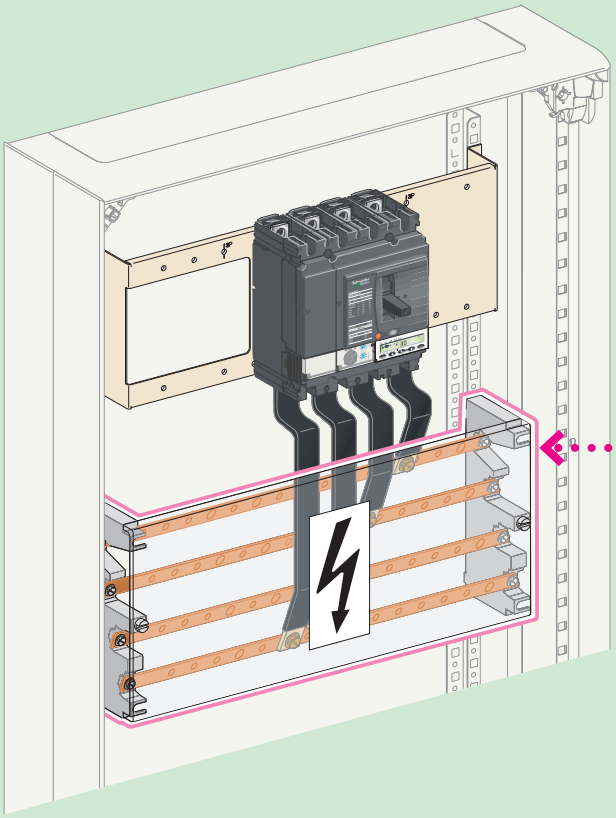


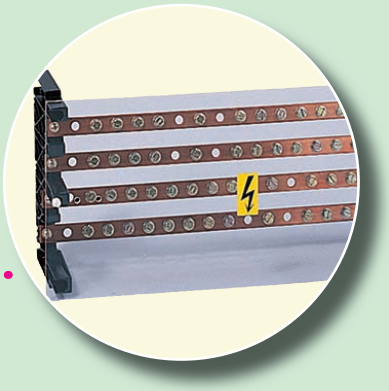


- Reliable spring-terminal connections for outgoing circuits, requiring no maintenance
- Horizontal or vertical installation in minimum space

▶ C-20

160 to 630 A multi-stage distribution block



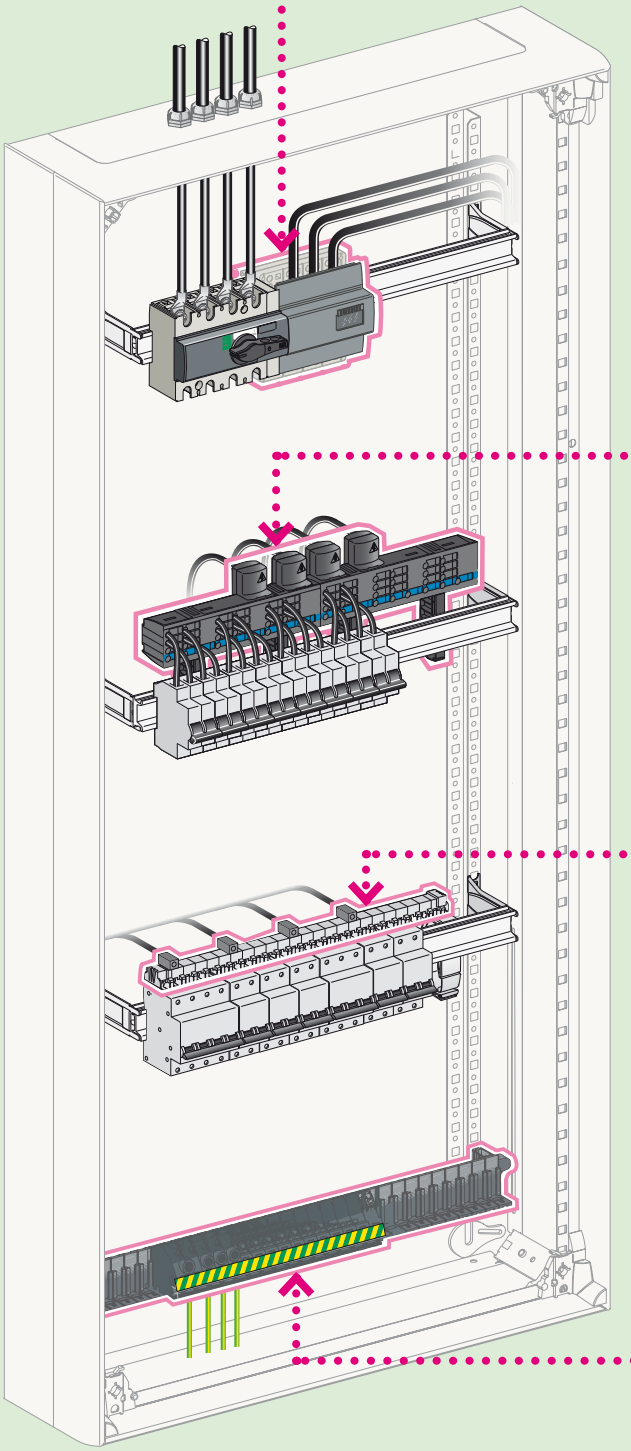


- Traditional, highly versatile solution
- Many installation possibilities

▶ C-16

distribution blocks

For rows of modular devices

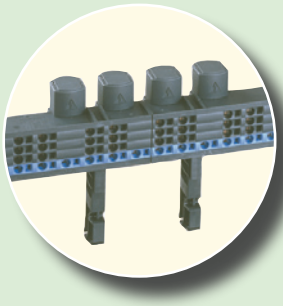


125 to 160 A Distribloc

- Spring terminals for electrical connections that stay tight
- Front designed to integrate perfectly with modular devices

▶ C-14

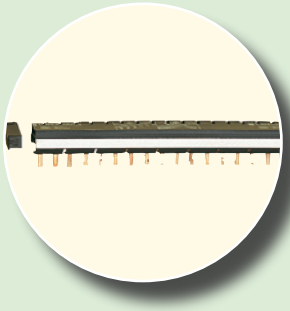
63/200 A Multiclip



- Reliable spring-terminal connections requiring no maintenance
- Fast installation
- Easy upgrades through replacement or addition of devices
- Easy balancing of phases

▶ C-17

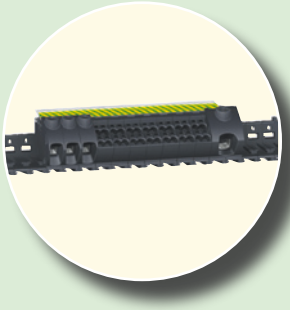
80 to 125 A comb busbars



- Fast and direct connections, adaptable to all needs
- Fast, economical connections

▶ B-22

63/160 A adaptable earthing terminal blocks



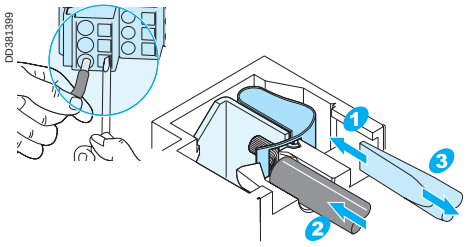
- Innovative solution

▶ C-30

Distribloc distribution block

Centralised distribution

General



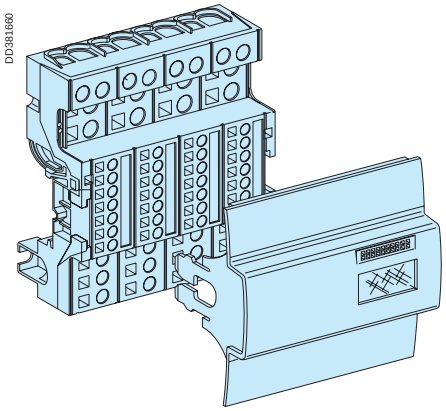
Cable connection.

Downstream circuits are connected from the front, to spring terminals.
Contact pressure automatically adapts to the size of the conductor. It does not depend on the operator.
Contacts are insensitive to vibrations and thermal variations.
Only one cable (flexible or rigid, without a metal ferrule) can be inserted in a spring terminal.
Degree of protection: IPxxB.

Advantages

- a reliable electrical connection, no maintenance required (tightness guaranteed over time)
- very fast connection
- easy phase balancing
- rewiring is very easy if the switchboard is expanded or modified.

Distribloc distribution block



The four-pole distr bution block is made up of:

- a fully insulated, one-piece distribution block complying with the degree of protection IPxxB (protection against direct contacts)
- a modular cover.

The design of the front (45 mm nose) blends perfectly into a row comprising modular devices.

Designation	Cat. no.
125 A Distribloc distribution block	**04045**
160 A Distribloc distribution block + connection	**04046**

Electrical characteristics

- rated insulation level: Ui = 750 V
- rated operational current Ie (40°C):
  - 125 A for the 125 A Distribloc
  - 160 A for the 160 A Distribloc with its prefabricated connection for INS160 or NSA160
- short-circuit withstand current: the reinforced breaking capacity due to cascading in circuit-breaker combinations is maintained. The worst-case situations have been tested.
- complies with the low-voltage device standard IEC 60947.7.1 and/or IEC 60439.1
- impulse withstand voltage Uimp = 8 kV.

Supply

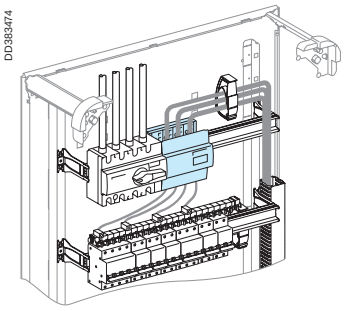
- tunnel terminal on 125 A Distribloc 125 for 6 to 35□ flexible cables (10 to 35□ rigid cables)
- the 160 A Distribloc is supplied with a prefabricated flexible connection. It is designed for an INS100/160 or NSA160 switch-disconnector, installed on the left or right.

Distribution (125 and 160 A Distribloc)

- spring terminals:
  - 2 outgoers from 1 to 10□, flexible or rigid
  - 3 outgoers from 1 to 6□, flexible or rigid
  - 7 outgoers from 1 to 4□, flexible or rigid
- tunnel terminals:
  - 1 outgoer from 4 to 16□, flexible (4 to 25□ rigid)

Supply

- an identification label
- adhesive labels for phase identification
- a prefabricated flexible connection for the INS160 or NSA160 (160 A Distribloc only).



Distribloc distribution block

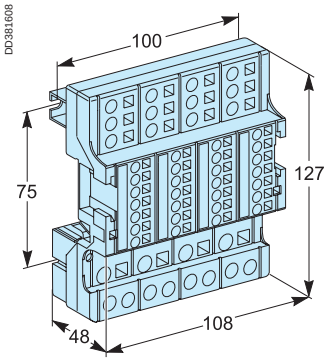
Centralised distribution

Installation

- clipped onto a modular rail
- width occupied is 12 modules (9 mm each)
- screwed to plain or slotted backplate. Distances between centres = 100 x 75 mm.

Dimensions

DD381608



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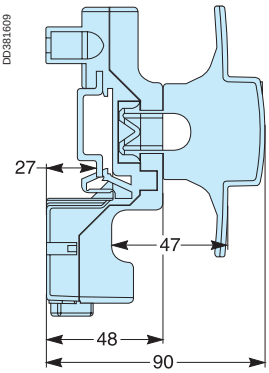


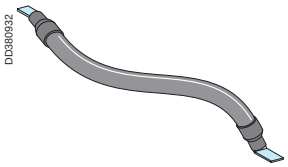
125 A connection

PD390658

Set of four flexible connections, 35□, L = 210 mm.
To supply a 125 A Distribloc from an NG125 or an INS125.

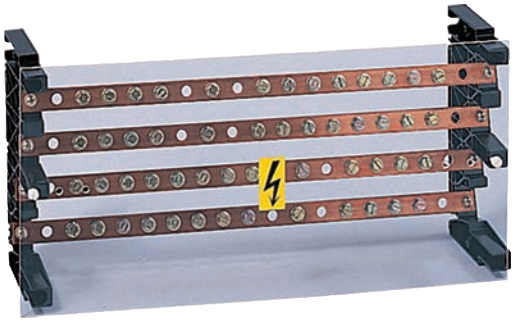
Designation	Cat. no.
4 NG-INS125 connections for Distribloc	**04047**

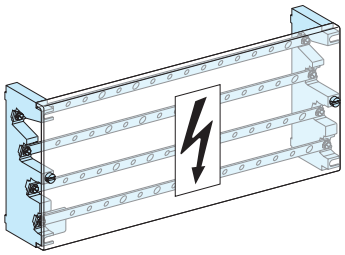
DD380932



160/630 A multi-stage distribution block

160/630 A four-pole multi-stage distribution block





The distribution block can be installed horizontally in the device zone or vertically in the 300 mm wide duct of wall-mount and floor-standing enclosures.
It is not compat ble with Pack enclosures.

The distribution block is made up of:
- ■ two staggered supports made of an insulating material
- ■ four slanted copper bars with holes every 25 mm
- □ 13 threaded M6 holes for outgoers
- □ four 12.2 mm diameter holes to supply the distribution block.

It is supplied with:
- ■ M6 hardware
- ■ one IPxxB insulating barrier for the front.

Cat. no. selection

Multi-stage distri. block	Size of bars (mm)	Cat. no.
160 A Distribloc (40 °C)	15 x 5	**04052**
250 A Distribloc (40 °C)	20 x 5	**04053**
400 A Distribloc (40 °C)	32 x 5	**04054**
630 A Distribloc (40 °C)	32 x 8	**04055**

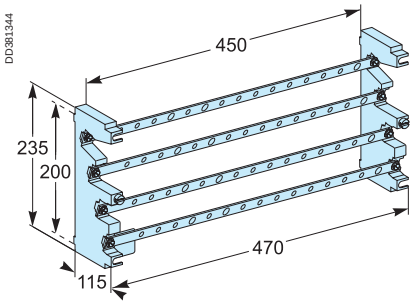
Electrical characteristics
- ■ rated operational current Ie (40 °C):
- □ 160 A for distr bution block 04052
- □ 250 A for distr bution block 04053
- □ 400 A for distr bution block 04054
- □ 630 A for distr bution block 04055
- ■ rated insulation level Ui = 750 V
- ■ rated short-time withstand current Icw:
- □ 10 kA rms / 1 s for 160 A block
- □ 13 kA rms / 1 s for 250 A block
- □ 20 kA rms / 1 s for 400 A block
- □ 25 kA rms / 1 s for 630 A block
- ■ rated peak withstand current Ipk:
- □ 30 kÂ for 160 A block
- □ 30 kÂ for 250 A block
- □ 40 kÂ for 400 A block
- □ 40 kÂ for 630 A block
- ■ impulse withstand voltage Uimp = 8 kV.

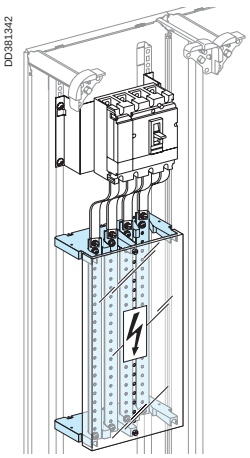
Supply
- ■ 16 mm^2 to 50 mm^2 cables with crimped lugs
- ■ 20 x 2 mm flexible bars for NSX100/160
- ■ 20 x 3 mm flexible bars for NSX250
- ■ 32 x 5 mm flexible bars for NSX400
- ■ 32 x 8 mm flexible bars for NSX630.

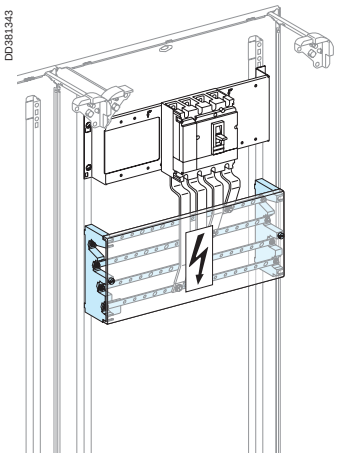
Distribution
13 outgoers per phase, max. 50 mm^2.

Installation
- ■ screwed horizontally onto the functional uprights of wall-mount and floor-standing enclosures
- ■ screwed vertically onto the functional uprights of the 300 mm wide duct
- ■ screwed to plain or slotted backplate.

Dimensions



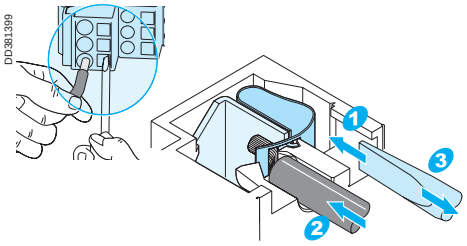




Multiclip distribution block

Centralised distribution

General



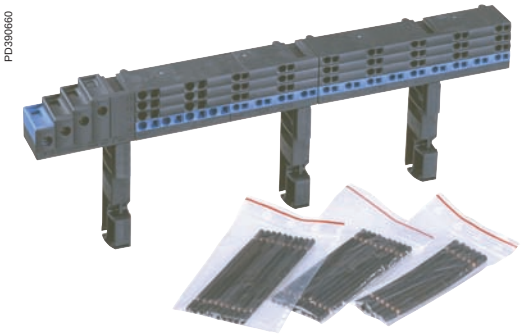
Cable connection.

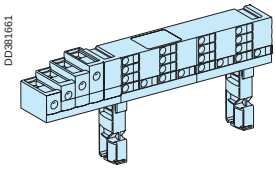
For connections, the distribution block uses a proven technique, i.e. spring terminals. Downstream circuits are connected from the front, without screws, to spring terminals. Contact pressure does not depend on the operator. It automatically adapts to the size of the conductor (minimum size = 1mm²). Contacts are insensitive to vibrations and thermal variations.
Only one cable (flexible or rigid, without a metal ferrule) can be inserted in a spring terminal.
Degree of protection: IPxxB.

Advantages

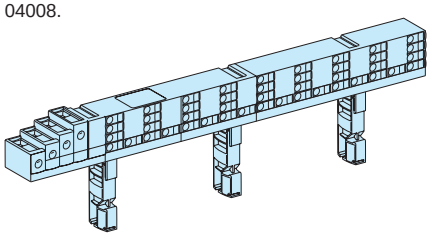
- a reliable electrical connection, no maintenance required (tightness guaranteed over time)
- the fast connections make phase balancing very easy.
- rewiring is very easy if the switchboard is expanded or modified.

63/80 A Multiclip distribution blocks





04008.



04004.

Application
Distribution over half or full rows of modular devices. It is generally supplied by a device at the head of a group of outgoers (NG125, INS, C60, etc.).

Cat. no. selection

Designation	Cat. no.
80 A Multiclip distribution block, 4P	**04004**
63 A Multiclip distribution block, 4P, 1/2 row	**04008**

Electrical characteristics

- rated insulation level Ui = 500 V
- impulse withstand voltage Uimp = 6 kV
- short-circuit withstand current: the reinforced breaking capacity due to cascading in circuit-breaker combinations is maintained. The worst-case situations have been tested.
- 63/80 A Multiclip distribution blocks:
  - 4 mm² cable outgoer: Imax = 32 A
  - 6 mm² cable outgoer: Imax = 40 A
  - two 6 mm² cables: Imax = 63 A.

Supply
Via tunnel terminals up to 25 mm², generally from a device supplying a group of outgoers.
The tunnel terminals are positioned to facilitate cable entry and screw tightening. They are designed for cables arriving from the top or bottom.

Distribution

- for the full-row Multiclip, 4P (04004), each phase offers:
  - 2 connection points for 6 mm² max. cable
  - 7 connection points for 4 mm² max. cable

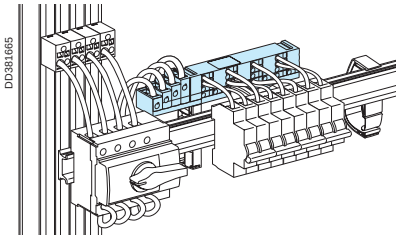
  the neutral offers:
  - 4 connection points for 6 mm² max. cable
  - 13 connection points for 4mm² max. cable
- for the half-row Multiclip, 4P (04008), each phase offers:
  - 2 connection points for 6 mm² max. cable
  - 2 connection points for 4 mm² max. cable

  the neutral offers:
  - 4 connection points for 6 mm² max. cable
  - 4 connection points for 4 mm² max. cable

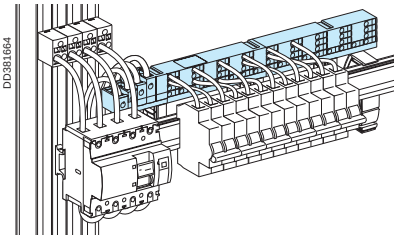
Each connection point can receive a single cable, either flexible or rigid.

Installation

- clipped onto the rear of modular rail
- screwed to plain or slotted backplate



Half-row Multiclip distribution block supplied by an INS switch-disconnector.



Multiclip distribution block supplied by a Vigi NG125 circuit breaker.

Supplied with 100 mm long bared copper connections

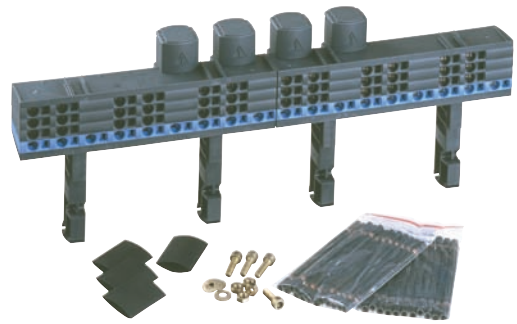
- for full-row Multiclip (04004):
  - 2 sets of ten 4 mm² connections + 1 set of six 6 mm² connections
- for half-row Multiclip (04008):
  - 1 set of ten 4 mm² connections + 1 set of six 6 mm² connections.

Multiclip distribution block

Centralised distribution

160/200 A Multiclip distribution blocks

PD390661



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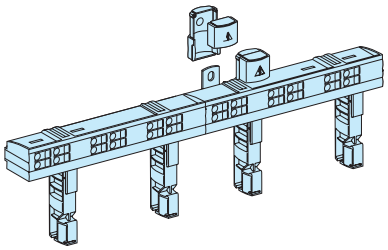
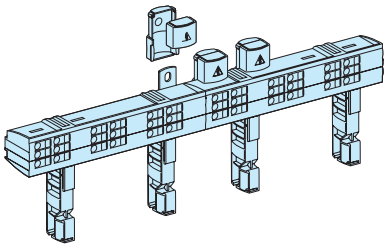


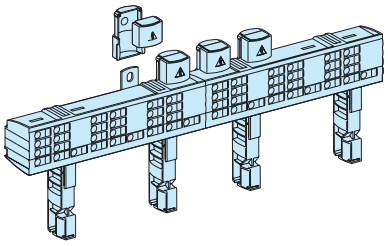
04012.

DD381670



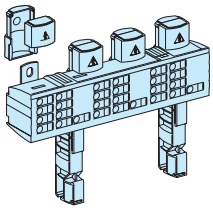
04013.

DD381671



04014.

DD381673



04018.

Application

Distribution over full rows of modular devices.
The distribution block is generally supplied by busbars in enclosures and cubicles.

Cat. no. selection

Designation	Cat. no.
200 A Multiclip, 2P	**04012**
200 A Multiclip, 3P	**04013**
200 A Multiclip, 4P	**04014**
160 A Multiclip, 4P, 1/2 row	**04018**

Electrical characteristics

- rated insulation level Ui = 750 V
- impulse withstand voltage Uimp = 8 kV
- short-circuit withstand current: the reinforced breaking capacity due to cascading in circuit-breaker combinations is maintained. The worst-case situations have been.
- 160/200 A Multiclip distribution blocks:
  - 10 mm² cable outgoer: Imax = 50 A
  - two 10 mm² cables: Imax = 63 A.

Supply

- direct to terminals:
  - 50 mm² cables with crimped lugs
  - 20 x 3 mm flexible bars
- from Powerclip insulated busbars in a wall-mount or floor-standing enclosure (04021)
- from lateral, channelled busbars in a cubicle (connection must be made)
- from busbars in the duct of a wall-mount or floor-standing enclosure (04024)
- from busbars in the rear of a wall-mount or floor-standing enclosure (04029).

Busbar connection

Designation	Cat. no.
Connection between 200 A Multiclip and Powerclip insulated busbars (enclosure)	**04021**
Connection between 200 A Multiclip and busbars in a duct (enclosure)	**04024**
Connection between 200 A Multiclip and rear busbars (enclosure)	**04029**

Distribution

- 200 A Multiclip, 2P (04012):
  - 12 connection points for phase and neutral
- 200 A Multiclip, 3P and 4P (04013 and 04014):
  - 12 connection points for each phase
  - 18 connection points for the neutral
- 160 A Multiclip, 4P, 1/2 row (04018):
  - 6 connection points for each phase
  - 9 connection points for the neutral

Each connection point can receive a single 10 mm² cable, either flexible or rigid.

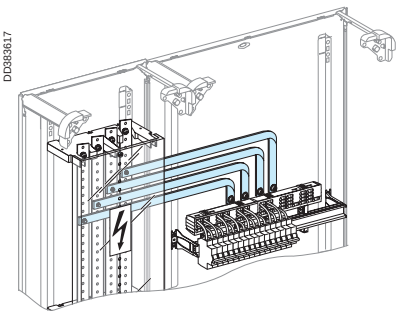
Installation

- clipped onto the rear of modular rail
- screwed to plain or slotted backplate.

Supplied with:

- 100 mm long, bared 10 mm² copper connections
  - 200 A Multiclip, 2P, 3P and 4P (04012, 04013 et 04014): 2 sets of 12 connections
  - 160 A Multiclip, 1/2 row (04018): 1 set of 12 connections
- protection covers for the supply terminals (IPxxB)
- the hardware required for the supply terminals.

DD383617



Supply from busbars in the duct of a wall-mount or floor-standing enclosure (connection 04024).

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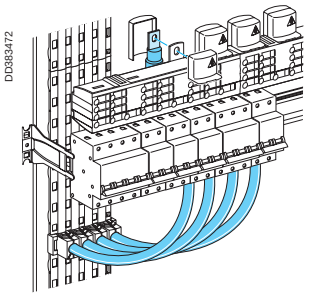
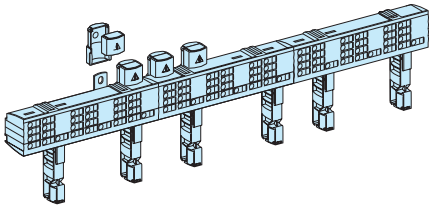


Supply from Powerclip busbars in a wall-mount or floor-standing enclosure (connection 04021).

Multiclip distribution block

Centralised distribution

200 A Multiclip distribution block (36 modules)



04026.

Application
Distribution over full rows of modular devices.
The distr bution block is generally supplied by busbars in enclosures.

Cat. no. selection

Designation	Cat. no.
200 A Multiclip, 4P (36 modules)	**04026**

Electrical characteristics
- rated insulation level Ui = 750 V
- impulse withstand voltage Uimp = 8 kV
- short-circuit withstand current: the reinforced breaking capacity due to cascading in circuit-breaker combinations is maintained. The worst-case situations have been.
- 200 A Multiclip:
  - 10 mm² cable outgoer: Imax = 50 A
- two 10 mm² cables: Imax = 63 A.

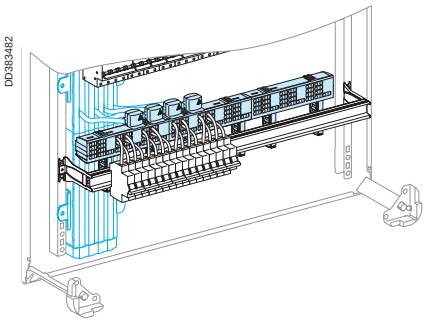
Supply
direct to terminals:
- 50 mm² cables with crimped lugs
- 20 x 3 mm flex ble bars
- from Powerclip insulated busbars in a wall-mounted or floor-standing enclosure (connection 04021)
- from busbars in the rear of a wall-mounted or floor-standing enclosure (connection 04029).

Designation	Cat. no.
Connection between 200 A Multiclip and Powerclip insulated busbars (enclosure)	**04021**
Connection between 200 A Multiclip and rear busbars (enclosure)	**04029**

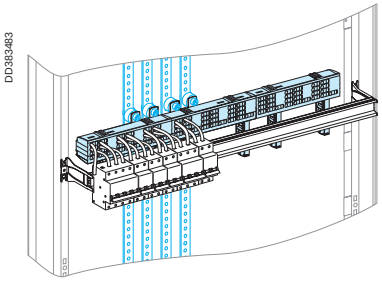
Distribution
18 connection points for each phase.
27 connection points for the neutral.
Each connection point can receive a single 10 mm² cable, either flex ble or rigid.

Installation
- clipped onto the rear of modular rail
- screwed to plain or slotted backplate.

Supplied with:
- 3 sets of twelve 100 mm long, bared 10 mm² copper connections
- protection covers for the supply terminals (IPxxB)
- the hardware required for the supply terminals.



Supply from Powerclip busbars in a wall-mounted or floor-standing enclosure (connection 04021).

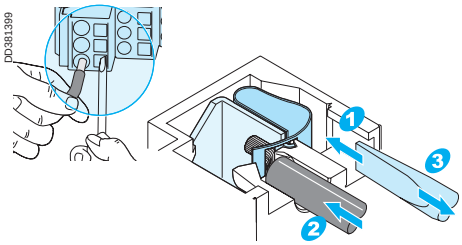


Supply from busbars in the rear of a wall-mounted or floor-standing enclosure (connection 04029).

Polybloc distribution block

Centralised distribution

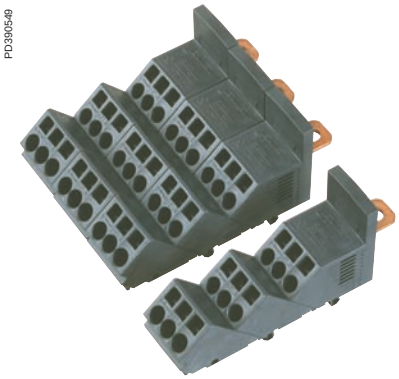
General

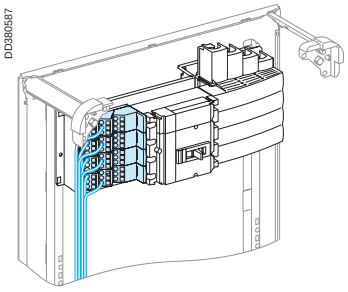


Downstream circuits are connected from the front, without screws, to spring terminals. Contact pressure automatically adapts to the size of the conductor (minimum size = 1 mm²). Contacts are insensitive to v brations and thermal variations.
Only one cable (flexible or rigid, without a metal ferrule) can be inserted in a spring terminal.
Degree of protection: IPxxB.

Advantages of spring terminals
- a reliable electrical connection, no maintenance required
- the fast connections make phase balancing very easy.
- rewiring is very easy if the switchboard is expanded or modified.

250 A Polybloc distribution block





Horizontally mounted Polybloc in a wall-mounted enclosure.

Applications
The Polybloc distribution block is designed for installation directly downstream of Compact circuit breakers and Interpact switch-disconnectors devices up to 250 A.
It can be rapidly mounted in the horizontal position. Electrical connections are made directly to the device terminals.
It has the same width as the devices and does not take up any additional space in the switchboard.
The connection terminals are slanted to facilitate cable entry and not exceed the bending radius of the flexible and rigid cables.

Cat. no. selection

Designation	Cat. no.
Polybloc distribution block, 3P, 250 A	**04033**
Polybloc distribution block, 4P, 250 A	**04034**

Electrical characteristics
The electrical characteristics are perfectly compatible with the connected devices. Neither the temperature derating curves nor the performance levels of the circuit breakers and switch-disconnectors are altered.
- rated insulation level Ui = 750 V
- short-circuit withstand current: the reinforced breaking capacity due to cascading in circuit-breaker combinations is maintained. The worst-case situations have been tested.

impulse withstand voltage Uimp = 8 kV.

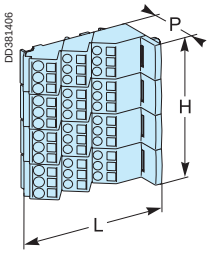
Supply
Directly to the terminals of the Compact NSX and Interpact INS devices up to 250 A.

Distribution
Via cables, up to six 10 mm² cables and three 16 mm² cables per phase.

Installation
Directly on the mounting plates of horizontally mounted Compact NSX100/250 and Interpact INS250 devices in the enclosures.
It can also be mounted downstream of vertically mounted Compact NSX100/250 and Interpact INS250 devices in the enclosures. In this case, the Polybloc is mounted on a depth-adjustable modular rail (03002).

Dimensions

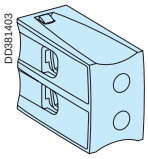
	H (mm)	L (mm)	P (mm)
Polybloc, 3P	105	138	63
Polybloc, 4P	140	138	63



Polybloc distribution block

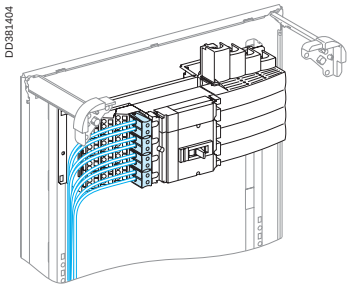
Centralised distribution

35 mm² additional blocks



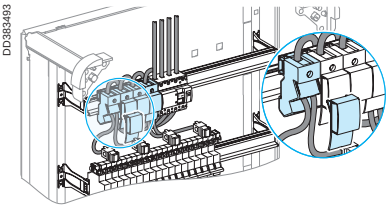
These blocks with screw terminals can be mounted on the 250 A Polybloc for connection of two 35 mm² cables per phase.

Designation	Cat. no.
35 mm² 3P additional blocks (3 blocks)	**04155**
35 mm² 4P additional blocks (4 blocks)	**04156**

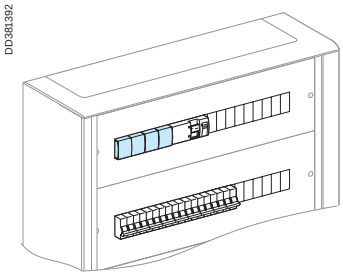


Additional blocks with a Polybloc distribution block.

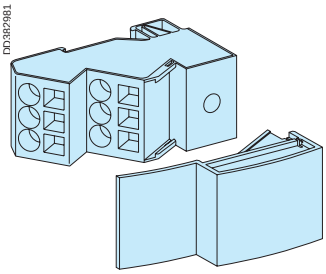
160 A Polybloc distribution block



Three 160 A Polybloc distribution blocks in the vertical position on a modular rail, supplied by an NG125.



160 A Polybloc distribution block in a front plate cut-out.



The 160 A Polybloc is made up of individual elements that can be used alone or with others to make two-pole, three-pole or four-pole distribution blocks.
Mounting is very fast. It clips onto a modular rail and is supplied by cables via a tunnel terminal.
The connection spring terminals are slanted to facilitate cable entry and bending of the flexible and rigid cables.
It is supplied with a cover that also guides the cables.

Cat. no. selection

Designation	Cat. no.
Polybloc distribu ion block, 1P, 160 A	**04031**

Electrical characteristics

- rated insulation level Ui = 750 V
- short-circuit withstand current: the reinforced breaking capacity due to cascading in circuit-breaker combinations is maintained. The worst-case situations were tested. The electrical characteristics are perfectly compatible with the connected devices. Neither the temperature derating curves nor the performance levels of the circuit breakers and switch-disconnectors are altered.
- impulse withstand voltage Uimp = 8 kV.

Supply

Direct to a tunnel terminal, for cables up to 70 mm².

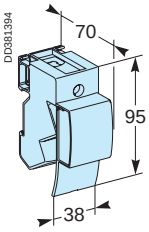
Distribution

Via cables, up to six 16 mm² cables.

Installation

The blocks clip onto a modular rail.

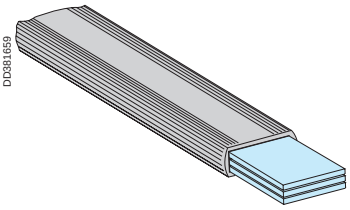
Dimensions



Insulated flexible bars

Centralised distribution

Presentation



The insulated flexible bars are tested in a type-tested switchboard environment.
Their design takes into account the switchboard architecture where they are often in close proximity to a protection device (circuit breaker or fuse) with significant heat losses.
In-depth knowledge of switchboard architecture and the connected devices led to the establishment of a selection table based on the type of device.
Flexible bars are 1800 mm long and made of copper with an insulating sheath.
Rated insulation level Ui = 1000 V.
The sizes for the flex ble bars indicated below take into account the heat losses of Schneider devices in a Prisma Plus switchboard.

Catalogue number selection

Connection between device and busbars

The flex ble bars are determined taking into account the connected device, whatever the internal temperature of the switchboard.
The bar sizes indicated below take into account the derating curves of devices.

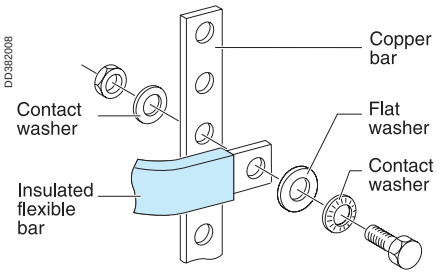
Device	Size (mm)	Cat. no.
NSX100	20 x 2	**04742**
NSX160/250	20 x 3 (1)	**04743**
NSX400	32 x 5	**04751**
NSX630	32 x 8	**04753**
INS125/160	20 x 2	**04742**
INS250	20 x 3	**04743**
INS400	32 x 5	**04751**
INS630	32 x 6	**04752**
200 A Multiclip	20 x 3	**04743**
Polypact, 3P (2)	32 x 8	**04753**
Polypact, 4P (2)	32 x 8	**04753**
Fupact 250	24 x 5	**04746**
Fupact 400	32 x 5	**04751**
Fupact 630	32 x 8	**04753**

(1) To connect a Compact NSX250 to Powerclip busbars, use a 24 x 5 mm flexible bar (04746).
(2) The connection of a Polypact distribution block using insulated flexible bars is not compatible with Form 2 partitioning (04922).
In this case, use the form 2 restoration kit 04924.

Connection between busbars

Flexible bars are designed for connections between busbars taking into account the following characteristics:
a maximum temperature of 60 °C inside the switchboard. This corresponds to the average temperature inside a switchboard for an ambient temperature of 35 °C
■ the maximum withstand temperature for the insulating material is 125 °C.

Ie max. (A)	Size (mm)	Cat. no.
200	20 x 2	**04742**
250	20 x 3	**04743**
400	24 x 5	**04746**
520	32 x 5	**04751**
580	32 x 6	**04752**
660	32 x 8	**04753**

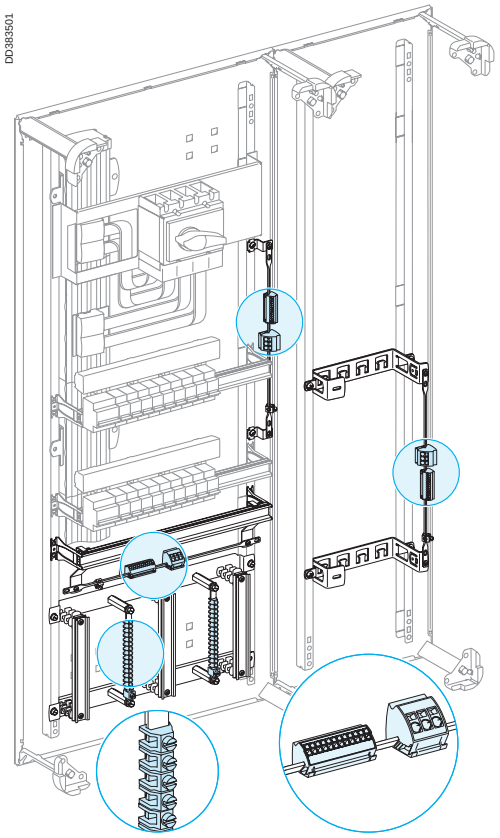


Earth bars

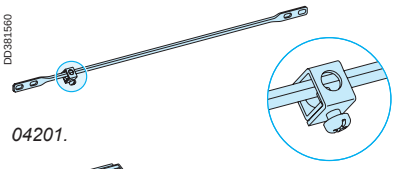
Centralised distribution

Position of the earth bar in the switchboard

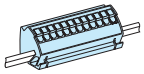
In Prisma Plus wall-mounted and floor-standing enclosures, the earth bar is installed:
- in a duct, which may be a dedicated zone, totally separate from the devices
- in the device compartment, at the top or bottom.



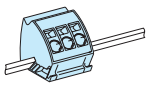
Earth bar



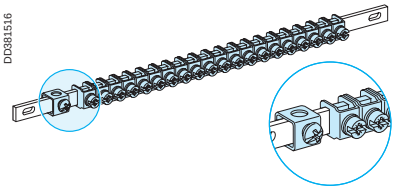
04201.



04214.



04215.



04200.

Presentation

The earth bar can be:
- a bare earth bar, 12 x 3 mm with 330 mm of connection space, equipped with a 35 mm² tunnel terminal and on which earth blocks with spring terminals can be clipped
- an earth bar (200 or 450 mm long), equipped with a 35 mm² tunnel terminal and clamps with captive screws.

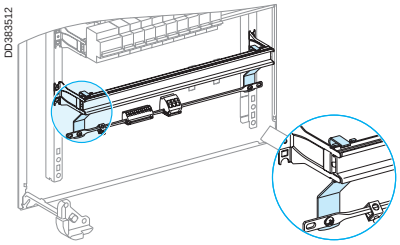
Designation	Cat. no.
Bare earth bar, 12 x 3 mm with 330 mm of connec ion space, equipped wi h a 35 mm² tunnel terminal (for earth blocks wi h spring terminals)	**04201**
4 ear h blocks with 12 x 4 mm² spring terminals (L = 75 mm)	**04214**
4 ear h blocks with 3 x 16 mm² spring terminals (L = 37 mm)	**04215**

Earth bar with clamps	Cat. no.
Earth bar wi h 40 clamps + one 35 mm² terminal (L = 450 mm)	**04200**
2 ear h bars with 20 clamps + one 35 mm² terminal (L = 200 mm)	**04202**

Earth bars

Centralised distribution

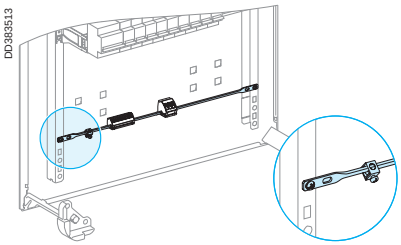
Top or bottom installation



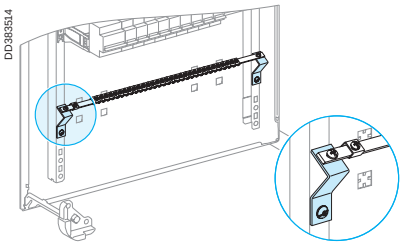
Earth bar mounted on rear of modular rail

Designation	Cat. no.
2 supports for earth bar on modular rail	04205

Earth bar used:
- 450 mm earth bar with clamps or spring terminals in an enclosure
- 200 mm earth bar with clamps in the 300 mm wide duct.



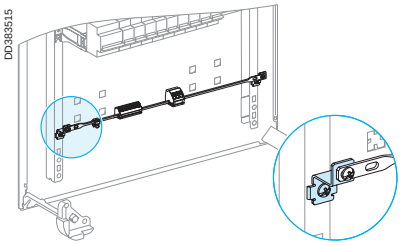
Earth bar mounted at rear of enclosure
Earth bar used:
- 450 mm earth bar with clamps or spring terminals in an enclosure
- 200 mm earth bar with clamps in the 300 mm wide duct.



Earth bar mounted on 45° supports

Designation	Cat. no.
Two 45° supports for modular rail	03005

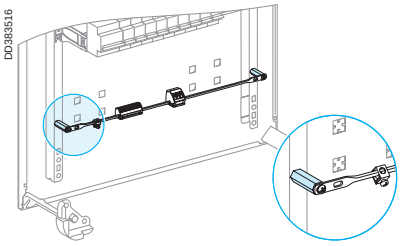
Earth bar used:
- 450 mm earth bar with clamps or spring terminals in an enclosure
- 200 mm earth bar with clamps in the 300 mm wide duct.



Earth bar mounted on fixing brackets

Designation	Cat. no.
2 fixing brackets for the earth bar on he functional uprights	
H = 15 mm	04206
H = 45 mm	04207
H = 80 mm	04208

Earth bar used:
- 450 mm earth bar with clamps or spring terminals in an enclosure
- 200 mm earth bar with clamps in the 300 mm wide duct.



Earth bar mounted on hexagonal spacers

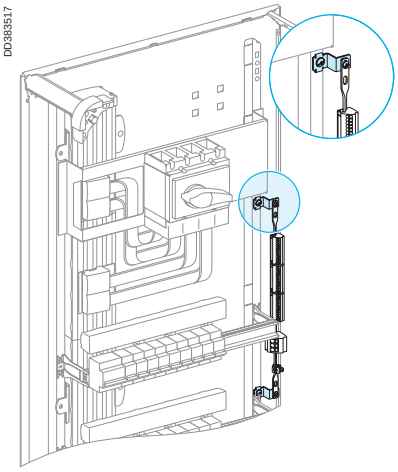
Designation	Cat. no.
Set of four M6 hexagonal spacers	
H = 9 mm	03195
H = 23 mm	03196
H = 55 mm	03197

Earth bar used:
- 450 mm earth bar with clamps or spring terminals in an enclosure
- 200 mm earth bar with clamps in the 300 mm wide duct.

Earth bars

Centralised distribution

Installation on the side



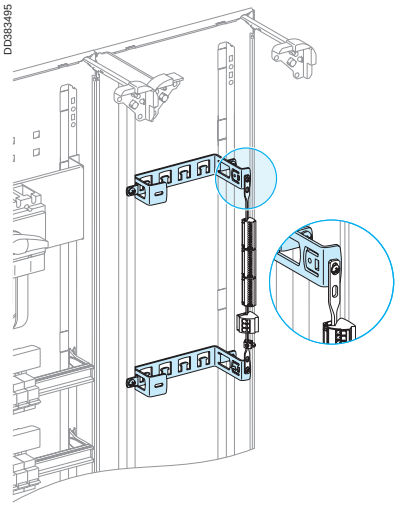
The earth bar can be installed vertically on two fixing brackets secured to a functional upright.
This solution saves considerable space in the device zone and avoids the need for the 300 mm wide duct.

Cat. no. selection

Designation	Cat. no.
2 fixing brackets for the earth bar on the functional uprights	
H = 15 mm	**04206**
H = 45 mm	**04207**
H = 80 mm	**04208**

Earth bar used:
- earth bar with clamps or spring terminals.

Installation in the 300 mm wide duct



A mounting plate (04220), made up of two supports, is equipped with:
- a 1600 mm modular rail (04226) for terminal blocks
- an earth bar.

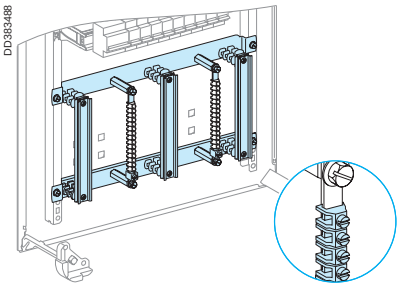
The supports have cut-outs that can be used to easily tie down the connection wires.

Cat. no. selection

Designation	Cat. no.
Mounting plate for terminal block and earth bar	**04220**

Earth bar used:
- earth bar with clamps or spring terminals.

Installation on a dedicated mounting plate



The mounting plate for terminal blocks (04223) can be equipped with two 200 mm earth bars with clamps.

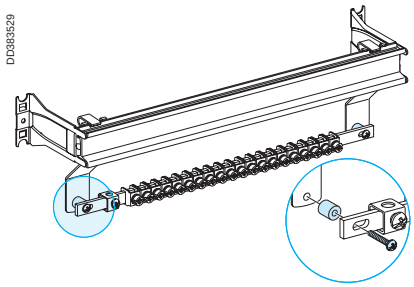
Designation	Cat. no.
Mounting plate with 4 vertical DIN rails for terminal blocks	**04223**

Earth bar used:
- 200 mm earth bar with clamps.

Neutral bars

Centralised distribution

Neutral bar



A neutral bar is created by inserting insulating spacers behind an earth bar.

Designation	Cat. no.
Kit for neutral bar	**04210**

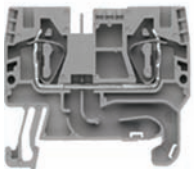
Terminal blocks
Spring technology

Terminal blocks

Terminal blocks for 4 to 16□ cables, flex ble or rigid, without a metal ferrule.
- connection to spring terminals, no screws
- contact pressure automatically adapts to the size of the conductor
- only one cable can be inserted in a spring terminal
- two versions:
  - 4 - 6 - 10 - 16□: one incomer and one outgoer for cables
  - 4□: one incomer and two outgoers for cables
- three colours: grey for phases, blue for neutral and green/yellow for earth
- mounting by clipping onto a modular rail
- rated insulation level Ui = 800 V
- rated impulse withstand voltage Uimp = 8 kV.

Advantages
- the quality of the connection does not depend on the operator and remains stable over time without maintenance
- contacts are insensitive to vibrations and thermal variations
- less expensive to apply
- permits a frontal connection.

DD383818



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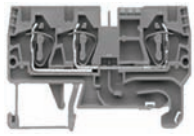

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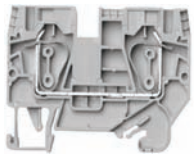

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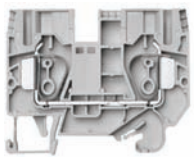

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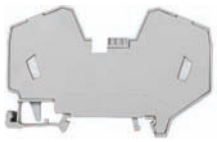


Terminal blocks for 4□ cables 6 mm wide		Number per set	Cat. no.
1 incomer, 1 outgoer			
Grey block	2 x 4□	100	**AB1 RRN435U2GR**
Blue block	2 x 4□	100	**AB1 RRN435U2BL**
Green/yellow block	2 x 4□	100	**AB1 RRNTP435U2**
Partition		10	**AB1 RRNTPAC442**
Grey end plate		10	**AB1 RRNAC443GR**
Blue end plate		10	**AB1 RRNAC443BL**
1 incomer, 2 outgoers			
Grey block	3 x 4□	100	**AB1 RRN435U3GR**
Blue block	3 x 4□	100	**AB1 RRN435U3BL**
Partition		10	**AB1 RRNTPAC443**
Commoning link	2 pole	10	**AB1 RRAL42**
Grey end plate		10	**AB1 RRNAC443GR**
Blue end plate		10	**AB1 RRNAC443BL**

Terminal blocks for 6□ cables 8 mm wide		Number per set	Cat. no.
Grey block	2 x 6□	100	**AB1 RRN635U2GR**
Blue block	2 x 6□	100	**AB1 RRN635U2BL**
Green/yellow block	2 x 6□	100	**AB1 RRNTP635U2**
Commoning link		10	**AB1 RRNAL62**

Terminal blocks for 10□ cables 10 mm wide		Number per set	Cat. no.
Grey block	2 x 10□	50	**AB1 RRN1035U2GR**
Blue block	2 x 10□	50	**AB1 RRN1035U2BL**
Green/yellow block	2 x 10□	50	**AB1 RRNTP1035U2**
Commoning link		10	**AB1 RRAL102**

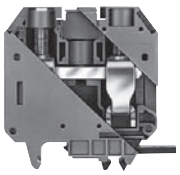
Terminal blocks for 16□ cables 12 mm wide		Number per set	Cat. no.
Grey block	2 x 16□	50	**AB1 RRN1635U2GR**
Blue block	2 x 16□	50	**AB1 RRN1635U2BL**
Green/yellow block	2 x 16□	50	**AB1 RRNTP1635U2**
Commoning link		50	**AB1 RRAL162**

Terminal blocks
Screw technology

Terminal blocks

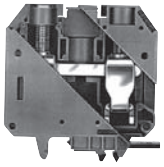
Terminal blocks for 35 to 150□ cables, flexible or rigid, without a metal ferrule.
Complementary offer “terminal blocks spring technology” for cables up to 16□.
- ■ two colours: grey for phases, blue for neutral
- ■ mounting by clipping onto a modular rail
- ■ rated insulation level:
- □ terminal blocks for 35 to 70□ cables: Ui = 800 V
- □ terminal blocks for 150□ cables: Ui = 1000 V
- ■ rated impulse withstand voltage:
- □ terminal blocks for 35 to 150□ cables: Uimp = 8 kV.

501685



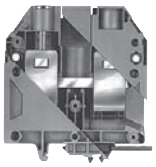
Terminal blocks for 35□ cables 16 mm wide		Number per set	Cat. no.
Grey block	2 x 35□	20	**AB1 VVN3535U**
Blue block	2 x 35□	20	**AB1 VVN3535UBL**
Commoning link	2 pole	10	**AB1 ALN352**

501686



Terminal blocks for 70□ cables 24 mm wide		Number per set	Cat. no.
Grey block	2 x 70□	20	**AB1 VVN7035U**
Blue block	2 x 70□	20	**AB1 VVN7035UBL**
Commoning link	2 pole	10	**AB1 ALN702**

501687



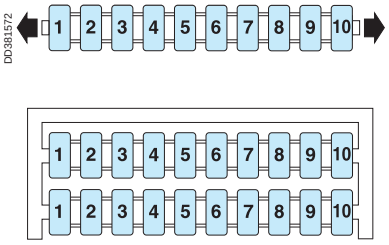
Terminal blocks for 150□ cables 28 mm wide		Number per set	Cat. no.
Grey block	2 x 150□	10	**AB1 VVN15035U**
Blue block	2 x 150□	10	**AB1 VVN15035UBL**
Commoning link	2 pole	10	**AB1 ALN1502**

Terminal blocks
Accessories

Stop plate

Stop plate	Number per set	Cat. no.
Stop plate	100	**AB1 AB8P35**

Markers



Sold in lots of 25 identical strips.

Marking	6 mm pitch	8 mm pitch
Blank	AB1-BV6	AB1-BV8
1 to 10	AB1-B610	AB1-B810
11...20	AB1-B620	AB1-B820
21...30	AB1-B630	AB1-B830
31...40	AB1-B640	AB1-B840
41...50	AB1-B650	AB1-B850
51...60	AB1-B660	AB1-B860
61...70	AB1-B6670	AB1-B870
71...80	AB1-B680	AB1-B880
81...90	AB1-B690	AB1-B890
91...100	AB1-B6100	AB1-B8100
L1	AB1-B6L1	
L2	AB1-B6L2	
L3	AB1-B6L3	
+ red	AB1-BV6RP	
- blue	AB1-BV6BM	

Marking	Number per set	Cat. no.
Blank clip-on marker (4.5 x 8 3 mm)	500	AB1-SA1

Marker strips with numbers 101 to 110, etc. up to 991 à 999.
Please consult “Terminal blocks” catalogue, reference number: ART960061.

Spring-technology terminal blocks

AB1	XX	XXXXX	XX	XX

Colour

Grey	Blue
GR	BL

No. of points

2	3	4
U2	U3 (1)	U4

(1) For 4 mm² only.

Block type / Conductor size

Pass- hrough				For protective earth			
4 mm²	6 mm²	10 mm²	16 mm²	4 mm²	6 mm²	10 mm²	16 mm²
435	635	1035	1635	TP435	TP635	TP1035	TP1635

Technology

Spring
RRN

Example: AB1RR635U2GR: grey 2-point spring-type terminal block for 6 mm² conductors.

Screw-technology terminal blocks

AB1	XX	XXXXX	XX	XX

Colour

Grey	Blue
GR	BL

No. of points

2
U

Block type / Conductor size

Pass-through		
35 mm²	70 mm²	150 mm²
N3535	N7075	N15035

Technology

Screw
VV

Example: AB1VVN3535UBL: blue 2-point screw-type terminal block for 35 mm² conductors.

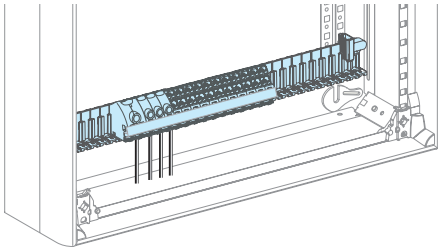
Adjustable earth + neutral terminal blocks

Spring or screw technology

Terminal block components

PB101638-68

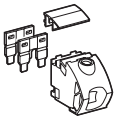
DB383949



These components are used to build and install a terminal block:
- on the framework near the conductor entry point
- on a DIN rail mounted on the enclosure framework
- at the rear of the enclosure or the interface
- on the functional uprights in Prisma Plus switchboards.

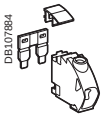
Permissible current:
- 50 mm² terminal block kit: 160 A max. at 40°C
- 25 mm² terminal block kit: 90 A max. at 40°C
- 6 x 4 mm² terminal block kit: 63 A max. at 40°C
- 8-block junction kit:
  - 90 A with 1 junction
  - 160 A with 2 junctions mounted in parallel
- 2-block junction kit: 90

DB107883



PRA90045

DB107884



PRA90046

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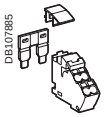
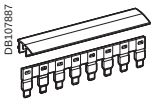


PRA90047

DB107886

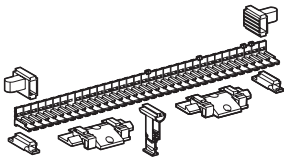
PRA90049

DB107887



PRA90050

DB107888

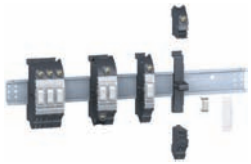


PRA90051

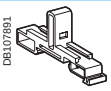
Terminal blocks			Cat. no.
50 mm² terminal block kit	W = 2 blocks	Batch of 2	**PRA90045**
25 mm² terminal block kit	W = 1 block	Batch of 5	**PRA90046**
4 x 6 mm² terminal block kit	W = 1 block	Batch of 10	**PRA90047**
Terminal block junction			
8-block junction kit	W = 8 blocks	Batch of 1	**PRA90050**
2-block junction kit	W = 2 blocks	Batch of 10	**PRA90049**
Terminal block support			
Terminal block support kit	W = 34 blocks maximum	Batch of 1	**PRA90051**

Use as incoming splitter block

PB101639-32



DB107891



Incoming splitter block kit	W = 1 block	Batch of 4	**PRA90048**

For conver ing terminal block kits PRA90045/PRA90046/PRA90047 into an incoming splitter block up to 125 A and 50 mm².

Permissible current:
- entry via PRA90046 (1 x 25 mm² - 1 block): 80 A
- entry via PRA90045 (1 x 50 mm² - 2 blocks): 125 A

Ui: 400 V and Uimp: 6 kV

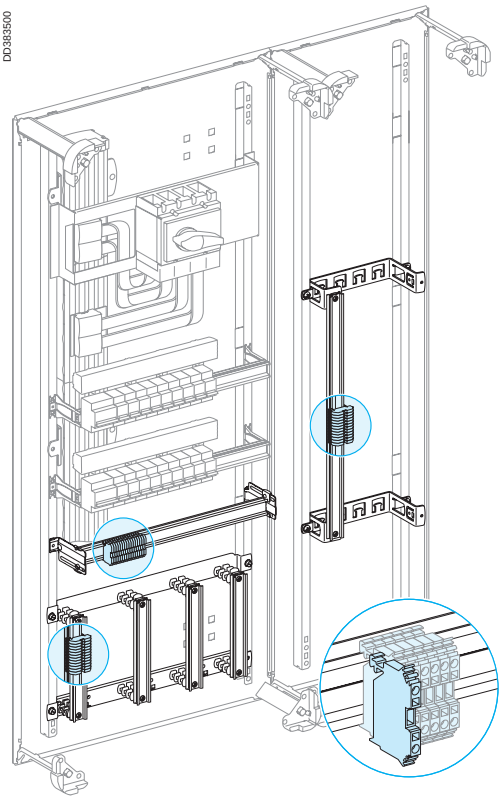
Terminal blocks

Centralised distribution

Terminal-block layout

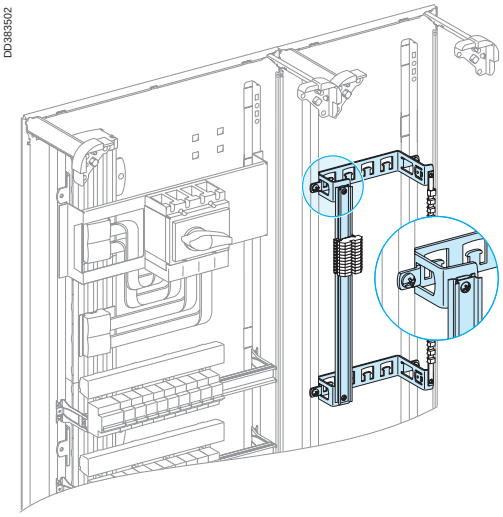
In Prisma Plus wall-mounted and floor-standing enclosures, terminal blocks are installed:
- in a duct, which may be a dedicated zone, totally separate from the devices
- in the device compartment, at the top or bottom.

DD383500



Installation in the 300 mm wide duct

DD383502



A mounting plate, made up of two supports, is equipped with:
- a modular rail for the terminal blocks, that is 1600 mm long, can be cut to length and has 6.4 mm holes every 450 mm
- an earth bar.

The supports have cut-outs that can be used to easily tie down the connection wires.

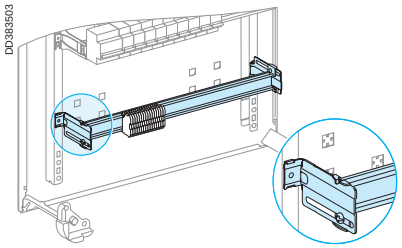
Cat. no. selection

Designation	Cat. no.
Mounting brackets for terminal block and earth bar	**04220**
2 modular rails, L = 1600 mm	**04226**

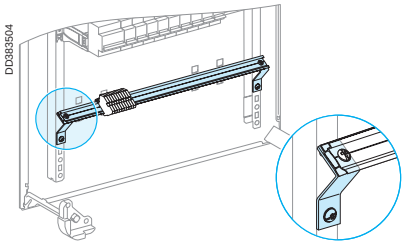
Terminal blocks

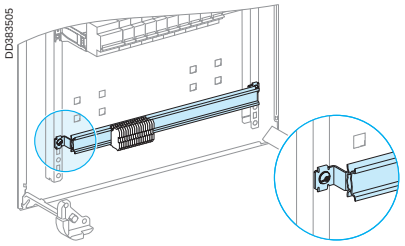
Centralised distribution

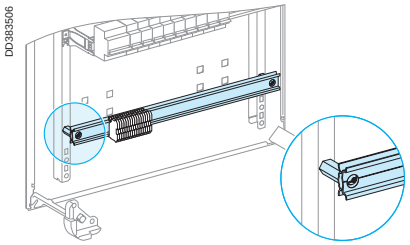
Top or bottom installation



Depth-adjustable modular device rail.







The terminal blocks are grouped on a modular rail:
- that is depth adjustable (03002)
- or mounted at the rear of the switchboard (03004). In this case, it can be raised on supports or spacers, or turned 45° on special supports.

Installation directly on the functional uprights

Designation	Cat. no.
Depth-adjustable modular rail, L = 432 mm	**03002**
Rear modular rail, L = 432 mm	**03004**

Space required in switchboard

Max. cable CSA	*Width of terminal block*	*No. of vertical modules required*	*Corresponding plain front plate*
4 mm²	6 mm	3	**03803**
6 mm²	8 mm	3	**03803**
10 mm²	10 mm	5	**03805**
16 mm²	12 mm	6	**03806**

Installation of the rail on 45° supports

Designation	Cat. no.
Two 45° supports for modular rail	**03005**

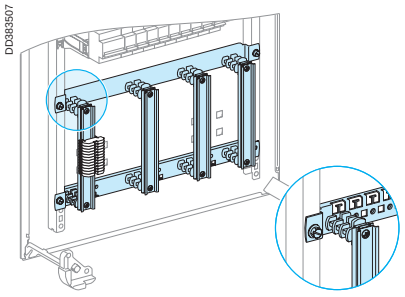
Installation of the rail on fixing brackets

Designation	Cat. no.
Two fixing brackets on func ional uprights	
H = 15 mm	**04206**
H = 45 mm	**04207**
H = 80 mm	**04208**

Installation of the rail on hexagonal spacers

Designation	Cat. no.
Set of four M6 hexagonal spacers	
H = 9 mm	**03195**
H = 23 mm	**03196**
H = 55 mm	**03197**

Installation on a dedicated mounting assembly



This mounting assembly is used to easily install and connect a large number of terminal blocks in a minimum amount of space. It is particularly useful when a duct is not warranted or cannot be installed.

Presentation

Mounting brackets, fixed to the functional uprights at the top or bottom of the enclosure, is equipped with four 200 mm symmetrical rails. They are installed vertically to facilitate cable running.

To facilitate mixing of different size terminal blocks and ensure convenient connections from the front or the side, the distance between rails and the depth of each rail can be adjusted.

The assembly has cut-outs that can be used to easily tie down the connection wires.

Earth bars, supplied separately, can be installed between the rows of terminal blocks to form different configurations, e.g.:
- four sets of terminal blocks
- 3 sets of terminal blocks + one or two earth bars (L = 290 mm)

The mounting assembly occupies a height of 250 mm, i.e. five 50 mm vertical modules.

Cat. no. selection

Designation	Cat. no.
Mounting plate with 4 vertical DIN rails for terminal blocks	**04223**

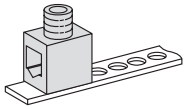
Connection
Connector

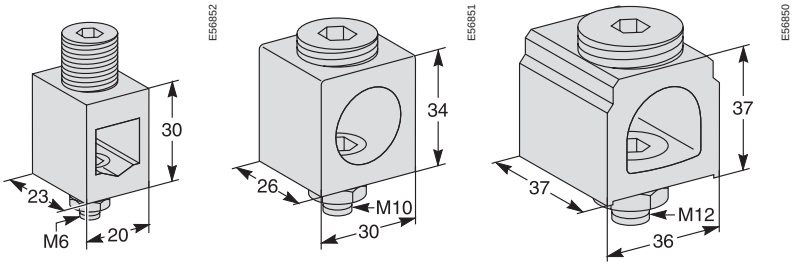
Connector

4 connectors for copper or aluminium cables.

Designation	Cat. no.
180 A for rigid cables 70 mm²	**07051** (1)
250 A for rigid cables 185 mm²	**07052** (1)
400 A for rigid cables 300 mm²	**07053** (1)

(1) *These connectors are designed for use on rear busbars only.*

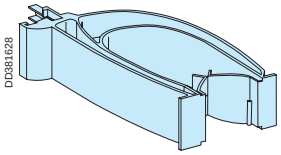




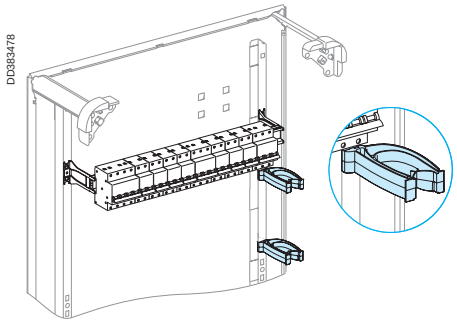
07051 07052 07053

Cable running
Cable straps

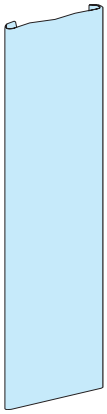
Vertical cable straps


DD381628

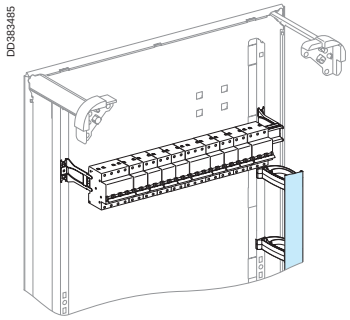
Designation	Cat. no.
12 cable straps for vertical cables	04264


DD383478

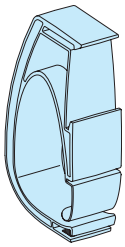
Cover for vertical cable straps


DD381633

Designation	Cat. no.
2 covers for vertical cable straps L = 1 m	04263

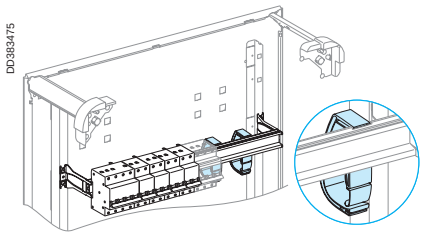

DD383485

Horizontal cable straps

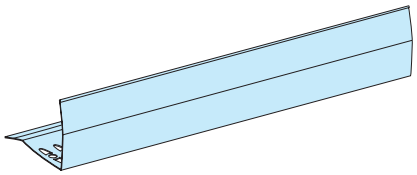

DD381618

Designation	Cat. no.
12 cable straps for horizontal cables	04239

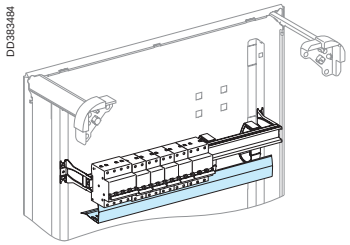
Horizontal cable straps have the same capacity as 60 x 30 mm trunking.


DD383475

Cover for horizontal cable straps

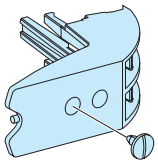

DD381621

Designation	Cat. no.
4 covers for horizontal cable straps L = 430 mm	04243

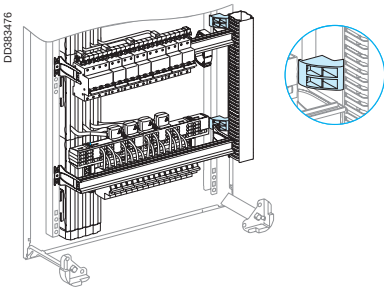

DD383484

Cable running
Trunking

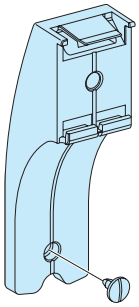
Vertical trunking support



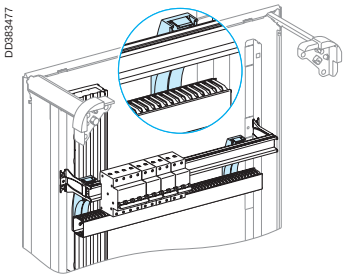
Designation	Cat. no.
12 vertical trunking supports	04265



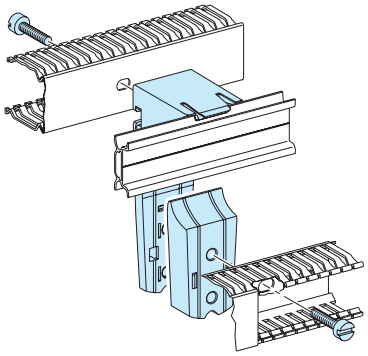
Horizontal trunking support



Designation	Cat. no.
12 horizontal trunking supports	04255

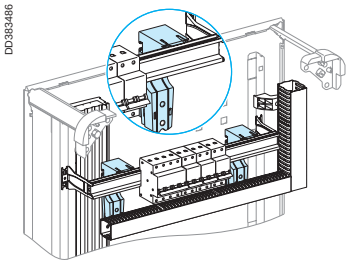


Trunking installed horizontally on the rear of a modular rail.



Aligns the cover of a horizontal trunking section (H = 60 or 80 mm) with that of a vertical trunking section (H = 80mm).

Designation	Cat. no.
10 adaptable support for horizontal trunking	04256

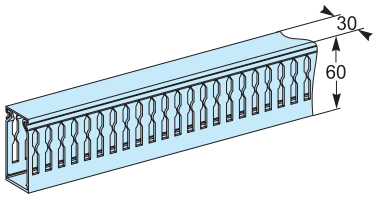


Note: *not designed for use with Pack enclosures.*

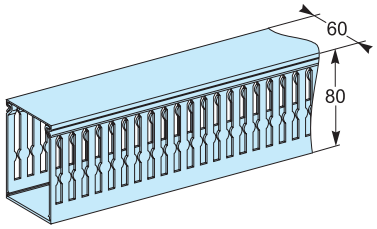
Cable running
Trunking, accessories

Trunking

DD381639



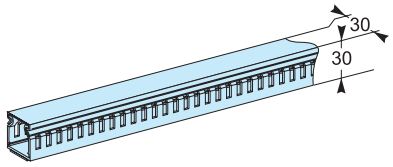
DD381640



Designation	Cat. no.
4 horizontal sections, 60 x 30 mm, L = 450 mm (with supports)	04257
Vertical trunking, 80 x 60 mm, L = 2000 mm (sold in sets of 18)	04267

Cable trunking for doors

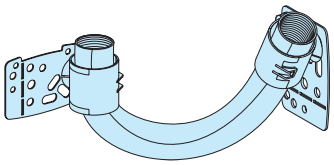
DD381641



Designation	Cat. no.
Cable trunking for doors, L = 2000 mm (sold in sets of 30)	04233
.Adhesive trunking, 30 x 30 mm	

Flexible trunking

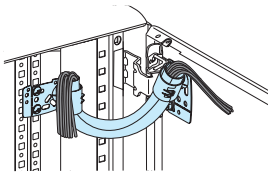
DD380863



Designation	Cat. no.
Flexible trunking for wiring to door	04235

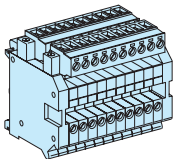
Length = 500 mm, inner diameter = 19mm.

DD381643



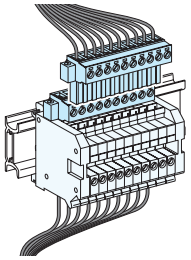
Terminal block for auxiliaries

DD381644



Designation	Cat. no.
Disconnectable terminal block for auxiliaries	04228

DD380867

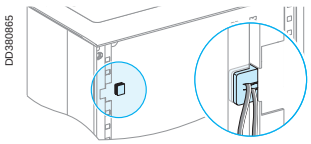


Grommets for wiring through front

DD380864

Designation	Cat. no.
10 grommets for wiring through front	04234

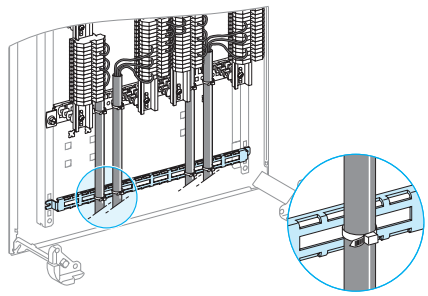
DD380865



IP30/31/43/55 enclosures
Connection accessories

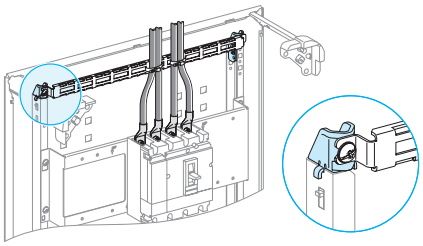
Cable-tie supports in IP30 to IP55 enclosures

DD381170



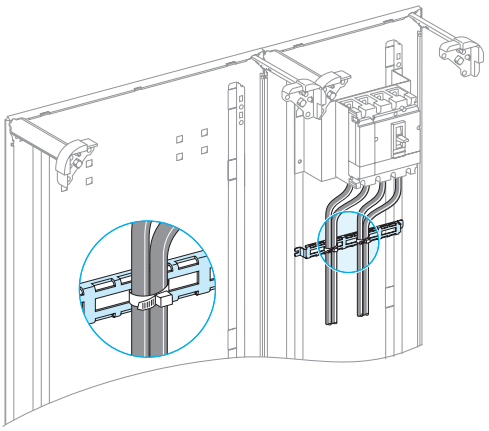
Cable tying in wall-mount or floor-standing enclosures

DD381171



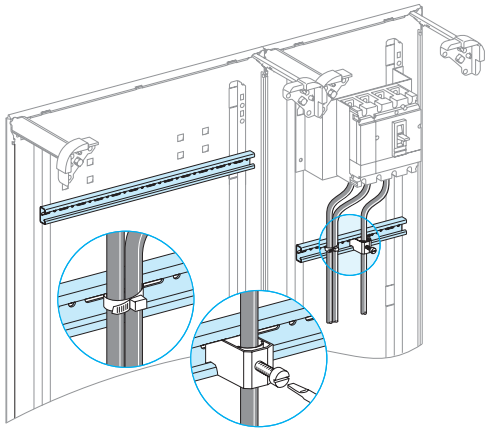
The adapter makes it possible to tie down the cables next to the gland plate and gain one module in height.

DD383423



Cable tying in a duct.

DD383424



Cable tying in wall-mount or floor-standing enclosures and ducts.

Cable-tie supports for wall-mount or floor-standing enclosures

Designation	Cat. no.
2 cable-tie supports for wall-mount or floor-standing enclosure	**08867**
Cable-tie support adapter	**08866**

Supplied with hardware for mounting on the functional uprights of the enclosure.

Cable-tie supports for the 300 mm wide duct

Designation	Cat. no.
4 cable-tie supports for 300 mm wide ducts	**08868**

Supplied with hardware for mounting on the functional uprights of the duct.

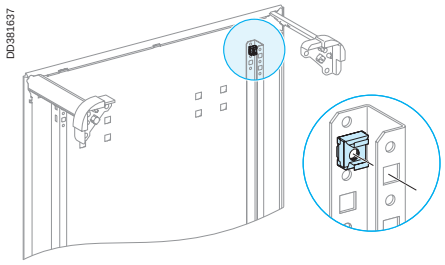
C-shaped cable-tie supports for wall-mount or floor-standing enclosures and ducts

Designation	Cat. no.
Cable-tie support, L = 1600 mm	**08783**

1600 mm support that can be cut to length as needed.
Supplied with hardware for mounting on the functional uprights of the enclosure or duct.
Cables secured by ties or cable clamps.

IP30/31/43/55 enclosures
Connection accessories

Captive nuts



The captive nuts clip onto the functional uprights of wall-mounted and floor-standing enclosures.
They can also be mounted on slotted mounting plates.

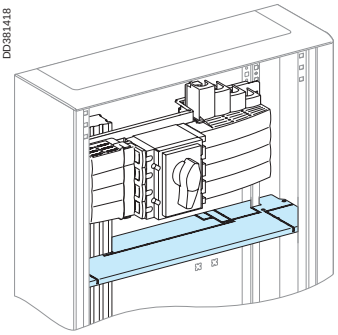
Designation	Cat. no.
Set of 20 M6 captive nuts	**03194**

Partitioning

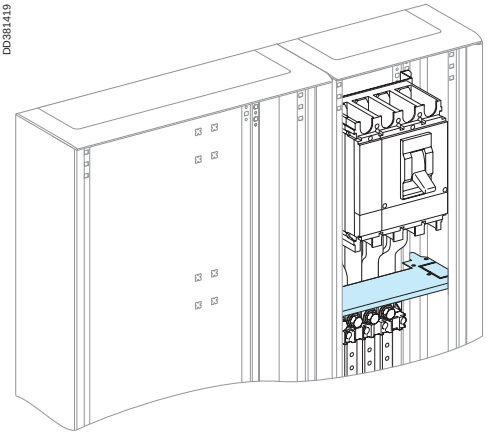
Centralised distribution

Horizontal partitioning

DD381418



DD381419



Presentation

The partition is a metal barrier installed in a wall-mounted enclosure, a floor-standing enclosure or a 300 mm wide duct.

It is used to:

- separate the functional units from one another
- create a physical separation between devices and a terminal block, for example.

It is mounted directly on the functional uprights.

Lateral and rear knock-outs are available for cable running or the installation of busbars at the rear of the switchboard.

Cat. no. selection

Designation	Cat. no.
Horizontal partition	
for wall-mounted or floor-standing enclosure	**04331**
for a duct, W = 300 mm	**04332**

Partitioning

Centralised distribution

Presentation
The metal partition creates a physical separation between the device compartment and the 300 mm wide duct of a wall-mounted enclosure or a floor-standing enclosure.
It is used to:
- separate the devices from busbars or a distribution block installed in the duct
- set up a special zone for terminal blocks in the duct.

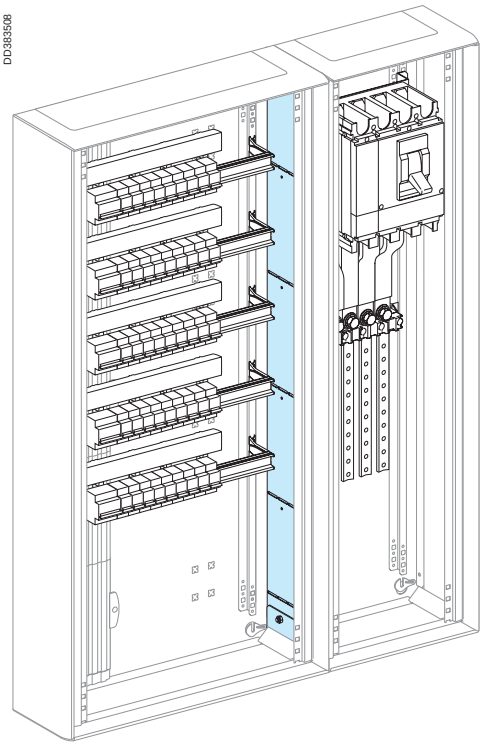
IP30 vertical partitioning

It can be cut to length every 150 mm and can be used for partitioning up to 33-module in wall mount enclosure and floor-standing enclosure (H = 1830 mm).

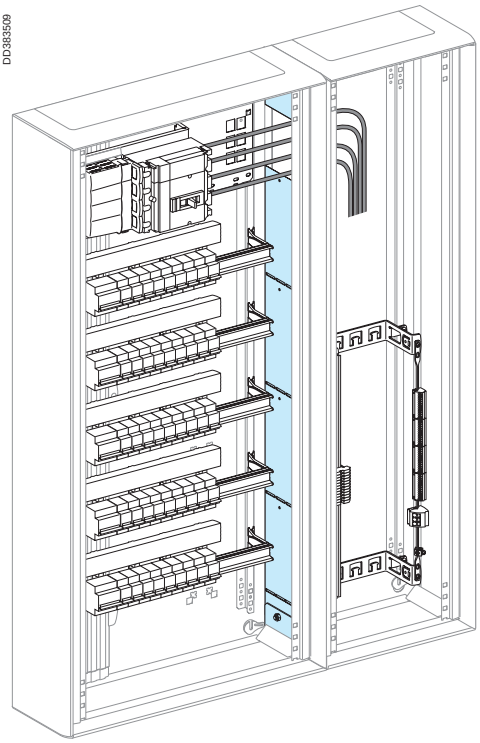
Cat. no. selection

Designation	Cat. no.
Vertical partition	**04330**

DD383508

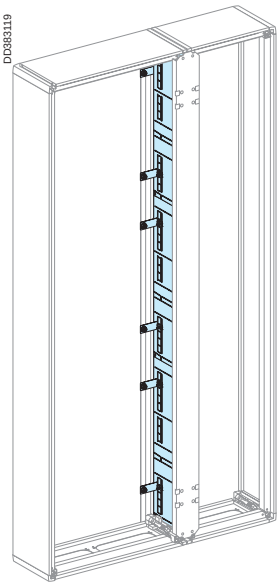


DD383509



IP55 vertical partitioning

DD383119



	No. of vertical modules	Height (mm)	
IP55 vertical partition			**Cat. no.**
For enclosures	7	450	**08384**
	11	650	
	15	850	**08384** x 2
	19	1050	
	23	1250	**08384** x 3
	27	1450	
	33	1750	

TOOLS

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This international site allows you to access all the Schneider Electric products in just 2 clicks via comprehensive range data-sheets, with direct links to:

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- all the new technical solutions
- all the components
- of an installation from a global point of view
- all the IEC standards modifications
- all the fundamental electrotechnical knowledge
- all the design stages, from medium to low voltage.

Contents

Wall-mounted and floor standing enclosures

IP30/IP31/IP43 wall-mounted and floor-standing enclosures Presentation

Carefully designed in every detail,
Prisma Plus wall-mounted and floor-standing enclosures are the solution for all common switchboard configurations up to 630 A:

- a sufficiently wide range with 8 wall-mounted enclosure heights from 330 to 1380 mm in 50 mm steps and 3 floor-standing enclosure heights from 1530 to 1830 mm, including a 150 mm plinth
- two widths:
  - 595 mm for devices
  - 305 mm for cables, terminal blocks, busbars or devices
- can be combined side-by-side (and one on top of another for wall-mounted enclosures)
- a standard degree of protection IP30 (with or without a door) that can be upgraded to IP43
- a structure designed to facilitate fast and total access at all times to the devices and all the connection points in the switchboard
- a discreet appearance that blends well in commercial settings, including entry halls or passageways
- colour RAL9001.

Prisma Plus wall-mounted enclosures comply with standard EN 50298.

PD390463

Combination of a wall-mounted enclosure with a 300 mm wide duct.

PD390476

Combination of a basic floor-standing enclosure with a 300 mm wide duct.

IP30/IP31/IP43 wall-mounted and floor-standing enclosures Presentation

PD390377

The entire front can be removed for fast, direct access to all the devices.
The front plates are equipped with clip-mount grips with a built-in quarter-turn fastening system for fast handling and installation.
The lead-sealing function is directly integrated in the grip mechanism.
A wide range of locks are available for the “push and pull” handle.

PD390874

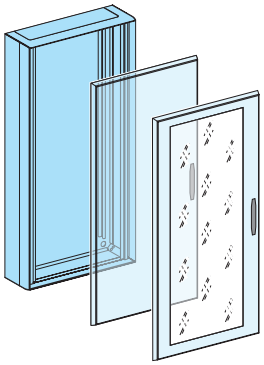
Discreet and user-friendly handle.

IP30/IP31/IP43 wall-mounted enclosures

Wall-mounted and floor standing enclosures

Wall-mounted enclosure (IP30)

DD380618



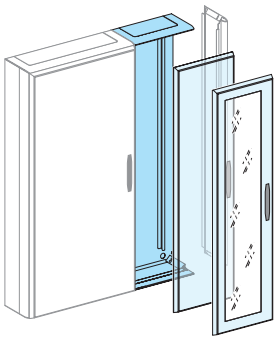
DD380622 DD380623 DD380624

No. of vertical modules	Height of enclosure	Enclosure	Plain door	Transparent door
Wall-mounted enclosure (IP30)				
6	330	**08102**	**08122**	**08132**
9	480	**08103**	**08123**	**08133**
12	630	**08104**	**08124**	**08134**
15	780	**08105**	**08125**	**08135**
18	930	**08106**	**08126**	**08136**
21	1080	**08107**	**08127**	**08137**
24	1230	**08108**	**08128**	**08138**
27	1380	**08109**	**08222**	**08232**

■ reversible doors (opening to left or right), equipped with a handle and keylock (key 405). For other possibilities, see page D-16.

Duct, W = 300 mm (IP30)

DD382927



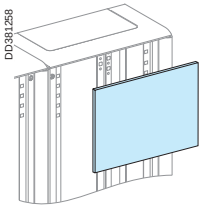
DD382928 DD380626 DD380627

No. of vertical modules	Height of duct	Duct, W = 300 mm	Plain door	Transparent door
Duct (IP30)				
6	330	**08172**	**08182**	
9	480	**08173**	**08183**	
12	630	**08174**	**08184**	
15	780	**08175**	**08185**	
18	930	**08176**	**08186**	
21	1080	**08177**	**08187**	**08197**
24	1230	**08178**	**08188**	**08198**
27	1380	**08179**	**08282**	**08292**

■ the duct is supplied with a combination kit for the enclosure

■ reversible doors (opening to left or right), equipped with a handle and keylock (key 405). For other possibilities, see page D-16.

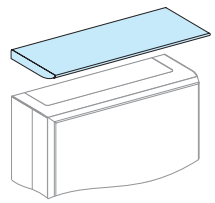
DD381258



Duct front plate, see page B-52.

Canopy (IP31)

DD381257



The addition of a canopy over the wall-mounted enclosure (and the duct) equipped with a door ensures compliance with the degree of protection IP31 (see page D-13).

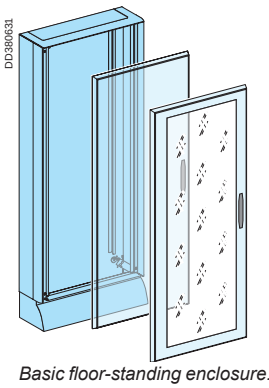
Gasket (IP43)

When the wall-mounted enclosure (and the duct) is equipped with a canopy, a gasket for the door of the wall-mounted enclosure (and the duct) ensures compliance with the degree of protection IP43 (see page D-13).

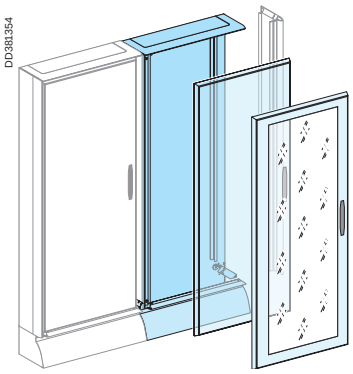
IP30/IP31/IP43 floor-standing enclosures

Wall-mounted and floor standing enclosures

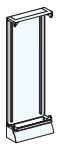
Floor-standing enclosure (IP30)



Basic floor-standing enclosure.



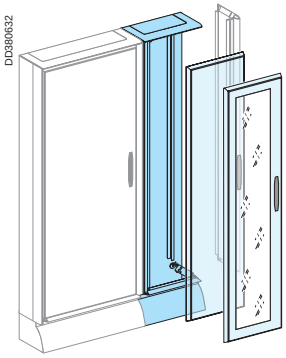
Floor-standing enclosure extension.

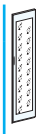


No. of vertical modules	*Height of enclosure*	*Basic enclosure*	*Enclosure extension*	*Plain door*	*Transparent door*
Floor-standing enclosure (IP30)					
27	1530	**08202**	**08212**	**08222**	**08232**
30	1680	**08203**	**08213**	**08223**	**08233**
33	1830	**08204**	**08214**	**08224**	**08234**

- two basic floor-standing enclosures cannot be combined
- to create a switchboard comprising a number of enclosures, use a basic floor-standing enclosure and one or more floor-standing enclosure extensions
- floor-standing enclosure extensions are supplied with a combination kit for the basic floor-standing enclosure.
- revers ble doors (opening to left or right), equipped with a handle and keylock (key 405). For other poss bilities, see page D-16.
- cables can be run on the sides of the plinth (diameter ⩽140 mm).

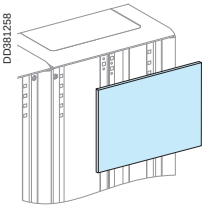
Duct, W = 300 mm (IP30)





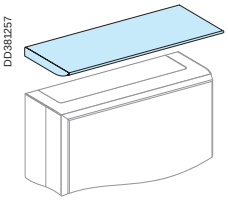
No. of vertical modules	*Height of duct*	*Duct, W = 300 mm*	*Plain door*	*Transparent door*
Duct, W = 300 mm (IP30)				
27	1530	**08272**	**08282**	**08292**
30	1680	**08273**	**08283**	**08293**
33	1830	**08274**	**08284**	**08294**

- the duct is supplied with a combination kit for the basic enclosure
- revers ble doors (opening to left or right), equipped with a handle and keylock (key 405). For other poss bilities, see page D-16.



Duct front plate, see page B-52.

Canopy (IP31)



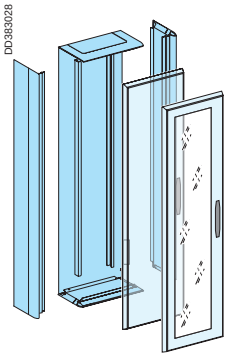
The addition of a canopy over the floor-standing enclosure (and the duct) equipped with a door ensures compliance with the degree of protection IP31 (see page D-13).

Gasket (IP43)

When the floor-standing enclosure (and the duct) is equipped with a canopy, a gasket for the door of the floor-standing enclosure (and the duct) ensures compliance with the degree of protection IP43 (see page D-13).

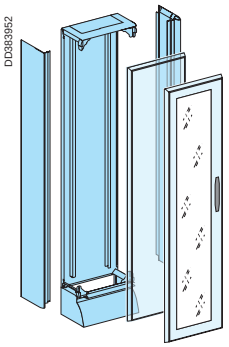
IP30 enclosures
300 mm wide

Wall-mounted and floor standing enclosures



Wall-mounted enclosures

No. of vertical modules	Height (mm)	Duct, W = 300 mm	Side panels	Plain door	Transparent door
Duct, W = 300 mm (IP30)					
6	330	**08172**	**2 x 01040**	**08182**	
9	480	**08173**	**2 x 01041**	**08183**	
12	630	**08174**	**2 x 01042**	**08184**	
15	780	**08175**	**2 x 01043**	**08185**	
18	930	**08176**	**2 X 01044**	**08186**	
21	1080	**08177**	**2 x 01045**	**08187**	**08197**
24	1230	**08178**	**2 x 01046**	**08188**	**08198**
27	1380	**08179**	**2 x 01035**	**08282**	**08292**

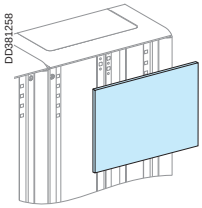


Floor-standing enclosures

No. of vertical modules	Height (mm)	Duct, W = 300 mm	Side panels	Plain door	Transparent door
Duct, W = 300 mm (IP30)					
27	1530	**08272**	**2 x 01035**	**08282**	**08292**
30	1680	**08273**	**2 x 01034**	**08283**	**08293**
33	1830	**08274**	**2 x 01033**	**08284**	**08294**

Reversible doors (opening to left or right), equipped with a handle and keylock (key 405).

For other possibilities, see page D-16.



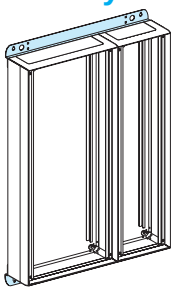
Duct front plate, see page B-52.

IP30/IP31/IP43 wall-mounted enclosures combinations

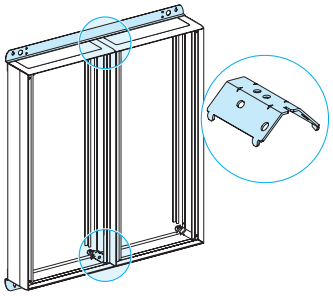
Wall-mounted and floor standing enclosures

Side-by-side combination

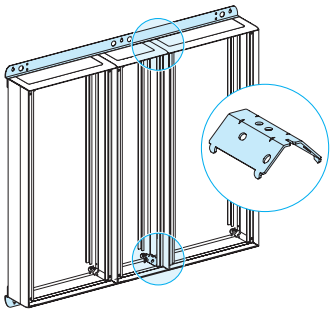
DD382985



DD383996



DD383997



Enclosure + 300 mm wide duct

The combination kit (two combination brackets) is supplied with the duct.
To make the combination more rigid, particularly during transport, it is advised to use a set of cross-members secured to the rear of the switchboard.

Designation	Cat. no.
Set of two lifting/reinforcement cross-members for single wall-mounted enclosure and 300 mm wide duct	08812

To make the combination more rigid, particularly during transport, it is mandatory to use a set of cross-members secured to the rear of the switchboard.

Enclosure + enclosure

A combination kit (must be ordered) ensures the mechanical connection between the two wall-mounted enclosures.

Designation	Cat. no.
Combination kit	08816
Set of two lifting/reinforcement cross-membersr	08811

Enclosure + two 300 mm wide duct (whatever the ducts position)

The combination kit (two mechanical combination brackets) is supplied with the ducts.

Designation	Cat. no.
Set of two lifting/reinforcement cross-membersr	08811

Enclosure + 300 mm wide duct + enclosure (whatever the duct position)

A combination kit is supplied with the duct. Only one additional combination kit must be ordered for the mechanical connection between the two wall-mounted enclosures and the duct.
To make the combination more rigid, particularly during transport, it is mandatory to use a set of cross-members secured to the rear of the switchboard.

Designation	Cat. no.
Combination kit	08816
Set of two lifting/reinforcement cross-members for two wall-mounted or floor-standing enclosures and a duct	08813

Duct + enclosure + duct + enclosure or duct + enclosure + enclosure + duct

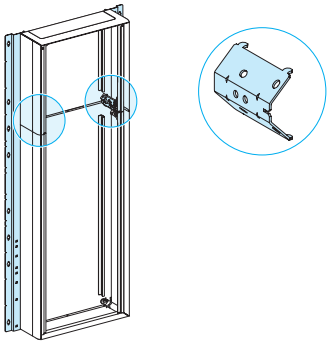
Designation	Cat. no.
Combination kit	08816
Set of two lifting/reinforcement cross-members	08814

Duct + enclosure + duct + enclosure + duct

Designation	Cat. no.
Combination kit	08816
Set of two lifting/reinforcement cross-members	08826

Vertical combination

DD383998



A combination kit (must be ordered) ensures the mechanical connection between the two wall-mounted enclosures.
To make the combination more rigid, particularly during transport, it is mandatory to use a set of combination uprights secured to the rear of the switchboard.
Fore more than 33 modules, a mechanical connection kit is used to join the 2 combination uprights.

Designation	Cat. no.
Combination kit	08816
Two combination uprights	08817

Square combination

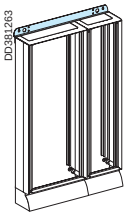
The square shape is created by combining three enclosures (extension or duct) with a basic enclosure.
Square combinations are only possible with enclosures that have the same number of vertical modules.

Designation	Cat. no.
Combination kit	08816
Two combination uprights	08817
Multiple combination kit	08818

IP30/IP31/IP43 floor-standing enclosures

Wall-mounted and floor standing enclosures

Side-by-side combination

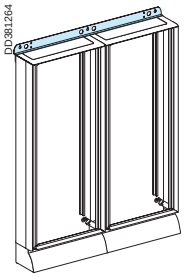


Basic floor-standing enclosure + duct.

Basic enclosure + 300 mm wide duct

The combination kit (two mechanical combination brackets) is supplied with the duct.
To make the combination more rigid, particularly during transport, it is advised to use one cross-member secured to the rear of the switchboard.

Designation	Cat. no.
Set of two lifting/reinforcement cross-members for basic floor-standing enclosure and 300 mm wide duct	**08812**

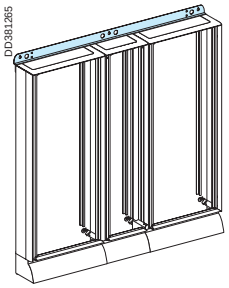


Basic floor-standing enclosure + extension.

Basic enclosure + enclosure extension or basic enclosure + two 300 mm wide duct (whatever the ducts position)

A combination kit for mechanical connection is supplied with the floor-standing enclosure extension and each duct.
To make the combination more rigid, particularly during transport, it is mandatory to use one cross-member secured to the rear of the switchboard.

Designation	Cat. no.
Set of two lifting/reinforcement cross-members	**08811**



Basic floor-standing enclosure + duct + extension.

Basic enclosure + 300 mm wide duct + basic extension (whatever the duct position)

A combination kit for mechanical connection is supplied with the duct and the floor-standing enclosure extension.
To make the combination more rigid, particularly during transport, it is mandatory to use one cross-member secured to the rear of the switchboard.

Designation	Cat. no.
Set of two lifting/reinforcement cross-members for basic floor-standing enclosure, 300 mm wide duct and extension	**08813**

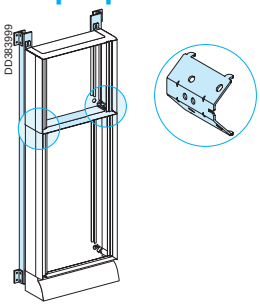
Duct + enclosure + duct + enclosure or duct + enclosure + enclosure + duct

Designation	Cat. no.
Set of two lifting/reinforcement cross-members	**08814**

Duct + enclosure + duct + enclosure + duct

Designation	Cat. no.
Set of two lifting/reinforcement cross-members	**08826**

Superposition

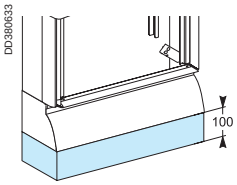


Basic enclosure + wall-mounted enclosures

A combination kit (ordered separately) can be added to the plain backplate to mechanically join the 2 enclosures.
The uprights leave space behind the switchboard for cable running and to improve ventilation.

Designation	Cat. no.
Combination kit	**08816**
Mounting upright (L = 1950 mm)	**08391**
Plain plate for wall-mounted and floor-standing enclosure	**08882**

Plinth raiser

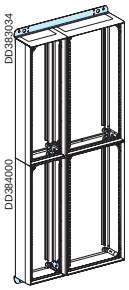


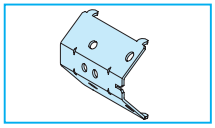
Designation	Cat. no.
Plinth raiser, H = 100 mm	
for basic floor-standing enclosure or extension	**08805**
for a duct, W = 300 mm	**08807**

Wall-mounted and floor standing enclosures

IP30/IP31/IP43 wall-mounted enclosures combinations

Multiple combinations



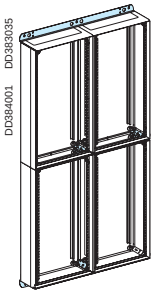


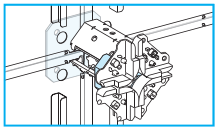
Combination kit

To make the combination more rigid, particularly during transport, it is mandatory to use a set of cross-members secured to the rear of the switchboard.

2 enclosures + 2 x 300 mm wide ducts

Designation	Cat. no.
Combination kit	08816
Multiple combination kit	08818
Set of two lif ing/reinforcement cross-members for single wall-mounted enclosure and 300 mm wide duct	08812

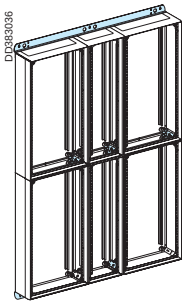




Multiple combina ion kit

4 enclosures

Designation	Cat. no.
Combination kit	3 x 08816
Multiple combination kit	08818
Set of two lif ing/reinforcement cross-members for two wall-mounted enclosures	08811



2 wall-mounted enclosures + 2 ducts + 2 wall-mounted enclosures

Designation	Cat. no.
Combination kit	3 x 08816
Multiple combination kit	2 x 08818
Set of two lif ing/reinforcement cross-members for two wall-mounted enclosures and a duct	08813

Duct + enclosure + duct + enclosure or duct + enclosure + enclosure + duct

Designation	Cat. no.
Set of two lif ing/reinforcement cross-members	08814

Duct + enclosure + duct + enclosure + duct

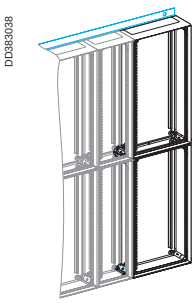
Designation	Cat. no.
Set of two lif ing/reinforcement cross-members	08826

Additional wall-mounted enclosures and ducts

Any number of wall-mounted enclosures and ducts can be combined horizontally or vertically.
To make the combination more rigid, particularly during transport, it is mandatory to use a set of user-made cross-members secured to the rear of the switchboard.

For each 300 mm wide extension duct

Designation	Cat. no.
Multiple combination kit	08818
Set of two lif ing/reinforcement cross-members	must be made

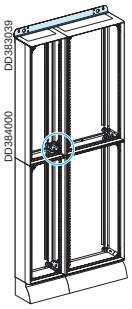


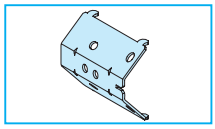
For each enclosure extension

Designation	Cat. no.
Combination kit	2 x 08816
Multiple combination kit	08818
Set of two lif ing/reinforcement cross-members	must be made

IP30/IP31/IP43 floor-standing enclosures combinations

Multiple combinations



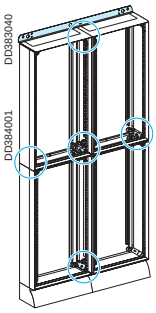


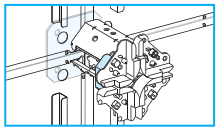
Combination kit

To make the combination more rigid, particularly during transport, it is mandatory to use one cross-member secured to the rear of the switchboard.

Basic enclosure and duct + wall-mounted enclosure and duct

Designation	Cat. no.
Combination kit	08815
Multiple combination kit	08818
Set of two lifting/reinforcement cross-members for basic floor-standing enclosure and 300 mm wide duct	08812

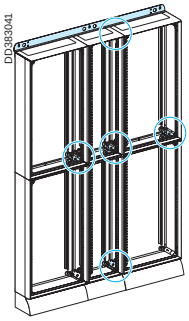




Multiple combination kit

Basic enclosure, enclosure extension + 2 wall-mounted enclosures

Designation	Cat. no.
Combination kit	2 x 08815
Multiple combination kit	08818
Set of two lifting/reinforcement cross-members for two wall-mounted enclosures	08811



Basic enclosure, duct,enclosure extension + 2 wall-mounted enclosures and duct.

Designation	Cat. no.
Combination kit	2 x 08815
Multiple combination kit	2 x 08818
Set of two lifting/reinforcement cross-members for two wall-mounted enclosures and a duct	08813

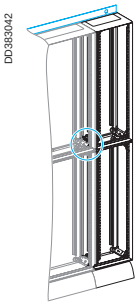
Duct + enclosure + duct + enclosure or duct + enclosure + enclosure + duct

Designation	Cat. no.
Set of two lifting/reinforcement cross-members	08814

Duct + enclosure + duct + enclosure + duct

Designation	Cat. no.
Set of two lifting/reinforcement cross-members	08826

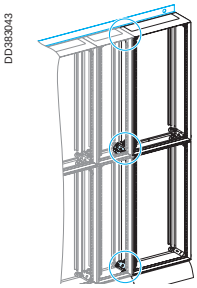
Additional floor-standing enclosures, ducts and wall-mounted enclosures



Any number of floor-standing enclosures, ducts and wall-mounted enclosures can be combined horizontally.
To make the combination more rigid, particularly during transport, it is mandatory to use one user-made cross-member secured to the rear of the switchboard.

For each 300 mm wide duct extension

Designation	Cat. no.
Multiple combination kit	08818
Set of two lifting/reinforcement cross-members	must be made



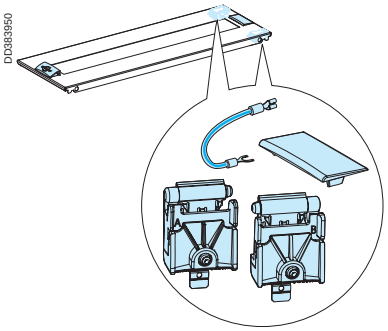
For each enclosure extension

Designation	Cat. no.
Combination kit	08815
Multiple combination kit	08818
Set of two lifting/reinforcement cross-members	must be made

Front plate accessories

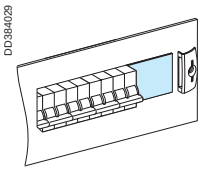
Wall-mounted and floor standing enclosures

Front plate accessories



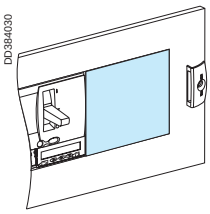
Designation	Cat. no.
Front plate hinge kit (set of 2 hinges)	08585

Blanking plates



For modular devices

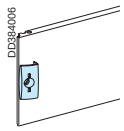
Designation	Cat. no.
Blanking strip, H = 46 mm, L = 1000 mm	03220
4 divisible blanking plates, H = 46 mm, L = 90 mm colour: white RAL 9001	03221



For Compact NSX100/250

Designation	Cat. no.
1 divisible blanking plates, H = 85 mm, L = 147 mm colour: white RAL 9001	03249

Front plate grips



Designation	Cat. no.
20 self adhesive front plate grips colour: white (RAL 9001)	01093

■ easily fitted using double-face adhesive tabs, to harmonise the front plates of your switchboards.

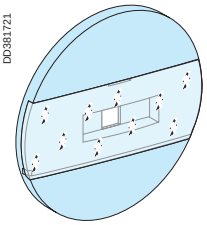
Adhesive labels for mimic diagrams

Designation	Black
10 lines, 900 mm long and 7 mm thick	01005
10 outgoing arrows	01006
10 incoming arrows	01007
10 transformers	01008
10 earth symbols	01009

Front plate accessories

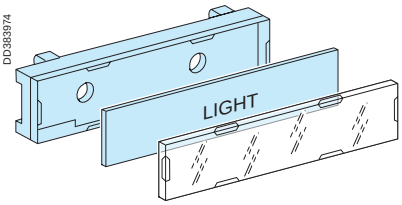
Wall-mounted and floor standing enclosures

Switchboard identification plate

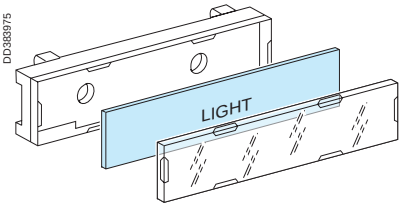


Designation	Cat. no.
Switchboard identification plate	08900

Identification labels



Clip-on label.



Engraving plate.

Clip-on labels

Clip-on labels

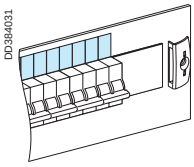
The clip-on support is supplied with a paper label and a transparent cover.
It clips onto the front plate horizontally or vertically and can be screwed to any support (plain door, plain front plate, etc.).

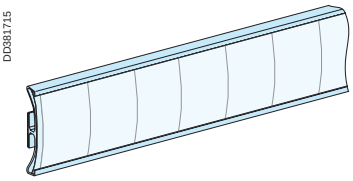
Engraving plates

Supplied separately, these plates simply replace the paper labels.

Cat. no. selection

Designation		Cat. no.
12 clip-on labels	18 x 35	08913
	18 x 72	08915
	25 x 85	08917
12 engraving plates	18 x 35	08914
	18 x 72	08916
	25 x 85	08918

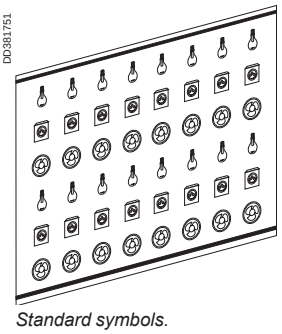




Adhesive labels

The adhesive label holders are supplied with a paper label and a transparent cover.

Designation		Cat. no.
12 label holders, W = 180 mm	H = 24 mm	08905
	H = 36 mm	08906
12 label holders, W = 432 mm	H = 24 mm	08903
	H = 36 mm	08904



Standard symbols.

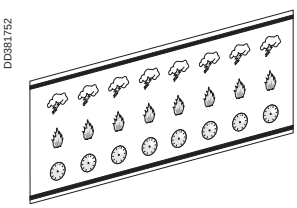
Symbol sheets

Each sheet comprises adhesive symbols that can be positioned on the identification labels to immediately identify the type of circuit.
Standard symbols:
- loads: sockets, lights, heating units, etc.
- rooms: bedroom, bathroom, etc.

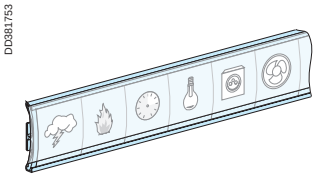
Special symbols:
- loads: lightning arrestor, gate, swimming pool, etc.
- rooms: technical room, computer room, etc.

Cat. no. selection

Designation		Cat. no.
Set of ten symbol sheets	standard	13735
	special	13736



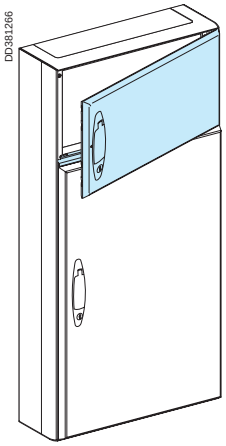
Special symbols.



Symbols on an adhesive label holder.

IP30/IP31/IP43 enclosures
Partial doors
Canopy

Partial door



24-module wall-mounted enclosure with a 6-module partial plain door and an 18-module plain door.

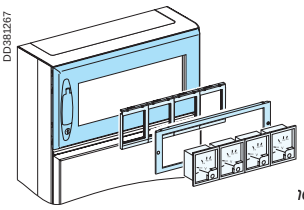
■ plain door or with cut-outs (for the interface with 72 x 72 or 96 x 96 mm measurement devices,)
■ height: 6 modules
■ installation:
□ on a wall-mounted enclosure at least 12 modules high (H ⩾ 630 mm)
□ on a basic floor-standing enclosure or extension
■ revers ble (opening to left or right), equipped with a handle and keylock (key 405).
For other poss bilities, see page D-16.

***Note:** each wall-mounted enclosure and basic floor-standing enclosure or extension can be equipped with only one partial door. The front must be completed with another door.*

The useful height behind a partial door is five modules.

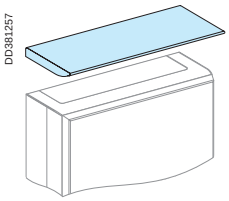
Cat. no. selection

Designation	Cat. no.
Partial plain door	**08850**
Partial door wi h cut-outs for 72 x 72 or 96 x 96 mm devices	**08851**



ıent devices on a partial door with cut-outs.

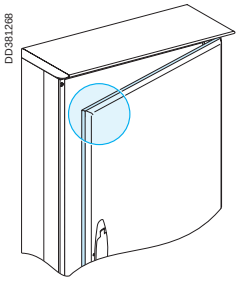
Canopy (IP31)



The addition of a canopy over a wall-mounted or floor-standing enclosure equipped with a door ensures compliance with the degree of protection IP31.

Designation		Cat. no.
Canopy	for wall-mounted or floor-standing enclosure alone	**08830**
	for wall-mounted encl. + duct or floor-standing encl. + duct	**08832**
	for 2 wall-mounted or 2 floor-standing enclosures	**08831**
	for 2 wall-mounted encl. + duct or 2 floor-standing encl. + duct (duct position not important)	**08833**
	for duct + wall-mounted or floor-standing enclosure + duct	**08827**

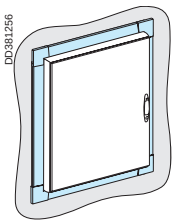
Gasket (IP43)



When the switchboard is equipped with a canopy, a gasket for the doors ensures compliance with the degree of protection IP43.
For combinations, order one gasket per door.

Designation	Cat. no.
Gasket for one wall-mounted encl./one floor-standing encl./one duct	
6 to 21 modules (L = 3300 mm)	**08840**
24 to 33 modules (L = 5300 mm)	**08841**

Flush-mount kit

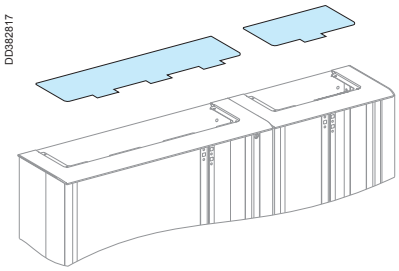


For wall-mounted enclosure and wall-mounted enclosure + duct

Designation	Cat. no.
Flush-mount kit for wall-mounted enclosures, 6 to 18 modules	**08819**
Flush-mount kit for wall-mounted enclosures, 21 to 27 modules	**08820**

IP30/IP31/IP43 enclosures
Gland plates

Gland plates

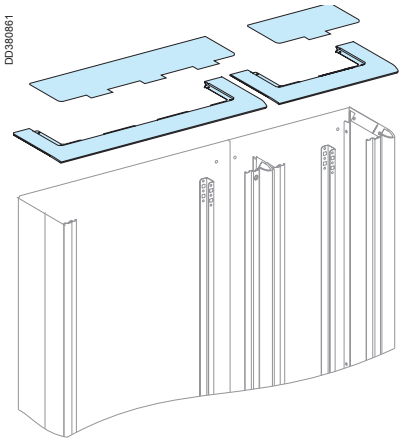


Metal gland plates

Enclosures (wall-mounted, floor-standing, 300 mm wide ducts) are supplied with a plastic gland plate installed on the top or bottom panel.
To cover all connection needs, the plastic gland plate can be replaced by a plain metal gland plate supplied separately.

Designation	Cat. no.
Plain metal gland plate	
for wall-mounted and basic floor-standing enclosure or extension	**08870**
for a duct, W = 300 mm	**08874**
Gland plate for floor-standing enclosure plinth	**08887**
Gland plate for duct plinth	**08888**

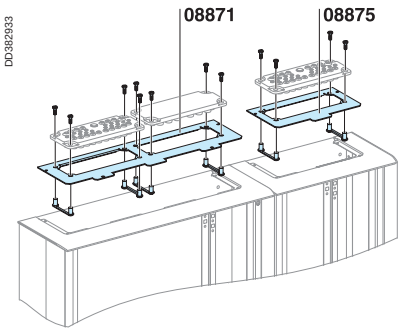
Top or bottom plate with plastic gland plate



- ■ top or bottom plate with cut-outs and a plastic gland plate
- ■ can be installed:
- □ at the top or bottom of a wall-mounted enclosure (or duct)
- □ at the top of a floor-standing enclosure (or duct).

Designation	Cat. no.
Plate with cut-outs + plastic gland plate	
for wall-mounted or floor-standing enclosure	**08880**
for a duct, W = 300 mm	**08884**

IP30/IP31/IP43 enclosures
Special gland plates

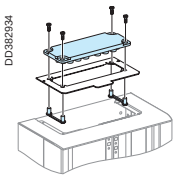


Metal plate with cut-outs

Enclosures (wall-mounted, floor-standing, 300 mm wide ducts) are supplied with a plastic gland plate installed on the top or bottom panel.
This gland plate can be replaced by an interface plate with cut-outs for special cable entry systems made of an insulating material (plain, with knockouts or membrane-type).

Designation	Cat. no.
Metal plate with cut-outs	
for wall-mounted and basic floor-standing enclosure or	**08871**
for a duct, W = 300 mm	**08875**

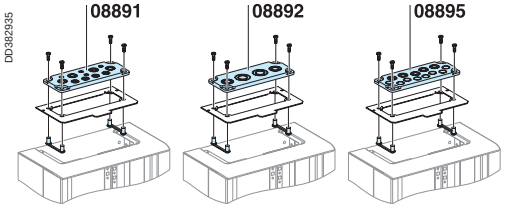
Gland plates



The gland plates are easy to install using the mounting kit (supplied with each gland plate) that positions and holds the nuts during installation.
This makes it possible to mount the gland plates using a single tool.

Plain gland plate

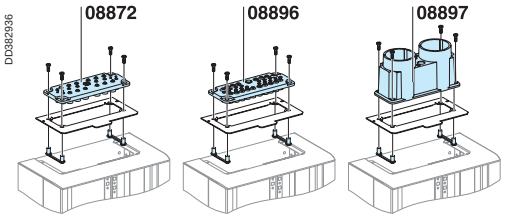
Designation	Cat. no.
Plain gland plates	**08881**



Gland plates with knockouts

Designed for metric cable glands.

Designation	Cat. no.
Gland plates with knockouts	
4 x M12 + 4 x M12 or M20 + 4 x M16 or M25	**08891**
2 x M20 or M32 + 2 x M25 or M40	**08892**
5 x M16 or M25 + 8 x M20	**08895**



Membrane-type gland plates

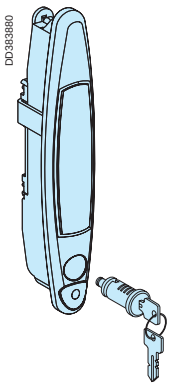
Gland plates with membranes for perforation according to required diameter.

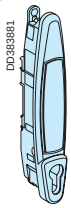
Number of entries	Number of entries per diameter	Cable diameters between Min.	Max.	Cat. no.
25	4	5	7	**08872**
	4	8	12	
	12	10	14	
	4	14	20	
	1	20	26	
35	2	5	7	**08896**
	6	6	10	
	8	7	12	
	16	10	14	
	2	12	18	
	1	17	32	
2	2	28	60	**08897**

Enclosure accessories
Door handles and locks

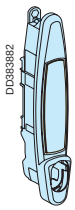
Wall-mounted and floor standing enclosures

Handles (except System G IP55)

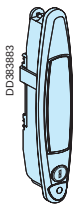




Designation	Cat. no.
EURO handle without barrel	08932



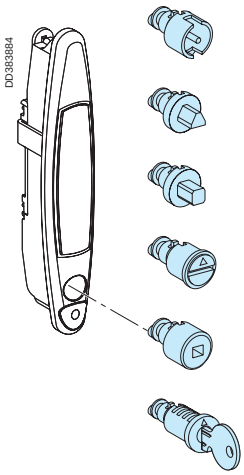
Designation	Cat. no.
ASSA/ABLOY handle without barrel	08933

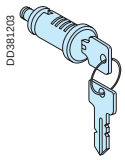


Designation	Cat. no.
Ral 7016 standard handle	08931

Can be equipped with all the barrel locks and inserts presented below.

Barrel locks, inserts

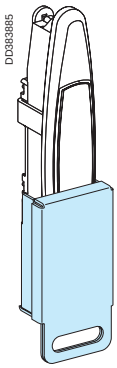




The barrel locks and inserts below can be mounted on handle 08930 and on all the door handles of the Prisma Plus range (except System G IP55) after removing the standard barrel lock (key no. 405).

Designation	Cat. no.
Barrel locks	
Barrel lock +1 keys no. 405	08940
Barrel lock + 2 keys no. 455	08941
Barrel lock + 2 keys no. 1242E	08942
Barrel lock + 2 keys no. 3113A	08943
Barrel lock + 2 keys no. 2433A	08944
Barrel lock + 2 keys no.2432E	08956
Inserts	
DIN double bar insert	08945
Screwdriver slot insert	08946
6 5 mm male triangle insert	08947
7 mm male triangle insert	08948
8 mm male triangle insert	08949
9 mm male triangle insert	08950
6 mm male square insert	08951
7 mm male square insert	08952
8 mm male square insert	08953
6 mm female square insert	08955

Padlocking



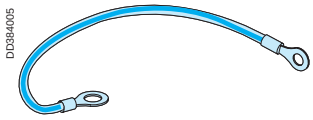
Designation	Cat. no.
Handle padlocking kit	08938

The kit can be installed on the door handles of the Prisma Plus range (except System G IP55) equipped with any of the barrel locks and inserts above.

Enclosure accessories

Wall-mounted and floor standing enclosures

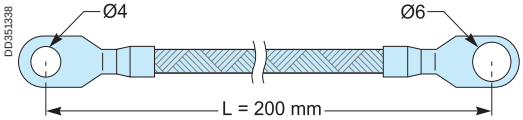
Earthing braid

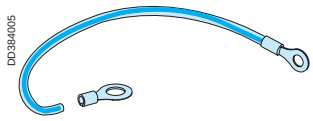


08910.

Designation	Cat. no.
Earthing braid, 6 mm²	**08910**

The braid is equipped with a 4 mm diameter lug at one end and a 6 mm diameter lug on the other.
It is used to earth:
- a door or wicket door with devices
- a front-plate support frame equipped with switchgear in a cubicle.

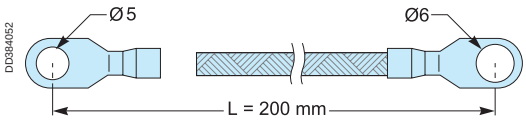




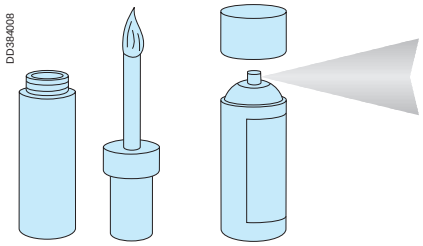
08911.

Designation	Cat. no.
Earthing wire, 6 mm²	**08911**

The wire is equipped with a 5 mm diameter lug at one end and a 6 mm diameter lug on the other.
The earthing wire is used to earth:
- a door or wicket door with devices
- a front-plate support frame equipped with switchgear in a cubicle.

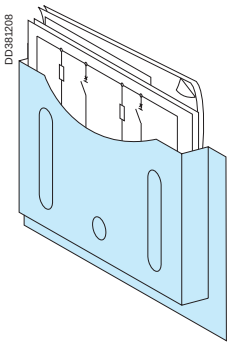


Touch-up accessories



Designation	Cat. no.
Touch-up spray paint, colour RAL 9001	**08962**
Touch-up paint brush, colour RAL 9001	**08961**

Drawing holder

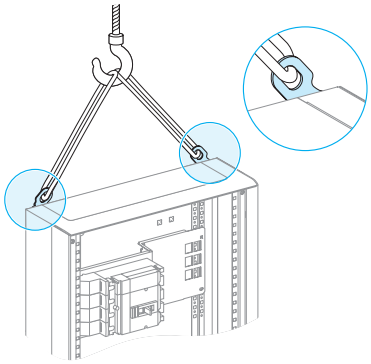


Designation	Cat. no.
Adhesive drawing holder, colour RAL 9001	**08963**

IP30/IP31/IP43 enclosures
Installation accessories

Wall-mounted and floor standing enclosures

Lifting accessories

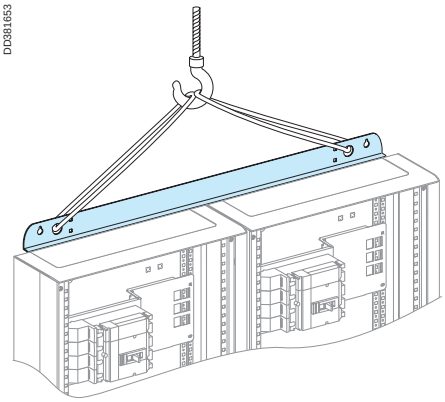


Lifting rings

The lifting rings are used to move a single wall-mounted or floor-standing enclosure.
For combined enclosures, use the lifting/reinforcement cross-members (see below).

Designation	Cat. no.
Set of two lifting rings for single wall-mounted or floor-standing enclosures	**08801**

DD391653



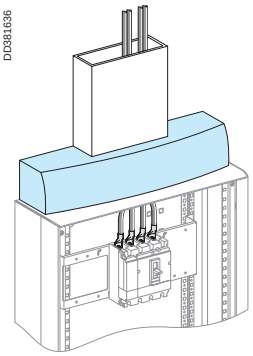
Lifting/reinforcement cross-members

The lifting cross-members, already installed to reinforce combined enclosures, have holes for lifting.
Whatever the ducts position.

Designation	Cat. no.
Set of two lifting/reinforcement cross-members	
for two wall-mounted or two floor-standing enclosures for a wall-mounted or floor-standing enclosure + two 300 mm wide ducts	**08811**
for a wall-mounted or floor-standing enclosure + 300 mm wide duct	**08812**
for two wall-mounted or floor-standing enclosures + 300 mm wide duct	**08813**
for duct+ enclosure + duct + enclosure or duct + enclosure + enclosure + duct	**08814**
for duct+ enclosure + duct + enclosure + duct	**08826**

Trunking spreader

DD391636



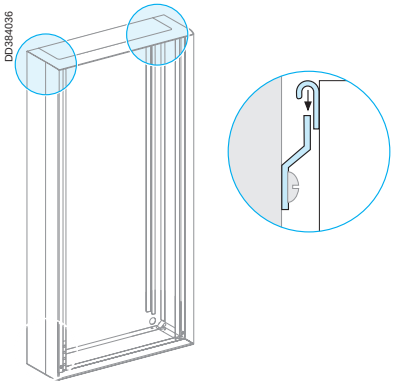
For a professional-looking connection between the trunking and the enclosure.
Can be installed at the top or bottom.
The spreader is marked for cut-outs for standard trunking sizes.
The maximum capacity is two 250 x 80 mm trunking sections.

Designation	Cat. no.
Trunking spreader	**08824**

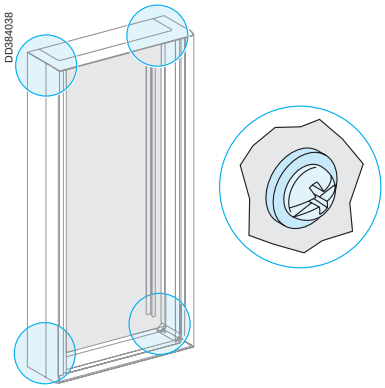
IP30/IP31/IP43 enclosures
Installation accessories

Wall-mounted and floor standing enclosures

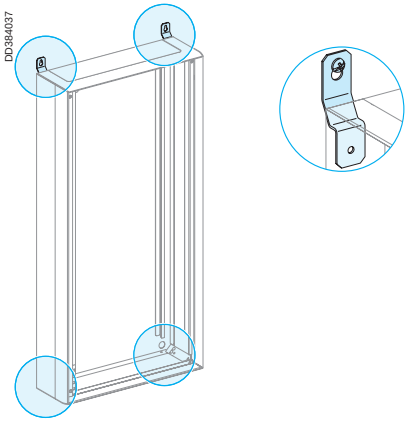
Wall mounted



Mounting through the rear.



Mounting via the inside.



Mounting using the external wall-mounted brackets (08804).

Switchboards can be mounted on a wall in three manners:
- on a support rail: the enclosure comes with 2 cross-members secured to the back of the enclosure (top and bottom) and a support rail (with levelling adjustment) for screw-mounting on the wall. The enclosure is easily mounted on the support rail
- via the inside of the enclosure: the enclosure can be mounted through the spacers in the 4 holes provided on the enclosure using using 8 mm diameter screws (2 knockouts can be removed if necessary to provide 2 other holes)
- using external wall-mounted brackets.

Combined enclosures can be mounted using the lifting/reinforcement cross-members, set of two lifting/reinforcement cross-members, see previous page.

Designation	Cat. no.
Four external wall-mounted brackets	**08804**

Air-conditioning accessories

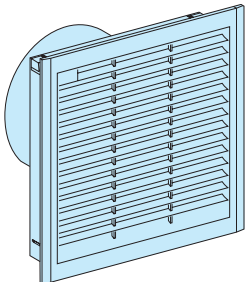
Wall-mounted and floor standing enclosures

Presentation

In most cases and notably for IP30 switchboards, convection takes place naturally and does not require fans.
However, when the switchboard is installed in temperate environments or when the degree of protection is high (IP55), ventilation accessories are indispensable. For more in-depth information on selecting air-conditioning accessories and the thermal management of switchboards, see page E-21.

Front or side fan

DD381703



The switchboard is cooled by drawing in cool external air.

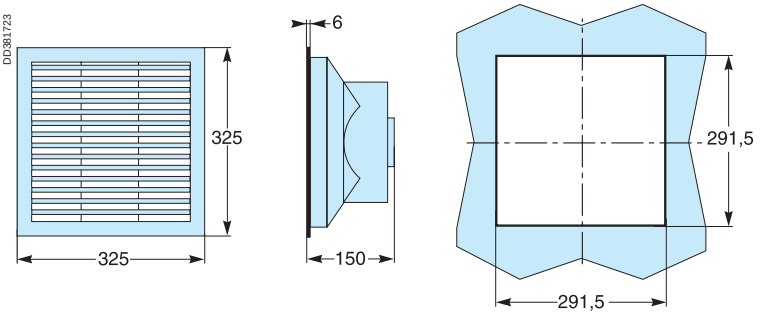
Presentation
The set comprises the fan with a grill and a filter.
It can be clipped directly on the cut-out front plate.

Installation
These fans are generally installed at the bottom of floor-standing enclosures:
- by cutting out a side panel
- or on the front, using the front plate with cut-out for a fan.

Designation	Cat. no.
Fan	**08987**
Front plate with cut-out for fan or filter (7 modules)	**03890**

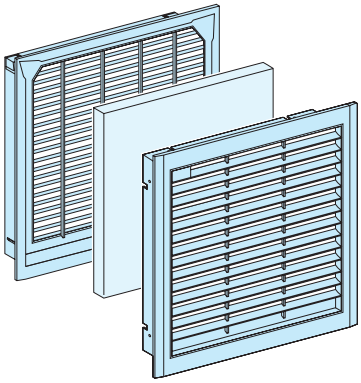
Characteristics
Power rating: 70 W.
Input voltage: 230 V.
Noise level: 69 dB.
Degree of protection: IP54.
Weight: 3 kg.
Unimpeded throughput: 460 m^3/h.
Throughput with counterpressure (grill + standard filter, cat. no. 08988): 350 m^3/h.

DD381723



Filter for front or side fan

DD381704



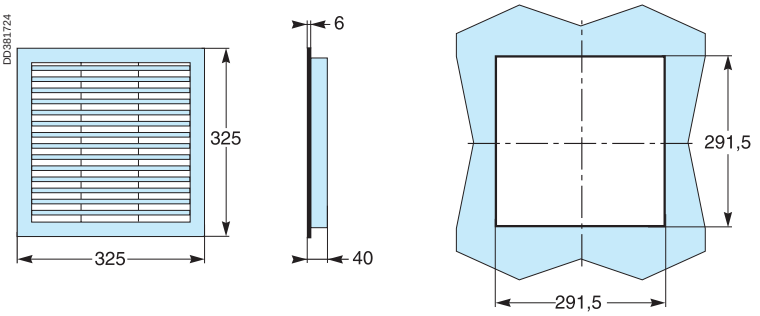
Presentation
The grill is supplied with a standard filter that can be replaced or exchanged for a finer filter.
The grill can be clipped directly on the cut-out front plate.

Installation
The grill/filter can be installed:
- by cutting out a side panel
- or on the front, using the front plate with cut-out for a fan.

Characteristics
Degree of protection: IP54.

Designation	Cat. no.
Grill with filter (supplied with standard filter, maximum throughput = 350 m^3/h)	**08988**
5 standard filters (replacement)	**08989**
5 fine filters	**08990**
Front plate with cut-out for fan or filter (7 modules)	**03890**

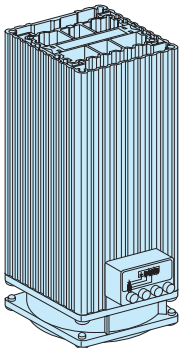
DD381724

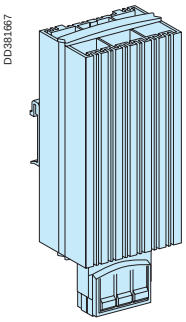


Air-conditioning accessories

Wall-mounted and floor standing enclosures

Heating elements



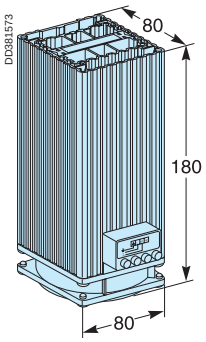


Designation	H	W	D (mm)	Cat. no.
55 W heating resistor	184	70	60	**08992**
90 W heating resistor	184	70	60	**08993**
250 W heating resistor	180	80	80	**08994**

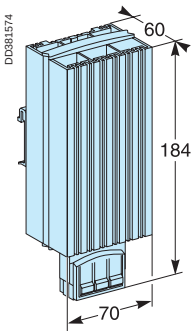
The resistors can be mounted horizontally or vertically. They prevent condensation, corrosion and superficial leakage currents.
They maintain a positive temperature in the enclosures and cubicles when external temperatures drop very low.

Characteristics

- aluminium case with fins
- turns off at 60 °C, turns on at 25-30 °C (temperature of the resistor itself)
- equipped with a symmetrical rail for rapid mounting (clips on)
- input voltage: 230 V.

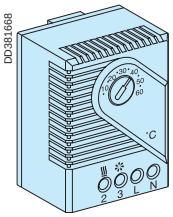


08994.



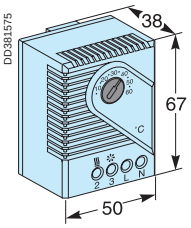
08992, 08993.

Thermostat



Designation	Cat. no.
Thermostat	**08998**

Used to control the temperature inside electrical switchboards in conjunction with heating resistors and fans.
Setting range: +5 °C to +60 °C.
Input voltage: 230 V.
Fixing: clips onto a modular rail.



Wall-mounted enclosures

IP55 enclosures
Presentation

Prisma Plus IP55 enclosures are designed for indoor switchboards in severe environments such as industrial and agricultural buildings, basements, kitchens, etc.
All System G components can be used to form switchboards that:
- the front plates are equipped with clip-mount grips with a built-in quarter-turn fastening system for fast handling and installation
- the lead-sealing function is directly integrated in the grip mechanism
- les plastrons peuvent être rendus pivotant grâce à un kit de pivotement plastron.
- have heavy-duty IP55 / IK10 characteristics
- can be dismantled and combined to facilitate installation, on-site connections and later modifications
- offer functional installation of control and indication devices (lights, pushbuttons, etc.) on the front of the switchboard, on a plain or partial door
- offer functional installation of Schneider industrial sockets
- can be installed anywhere in a building (on a wall, on a pole, on free-standing structures, etc.).

PD390596

PD391278

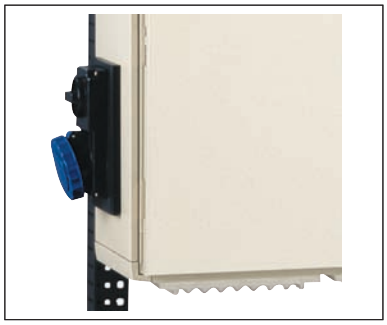
Installation on a wall structure.

IP55 enclosures
Presentation

PD390537

Sockets on a partial door.

PD390538



Sockets on the side.

PD390539

Lights and pushbuttons on a partial door.

PD390540

Extended rotary handle on a door.

PD390499

Gland plates on an enclosure and a duct.

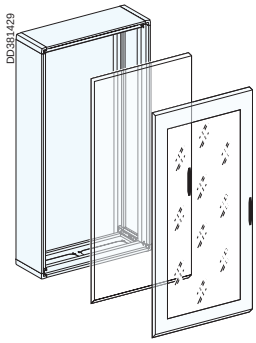
PD390501

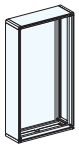
Gland plates on an enclosure.

IP55 enclosures

Wall-mounted enclosures

Enclosure

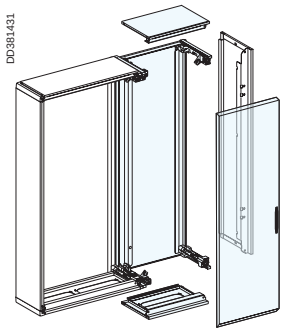




No. of vertical modules	Height (mm)	Enclosure	Plain door	Transparent door
Basic enclosure				
7	450	**08302**	**08322**	**08332**
11	650	**08303**	**08323**	**08333**
15	850	**08304**	**08324**	**08334**
19	1050	**08305**	**08325**	**08335**
23	1250	**08306**	**08326**	**08336**
27	1450	**08307**	**08327**	**08337**
33	1750	**08309**	**08329**	**08339**

■ reversible doors (opening to left or right), equipped with a handle and keylock (key 405). For other possibilities,,see page D-33 .

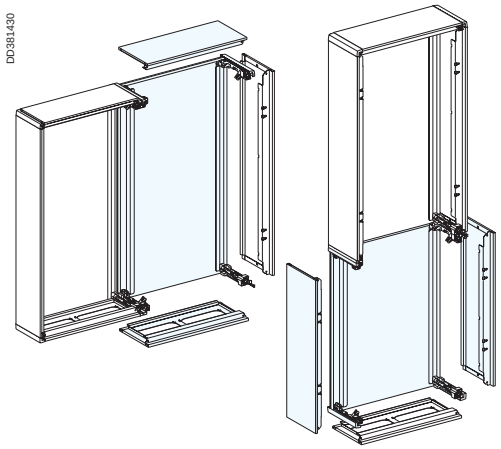
Duct, W = 300 mm

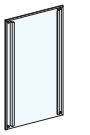


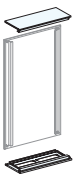
No. of vertical modules	Height (mm)	Rear + door, W = 300 mm	Top and bottom plates
Duct, W = 300 mm			
7	450	**08342**	**08372**
11	650	**08343**	**08372**
15	850	**08344**	**08372**
19	1050	**08345**	**08372**
23	1250	**08346**	**08372**
27	1450	**08347**	**08372**
33	1750	**08349**	**08372**

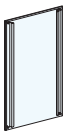
■ reversible doors (opening to left or right), equipped with a handle and keylock (key 405). For other possibilities, see page D-33.

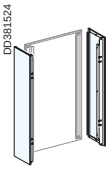
Enclosure extension









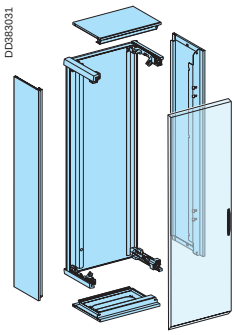


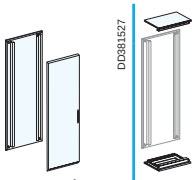
No. of vertical modules	Height (mm)	Side-by-side combination Rear	+ Top and bottom plates	Vertical combination Rear	+ Side panels
Enclosure extension					
7	450	**08312**	**08371**	**08312**	**08352**
11	650	**08313**	**08371**	**08313**	**08353**
15	850	**08314**	**08371**	**08314**	**08354**
19	1050	**08315**	**08371**	**08315**	**08355**
23	1250	**08316**	**08371**	**08316**	**08356**
27	1450	**08317**	**08371**	**08317**	**08357**
33	1750	**08319**	**08371**	**08319**	**08359**

■ the enclosure extension uses the same doors as the basic enclosure.

IP55 wall-mounted enclosures
300 mm wide

Wall-mounted enclosures





No. of vertical modules	*Height (mm)*	*Rear + door, W = 300 mm*	*Top and bottom plates*	*Side panels*	*2 struts*
Duct, W = 300 mm					
7	450	**08342**	**08372**	**08352**	**2 x 01025**
11	650	**08343**	**08372**	**08353**	**2 x 01025**
15	850	**08344**	**08372**	**08354**	**2 x 01025**
19	1050	**08345**	**08372**	**08355**	**2 x 01025**
23	1250	**08346**	**08372**	**08356**	**2 x 01025**
27	1450	**08347**	**08372**	**08357**	**2 x 01025**
33	1750	**08349**	**08372**	**08359**	**2 x 01025**

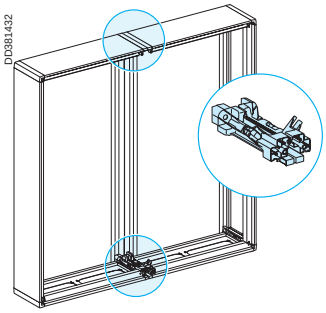
■ revers ble doors (opening to left or right), equipped with a handle and keylock (key 405).

For other poss bilities, see page D-33.

IP55 enclosures

Wall-mounted enclosures

Combination kits



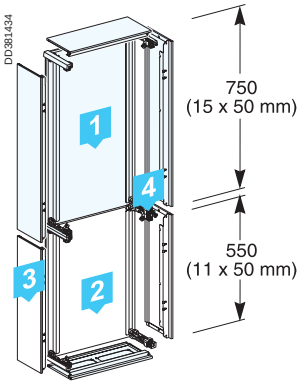
IP55 enclosures can be combined side-by-side and vertically.
To make a combination, start with a basic enclosure and add a duct or one (or more) enclosure extensions using the corresponding combination kits.

Cat. no. selection

Designation	Cat. no.
Combination kit	
horizontal/vertical (two double struts)	**08381**
"L" shape (one triple strut and one single strut)	**08382**
square shape (one quadruple strut)	**08383**

Note: *for combinations of more than two enclosures, the switchboard must be reinforced using mounting uprights* ***(08391)****, see page D-35 .*

Examples of combinations



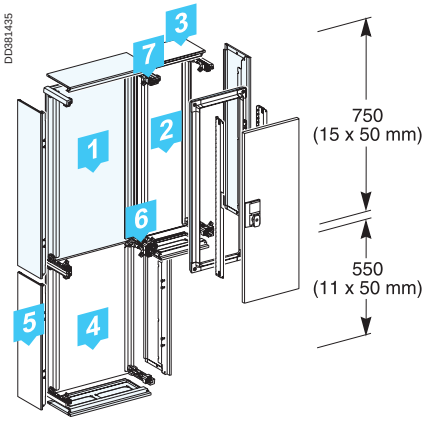
Vertical combination

A basic enclosure is positioned above an enclosure extension, whatever its height. Use the horizontal/vertical combination kit with two double struts.

Catalogue numbers for the configuration opposite

Item	Designation	Cat. no.
1	1 basic enclosure	**08304**
2	1 rear plate for enclosure extension	**08313**
3	1 set of two side panels	**08353**
4	1 horizontal/vertical combination kit	**08381**

See previous page for plain and transparent doors for basic enclosures and extensions.



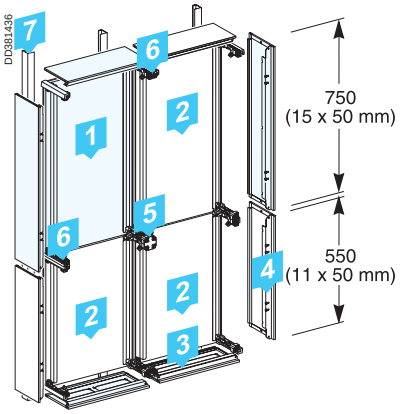
"L" combination

The "L" shape is created by combining two enclosures (extension or duct) with a basic enclosure.

Catalogue numbers for the configuration opposite

Item	Designation	Cat. no.
1	1 basic enclosure	**08304**
2	1 rear + door for duct, W = 300 mm	**08344**
3	1 set of two top and bottom plates for duct	**08372**
4	1 rear plate for enclosure extension	**08313**
5	1 set of two side panels	**08353**
6	1 "L" combination kit	**08382**
7	1 horizontal/vertical combination kit	**08381**

See previous page for plain and transparent doors for basic enclosures and extensions.



Square combination

The square shape is created by combining three enclosures (extension or duct) with a basic enclosure.

Catalogue numbers for the configuration opposite

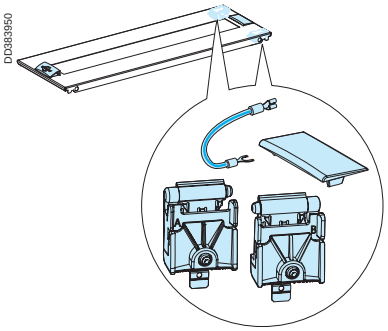
Item	Designation	Cat. no.
1	1 basic enclosure	**08303**
2	3 rear plates for enclosure extensions	**08313**
3	1 set of two top and bottom plates for enclosure extensions	**08371**
4	1 set of two side panels	**08353**
5	1 square combination kit	**08383**
6	2 horizontal/vertical combination kits	**2 x 08381**
7	3 mounting uprights L = 1950 mm(to reinforce he switchboard)	**3 x 08391**

See previous page for plain and transparent doors for basic enclosures and extensions.

Front plate accessories

Wall-mounted enclosures

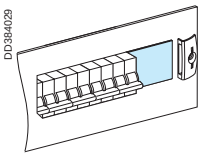
Front plate accessories



Designation	Cat. no.
Front plate hinge kit (set of 2 hinges)	**08585** (1)

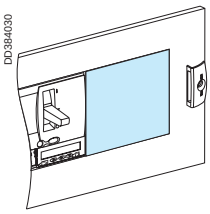
(1) *In case of mounting a front plate with hinges at the top or bottom of a IP55 enclosure, it is recommended to insert at the top or bottom a fixed front plate 1M (03801) before positioning the front plate with hinges.*

Blanking plates



For modular devices

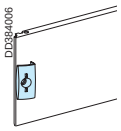
Designation	Cat. no.
Blanking strip, H = 46 mm, L = 1000 mm	**03220**
4 divisible blanking plates, H = 46 mm, L = 90 mm colour: white RAL 9001	**03221**



For Compact NSX100/250

Designation	Cat. no.
1 divisible blanking plates, H = 85 mm, L = 147 mm colour: white RAL 9001	**03249**

Front plate grips



Designation	Cat. no.
20 self adhesive front plate grips colour: white (RAL 9001)	**01093**

■ easily fitted using double-face adhesive tabs, to harmonise the front plates of your switchboards.

Adhesive labels for mimic diagrams

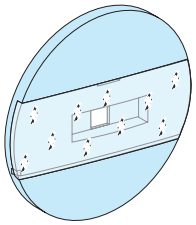
Designation	Black
10 lines, 900 mm long and 7 mm thick	**01005**
10 outgoing arrows	**01006**
10 incoming arrows	**01007**
10 transformers	**01008**
10 earth symbols	**01009**

Front plate accessories

Wall-mounted enclosures

Switchboard identification plate

DD381721



Designation	Cat. no.
Switchboard identification plate	08900

Identification labels

Clip-on labels

Clip-on labels

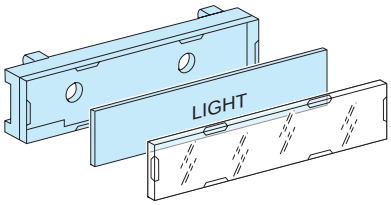
The clip-on support is supplied with a paper label and a transparent cover.
It clips onto the front plate horizontally or vertically and can be screwed to any support (plain door, plain front plate, etc.).

Engraving plates

Supplied separately, these plates simply replace the paper labels.

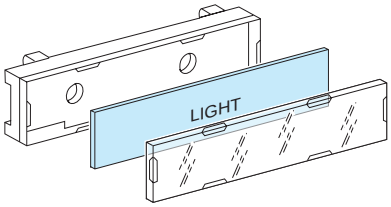
Cat. no. selection

DD383974



Clip-on label.

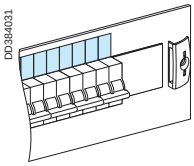
DD383975



Engraving plate.

Designation		Cat. no.
12 clip-on labels	18 x 35	08913
	18 x 72	08915
	25 x 85	08917
12 engraving plates	18 x 35	08914
	18 x 72	08916
	25 x 85	08918

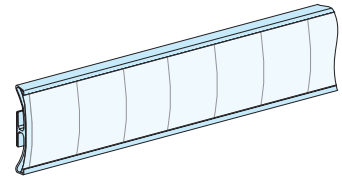
DD384031



Adhesive labels

The adhesive label holders are supplied with a paper label and a transparent cover.

DD381715



Designation		Cat. no.
12 label holders, W = 180 mm	H = 24 mm	08905
	H = 36 mm	08906
12 label holders, W = 432 mm	H = 24 mm	08903
	H = 36 mm	08904

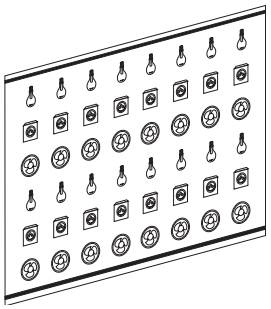
Symbol sheets

Each sheet comprises adhesive symbols that can be positioned on the identification labels to immediately identify the type of circuit.
Standard symbols:
- loads: sockets, lights, heating units, etc.
- rooms: bedroom, bathroom, etc.

Special symbols:
- loads: lightning arrestor, gate, swimming pool, etc.
- rooms: technical room, computer room, etc.

Cat. no. selection

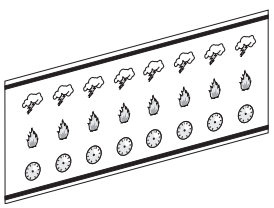
DD381751



Standard symbols.

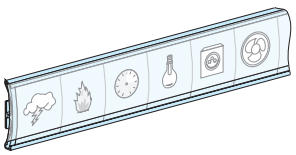
Designation		Cat. no.
Set of ten symbol sheets	standard	13735
	special	13736

DD381752



Special symbols.

DD381753



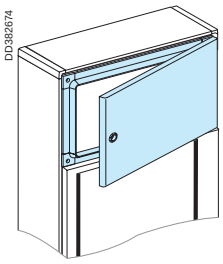
Symbols on an adhesive label holder.

IP55 enclosures
Partial doors

Partial doors

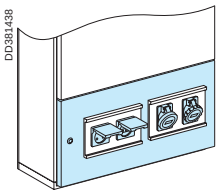
Whether plain or with cut-outs, they can be mounted on basic enclosures or extensions at least eleven modules high (H = 650 mm).
They are equipped with:
- hinges that open 170°
- a 8 mm male triangle insert (key not supplied).

The front can be completed with a standard door, either plain or transparent.
Each basic enclosure or extension can be equipped with only one partial door.



Partial plain door

Designation	Cat. no.
Partial plain door	
4 modules (H = 200 mm) for enclosures from 11 to 27 modules high	**08374**
6 modules (H = 300 mm) for enclosures 33 modules high	**08375**

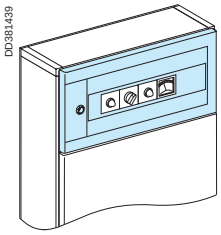


Partial door with cut-outs

Designed for two mounting plates with 22 mm diameter devices or Schneider industrial sockets.

Designation	Cat. no.
Partial door wi h cut-outs	
4 modules (H = 200 mm) for enclosures from 11 to 27 modules high	**08376**
6 modules (H = 300 mm) for enclosures 33 modules high	**08377**

They are supplied with an insulating plain mounting plate that can be used to blank off a reserve hole or to install all types of devices (sockets, EPO devices, measurement devices).
The dimensions of the two holes are 200 mm x 112 mm.



Tego Dial partial door

Designed for “Tego Dial” mounting plates (H = 100 mm) on which it is poss ble to mount control, monitoring, measurement and indication devices.

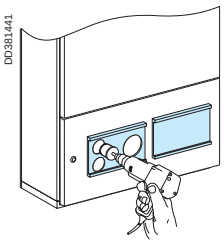
Designation	Cat. no.
Tego Dial partial door	
4 modules (H = 200 mm) for enclosures from 11 to 27 modules high	**08378**
6 modules (H = 300 mm) for enclosures 33 modules high	**08379**

The cut-out is 375 mm wide (five 75 mm modules).
For selection of Tego Dial mounting plates, see the Schneider industrial control catalogue.

IP55 enclosures
Functional units for partial doors

Mounting plates for 22 mm diameter devices or industrial sockets

Plastic mounting plates are used for 22 mm diameter devices or industrial sockets on the outside of the switchboard.
They can be installed:
- horizontally on the partial doors with cut-outs
- horizontally vertically at any point on a door or side panel.

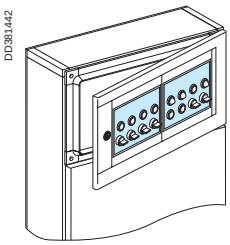


Plain mounting plate

A plain plate is used to blank off partial doors with cut-outs.

Designation	Cat. no.
Plain mounting plate, 210x150 mm	**08861**

Can be used to mount any type of device (EPO devices, measurement devices, sockets).

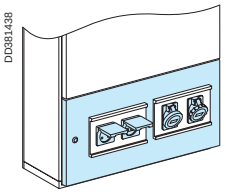


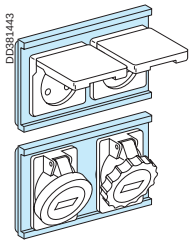
Mounting plate for 22 mm diameter devices

For installation of eight 22 mm diameter devices (lights, switches, pushbuttons, etc.).

Designation	Cat. no.
Mounting plate with eight 22 mm diameter holes	**08862**

Supplied with 4 blanking plug



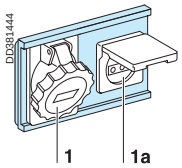


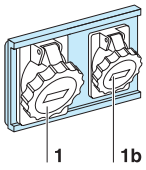
Mounting plate for Schneider industrial sockets

Mounting plate with two 65 x 85 mm holes.
Intended for the installation of:
- 10/16 A residential sockets
- flush-mount 16 A LV sockets, inclined or straight, IP44/IP67, IK08.

Designation	Cat. no.
Mounting plate with two 65 x 85 mm holes	**08863**

Supplied with a 65 x 85 mm blanking plate.





Mounting plate with two holes, 65 x 85 mm and 90 x 100 mm

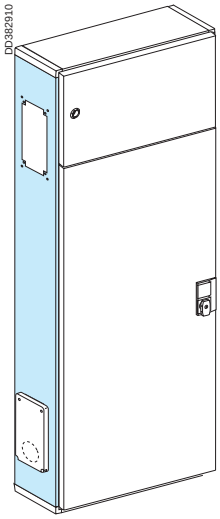
Intended for the installation of:
- inclined 16 and 32 A IP44 and IP67 sockets in the 90 x 100 mm hole **(1)**
- residential sockets (< 10/16 A) in the 65 x 85 mm hole **(1a)**
- flush-mount inclined or straight 16 A LV sockets, IP44/IP67, IK08, in the 65 x 85 mm hole **(1b)**.

Designation	Cat. no.
Mounting plate with two holes, 65 x 85 mm and 90 x 100 mm	**08864**

Supplied with a 65 x 85 mm blanking plate.

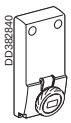
IP55 enclosures
Side panels with cut-outs

Side panel with cut-out



These panels are designed to replace the standard side panel.
They can be mounted on the left or right-hand side.

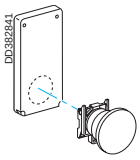
Designation	Cat. no.
1 side panel with cut-out	
7 mod.	**08362**
11 mod.	**08363**
15 mod.	**08364**
19 mod.	**08365**
23 mod.	**08366**
27 mod.	**08367**
33 mod.	**08369**



Montage direct.

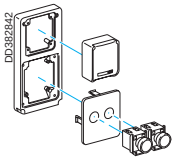
The cut-outs are designed for the installation of Practika PK industrial sockets up to 63 A either directly or on 103 x 225 mm adaptation plates of the Kaedra enclosure range.
Installation is direct (in 103 x 225 mm cut-outs) for:

- 16/32 A interlocked LV sockets, IP44/IP65, IK08
- 16 A VLV sockets with safety transformers, IP44/IP65, IK08



13143.

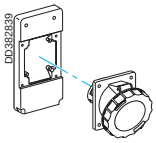
- blanking plates, also used for mounting accessories such as pushbuttons of the Kaedra range (plate cat. no. 13143)



13142.

Installation requires a Kaedra adaptation plate for:

- 16 A and 32 A LV and VLV sockets (plate cat. no. 13142)

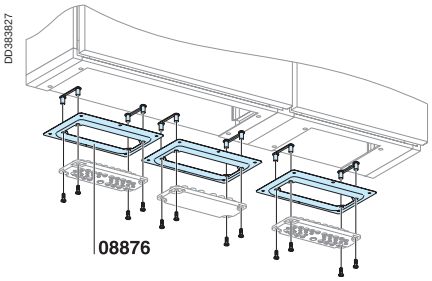


13144.

- 63 A LV sockets, IP67, IK08 (plate cat. no. 13144).

For selection of PK industrial sockets and adaptation plates: see Kaedra catalogue.

IP55 enclosures
Special gland plates

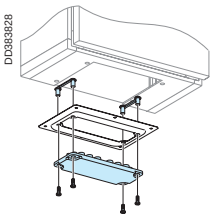


Metal plate with cut-outs

Enclosures are supplied with metal gland plates installed on the top or bottom panel of the enclosures (2 plates) or 300 mm wide ducts (1 plate).
These plates can be replaced by metal plates with cut-outs for special cable entry systems made of an insulating material (plain, with knockouts or membrane-type). They are designed for entry of cables of different cross-sectional areas via the bottom of a switchboard while maintaining the IP55 degree of protection.

Designation	Cat. no.
Metal plate with cut-outs	
for enclosure and duct L = 300 mm	**08876**

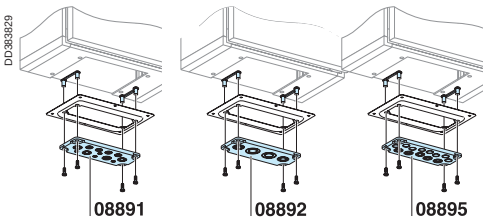
Gland plates



The gland plates are easy to install using the mounting kit (supplied with each gland plate) that positions and holds the nuts during installation.
This makes it poss ble to mount the gland plates using a single tool.

Plain gland plate

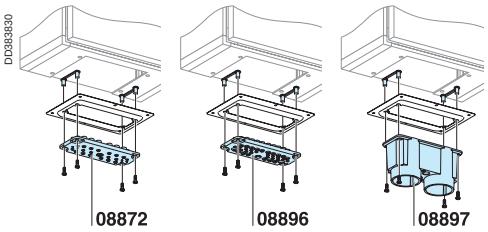
Designation	Cat. no.
Plain gland plates	**08881**



Gland plates with knockouts

Designed for metric cable glands.

Designation	Cat. no.
Gland plates with knockouts	
4 x M12 + 4 x M12 or M20 + 4 x M16 or M25	**08891**
2 x M20 or M32 + 2 x M25 or M40	**08892**
5 x M16 or M25 + 8 x M20	**08895**
Gland plates with 39 x 7 to 26 mm diameter entries	**08898**
Gland plates with 2 x 33 to 72 mm diameter entries	**08899**



Membrane-type gland plates

Gland plates with membranes for perforation according to required diameter.

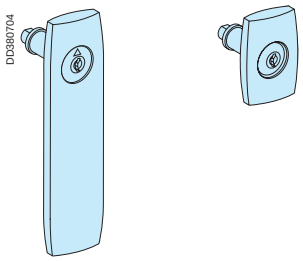
Number of entries	Number of entries per diameter	Cable diameters between Min.	Max.	Cat. no.
25	4	5	7	**08872**
	4	8	12	
	12	10	14	
	4	14	20	
	1	20	26	
35	2	5	7	**08896**
	6	6	10	
	8	7	12	
	16	10	14	
	2	12	18	
	1	17	32	
2	2	28	60	**08897**

IP55 enclosures
Handles, locks

Presentation

The small plain and transparent doors (7 to 23 modules) are supplied with a small handle comprising a barrel lock no. 405.
The large plain and transparent doors (27 to 33 modules) are supplied with a large handle comprising a barrel lock no. 405.
The partial doors are supplied with an 8 mm male triangle insert.
All doors can receive as optional equipment:
- a large or small handle with a barrel lock no. 405. The latter can be replaced by other barrel locks or special inserts
- a large EURO handle, supplied without a barrel lock
- door inserts (squares, triangles, double bars, screwdriver slots).

Handles

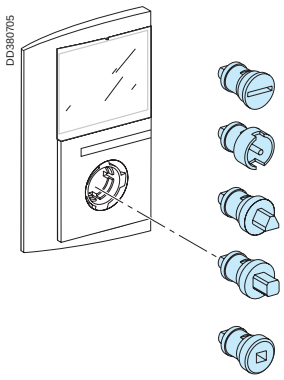


Replacement handles

Designation	Cat. no.
Door latch with lock and 2 no. 405 keys	**08936**
Handle (L = 155 mm) with lock and 2 no. 405 keys	**08935**
EURO handle without a barrel lock (1)	**08934**

(1) *Do not suit to barrels with an automatic return stroke of the key.*

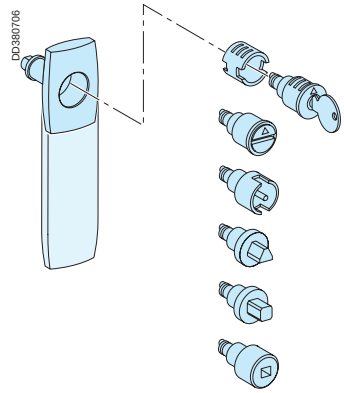
Door insert



These inserts simply replace a standard handles.

Designation	Cat. no.
Screwdriver slot insert	**09981**
3 mm double bar insert	**09982**
7 mm male triangle insert	**09983**
8 mm male triangle insert (CNOMO)	**09984**
9 mm male triangle insert (EDF)	**09985**
6 mm male square insert	**09986**
7 mm male square insert	**09987**
8 mm male square insert	**09988**
6 mm female square insert	**09989**

Handle barrel locks and inserts



Barrel locks

These components may equip handles after removing the standard barrel lock no. 405.

Designation	Cat. no.
Barrel lock + 2 keys no. 2433A	**09933**
Barrel lock + 2 keys no. 455	**09945**
Barrel lock + 2 keys no. 1242 E	**09942**
Barrel lock + 2 keys no. 3113 A	**09943**

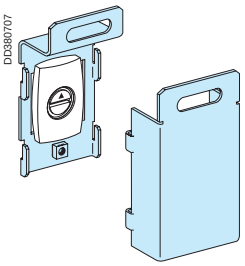
Other A and E combinations are available from Ronis, please consult us.

Inserts

Designation	Cat. no.
Screwdriver slot insert	**09931**
6 mm female square insert	**09946**
6 mm male square insert	**09949**
7 mm male square insert	**09947**
8 mm male square insert	**09948**
7 mm male triangle insert	**09937**
8 mm male triangle insert (CNOMO)	**09938**
9 mm male triangle insert (EDF)	**09939**
3 mm double bar insert	**09932**

IP55 enclosures
Handles, locks

Padlocking



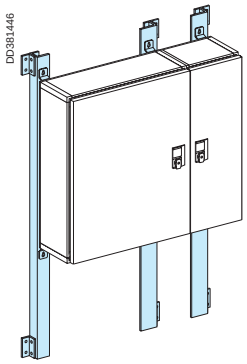
Kit designed for three padlocks.

Designation	Cat. no.
IP55 handle padlocking kit	**08939**

The kit can be installed on all IP55 doors, except those equipped with an EURO lock.

IP55 enclosures
Installation accessories

Mounting supports



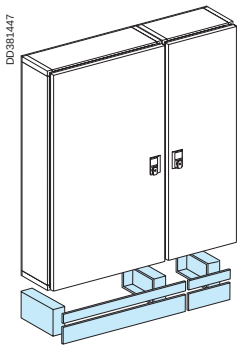
Mounting uprights

The uprights are used to mount on a wall one or more enclosures combined horizontally or vertically.
The uprights leave space behind the switchboard for cable running and to improve ventilation.
Colour RAL7016.
For one enclosure, order two uprights.
For each enclosure extension or duct, order one additional upright.

Designation	Cat. no.
1 mounting upright (L = 1950 mm)	**08391**

Supplied with:
- two adjustable fixing brackets
- one joint for combination with a plinth or another upright.

Note: *to create the configuration opposite, order:*
- three mounting uprights (08391 x 3).

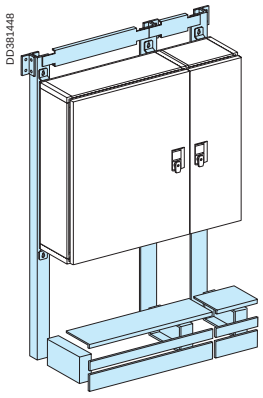


Plinth, H = 150 mm

The plinth, installed in the factory or on-site, raises the switchboard to protect it and facilitate spreading of cables arriving from a trough.
Colour RAL7016.
The wall-fixing brackets supplied with the plinth ensure that the switchboard cannot topple over.
For the basic enclosure, order two gussets and one 600 mm wide plinth cover panel.
For each enclosure extension or duct, order one additional gusset and the corresponding cover panel.

Designation	Cat. no.
Plinth gusset	**08392**
Plinth cover panel, W = 600 mm (for enclosure)	**08393**
Plinth cover panel, W = 300 mm (for duct)	**08394**

Note: *to create the configuration opposite, order:*
- three plinth gussets (08392 x 3)
- one plinth cover panel, W = 600 mm (08393)
- one plinth cover panel, W = 300 mm (08394).

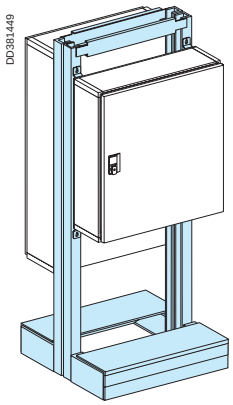


Wall structure

The switchboard can be mounted on the structure in the factory or on site.
Two wall-fixing brackets supplied with the basic enclosure ensure that the switchboard cannot topple over.
Colour RAL7016.

Designation	Cat. no.
1 mounting upright (L = 1950 mm)	**08391**
1 plinth gusset	**08392**
Plinth cover panel, W = 600 mm (for enclosure)	**08393**
Plinth cover panel, W = 300 mm (for duct)	**08394**

Note: *to create the configuration opposite, order:*
- three mounting uprights (08391 x 3)
- three plinth gussets (08392 x 3)
- one plinth cover panel, W = 600 mm (08393)
- one plinth cover panel, W = 300 mm (08394).



Free-standing structure

The free-standing structure is simply two wall structures combined back-to-back.
The switchboard can be positioned anywhere.
It can be fixed to the floor and moved easily using the lifting rings *(08396)*.
It can be equipped with one or more enclosures with Schneider sockets.
Colour RAL7016.

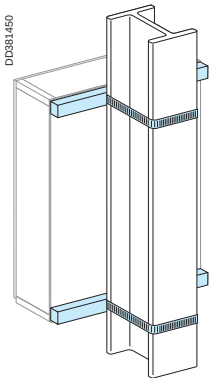
Designation	Cat. no.
1 mounting upright (L = 1950 mm)	**08391**
1 plinth gusset	**08392**
Plinth cover panel, W = 600mm (for enclosure)	**08393**
Plinth cover panel, W = 300 mm (for duct)	**08394**

Note: *to create the configuration opposite, order:*
- four mounting uprights (08391 x 4)
- four plinth gussets (08392 x 4)
- two plinth cover panels, W = 600 mm (08393 x 2).

IP55 enclosures
Installation accessories

Wall-mounted enclosures

Mounting on a pole

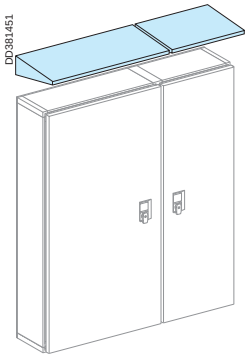


The kit is used to mount an enclosure or an enclosure + duct combination, without drilling, to an I-beam or concrete pole that can be rectangular or cylindrical.
The maximum circumference of the pole is 580 mm.

Designation	Cat. no.
Pole-mount kit for enclosures	08395

The kit is made up of:
- two reinforcement cross-members to support the enclosure
- mounting components and hardware.

Canopies

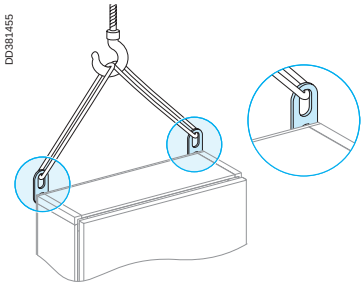


Installed on the mounting uprights or directly on the wall, canopies improve switchboard protection against vertically falling water and objects.
Colour RAL7016.

Designation	Cat. no.
Canopy, W = 600 (for enclosure)	08386
Canopy, W = 300 (for duct)	08387

Supplied with:
- the hardware required for mounting on the uprights
- the components required for combination with another canopy.

Lifting rings



The lifting rings are secured directly to the switchboard or to the mounting uprights.
Supplied with mounting hardware.

Designation	Cat. no.
Set of two lifting rings	08396

Air-conditioning accessories

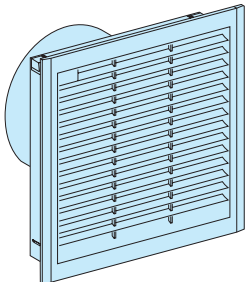
Wall-mounted enclosures

Presentation

In most cases and notably for IP30 switchboards, convection takes place naturally and does not require fans.
However, when the switchboard is installed in temperate environments or when the degree of protection is high (IP55), ventilation accessories are indispensable. For more in-depth information on selecting air-conditioning accessories and the thermal management of switchboards, see page E-20.

Front or side fan

DD381703



The switchboard is cooled by drawing in cool external air.

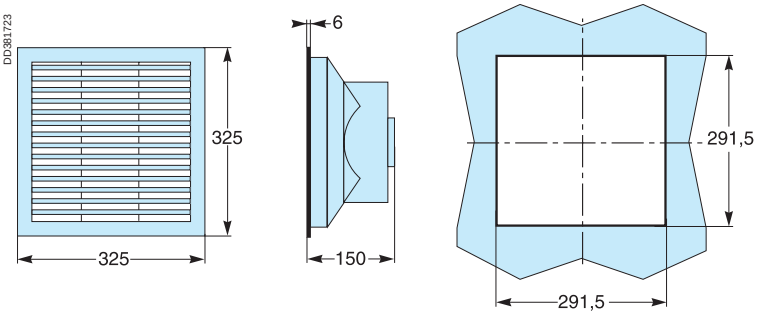
Presentation
The set comprises the fan with a grill and a filter.
It can be clipped directly on the cut-out front plate.

Installation
These fans are generally installed at the bottom of floor-standing enclosures:
- by cutting out a side panel
- or on the front, using the front plate with cut-out for a fan.

Designation	Cat. no.
Fan	**08987**
Front plate with cut-out for fan or filter (7 modules)	**03890**

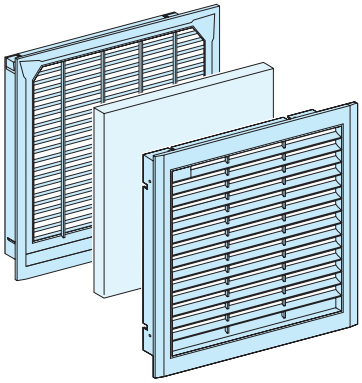
Characteristics
Power rating: 70 W.
Input voltage: 230 V.
Noise level: 69 dB.
Degree of protection: IP54.
Weight: 3 kg.
Unimpeded throughput: 460 m^3/h.
Throughput with counterpressure (grill + standard filter, cat. no. 08988): 350 m^3/h.

DD381723



Filter for front or side fan

DD381704



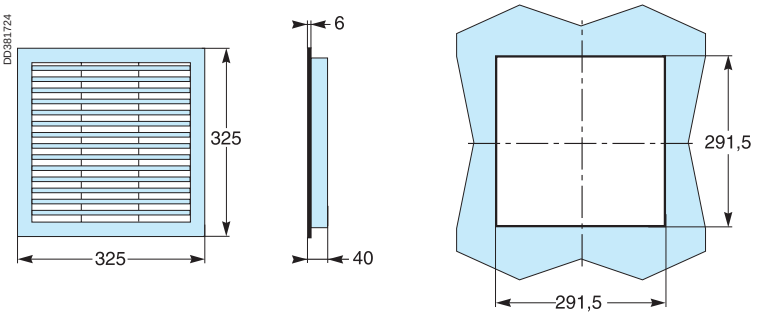
Presentation
The grill is supplied with a standard filter that can be replaced or exchanged for a finer filter.
The grill can be clipped directly on the cut-out front plate.

Installation
The grill/filter can be installed:
- by cutting out a side panel
- or on the front, using the front plate with cut-out for a fan.

Characteristics
Degree of protection: IP54.

Designation	Cat. no.
Grill with filter (supplied with standard filter, maximum throughput = 350 m^3/h)	**08988**
5 standard filters (replacement)	**08989**
5 fine filters	**08990**
Front plate with cut-out for fan or filter (7 modules)	**03890**

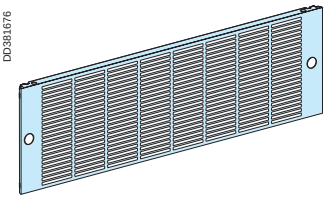
DD381724



Air-conditioning accessories

Wall-mounted enclosures

Ventilated front plate



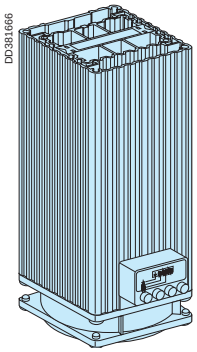
Designation	Cat. no.
IP30 ventilated front plate, H = 50 mm (1 module), S = 80 cm²	**03891**
IP30 ventilated front plate, H = 150 mm (3 modules), S = 250 cm²	**03895**

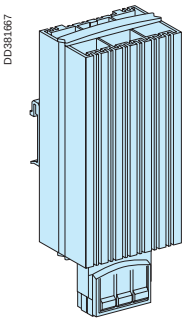
Located at the top and bottom of the switchboard, IP30 ventilated front plates facilitate natural convection in the switchboard.
S is the surface area of the openings.

Air-conditioning accessories

Wall-mounted enclosures

Heating elements



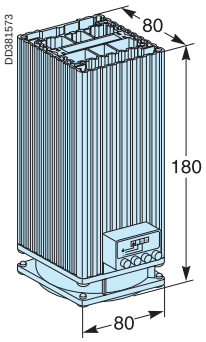


Designation	H	W	D (mm)	Cat. no.
55 W heating resistor	184	70	60	**08992**
90 W heating resistor	184	70	60	**08993**
250 W heating resistor	180	80	80	**08994**

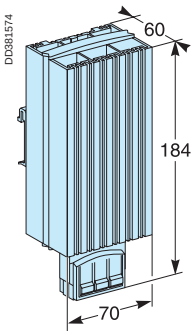
The resistors can be mounted horizontally or vertically. They prevent condensation, corrosion and superficial leakage currents.
They maintain a positive temperature in the enclosures and cubicles when external temperatures drop very low.

Characteristics

- aluminium case with fins
- turns off at 60 °C, turns on at 25-30 °C (temperature of the resistor itself)
- equipped with a symmetrical rail for rapid mounting (clips on)
- input voltage: 230 V.

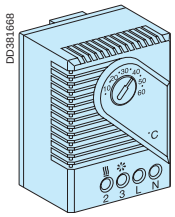


08994.



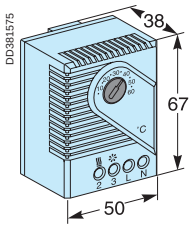
08992, 08993.

Thermostat



Designation	Cat. no.
Thermostat	**08998**

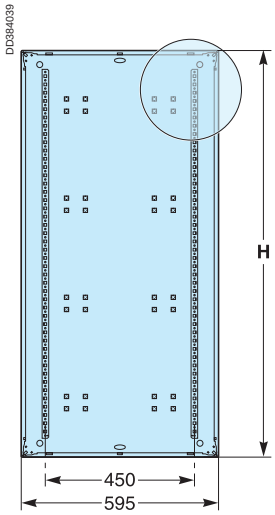
Used to control the temperature inside electrical switchboards in conjunction with heating resistors and fans.
Setting range: +5 °C to +60 °C.
Input voltage: 230 V.
Fixing: clips onto a modular rail.

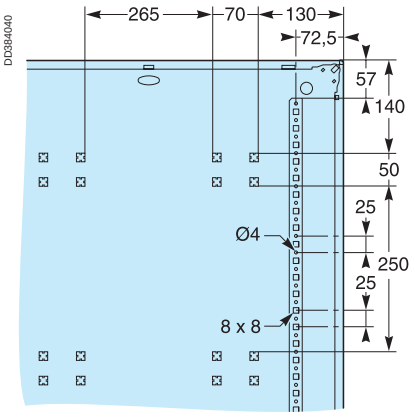


IP30/31/43 wall-mounted enclosures

Dimensions

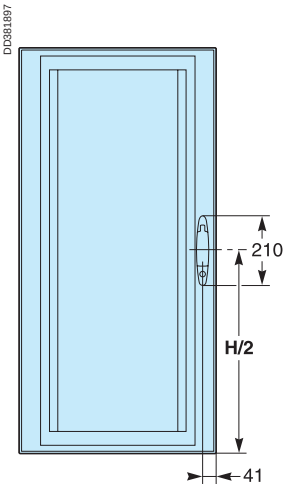
Wall-mounted enclosures

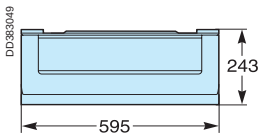


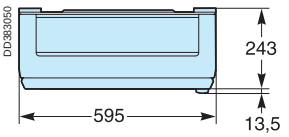


	No. of modules							
	6	9	12	15	18	21	24	27
H	330	480	630	780	930	1080	1230	1380

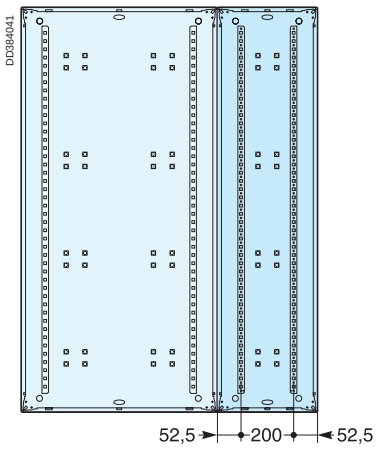
Door

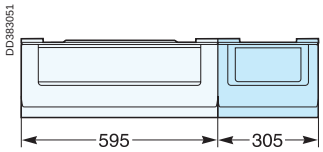




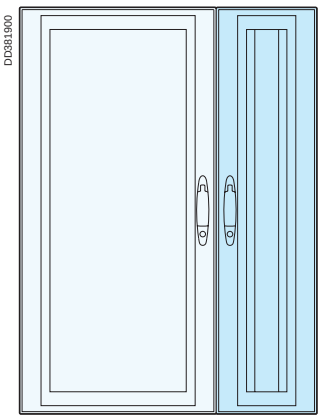


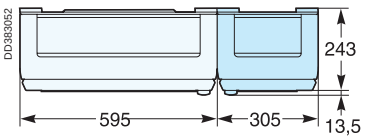
300 mm wide duct



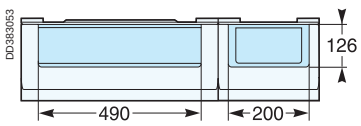


Door

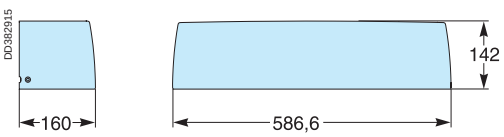




Cable entry



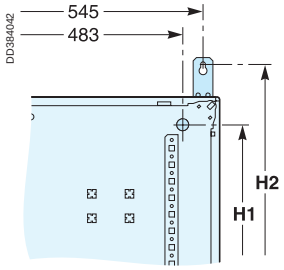
Trunking spreader



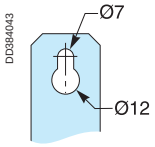
IP30/31/43 wall-mounted enclosures

Dimensions

Wall mounted

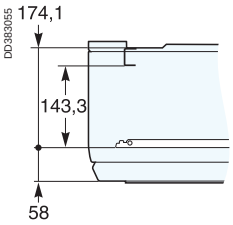


	No. of modules							
	6	9	12	15	18	21	24	27
H1	246	396	546	696	846	996	1146	1296
H2	430	580	730	880	1030	1180	1330	1480

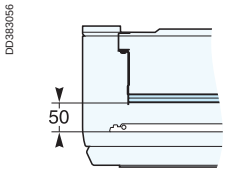


Depth behind front plate

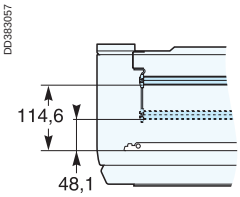
Functional uprights



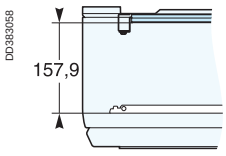
Modular rail



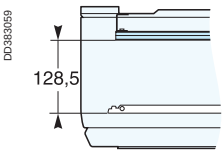
03001/03010.



03002/03011.

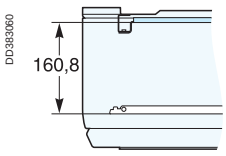


03003.

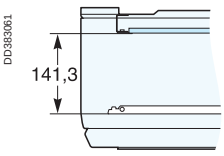


03004.

Slotted mounting plate



03171/03172/03173/
03176/03177/03178.

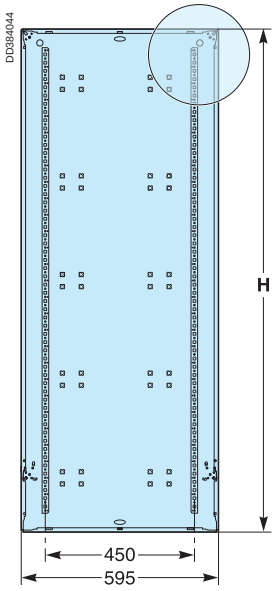


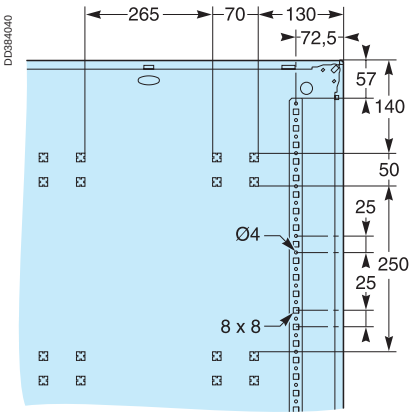
03170/03175.

IP30/31/43 floor-standing enclosures

Dimensions

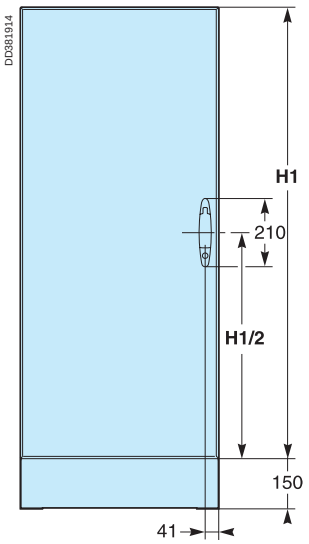
Floor-standing enclosure

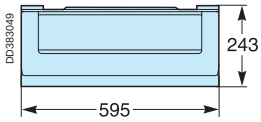


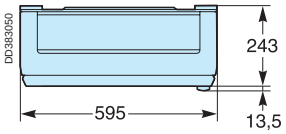


	No. of modules		
	27	30	33
H	1530	1680	1830
H1	1380	15 30	1680

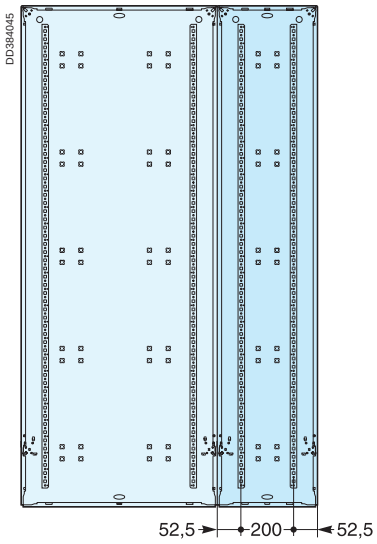
Door

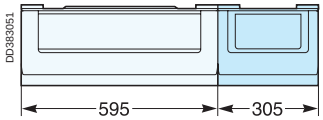




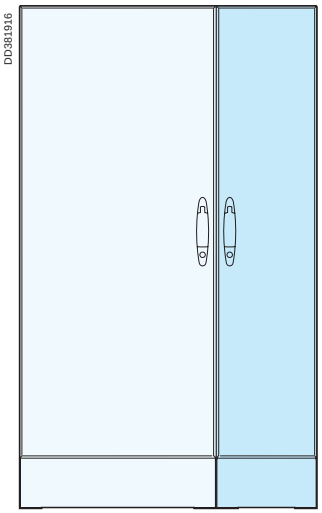


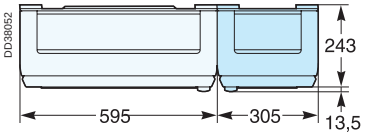
300 mm wide duct



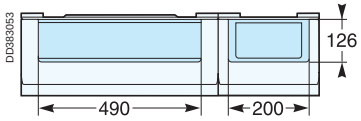


Door

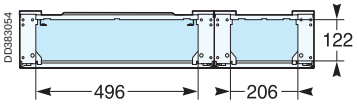




Top cable entry



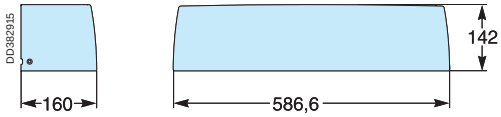
Cable entry for plinths



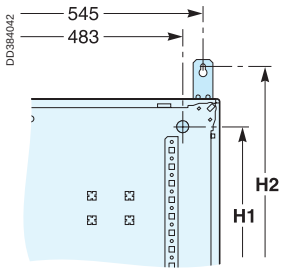
IP30/31/43 floor-standing enclosures

Dimensions

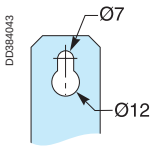
Trunking spreader



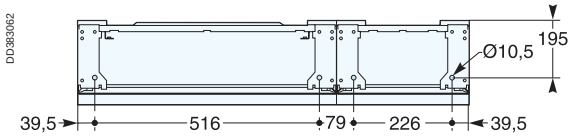
Wall mounted



	No. of modules		
	27	30	33
H1	1488	1638	1788
H2	1580	1730	1880

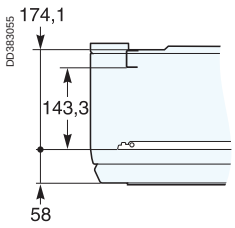


Fixing to floor

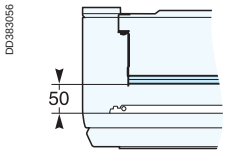


Depth behind front plate

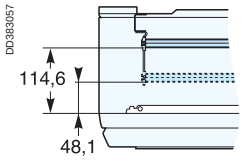
Functional uprights



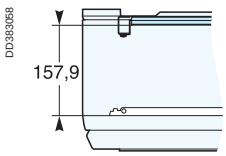
Modular rail



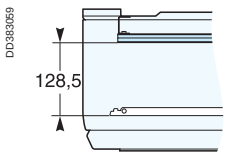
03001/03010.



03002/03011.

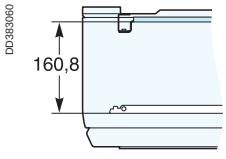


03003.

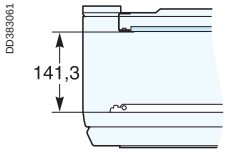


03004.

Slotted mounting plate



03171/03172/03173/
03176/03177/03178.

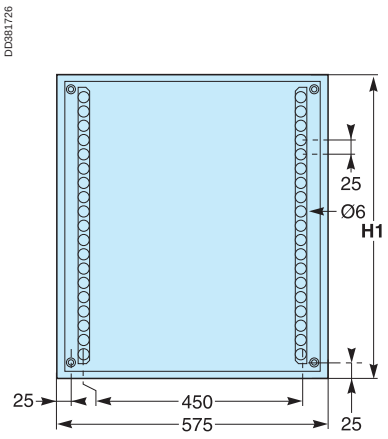


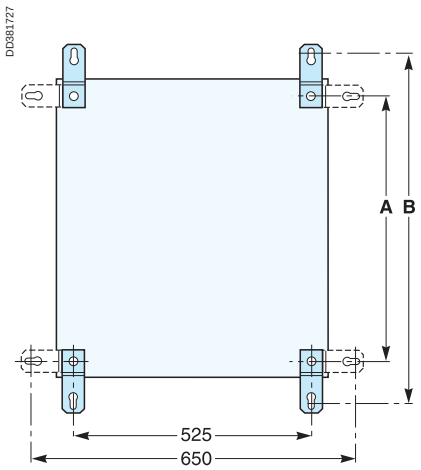
03170/03175.

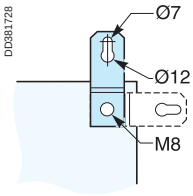
IP55 enclosures

Dimensions

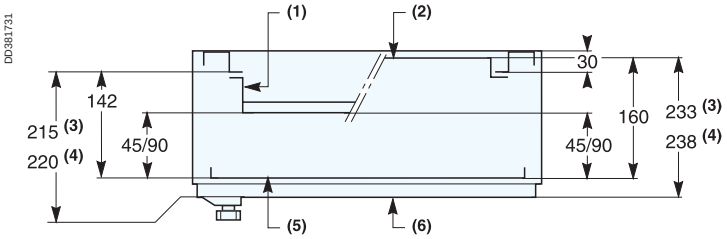
Enclosures

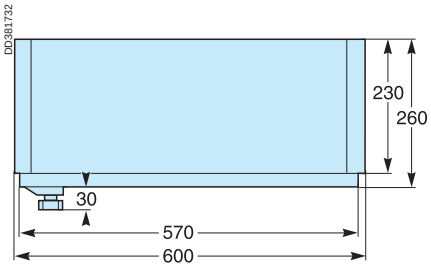




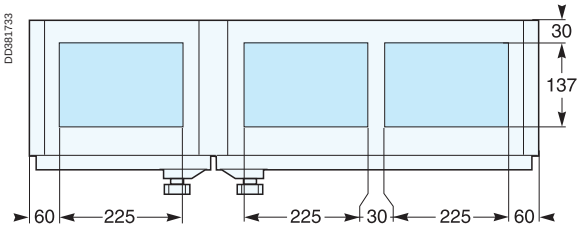


Useful depth



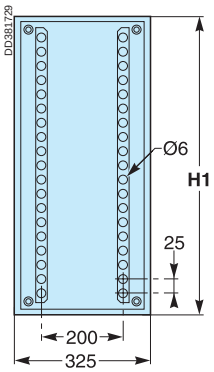


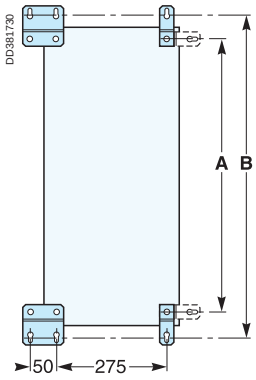
Gland plates



(1) *Multifix rail.*
(2) *Recessed slotted mounting plate.*
(3) *Transparent door.*
(4) *Plain door.*
(5) *Front plate.*
(6) *Door.*

Duct



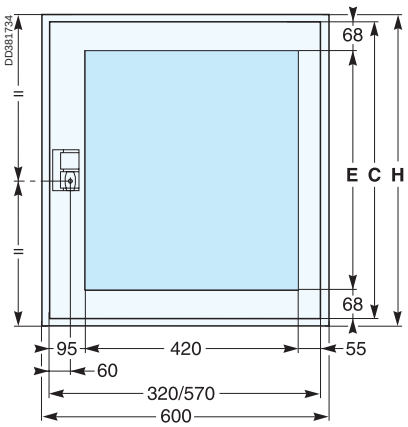


No. of modules	H1	A	B
7	425	375	475
11	625	575	675
15	825	775	875
19	1025	975	1075
23	1225	1175	1275
27	1425	1375	1475
33	1725	1675	1775

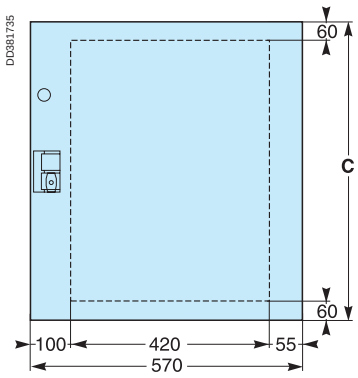
IP55 enclosures

Dimensions

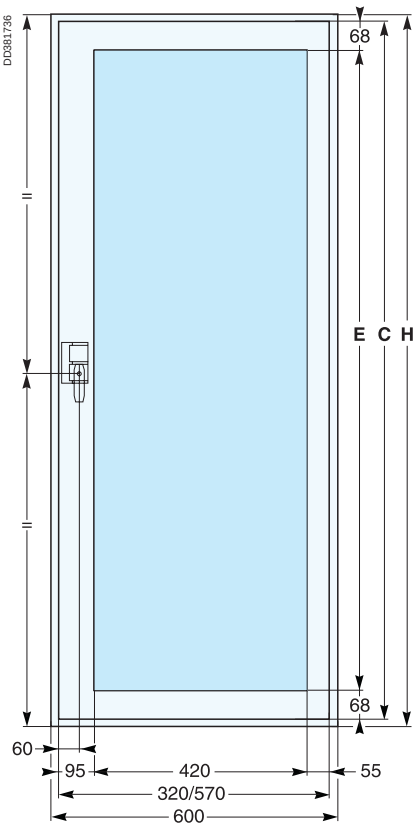
Door



Useful door surface

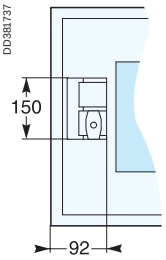


7 to 23 modules.



27/33 modules.

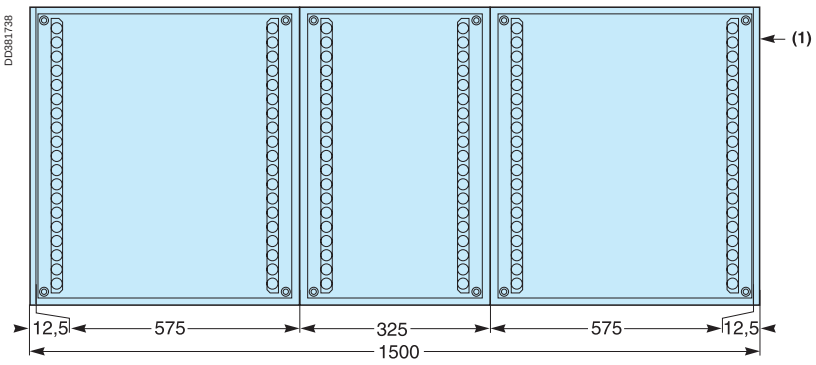
No. of modules	C	E	H
7	420	284	450
11	620	484	650
15	820	684	850
19	1020	884	1050
23	1220	1084	1250
27	1420	1284	1450
33	1720	1584	1750



IP55 enclosures

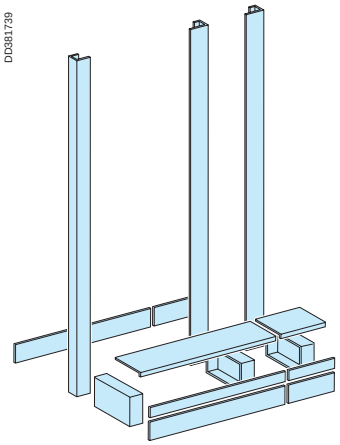
Dimensions

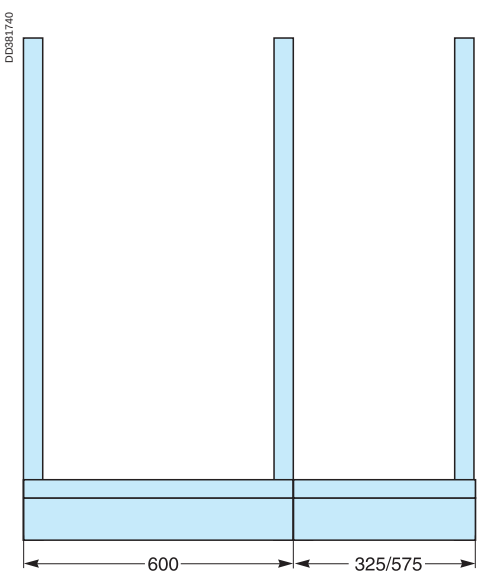
Enclosure combinations

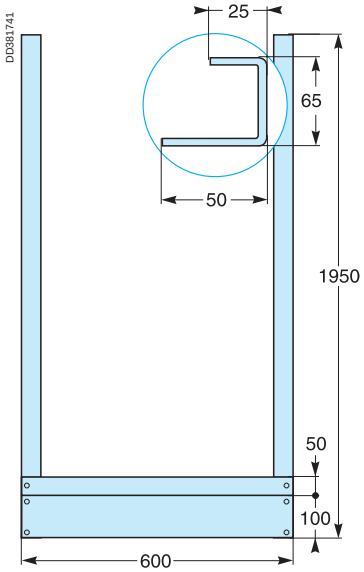


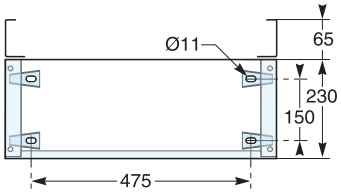
(1) Side panel.

Wall structure

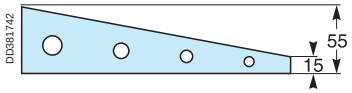


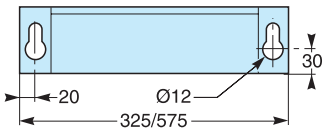






Canopy

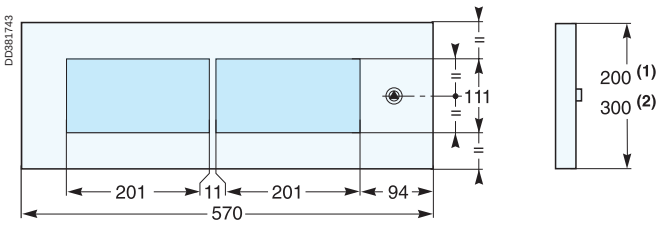




IP55 enclosures

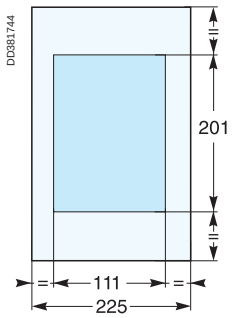
Dimensions

Partial door with cut-outs

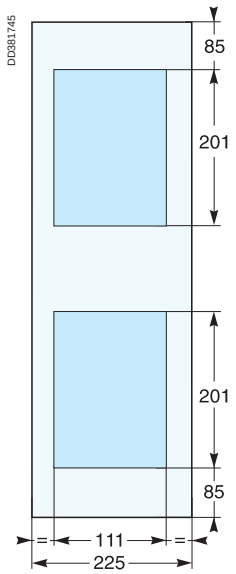


(1) 7 to 23 modules.
(2) 27 to 33 modules.

Side panels with cut-outs

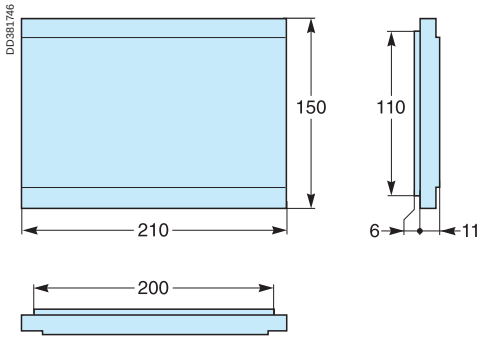


7 modules.



11 to 33 modules.

Functional mounting plates



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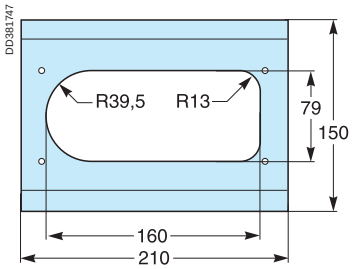

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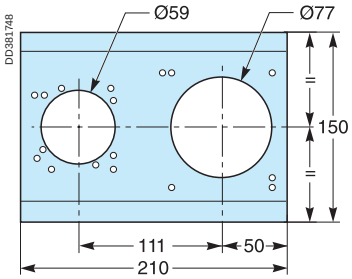

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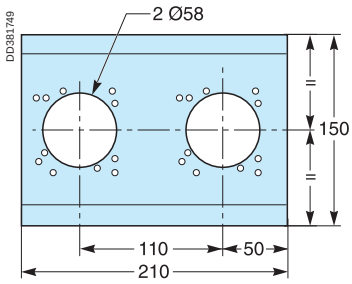

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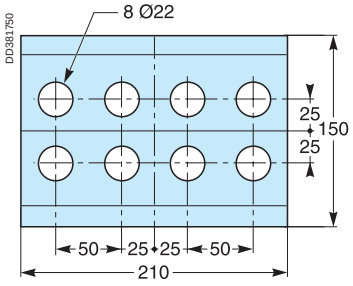

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TOOLS

schneider-electric.com

This international site allows you to access all the Schneider Electric products in just 2 clicks via comprehensive range data-sheets, with direct links to:

- complete library: technical documents, catalogs, FAQs, brochures...
- selection guides from the e-catalog.
- product discovery sites and their Flash animations.

You will also find illustrated overviews, news to which you can subscribe, the list of country contacts...

The technical guide

These technical guides help you comply with installation standards and rules i.e.: the electrical installation guide, the protection guide, the switchboard implementation guide, the technical booklets and the co-ordination tables all form genuine reference tools for the design of high performance electrical installations.
For example, the LV protection co-ordination guide - discrimination and cascading - optimises choice of protection and connection devices while also increasing markedly continuity of supply in the installations.

Contents

After-sales support

Rear panel accessories

Wall-mounted enclosure (IP30)	
Accessories for rear of duct 4 corner pieces 2 door stops 2 combination uprights 2 combination brackets 1 earthing braid plug Mounting hardware	**01016**
Floor-standing enclosure (IP30)	
4 struts 4 struts + strut heads 1 combination reinforcement 2 combination brackets Mounting hardware	**01036**
Designation	
Accessories 4 struts + strut heads 1 earthing braid plug 4 corner pieces 2 door stops Mounting hardware	**01018**
4 washers for rear panel	**01098**
(IP55)	
2 single struts, RAL 9001 4 struts	**01025**

Door accessories

Wall-mounted enclosure (IP30)	
Closing accessories for System G wall-mounted enclosure door 2 fixed hinges + pins ■ 1 bolt stop	**01038**
(IP30)	
Closing accessories for System G floor-standing enclosure door 3 fixed hinges + pins ■ 1 bolt stop	**01032**
System G Retrofit handle	**01220**
(IP55)	
Handle wall-mounted enclosure RAL 7016	**01205**
Handle floor standing enclosure RAL 7016	**01206**
Hub cap handle IP55	**01207**
Set of spare parts for IP55 wall-mounted enclosures	**01247**
Set of spare parts for IP55 door	**01248**
IP55 closing system spare parts	**01249**

Sides

Wall-mounted enclosure (IP30)	
Side for 6-module System G wall-mounted enclosures	**01040**
Side for 9-module System G wall-mounted enclosures	**01041**
Side for 12-module System G wall-mounted enclosures	**01042**
Side for 15-module System G wall-mounted enclosures	**01043**
Side for 18-module System G wall-mounted enclosures	**01044**
Side for 21-module System G wall-mounted enclosures	**01045**
Side for 24-module System G wall-mounted enclosures	**01046**
Floor-standing enclosure (IP30)	
Side for 27-module System G floor-standing enclosures	**01035**
Side for 30-module System G floor-standing enclosures	**01034**
Side for 33-module System G floor-standing enclosures	**01033**

After-sales support

Central uprights

Floor-standing enclosure (IP30)	
Combination piece for 27-module System G floor-standing enclosures	**01030**
Combination piece for 30-module System G floor-standing enclosures	**01029**
Combination piece for 33-module System G floor-standing enclosures	**01028**

Front-plate accessories

Grips	
Quarter-turn closing accessories	**01094**

Plinths

Floor-standing enclosure (IP30)	
Accessories for plinth with holes	**01050**
Accessories for plinth	**01051**
Plinth front, 600mm	**01052**
Plinth front, 300mm	**01053**
Plinth front, 850mm	**01054**

Top plates

Wall-mounted enclosure (IP30)	
Support plate for duct, W=300mm	**01039**

Gland plates

Wall-mounted enclosure (IP30)	
STD gland plate	**01017**
Wall-mounted enclosure (IP55)	
FL21 gland plate for Pack enclosures	**01020**

Powerclip busbar accessories

Designation	
Powerclip busbar accessories, 160 to 400A Mounting hardware 2 end plugs 2 Powerclip supports	**01210**
Powerclip busbar accessories, 630A	**01211**

Mounting hardware

Designation	
12 1/4 turn front plate screws	**01200**

Busbars

Designation	
2 IPxxB clipon covers for Powerclip busbars	**01201**
4 terminal covers for 200A Multiclip	**01202**

Designing Prisma Plus power circuits

Presentation and approach

The Prisma Plus system takes into account the installation and connection conditions of Schneider Electric devices.
The entire installation complies with standard IEC 60439-1. The result is a type tested switchboard.

PD390526-51-

In the following pages you will find a number of examples, validated for Prisma Plus switchboards, intended to assist in determining the busbars as well as the upstream and downstream connections for the installation.
The examples assume that the devices have already been selected.
A complete process involves a number of steps before making final choices (transformer, conductors, protection, etc.).
Schneider Electric offers a number of tools to assist in designing a complete installation (technical guides, software).

Busbar sizing

The factors that must be taken into account in determining the size of busbars include:
■ the diversity factor.
Not all the loads supplied by a set of busbars are used at full rated load or at the same time. The diversity factor is the means to determine the maximum load current used to size the busbars.
Standard IEC 60439-1 §4.7 specifies the table below.

Number of circuits	Diversity factor
2 and 3	0.9
4 and 5	0.8
6 to 9	0.7
10 and more	0.6

■ the degree of protection IP.
■ the ambient temperature around the switchboard.

Supply of devices for outgoers ≤ 630 A

Flexible copper bars with an insulating cover.
To determine the required sizes for flexible bars, see the tables starting on page E-5, which indicate the correct size for each type of connected device.
■ an insulated flexible bar (not connected) must meet standards IEC 60243-1 (dielectric), NFC 32201 (insulation) and IEC 60332-1 (fire)
■ a flexible bar connected to a device in an enclosure must comply with standard IEC 60439-1.

Cables
To determine the cables required, see the table on page E-8.
They can be used to determine:
■ the size of cables as a function of:
□ the circuit breaker rating
□ the current
□ the ambient temperature around the switchboard
■ the permissible current for individually tied cables or touching cables as a function of:
□ the size of the cables
□ the degree of protection for the switchboard.

Designing connections ⩽ 630 A
Device connections

Flexible copper bars with an insulating sheath

Switchboards that comply with standard IEC 60439-1

It is imperative to use the values indicated below that have been validated for the installation of devices in Prisma Plus switchboards.
The parameters determining the size of flexible bars are:
- ■ the environment in which the devices are installed:
  - □ position in the enclosure
  - □ dimensions of other conductors in the circuit
  - □ ambient temperature around the switchboard
- ■ the characteristics of the connected devices:
  - □ device heat losses
  - □ the type of installation (horizontal or vertical)
  - □ the type of device (fixed or withdrawable).

Only the equipment manufacturer with in-depth knowledge on:
- ■ the characteristics of the installed devices
- ■ the configuration of the installation in the enclosure

can provide the correct sizes of flex ble bars for a given permiss ble current.
Insulated, flexible bars make for easy, fast and flexible implementation up to 630 A, but higher ratings require sizes that cancel these advantages.
For high Isc values, it is advised to use rigid bars which require fewer supports.

Insulated flexible bars are better than cables, they offer:

- ■ better insulation temperature withstand (125 °C for bars, 105 °C for cables) and a larger exchange surface for an equivalent size, i.e. a smaller size for a given current
- ■ greater rigidity offering better electrodynamic characteristics for short-circuit currents
- ■ no intermediate parts (lugs) for a direct connection between the device and the busbars therefore less temperature rise and less risk of error
- ■ fast implementation of prefabricated connections already cut to length, formed and drilled.

Technical characteristics
- ■ thickness of the insulation: variable depending on the bar size, 2 mm on average
- ■ rated insulation level Ui = 1000 V
- ■ impulse withstand voltage Uimp = 12 kV
- ■ maximum withstand temperature of insulating material = 125 °C.

Connection

In all cubicles with IP ⩽ 55
- ■ the switchboard internal temperature is 60 °C
- ■ the withstand temperature of the insulating material is 125 °C.

If the withstand temperature of the insulation is only 105 °C, use the next largest flexible bar.
The bar sizes indicated below take into account the derating curves of devices.

Connection of devices and distribution blocks to busbars

Device	**INS125**	**INS160**	**INS250**	**INS320 INS400**	**INS500 INS630**	**NSX100 (1)**	**NSX160 (1)**
S (mm)	20 x 2	20 x 2	20 x 3	32 x 5	32 x 6	20 x 2	20 x 3
Device	**NSX250 (1)**	**NSX400 (1)**	**NSX630**	**INF250 ISFT250**	**INF400 ISFT400**	**INF630 ISFT630**	
S (mm)	20 x 3	32 x 5	32 x 8	24 x 5	32 x 5	32 x 8	

(1) *The values for circuit breakers apply to contactors with the same ratings.*

To connect a Compact NSX250 to Powerclip busbars, use a 24 x 5 mm flexible bar (04746).

Device	**Multiclip distribution block (200 A)**	**Polypact distribution block (3P)**	**Polypact distribution block (4P)**
S (mm)	20 x 3	32 x 6	32 x 5

Disconnectors, terminal blocks, connections, busbars to busbars

I max. (60 °C)	200 A	250 A	400 A	400 A	480 A	520 A	580 A	660 A
S (mm)	20 x 2	20 x 3	24 x 5	24 x 5	24 x 6	32 x 5	32 x 6	32 x 8

Note: *the values indicated above have been validated for Prisma Plus switchboards.*

Designing connections ⩽ 630 A
Compact circuit breakers NSX100 to NSX630

Compact NSX100 to NSX250

Insulated flexible copper bars

Devices		Permissible current (A)					
		Ambient temperature around the switchboard					
		25 °C	30 °C	35 °C	40 °C	45 °C	50 °C
IP ⩽ 55							
NSX100 TMD-TMG	Size per phase	20 x 2	20 x 2	20 x 2	20 x 2	20 x 2	20 x 2
	I (A)	100	97.5	95	92.5	90	85
NSX125 TMD-TMG	Size per phase	20 x 2	20 x 2	20 x 2	20 x 2	20 x 2	20 x 2
	I (A)	125	122	119	116	113	100
NSX160 (1) TMD-TMG	Size per phase	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3
	I (A)	160	156	152	147	144	140
NSX250 (1) TMD-TMG	Size per phase	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3
	I (A)	250	244	238	231	225	198
NSX100 STR	Size per phase	20 x 2	20 x 2	20 x 2	20 x 2	20 x 2	20 x 2
	I (A)	100	100	100	100	100	100
NSX160 STR	Size per phase	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3
	I (A)	160	160	160	160	160	160
NSX250 (2) STR	Size per phase	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3	20 x 3
	I (A)	250	250	237.5	237.5	225	225

(1) *For a withdrawable NSX160 or NSX250 equipped with a Vigi or an insulation-monitoring module, multiply the In values by 0.9.*
(2) *For a withdrawable NS250 equipped with a Vigi or an insulation-monitoring module, multiply the In values by 0.86.*

Compact NSX400 to NSX630

Permissible current (A)

Insulated flexible copper bars

Devices		Permissible current (A)					
		Ambient temperature around the switchboard					
		25 °C	30 °C	35 °C	40 °C	45 °C	50 °C
IP ⩽ 55							
NSX400N/H/L fixed	Size per phase	32 x 5	32 x 5	32 x 5	32 x 5	32 x 5	32 x 5
	I (A)	400	400	400	390	380	370
NSX400N/H/L with Vigi	Size per phase	32 x 5	32 x 5	32 x 5	32 x 5	32 x 5	32 x 5
	I (A)	400	390	380	370	360	350
NSX400N/H/L withdrawable	Size per phase	32 x 5	32 x 5	32 x 5	32 x 5	32 x 5	32 x 5
	I (A)	400	390	380	370	360	350
NSX630N/H/L fixed	Size per phase	32 x 6	32 x 6	32 x 6	32 x 6	32 x 6	32 x 6
	I (A)	630	615	600	585	570	550
NSX630N/H/L Vigi or wi hdrawable	Size per phase	32 x 8	32 x 8	32 x 8	32 x 8	32 x 8	32 x 8
	I (A)	570	550	535	520	505	490

Note: *the values indicated above have been validated for Prisma Plus switchboards.*

Designing connections ⩽ 630 A
Incoming connection block and power supply block on Powerclip busbars

Compact NSX100 to NSX250

Horizontal mounting

Determining the permissible current of NSX100 to NSX630 connection and power supply blocks as a funtion of the ambient temperature around the switchboard and their IP degree of protection.

Device				Permissible current (A)											
				Ambient temperature around the switchboard											
				25 °C		30 °C		35 °C		40 °C		45 °C		50 °C	
				IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31
NSX100 TMD-TMG	Incoming connection block	via the top	**04066**	100	95	100	92	100	90	97	87	95	85	92	■
		via the bottom	**04067**												
	Power supply block		**04060**												
NSX100STR	Incoming connection block	via the top	**04066**	100	100	100	97	100	95	100	92	100	90	97	■
		via the bottom	**04067**												
	Power supply block		**04060**												
NSX160 TMD-TMG	Incoming connection block	via the top	**04066**	160	152	160	147	160	144	156	140	152	136	147	■
		via the bottom	**04067**												
	Power supply block		**04060**												
NSX160STR	Incoming connection block	via the top	**04066**	160	160	160	156	160	152	160	147	160	144	156	■
		via the bottom	**04067**												
	Power supply block		**04060**												
NSX250 TMD-TMG	Incoming connection block	via the top	**04066**	238	213	231	207	225	200	219	193	213	185	207	■
		via the bottom	**04067**												
	Power supply block		**04060**												
NSX250STR	Incoming connection block	via the top	**04066**	250	219	245	213	238	207	225	200	219	193	213	■
		via the bottom	**04067**												
	Power supply block		**04060**												
NSX400N/H/L fixe	Incoming conn. block		**04076**	400	360	390	350	380	340	370	330	360	320	350	■
	Power supply block		**04070**												
NSX630N/H/L fixe	Incoming conn. block		**04076**	570	520	555	505	540	490	525	470	510	450	495	■
	Power supply block		**04071**												

■ *connection not possible.*

The indicated performance characteristics are valid for:
- ■ Compact NSX100/160/250/400 circuit breakers used as incoming or outgoing devices
- ■ Compact NSX630 circuit breakers used as incoming device.

Note: *the values indicated above have been validated for Prisma Plus switchboards.*

Designing connections with cables

Cables

Practical guidelines

Schneider Electric provides cabling recommendations according to the rating of the circuit breaker.
The size of cables must be selected according to:
- the level of current
- the ambient temperature around the conductors
- the degree of protection for the switchboard.

The tables below take into account the installation conditions for each type of device (permissible temperature at connection terminals, etc.).
They follow the temperature derating values for installed devices in all cubicles with cover panels rated IP ⩽ 55.
- switchboard internal temperature 60 °C
- connections using copper cables.

For System G, the volumes, ratings and connection lengths are low.
Select the values in the “Cables tied together” column, according to the IP.

Connection of circuit breakers

Size of cables (mm²)	Permissible current (A)			
	Cables tied individually		Cable tied together	
	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31
1 5	16	14	14	12
2 5	25	25	22	20
4	32	29	28	24
6	40	39	36	33
10	63	55	55	50
16	90	77	80	70
25	110	100	100	93
35	135	125	125	120
50	180	150		
70	230	190		
95	275	230		

Connection of other devices

Size of cables (mm²)	Permissible current (A)			
	Cables tied individually		Cable tied together	
	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31
1 5	13	12	12	10
2 5	23	21	20	19
4	28	26	25	22
6	36	35	32	30
10	55	50	50	46
16	80	70	72	63
25	100	90	90	84
35	120	115	110	103
50	165	135		
70	210	176		
95	250	210		

Connection of NSX100 to 630 A

Device	NSX100	NSX160	NSX250
Size (mm²)	25	50	95

Note: *Schneider Electric recommends connecting NSX400/630 circuit breakers with insulated flexible bars or rigid bars.* *see page E-6.*

Note: *the values indicated above have been validated for Prisma Plus switchboards.*

Designing connections with cables
Tubular lugs

Tubular lugs for incoming connection blocks

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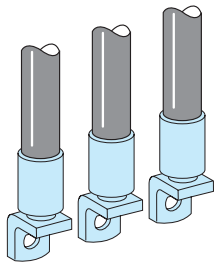


Maximum size of lugs for connection to the different incoming connection blocks.

	Standard Cu lugs	*Narrow Cu lugs*	*Narrow bimetal lugs*
Incoming connec ion block for NSX-INS250 supplied via the top or bottom, cat. no. 04066 and 04067	150 mm²	240 mm²	185 mm²
In-duct incoming connection block for NSX630, cat. no. 04076	240 mm²	300 mm²	300 mm²

Narrow bimetal lugs

Cat. no. selection

Cat. no.	*Cable size (mm²)*	*Quantity*
Lugs for aluminium cable(1)		
29504	150	3
29505	150	4
29506	185	3
29507	185	4
32504	240	3
32505	240	4
32506	300	3
32507	300	4

(1) *Supplied with 2 or 3 interphase barriers.*

Designing the PEN conductor
Power circuit

Size of PEN protective conductor

Practical guidelines

The size of the PEN is determined in the same manner as a neutral conductor, i.e.:
■ for copper single-phase circuits or sized ⩽ 16mm², it must be the same size as the phase conductors
■ for copper three-phase circuits sized > 16 mm², it can be:
□ the same size as the phase conductors
□ smaller on the condition that:
- the current l kely to flow in the neutral during normal operation is less than the permiss ble current for the conductor
- the power rating of single-phase loads does not exceed 10% of the total rating.

The conductor must be accessible to enable connections both in the factory and on site, as well as checks on the tightness of connections.

Implementing the PEN protective conductor

Practical guidelines

According to standard IEC 60439-1, the practical guidelines for implementing the PEN are the following:
■ at the entry to the assembly, the PEN connection must be next to the phase connections
■ within the assembly, the PEN does not need to be insulated from the exposed conductive parts (except on sites where there is a risk of fire or explosion)
■ the size of the conductor must be at least equal to that of the neutral
■ the size must remain constant throughout the main busbars
■ the change from a TNC to a TNS system must take place at a single point in the switchboard, via a marked neutral-disconnection bar that is accessible and can be dismantled to facilitate the impedance measurement of the fault loop
■ after the TNS creation point, it is forbidden to recreate a TNC system.
The PE and the neutral must meet their specific requirements.

Selection of enclosures according to the premises

The IP and IK degrees of protection provided by an enclosure must be specified as a function of the various external influences defined by standard IEC 30364-5-51, in particular:

- presence of foreign solid bodies (code AE)
- presence of water (code AD)
- mechanical stress (code not specified)
- capability of persons (code BA)
- ....

Prisma Plus switchboards are designed for indoor installation.
Unless the rules, standards and regulations of a specific country stipulate otherwise, Schneider Electric recommends the following IP and IK values based on French guide UTE C 15-103 (March 2004).

Using the table

1. Opposite the relevant premises, read the recommended IP and IK values.
2. The ■ symbol indicates the enclosure or cubicle satisfying the criteria of the UTE guide.
   Any enclosure or cubicle with a higher degree of protection can also be used.
3. If several degrees of protection are possible (refer to the standard for more details) and the □ and ■ symbols are indicated (e.g. 24□/25■), enclosures that correspond to the higher degree of protection (■) are suitable for the lower degree of protection (□).

Example:
Selection of an enclosure for a laundry room.
Minimum degree of protection: IP21/IK02
A wall-mounted enclosure with a door (plain or transparent), a canopy and a gasket offer IP31/IK08 degrees of protection and are therefore suitable for this application.

Type of premises	Enclosure or cubicle						
	Wall-mounted enclosure		without door	with door	with door + canopy	with door + canopy + gasket	IP55
	Floor-standing enclosure		without door	with door	with door + canopy	with door + canopy + gasket	
	Cubicle		with fixed frame	with door + IP30 cover	with door + gasket + IP30 cover		with door + IP55 cover
	Min. IP/IK required		IP30/IK07	IP30/IK08	IP31/IK08	IP43/IK08	IP55/IK10
	IP	**IK**					
Domestic or comparable premises or locations							
Porch	24	07					■
Bathrooms (see washrooms)							
Bicycles, motorcycles, tricycles, etc. (premises for)	20	07	■				
Water, sewer and heating connections	23	02				■	
Laundries	21	02			■		
Cellars, garages, furnace rooms	20	02/07	■				
Bedrooms	20	02	■				
Trash rooms	25	07					■
Halls in cellars	20	07	■				
Courtyards	24/25	02/07					■
Kitchens	20	02	■				
Shower rooms (see washrooms)							
Indoor stairways and alleys	20	02/07	■				
Outdoor stairways and outdoor alleys without roofs	24	07					
Outdoor alleys with roofs	21	02			■		
Attics (roof space)	20	02	■				
Garden shelters	24/25	02/07					■
Latrines	20	02	■				
Dustbin rooms	25	02/07					■
Ironing room	20	02	■				
Access ramps to garages	25	07					■

Selection of enclosures according to the premises

Enclosure characteristics

Type of premises		Enclosure or cubicle						
		Wall-mounted enclosure		wi hout door	with door	with door + canopy	with door + canopy + gasket	IP55
		Floor-standing enclosure		wi hout door	with door	with door + canopy	with door + canopy + gasket	
		Cubicle		wi h fixed frame	with door + IP30 cover	with door + gasket + IP30 cover		wi h door + IP55 cover
		Min. IP/IK required		IP30/IK07	IP30/IK08	IP31/IK08	IP43/IK08	IP55/IK10
		IP	IK					
Washrooms, rooms containing a bathtub or shower	volume 0	27	02					
	volume 1	24	02					■
	volume 2	23	02				■	
	volume 3	21	02			■		
Lounges, living rooms, etc		20	02	■				
Drying rooms		21	02			■		
Covered terraces		21	02			■		
WCs		20	02	■				
Verandas		20	02	■				
Crawl spaces		23	07				■	
Commercial premises and adjoining areas								
Gunsmiths (storage area, workshop)		30	08		■			
Laundries (wash room)		24	07					■
Butchers	shop	24	07					■
	cold room ≤ -10 °C	23	07				■	
Bakers, cake shops (kitchens)		50	07					■
Coffee roasters		21	02			■		
Coal, wood, oil		20	08		■			
Delicatessen (production)		24	07					■
Sweets (production)		20	02	■				
Shoe repair shops		20	02	■				
Dairies		24	02					■
Hardware stores (storage areas for chemicals and paint)		33	07				■	
Wood workers		50	07					■
Art galleries		20	02/07	■				
Florists		24	07					■
Furriers		20	07	■				
Fruit and vegetable merchants		24	07					■
Grain shops		50	07					■
Bookshops, stationers		20	02	■				
Motorcycle and bicycle repairs and accessories		20	08		■			
Messenger services		20	08		■			
Furniture shops (antiques, second-hand)		20	07	■				
Glass and mirror merchants (workshop)		20	07	■				
Wallpaper shop (storage area)		20	07	■				
Cosmetics shop (storage area)		20	02	■				
Chemists (storage area)		20	02	■				
Photographers (dark room)		23	02				■	
Plumbers (storage area)		20	08		■			
Fishmongers		25	07					■
Dry cleaners		23	02				■	
Hardware stores (without paint, chemicals, etc.)		20	07	■				
Locksmiths		20	07▫/08▪	□	■			
Vintners, spirits		20	07	■				
Interior decorator (carding)		50	07					■
Tailors, clothing retailers (storage area)		20	02	■				
Pet care		35	07					■

Selection of enclosures according to the premises

Enclosure characteristics

Type of premises			Enclosure or cubicle						
			Wall-mounted enclosure		without door	with door	with door + canopy	with door + canopy + gasket	IP55
			Floor-standing enclosure		without door	with door	with door + canopy	with door + canopy + gasket	
			Cubicle		with fixed frame	with door + IP30 cover	with door + gasket + IP30 cover		with door + IP55 cover
			Min. IP/IK required		IP30/IK07	IP30/IK08	IP31/IK08	IP43/IK08	IP55/IK10
			IP	IK					
Buildings open to the general public									
Shared premises of buildings open to the general public		storage rooms	20	08		■			
		packing rooms	20	08		■			
		archive rooms	20	02	■				
		film and magnetic media storage	20	02	■				
		linen rooms	20	02	■				
		laundry rooms	24	07					■
		misc. shops	21	07/08			■		
		kitchens (large)							
J	Reception old and handicapped people		20	02	■				
L	Lecture halls, meeting rooms, auditoriums, halls used for several purposes	halls	20	02/07	■				
		stage areas	20	08		■			
		scenery storage rooms	20	08		■			
		costume rooms	20	07	■				
M	Retail premises, shopping malls	sales premises	20	08		■			
		areas for storage and handling of packing	20	08		■			
N	Restaurants and cafes		20	08		■			
O	Hotels and boarding houses		20	02	■				
P	Dance halls and gaming parlours		20	07	■				
R	Teaching establishments, holiday camps	classrooms	20	02	■				
		dormitories	20	08		■			
S	Libraries and documentation centres		20	02	■				
T	Exhibitions	halls and rooms	20	02	■				
		areas for recep ion of equipment and merchandise	20	07	■				
U	Healthcare establishments	bedrooms	20	02	■				
		incineration	21	07/08			■		
		operating rooms	20	07	■				
		centralised sterilisation	24	02/07					■
		pharmacies and labs with more than 10 l of inflammable liquids	21▫/23▪	02▫/07▪			□	■	
V	Places of worship		20	02	■				
W	Administrative premises, banks		20	02	■				
X	Indoor sports facilities	halls	20	07▫/08▪	□	■			
		premises containing refrigeration facilities	21	08			■		
Y	Museums		20	02	■				
PA	Covered open air facilities		23▫/25▪	08▫/10▪				□	■
CTS	Marquees and tents		44	08					■
SG	Inflatable structures		44	08					■
PS	Covered parking lots		21	08▫/10▪			□		■

Selection of enclosures according to the premises

Enclosure characteristics

Type of premises		Enclosure or cubicle						
		Wall-mounted enclosure		without door	with door	with door + canopy	with door + canopy + gasket	IP55
		Floor-standing enclosure		without door	with door	with door + canopy	with door + canopy + gasket	
		Cubicle		with fixed frame	with door + IP30 cover	with door + gasket + IP30 cover		wi h door + IP55 cover
		Min. IP/IK required		IP30/IK07	IP30/IK08	IP31/IK08	IP43/IK08	IP55/IK10
		IP	IK					
Technical premises								
Battery rooms		23	02/07				■	
Lifts (machine rooms and pulley rooms)		20	07▫/08▪	□	■			
Electrical rooms		20	07	■				
Control rooms		20	02	■				
Workshops		21▫/23▪	07▫/08▪			□	■	
Laboratories		21▫/23▪	02▫/07▪			□	■	
Air conditioning washers		24	07					■
Garages (used exclusively for parking vehicles) of an area not exceeding 100 m²		21	07			■		
Machine rooms		31	07/08			■		
Water pressurisers		23	07/08				■	
Boiler houses and adjoining premises (power in excess of 70 kW)								
Boiler rooms	coal fuel	51▫/61▪	07▫/08▪					□
	other fuel	21	07/08			■		
	electrical	21	07/08			■		
Fuel storage areas	coal	50▫/60▪	08					□
	oil	20	07▫/08▪	□	■			
	liquefied gas	20	07▫/08▪	□	■			
Cinder tips		50	08					■
Pump rooms		21▫/23▪	07▫/08▪			□	■	
Pressure reduction rooms (gas)		20	07▫/08▪	□	■			
Steam or hot water facilities		21▫/23▪	07▫/08▪			□	■	
Expansion vessel rooms		21	02			■		
Garages and car parks of an area exceeding 100 m²								
Parking lots		21	07▫/10▪			□		■
Carwash areas (inside premises)		25	07					■
Petrol stations	inside	21	07			■		
	outside							
Lubrication areas		23	08				■	
Battery recharging areas		23	07				■	
Workshops		21	08			■		
Public building (other than for the general public)								
Offices		20	02	■				
Libraries		20	02	■				
Archives		20	02	■				
Computer rooms		20	02	■				
Design offices		20	02	■				
Rooms containing reprographic machines		20	02	■				
Sorting rooms		20	07	■				
Refectories in restaurants or canteens		21	07			■		
Large kitchens								
Sports rooms		20	07▫/08▪	□	■			
Barracks		20	07	■				
Meeting rooms		20	02	■				
Waiting rooms, lounges, halls		20	02	■				
Medical consulting rooms, not fitted with specific equipment		20	02	■				
Demonstration and exhibition rooms		20	02/07	■				

Selection of enclosures according to the premises

Enclosure characteristics

Type of premises			Enclosure or cubicle				
		Wall-mounted enclosure	without door	with door	wi h door + canopy	with door + canopy + gasket	IP55
		Floor-standing enclosure	without door	with door	wi h door + canopy	with door + canopy + gasket	
		Cubicle	with fixed frame	with door + IP30 cover	wi h door + gasket + IP30 cover		with door + IP55 cover
		Min. IP/IK required	IP30/IK07	IP30/IK08	IP31/IK08	IP43/IK08	IP55/IK10
		IP / IK					
Farm premises or locations							
Alcohol (storage)		23 / 07				■	
Closed cattle sheds		35 / 07					■
Laundries		24 / 07					■
Wood storage rooms		30 / 10					■
Threshing floors		50 / 07					■
Distilling cellars		23 / 07				■	
Vat rooms (wine)		23 / 07				■	
Courtyards		35 / 07					■
Poultry barns		35 / 07					■
Stables		35 / 07					■
Fertiliser (storage)		50 / 07					■
Stables		35 / 07					■
Manure heaps		24 / 07					■
Haylofts		50 / 07					■
Haystacks, forage (storage)		50 / 07					■
Granaries, barns		50 / 07					■
Straw (storage)		50 / 07					■
Greenhouses		23 / 07				■	
Grain silos		50 / 07					■
Milking rooms		35 / 07					■
Pig sties		35 / 07					■
Chicken houses		35 / 07					■
Miscellaneous installations							
Fair facilities		33 / 08				■	
Water treatment facilities		24/25 / 07/08					■
Thermodynamic installations, air-conditioned rooms and cold rooms							
Height above ground	from 0 to 1.10 m	25 / 07					■
	from 1.10 to 2 m	24 / 07					■
	above 2 m under evaporator or water drain pipe	21 / 07			■		
	ceiling and up to 10 cm underneath	23 / 07				■	
Temperature ≤ -10 °C		23 / 07				■	
Compressor	room	21 / 08			■		
	integral unit located outside or on a terrace	34 / 08					

Selection of enclosures according to the premises

Enclosure characteristics

Type of premises	Enclosure or cubicle						
	Wall-mounted enclosure		without door	with door	with door + canopy	with door + canopy + gasket	IP55
	Floor-standing enclosure		without door	with door	with door + canopy	with door + canopy + gasket	
	Cubicle		with fixed frame	with door + IP30 cover	with door + gasket + IP30 cover		with door + IP55 cover
	Min. IP/IK required		IP30/IK07	IP30/IK08	IP31/IK08	IP43/IK08	IP55/IK10
	IP	IK					
Industrial facilities							
Slaughter houses	55	08					■
Batteries (manufacture)	33	07				■	
Acid (manufacture and storage)	33	07				■	
Alcohol (manufacture and storage)	33	07				■	
Aluminium (manufacture and storage)	51	08					■
Livestock (raising, fattening and sale)	45	07					■
Asphalt and bitumen storage	53	07					■
Wool beating and carding	50	08					■
Industrial laundry	24/25	07					■
Wood (processing)	50	08					■
Meat packers	24/25	07					■
Bakeries	50	07					■
Breweries	24	07					■
Brickworks	53	08					■
Rubber (production and processing)	54	07					■
Carbide (manufacture and storage)	51	07					■
Ammunition factories	53	08					■
Carton board (production)	33	07				■	
Quarries	55	08					■
Celluloid (manufacture of objects)	30	08		■			
Cellulose (manufacture)	34	08					■
Coal (depots)	53	08					■
Pork products	24/25	07					■
Boiler-making works	30	08		■			
Lime kilns	50	08					■
Rag (storage)	30	07	■				
Chlorine (manufacture and storage)	33	07				■	
Chrome-plating	33	07				■	
Cement works	50	08					■
Coking plant	53	08					■
Adhesives (production)	33	07				■	
Bottling lines	35	08					■
Liquid fuels (storage)	31▫/33▪	08			□	■	
Fats (processing)	51	07					■
Leather (tanning and storage)	31	08			■		
Copper (ore processing)	31	08			■		
Paint stripping	54	08					■
Detergents (manufacture)	53	07					■
Distilleries	33	07				■	
Electrolysis	33	08				■	
Ink manufacturing	31	07			■		
Fertilisers (manufacture and storage)	53	07					■
Explosives (manufacture and storage)	55	08					■
Iron (production and processing)	51	08					■
Spinning mills	50	07					■
Furriers (beating process)	50	07					■
Cheese factories	25	07					■
Gas (production and storage)	31	08			■		
tar (processing)	33	05				■	
Seed production	50	07					■
Metal engraving	33	07				■	
Oils (extraction)	31	07			■		
Petroleum products (manufacture)	33▫/34▪	08				□	■
Printworks	20	08		■			

Selection of enclosures according to the premises

Enclosure characteristics

Type of premises	Enclosure or cubicle						
	Wall-mounted enclosure		without door	with door	with door + canopy	with door + canopy + gasket	IP55
	Floor-standing enclosure		without door	with door	with door + canopy	with door + canopy + gasket	
	Cubicle		with fixed frame	with door + IP30 cover	with door + gasket + IP30 cover		with door + IP55 cover
	Min. IP/IK required		IP30/IK07	IP30/IK08	IP31/IK08	IP43/IK08	IP55/IK10
	IP	**IK**					
Industrial establishments (continued)							
Dairies	25	07					■
Public wash-houses	25	07					■
Liqueurs (production)	21	07			■		
Halogenated liquids (use)	21	08			■		
Inflammable products (storage and workshops where they are used)	21	08			■		
Magnesium (production, storage and use)	31	08			■		
Machine rooms	20	08		■			
Plastics (production)	51	08					■
Cabinet makers	50	08					■
Metals (processing)	31□/33■	08			□	■	
Combustion engines (tes ing of)	30	08		■			
Ammuni ion storage	33	08				■	
Nickel (ore processing)	33	08				■	
Household waste (processing)	54	07					■
Paper (production)	33□/34■	07				□	■
Paper (storage)	31	07			■		
Perfume (production and storage)	31	07			■		
Pulp mill	34/35	07					■
Paint (production and storage)	33	08				■	
Plaster (processing and storage)	50	07					■
Gunpowder factory	55	08					■
Chemicals (production)	30□/50■	08		□			■
Oil refineries	34/35	07					■
Salt preserve factories	33	07				■	
Soap (production)	31	07			■		
Saw mills	50	08					■
Metalwork shops	30	08		■			
Grain or sugar silos	50	07					■
Silk and artificial hair factories	50	08					■
Sodium carbonate (processing and storage)	33	07				■	
Sulphur (processing)	51	07					■
Spirits (storage)	33	07				■	
Sugar mills	55	07					■
Tanners	35	07					■
Dye works	35	07					■
Textile and fabric (production)	51	08					■
Varnish (production and applica ion)	33	08				■	
Glass works	33	08				■	
Zinc works	31	08			■		

Properties of metal enclosures

Enclosure characteristics

Merlin Gerin enclosures comply with standard EN 50298 for empty enclosures.
The sheet metal used for Merlin Gerin enclosures receives an anti-corrosion epoxy electrophoresis treatment and a coating of a thermosetting, polyester-resin-modified epoxy powder for colour and appearance.
This two-coat system provides excellent finish and corrosion protection.
The characteristics of this coating are much better than those of traditional epoxy powders:
- improved colour stability
- wider operating temperature range.

Mechanical properties of enclosures

Static load on doors, wall-mounted and floor-standing enclosures and	
Cubicle	400 kg
Floor-standing enclosure	64 kg
Wall-mounted enclosure	48 kg
Cubicle door	12 kg
Floor-standing enclosure door	4 kg
Wall-mounted enclosure door	4 kg

Mechanical properties of powder coated surfaces

Test conditions
Test piece made of 1 mm thick steel sheet, degreased, iron phosphated, final rinsing with 100000 Ω cm DI water, 15 microns of anti-corrosion electrophoresis treatment and 35 microns of powder paint.

Adhesion (cross-hatch and pull-off)	class 0 required	(ISO 2409)
Impact strength (1)	> 1 kg/50 cm	(ISO 6272)
Mandrel bending test (2)	< 10 mm	(ISO 6860)
Persoz hardness	300 s	(ISO 1522)

(1) *No cracking of the paint film after dropping a weight of one kilogram on the test piece from a height of 50 centimetres.*
(2) *Film cracks over a length of 10 millimetres maximum.*

Artificial ageing test on powder coating

Test conditions:
Two tests carried out on the same 1 mm thick steel sheet test piece.
- cyclical damp-heat test:
  - as per standard IEC 68-2-30
  - six 24-hour cycles at temperatures higher than 40°C
- continuous resistance to neutral salt mist:
  - the tests were carried out over a period of 400 hours, far more than the 48 hours required by the standard for indoor installations
  - as per standard IEC 68-2-11 and ISO 7253
  - 400 hours without blistering for normal surface on test piece
  - 250 hours for a scratched surface.

Evaluation of corrosion as per ISO 4628:
- adhesion: class ⩽ 1
- blistering: degree 1 dim.1
- rusting: Ri 1
- cracking: class 1
- flaking imp. 1 dim. 1

Propagation of corrosion under scratch with respect to the scratch axis: 3 mm max.

Properties of metal enclosures

Enclosure characteristics

Chemical properties of powder coating

Tests carried out at ambient temperature on phosphated test pieces coated with a 150 to 200 micron film.

Test duration (months)			2	4	6	8	10	12
Acids		Concentration						
	Acetic	20 %						
	Sulphuric	30 %						
	Nitric	30 %						
	Phosphoric	30 %						
	Hydrochloric	30 %						
	Lactic	10 %						
	Citric	10 %						
Bases	Soda	10 %						
	Ammonia	10 %						
Water	Distilled water							
	Seawater							
	Tap water							
	Diluted bleach							
Solvents	Petrol							
	High alcohols							
	Aliphatics							
	Aromatics							
	Ketones, esters							
	Tri-perchlorethylene							

Film intact.

Film damaged (blisters, yellowing, loss of shine).

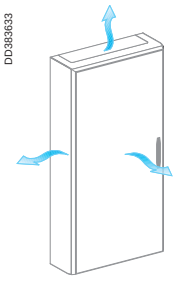
Thermal management of switchboards
General

A switchboard is designed for operation under normal ambient conditions.
Most devices do not operation correctly outside a temperature range of -10 and +70°C.
It is therefore important to maintain the switchboard internal temperature within this temperature range by:
- correctly sizing the switchboard during design
- correcting the temperature using suitable means.

Management of the internal temperature

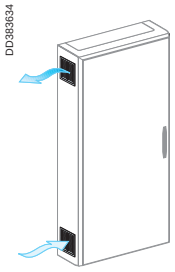
Cooling
There are a number of way to dissipate heat from the switchboard.
The drawings below present the various means.

Convection



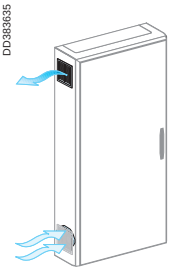
IP > 31

Ensured naturally in Prisma Plus enclosures



IP ⩽ 31

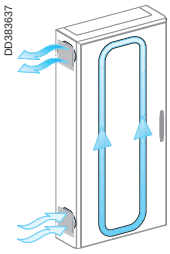
Forced-air ventilation



IP ⩽ 54

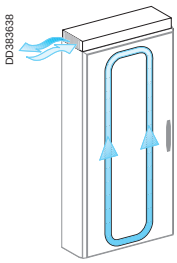
Using fans, it significantly increases the thermal capacity of an enclosure.

Forced-air ventilation with air-air exchanger



IP > 31
On special request.

Forced convection and cooling



IP > 31

For these extreme cases, many installers prefer to set up the switchboards with other electrotechnical and electronic devices in air-conditioned electrical rooms.

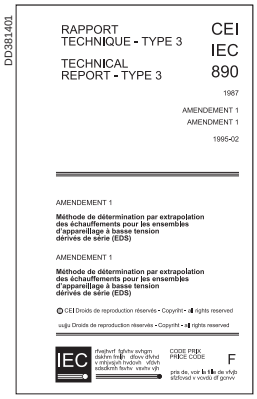
Heating
The means employed to raise the internal temperature in a switchboard is a resistor-based heater, used to:
- avoid condensation by limiting variations in temperature
- ensure that the switchboard does not freeze.

Thermal management of switchboards
General

Calculation of the internal temperature

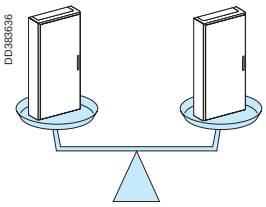
Calculation of the temperature is the means to check that the enclosure can evacuate the dissipated power of the installed devices.

Important note
Correct thermal management of the switchboard depends on compliance with the installation requirements for the distribution system (power circuits).
Incorrect installation will have major consequences on the connected device, but almost none on the internal temperature of the enclosure.
Once the circuit has been correctly sized, it is necessary to check whether the assembly (devices + distr bution system + cables) have a level of dissipated power P(W) ⩽ the P(W) that the enclosure can handle.

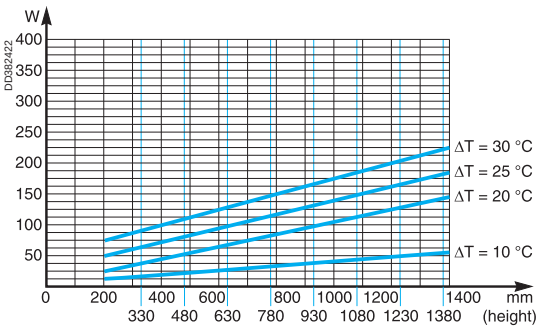


Method defined by IEC 890 technical report
This IEC guide for switchboards proposes a calculation method to determine three levels of internal temperature, depending on the dissipated power of the devices and distribution blocks installed in the switchboard.
Users can consult this document when it is necessary to determine precisely the internal temperature in view of optimising the switchboard.

On request, Schneider Electric can carry out a thermal study to check that the installed assembly and the thermal capacity of the enclosure are compat ble.



Comparative method
A number of qualified and tested configurations serve as the basis for indicating the thermal capacity of Prisma Plus enclosures.
This is en empirical means to check whether the dissipated power of the desired configuration is close to that of a tested configuration.



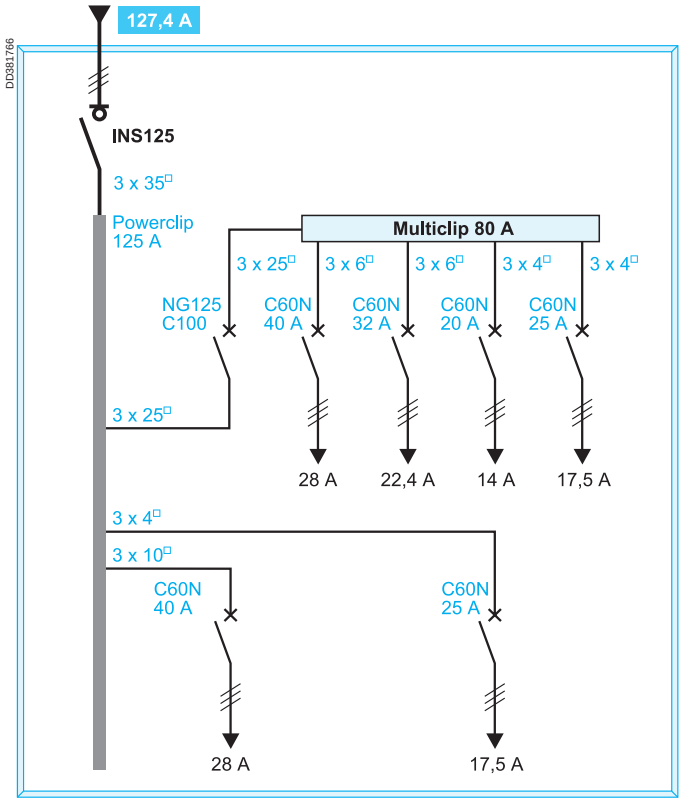
Method using charts taking into account enclosure characteristics
To speed up calculations, Schneider Electric produces charts based on the company's experience and a number of assumptions on the installation.
They can be used sufficiently precisely to determine the variations in temperature and the dissipated-power levels for the different types of wall-mounted enclosures, floor-standing enclosures and cubicles.

Thermal management of switchboards
Comparative method

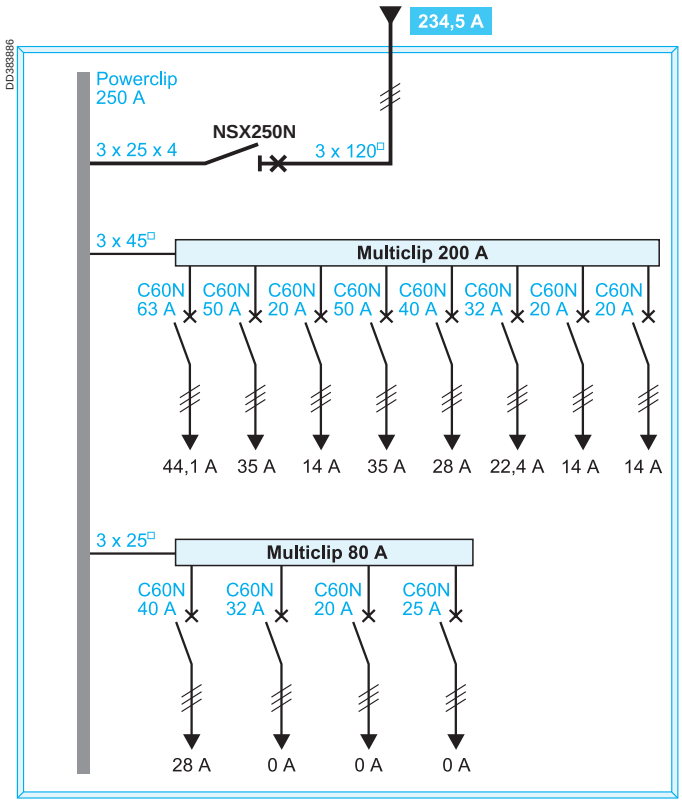
Comparative method

You will have no problems with your switchboard if:
- the volume of the enclosure is greater than that of the tested enclosure with a similar assembly
- the P(W) of the installed assembly is less than the P(W) of the tested configuration in the same size enclosure.

Pack enclosure, 3 rows, IP30
Diversity factor: 0.7
Ambient temperature around the switchboard: 35 °C
P(W) = 95 W



Wall-mounted enclosure, 23 modules, IP30
Diversity factor: 0.7
Ambient temperature around the switchboard: 35 °C
P(W) = 170 W

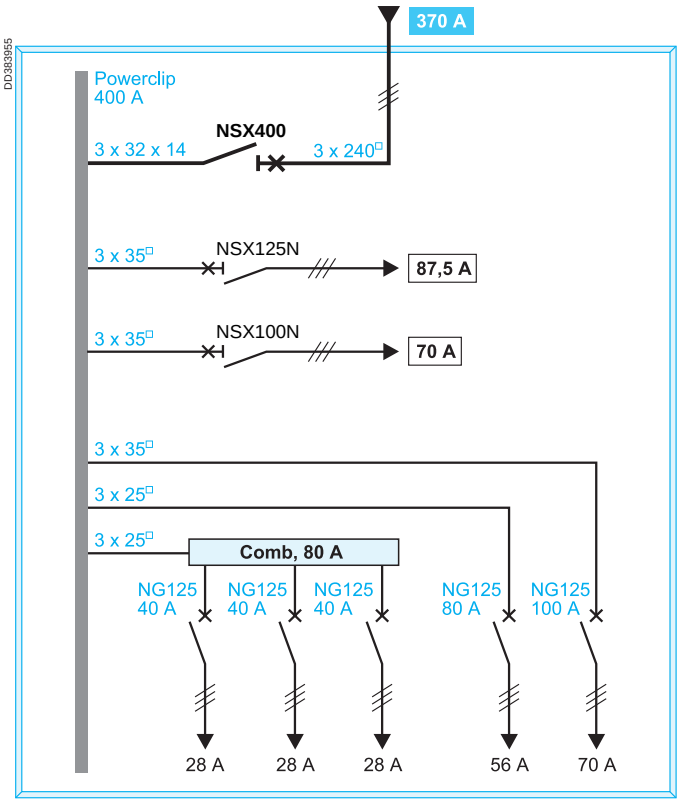


Thermal management of switchboards
Comparative method

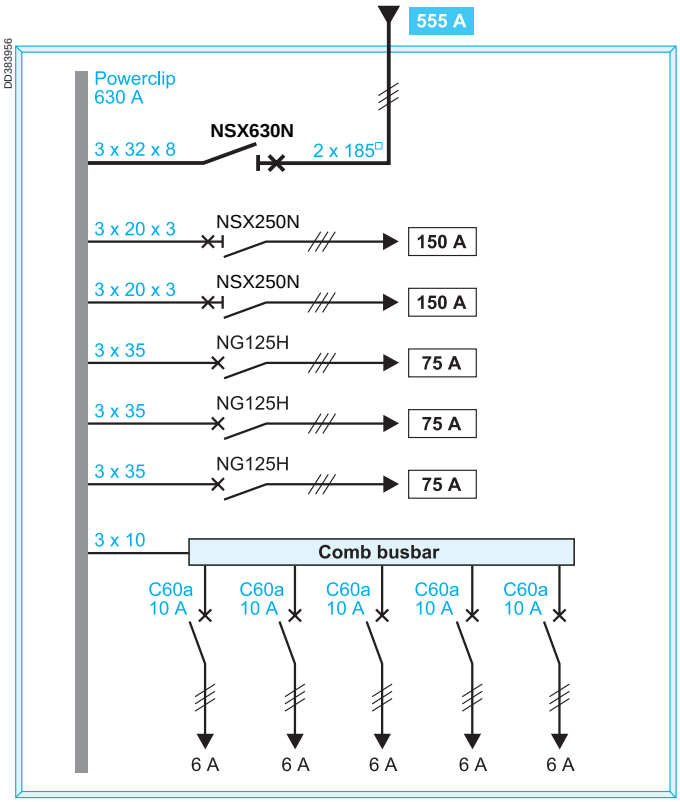
Comparative method

You will have no problems with your switchboard if:
- the volume of the enclosure is greater than that of the tested enclosure with a similar assembly
- the P(W) of the installed assembly is less than the P(W) of the tested configuration in the same size enclosure.

Wall-mounted enclosure, 23 modules, plain door, IP30
Diversity factor: 0.7
Ambient temperature around the switchboard: 35 °C
P(W) = 200 W

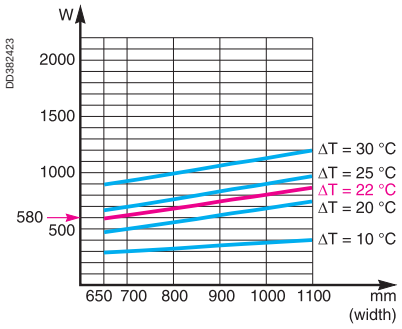


Floor-standing enclosure, 33 modules, IP30
Diversity factor: 0.7
Ambient temperature around the switchboard: 35 °C
P(W) = 270 W



Thermal management of switchboards
Example

Once the dissipated power of the devices has been determined and the enclosure with its IP selected, transfer the results (sum of the dissipated power and width of the device zone) to the chart corresponding to the enclosure IP.



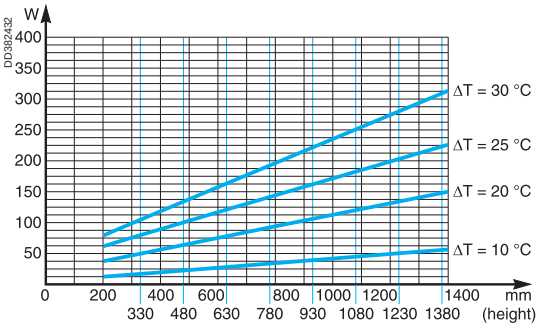
Draw a line parallel to the others on the chart and read the corresponding difference in temperature.
For the given example, the heat rise is 22°C at mid-height in the enclosure.
The internal temperature = external temperature + heat rise
= 35°C + 22°C = 57°C
57°C < 60°C stipulated by the standard, i.e. the result is acceptable for an IP3 cubicle.
This gives roughly:
Internal temperature = 60°C at mid-height in the enclosure for a low IP value.
Internal temperature = 70°C at mid-height in the enclosure for a high IP value.

Thermal management of switchboards
Charts

Quick calculation charts for internal temperatures

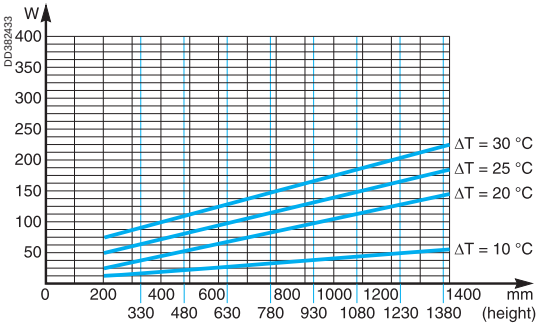
The indicated internal heat rise is that measured at mid-height in the enclosure.

IP3X wall-mounted enclosure



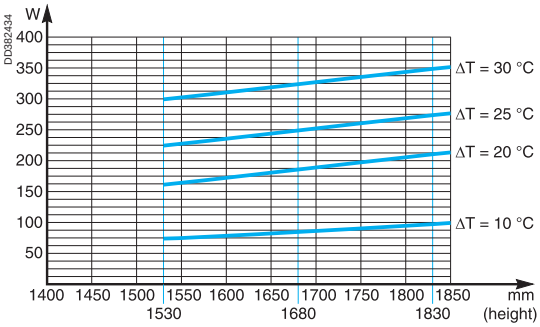
Test conditions:
600 mm wide enclosure mounted directly on wall without fixing lugs.

IP43 wall-mounted enclosure



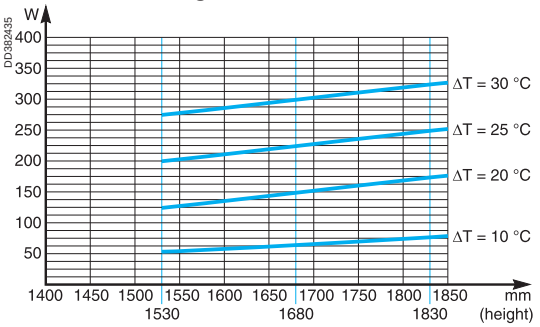
Test conditions:
600 mm wide enclosure mounted directly on wall without fixing lugs.

IP3X floor-standing enclosure



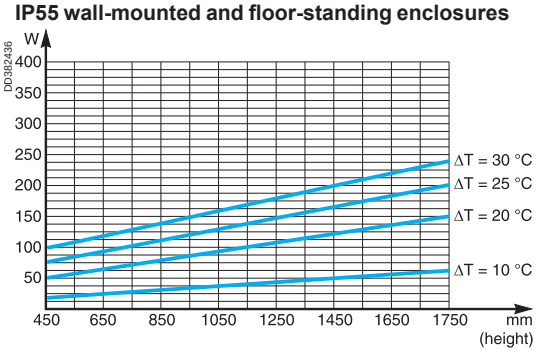
Test conditions:
600 mm wide enclosure on floor against a wall.

IP43 floor-standing enclosure



Test conditions:
Mounted on wall with fixing lugs or on mounting uprights.

IP55 wall-mounted and floor-standing enclosures



Test conditions:
600 mm wide enclosure mounted directly on wall without fixing lugs or mounting uprights.

Thermal management of switchboards
Ventilation

Switchboard ventilation

The air enters the lower section via the fans and exits the upper section:
- through a ventilated roof
- or through a ventilation opening.

The air throughput of the fans is determined by the equation:

$$D = 3.1 \times \left(\frac{P}{\Delta T} - KS\right)$$

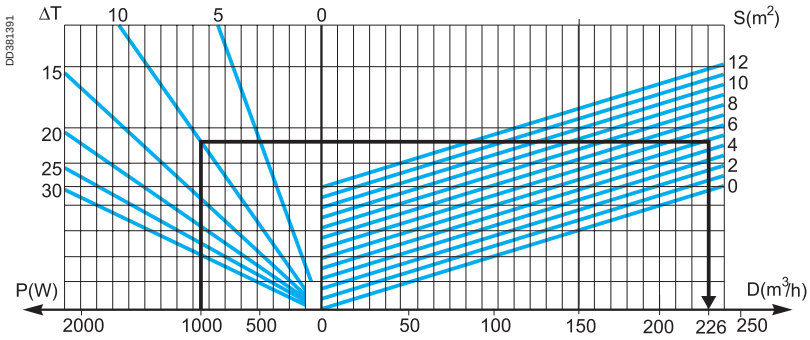
The chart below can be used to determine the necessary throughput, based on the dissipated power, the difference in temperature (internal - external) and the exposed surface area of the enclosure.

Example

Consider an IP3X cubicle, 650 mm wide and 400 mm deep, containing components (devices, connections, busbars, etc.) dissipating 1000 W.
The ambient temperature around the cubicle is 50°C.
Given that the average temperature at mid-height should not exceed 60°C, the difference in temperature ΔT is equal to 60 - 50 = 10°C.
The exposed surface of the cubicle (non adjacent to a wall or other cubicle) is 4.46 m².
(back = 1.3 m², front = 1.3 m², roof = 0.26 m², side panels = 1.6 m²).
What is the necessary throughput of the ventilation system?
The throughput can be calculated as:

$$D = 3.1 \times \left(\frac{1000}{10} - 5.5 \times 4.46\right)$$

D = 234 m³/h.
In the range of Prisma Plus accessories, select a system with a throughput of 300 m³/h.



Calculation data

P : power dissipated by the devices, connections and busbars (in Watts)
$\mathbf{P_r}$: power of the heating resistor (in Watts)
$\mathbf{T_m}$: maximum internal temperature in the device zone (in °C)
$\mathbf{T_i}$: average internal temperature (in °C)
$\mathbf{T_e}$: average external temperature (in °C)
$\Delta \mathbf{T_m} = T_m - T_e$
$\Delta \mathbf{T} = T_i - T_e$
S : total free surface area of the enclosure (expressed in m²)
K : thermal-conduction coefficient of the material (W/m² °C)
K = 5.5 W/m² °C for painted sheet metal
D: ventilation throughput (in m³/h)

Note: *the dissipated power of each device is provided by the manufacturer. Add approximately 30 % to account for the connections and the busbars.*

Thermal management of switchboards
Heating

Switchboard heating

The heating resistor, placed in the bottom of the switchboard, maintains the internal temperature 10°C higher than the external temperature. When the switchboard is not in operation, the heater compensates the dissipated power normally emitted by the switchboard.
The power of the heating resistor is calculated:
- using the equation: Pr = (ΔT x S x K) - P
- or using the charts below, based on the exposed surface area of the enclosure and the desired difference in temperature.

Chart to determine the heating resistor for small wall-mounted enclosures (exposed surfaces ≤ 1 m²)

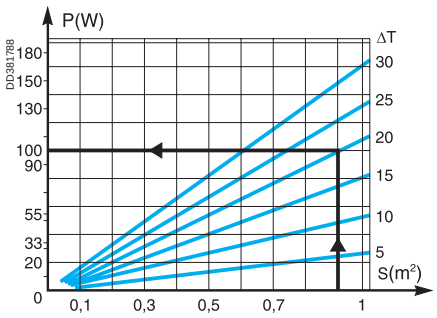
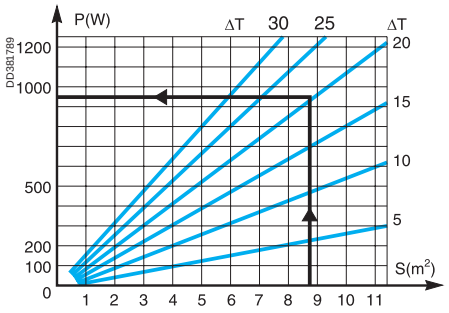


Chart to determine the heating resistor for all types of enclosures and cubicles



Calculation data

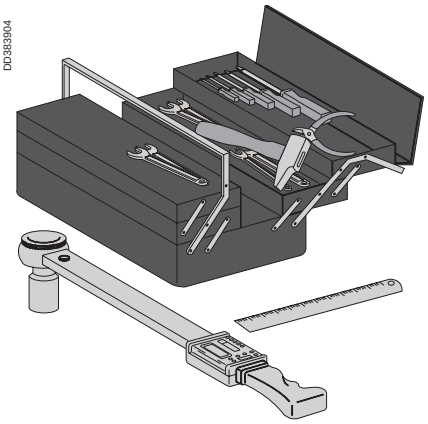
P : power dissipated by the devices, connections and busbars (in Watts)
P_r : power of the heating resistor (in Watts)
T_m : maximum internal temperature in the device zone (in °C)
T_i : average internal temperature (in °C)
T_e : average external temperature (in °C)
$\Delta T_m = T_m - T_e$
$\Delta T = T_i - T_e$
S : total free surface area of the enclosure (expressed in m²)
K : thermal-conduction coefficient of the material (W/m² °C)
K = 5.5 W/m² °C for painted sheet metal

D: ventilation throughput (in m³/h)

Note: *the dissipated power of each device is provided by the manufacturer. Add approximately 30 % to account for the connections and the busbars.*

Schneider Electric E-27

Tools required for mounting and connection



- Vacuum cleaner to clean the switchboards
- Ratchet wrench with sockets
- Torque wrench with sockets and ring bits to tighten the electrical connections to the correct torque (max. torque 50 Nm)
- Open-ended spanners (15 to 27 mm).
- Electrician's knife
- 7, 8, 10, 13, 16, 17 and 19 mm sockets
- Bit holder socket
- 4, 5, 6, 8 and 10 mm hexagonal-head bits
- Pozidriv no. 1, 2 and 3 bits
- Rubber mallet
- Level.
- Measurement and inspection tools and instruments
- Drill
- Semi-circuit nosed pliers
- Cable-tie pliers
- Wire stripper
- Crimping tool
- Diagonal cutter
- Wire cutters
- Flat-nosed pliers
- Bit holder for screwdriver
- Extension
- Electric saw
- Jig saw
- Clamp for cubicle alignment
- Buzzer or tester
- 3, 5, 4, 5.5 and 8 mm flat screwdrivers
- Posidriv no. 2 crosshead screwdriver (to mount handle)
- Hydraulic jacks that can be operated in horizontal position to lift cubicles and move them sideways if necessary.
- Coloured, indelible and temperature resistant acrylic varnish.
- Electric screwdriver

Note. *A Facom brand torque wrench is available with a capacity of 75 Nm and a thin shape. It is recommended for tightening under difficult access conditions.*

Part numbers:

- SP3723 = wrench handle (essential)
- SP3721 = extra-flat ratchet adapter (essential)
- SP3722 = ratchet for ordinary sockets (optional) for mounting on handle SP3723
- SP2709 = extra-flat 13 mm short socket
- SP2709A = extra-flat 13 mm long socket
- SP4369 = extra-flat 16 mm short socket
- SP4370 = extra-flat 16 mm long socket
- SP2710 = extra-flat 17 mm short socket
- SP4371 = extra-flat 19 mm short socket
- SP4372 = extra-flat 19 mm long socket

Cable sizes according to permissible current

Schneider Electric provides cabling recommendations according to the rating of the circuit breaker.
The size of cables must be selected according to:
- the level of current
- the ambient temperature around the conductors
- the degree of protection of the switchboard.

The tables below take into account the installation conditions for each type of device (permissible temperature at connection terminals, etc.).
They follow the temperature derating values for installed devices in all cubicles with cover panels rated IP ⩽55
- switchboard internal temperature is 60°C
- connections using copper cables.

Connection of circuit breakers

Size of cables (mm²)	Permissible current (A)			
	Cables tied individually		Cable tied together	
	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31
1.5	16	14	14	12
2.5	25	25	22	20
4	32	29	28	24
6	40	39	36	33
10	63	55	55	50
16	90	77	80	70
25	110	100	100	93
35	135	125	125	120
50	180	150		
70	230	190		
95	275	230		

Connection of other devices

Size of cables (mm²)	Permissible current (A)			
	Cables tied individually		Cable tied together	
	IP ⩽ 31	IP > 31	IP ⩽ 31	IP > 31
1.5	13	12	12	10
2.5	23	21	20	19
4	28	26	25	22
6	36	35	32	30
10	55	50	50	46
16	80	70	72	63
25	100	90	90	84
35	120	115	110	103
50	165	135		
70	210	176		
95	250	210		

Connection of NSX100 to 630 A

Devices	NSX100	NSX160	NSX250
Size (mm²)	25	50	95

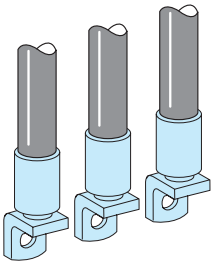
Note: *Schneider Electric recommends connecting NSX400/630 circuit breakers with insulated flexible bars or rigid bars*
See page E-5.

Note: *the values indicated above have been validated for Prisma Plus switchboards.*

Connection accessories

Tubular lugs for incoming connection blocks

DD382788



Maximum size of lugs for connection to the different incoming connection blocks.

	Standard Cu lugs	*Narrow Cu lugs*	*Bimetal narrow lugs*
Incoming connection block for NSX-INS250 supplied via the top or bottom, cat. no. 04066 or 04067	150 mm²	240 mm²	185 mm²
In-duct incoming connection block for NSX630 supplied via the top or bottom, cat. no. 04076	240 mm²	300 mm²	300 mm²

Narrow bimetal lugs

Cat. no. selection

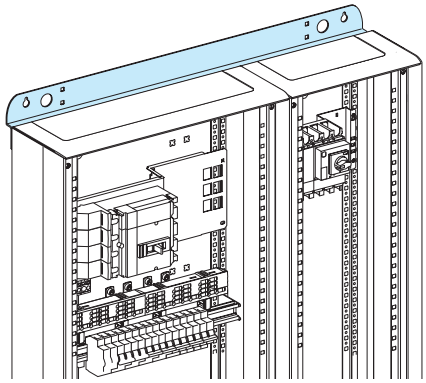
Cat. no.	*Cable size (mm²)*	*Quantity*
Lugs for aluminium cables(1)		
29504	150	3
29505	150	4
29506	185	3
29507	185	4
32504	240	3
32505	240	4
32506	300	3
32507	300	4

(1) *Supplied with 2 or 3 interphase barriers.*

Storage recommendations

Practical information

DD382187



Cubicles must be stored in upright position in a dry and ventilated location, sheltered from rain, weather, dripping and running water, dust and chemical agents.

Apart from IP55 cubicles, never store enclosures outdoors, even under an awning or tarp.

The cubicles should if possible be left in their packing until they are installed. In this way they are protected against all risks that may be encountered on the site (impacts, splashes, etc.).

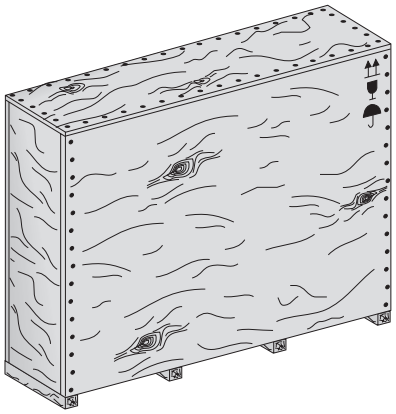
Acceptable storage temperatures are -25 °C to +55 °C (or up to +70 °C for short periods not exceeding 24 hours).

Given their heavy weight, cubicles should be stored on a stable, rigid and flat floor to avoid any risk of tipping during storage or handling.

Packing information

Storage/Packing

DD383912



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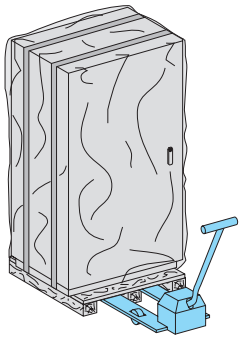


Receiving the switchboard

On receipt of the equipment and before handling it, check that the cases and packing materials used for transportation have not been damaged and that all items on the packing list have been effectively delivered.

- Even if the packing appears to be in good condition, do not hesitate to unpack the equipment in the presence of an authorised transport agent.
- Check the contents and weights of the shipping units. Thoroughly check the equipment to make sure that no damage or shocks have occurred that could impair insulation or operation.
- If necessary, check that the information on the switchboard nameplate, located on the incoming cubicle, complies with the information indicated on the delivery slip.
- In case of damage or missing parts, inform the transport agent by registered mail.
- After this inspection, refit the plastic protective cover.

Each shipping unit is marked with:

- project number
- weight
- packing unit information (packing unit number and total quantity)
- position of the centre of gravity
- storage and handling instructions.

Standard packing

The cubicles are protected by a plastic cover in a crate.
The following accessories are attached inside the switchboard:

- installation accessories (lifting/fixing cross-members and external fixing lugs)
- preliminary installation accessories: plinth raisers
- additional nuts and bolts and other mounting hardware
- panels to be fitted after on-site connection: canopies, gland plates
- a set of drawings
- device user manuals
- a tube of Swiss white varnish.

Sea packing

The cubicles are protected by a heat-sealed plastic cover containing desiccant bags and are installed in a ventilated wooden or plywood crate.

Sorting

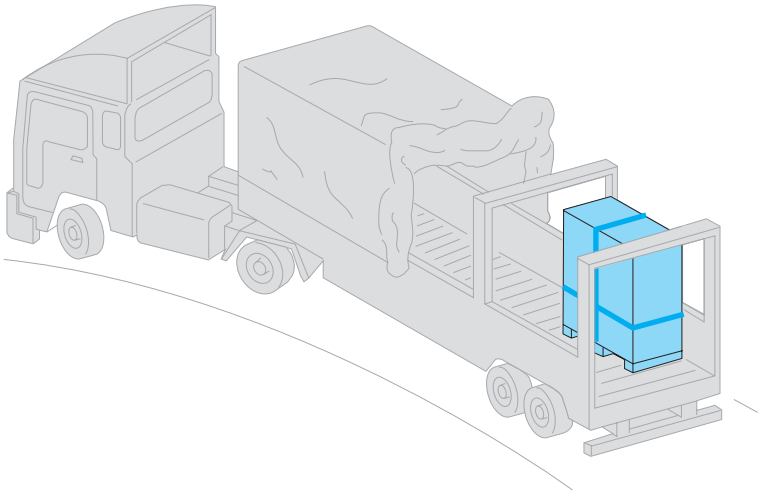
In order to sort the different types of packing material, specific waste recovery bins are required.

Transport

Practical information

After loading, check that the equipment is firmly secured in the truck to avoid any risk of damage during transport.

DD383917



Enclosures supplied as kits should be transported horizontally if possible.

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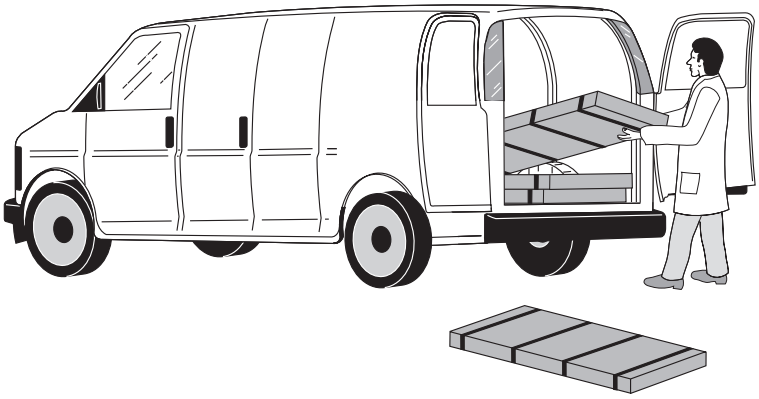

Connection of power cables

Installation/Connection

■ To ensure protection of persons, first connect the switchboard protective conductor to the earth electrode.
■ Tie the cables as close as possible to the connections to avoid any mechanical stresses on the device terminals. When not using cable glands, also attach the cables near to the cubicle entry point.
■ Cables must never be in contact with or passed between live conductors.
■ Sharp edges of the framework must be protected where cables pass to avoid damaging the conductors.
■ Comply with a minimum radius of curvature of 6 to 8 times the cable outside diameter.
■ All power connections must be made with class 8.8 mounting hardware and elastic contact washers, tightened to the torque indicated in the table below.
■ When connecting aluminium cables to copper terminals, use bimetal lugs or interfaces.
■ Separate the different types of circuits into separate cable bundles (power, control, 48 V, 24 V, DC, AC, etc).

Cable bundles

Cable cross-sectional area (mm^2)	Max. number of cables per bundle
CSA ⩽ 10	8
16 < CSA ⩽ 50	4
CSA ⩾ 50	Tie individually

Tying the cable bundles

Type of tie	Maximum Icw (kA/rms 1s)	Distance between ties (mm)
Width: 4.5 mm Load: 22 kg	10 15 20	200 100 50
Width: 9 mm Load: 80 kg	20 25 35 45	350 200 100 70

For cable sizes of 50 mm^2 or more, use 9 mm wide fixing ties.

Recommended tightening torque for mechanical and electrical connections with 8.8 class screws.

Diameter of screw	Tightening torque (Nm) (with nut + contact washer)
M3	1.5
M4	3.5
M5	7
M6	13
M8	28
M10	50
M12	75

Notes

Notes

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