ABB

Gemini.
The new resistance.

Flexible thermoplastic enclosures
for harsh environments.

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- **High degree of protection for harsh outdoor environments**
- **Easy to install**
- **Flexibility and Strength**

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Durability and resistance are crucial for the protection of your control panel infrastructure.

Thanks to the co-injection technology, Gemini thermoplastic enclosures guarantee excellent performance, great resistance to chemicals, IP66 protection and continuous operation in any environmental context, even in particularly severe operating conditions.

Table of contents

Automation and multi purpose enclosures
Strong outside and versatile inside

Whether you are near the sea or close to a swimming pool, from scorching to icy temperatures, in a dusty, dirty and harsh environment, Gemini insulating enclosures fully protect the integrity of your control panel infrastructure.
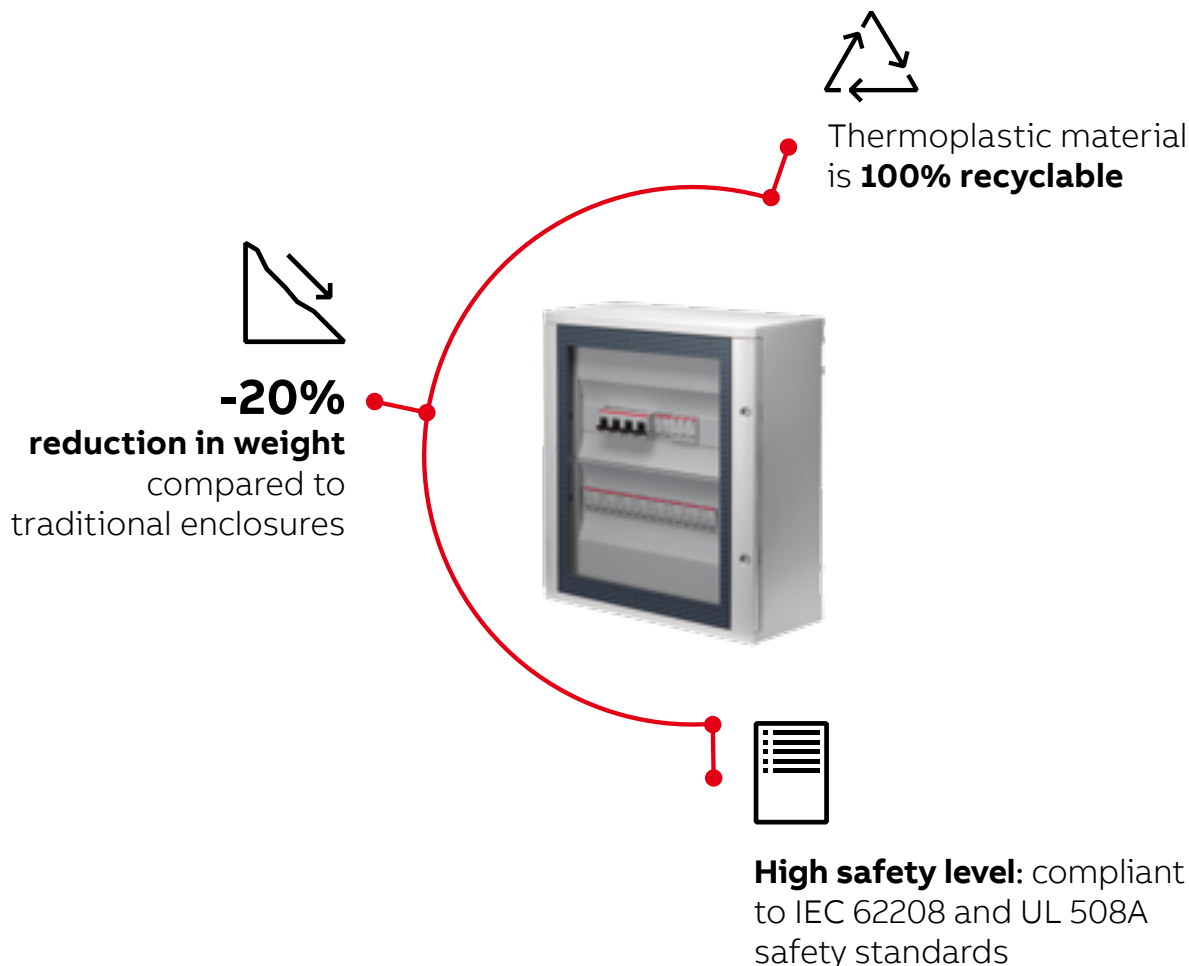
ABB's Gemini thermoplastic enclosures are designed for use in demanding environments since they are resistant, durable and extremely sturdy.

Moreover, they are developed according to current international regulations and standards, in order to provide a safe solution to meet our customers' requirements.

In particular, Gemini complies with IEC 62208 and UL 508 safety standards and it guarantees IP66 degree of protection from infiltration of any solid bodies, even those which are extremely small like dust particles or grains of sand as well as protection against harmful water and humidity.

In addition to this, Gemini retains its characteristics for a long time since it is not subject to corrosion by chemical or atmospheric agents. According to test performed on:
• Saline environments (IEC 60068-2-52)
• Weathering (IEC 60068-2-5)
• Permanent sun exposure (IEC 60068-2-5)

Thermoplastic material is **100% recyclable**

-20%
reduction in weight
compared to traditional enclosures

High safety level: compliant to IEC 62208 and UL 508A safety standards

ABB can offer a complete, integrated range of enclosures for electrical distribution safety and reliability which guarantees the protection of people and assets.

SR2, SRX and Gemini are the most resistant range of enclosures: reliable in extreme conditions and suitable for outdoor installations thanks to the special mechanical properties of stainless steel and plastic material.

Gemini's plastic enclosures, combined with the SR2 and SRX metal enclosures, represents the perfect solution for all the installation needs for automation, control & command and distribution applications.

IP66 **IK10**
Designed for harsh environments

UL
Types 1, 3R, 4, 4X, 12

Eco-compatible materials

Gemini: the improved range
Robust and flexible thermoplastic enclosures

Six different box sizes with internal space which accomodates from 24 to 216 DIN modules

Opaque or transparent doors, opening at more than 180°.

A single handle operates the door closing mechanism and it can be ordered separately.

Gemini is compliant to IEC62208 and UL 508A standards. IP66 certifies Gemini is completely protected against the infiltration of solid bodies and is resistant to the penetration of jets of water similar to sea waves.
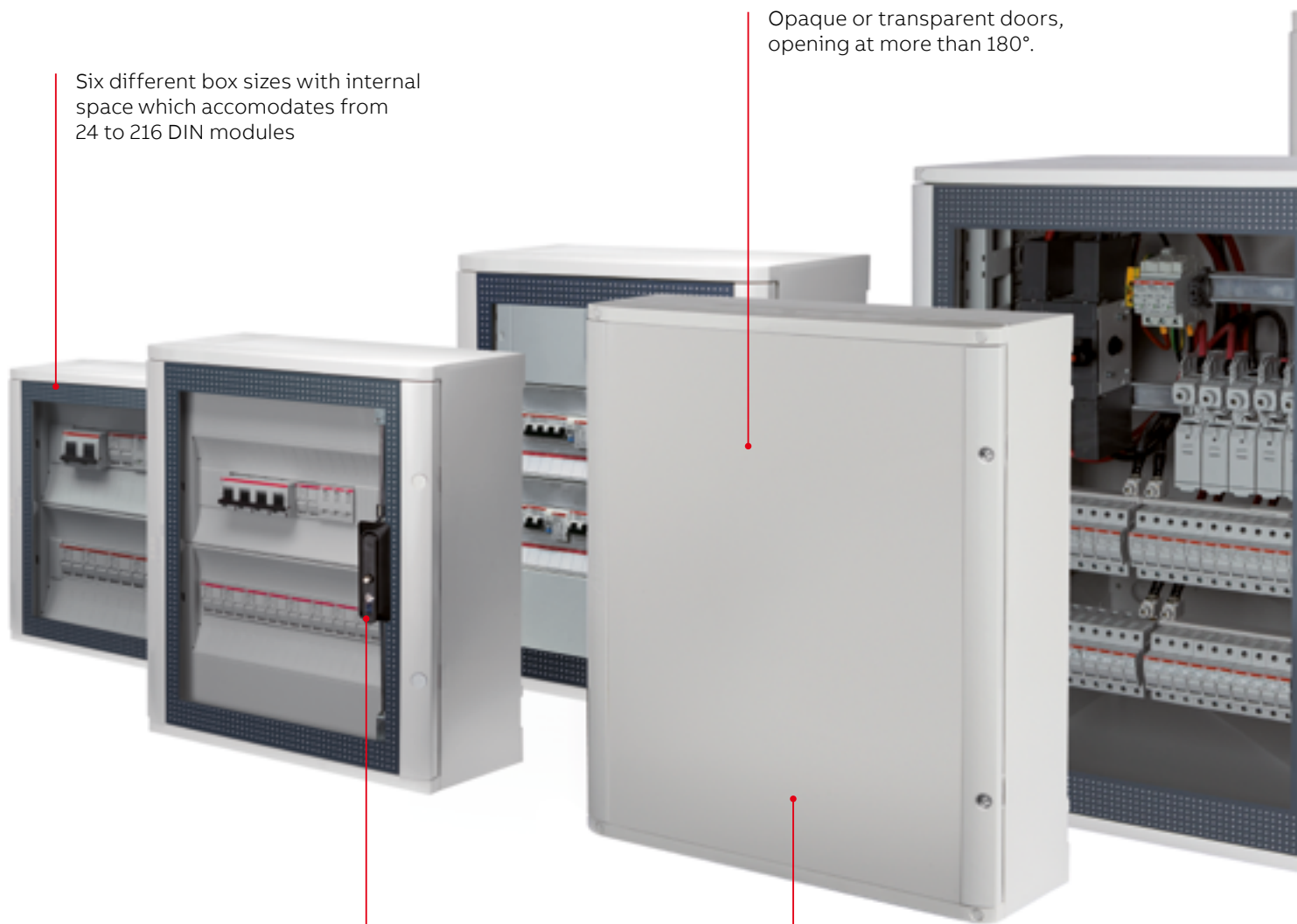
High resistance: flexible and extremely sturdy. Resistant to harsh environments, chemical and atmospheric agents.

Suitable for outdoor installations, in any operating conditions: IP66, IK10, GWT=750°C, -25°C to 100°C

Easy to install

Ready-to-use solutions are available to quickly install all the devices without using tools.

High degree of protection

Extremely sturdy, even against 20 joules impact, dust and water jets (IK10 and IP66 degree of protection), able to operate in a wide range of temperatures (25 up to 100°C), exceptionally resistant to UV and chemical agents and compliant with IEC 62208 and UL 508A standards.

Adaptable to customers' requirements

Available in 6 sizes and with transparent or blind door, with full metal and plastic base plates. Gemini can be used even in very difficult application circumstances and extreme weather conditions.

Eco-friendly

Thanks to co-injection technology, Gemini's thermoplastic not only ensures sturdiness, mechanical features and resistance to oils but it also reduces at the same time the environmental impact at the end of its useful life since it's 100% recyclable.

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The thermoplastic co-injection molding process

It's like a "sandwich" of two materials: a compact external covering and an expanded core.
This technology ensures the highest level of mechanical protection against impacts (IK10) .

Easy to install
Versatile and simple. To meet any application.

Offering the best technology for more reliable energy distribution solutions, by protecting people, equipments and resources.

ABB's Gemini enclosures provide a real system of integrated and complementary functions making them configurable into different applications: for automation, distribution and combined automation and distribution.

Gemini is designed to be perfectly compatible with ABB components for low voltage control and monitoring. In mixed applications, the Gemini enclosure is designed to be fitted with System pro M modular devices and Tmax XT moulded-case circuit breakers. To respect safety standards, all the enclosure components are easy to fit and can be fixed to the base plate or to the box frame without using any tools.
Wiring operations are carried out from the front followed by snapping the base plate or the distribution frame onto the box.
The patented frame is fitted with the cable duct incorporated in the uprights.

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Gemini is also flexible thanks to six different box sizes and internal space to accommodate from 24 to 216 DIN modules.

For control and command applications, three typologies of base plates are available: standard metal, perforated metal and insulated.

Lightweight thermoplastic material makes handling operation easier compared to traditional enclosure, for easier handling.
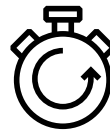
- Few parts: **snap-on fixing**, **no tools needed**
- **Pre-assembled hinges**
- Door with **180 degree rotation**
- Frame with **integrated vertical wiring duct**
- Frontal cabling: **comfort in the wiring process**
- **A wide range of accessories for automation and distribution applications**

01 Gemini doors open at an angle of more than 180° giving easy access to the devices installed inside the switchboard.

02 No tools are needed for installation. The doors hook onto the hinges with special hinge pins and are reversible.

03 The frame can be extracted to make wiring operations easier at the workbench.

04 The fixing hooks supplied in the standard versions are applied without having to use tools.

05 Fixing hooks and feet allow the frame to be snap-mounted inside the box.

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High degree of protection
Designed to operate in harsh environments

Gemini is developed and designed by ABB together with the direct collaboration of panel builders, installers and designers in order to create insulating enclosures to better face extreme weather conditions.

Gemini represents the best solution for both distribution and automation (control and command) applications.

For a valid enclosure, the degree of protection is an important factor. Gemini thermoplastic enclosures are totally protected against the infiltration of solid bodies thanks to an IP66 degree of protection (IP30 with the door open and with the appropriate components installed) and a double insulation, even in the event of indirect contact.

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They are suitable for environments with extreme temperatures, in outdoor applications and severe conditions.

Thermoplastic material retains its characteristics for a long time since it's not subject to corrosion from chemical and atmospheric agents such as dust and sand. In Mining or Construction applications as well as manufacturing plants, Gemini withstands harsh chemicals with high levels of performance.

Typical examples of some Gemini applications can be seen in Manufacturing sites, Solar power plants, greenhouses, chemical plants and in any other environments where distribution and automation demand specific safety requirements and service continuity.

It is particularly recommended in photovoltaic and greenhouse applications, also because of its strong resistance to UV rays.

- **IP66 degree of protection** (IP30 with the door open and with the appropriate components installed)
- **Double insulation from dust and water jets**, even in the event of indirect contact
- Adaptation to environments with extremely high or low temperatures **(-25°C to 100°C)**, in outdoor applications and in severe conditions
- **Resistance to aggressive chemical agents and UV radiation**
- Resistance to fire and abnormal heat **(GWT up to 750°C)**.
- Insulation Voltage: **1000 Vac; 1500 Vdc**
- UL Type **1, 3R, 4, 4X, 12**

Additional tests completed
- Dust/sand resistance (factory internal tested)
- Saline environments (according to IEC 60068-2-52)
- Weathering (according to IEC 60068-2-5)
- Permanent sun exposure (IEC 60068-2-5)

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Photovoltaic

In a typical photovoltaic plant the direct current
section comprises a generator consisting of
strings composed of photovoltaic modules
connected in series. The Gemini series of IP66
enclosures are ideal for use as field combiners or
as parallel switchboards, i.e. for outdoor
installation near the modules. ABB has a range
which is currently unique on the market, and has
developed a family of plug & operate solutions, i.e. a
series of finished, wired and certified switchboards
to meet the needs of a huge range of plant types:
from single string for residential applications to
large-scale solar fields (for more information see
specific documentation on abb.com).

Adaptable to customers' requirements
Widest range and numerous accessories for a complete solution

With Gemini, you can benefit from a wide range of enclosures with different dimensions and the possibility to arrange the devices into the DIN-Rail as you need. Moreover, Gemini enclosures have a wide range of accessories for both automation and distribution applications, ensuring maximum versatility and integration.
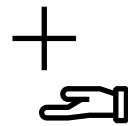
Accessories

- Various locking systems can be installed (triangular, squared, with handles and ciphered type
- Ventilation and anti-condensation kits: protecting devices from the effects of heat and humidity
- Wall brackets, pole mounting kit and
- pedestal make it easier to install the enclosures in any context.
- Kit for installing Tmax XT circuit-breakers
- The universal drill bit can be used to create the holes to install the cable glands for cable derivations
- Doors with single central handle (as per picture beside) can be fitted with half cylinder locking systems and/or padlock

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01 Doors with central
single handle are also
available.

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02 Wall-mounted
installation is possible
using the special
mounting brackets.

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03 ABB logo with its min-
imal graphic design fits
well to hinged doors .

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04 Pole-mounted or
mounted on a special
pedestal installation
is also possible.

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05 The standard double-
bit locks supplied can be
replaced by the version
with ciphered key and
handle or with square or
triangular impression.

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Components for automation applications

Gemini enclosures are designed to be perfectly compatible with ABB components for low voltage control and monitoring.
For these applications they can be equipped with modular devices belonging to the System pro M range, with Tmax XT moulded-case circuit-breakers and control and signaling devices, creating a truly integrated automation system. When deciding the Gemini layout for control and command applications, you can rely on base plates available in three versions (metal, perforated metal, insulated). base plate in one of the three versions in the range.

After wiring with the ducts and the Fix-O-Rapid device, the special standard adjustable feet and hooks must be fitted onto the base plate, allowing it to be inserted inside the box at up to seven different depths and three further levels of adjustment: no tools need to be used to carry out these operations. To finish the job, the inner door can be mounted (reversible and in insulating material), guaranteeing IP30 degree of protection when the switchboard door is open.
No tools are needed unless the inner door is equipped with buttons, warning lights, etc.

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01, 02 and 03 Example of the configuration of a switchboard for an automation application: some ABB control and protection devices are installed on the plate. The inner door is fitted with light-signaling devices.

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04 The feet supplied in the standard versions is applied without having to use tools.

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Components for distribution and mixed applications

In distribution and mixed applications, the Gemini enclosure is designed to be fitted with System pro M modular devices and Tmax XT moulded-case circuit breakers. The frame is the load-bearing element of the configuration: DIN-rails, partial modular plates and the special Tmax XT mounting and cabling kits are snapped onto the uprights. All the components can be adjusted to six different depths with a pitch of 12.5 mm and arranged at heights with standard installation pitch of 150, 225 and 300 mm and a distance of 75 mm between the rows.

Blank or windowed front panels are applied to protect the equipment and these can be hinged onto both sides; the cables are housed inside the vertical wiring duct integrated in the uprights according to an exclusive ABB patent. Wiring is carried out by pulling out the frame and working from the front; the ergonomic grip and the standard feet and snap-on hooks supplied make it easy to insert it inside the enclosure after the job is finished.
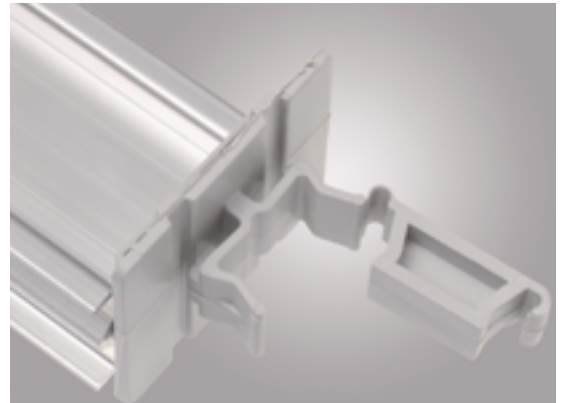
—
01 Fixing hooks and feet allow the frame to be snap-mounted inside the box.

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02 The DIN-rail is supplied with special hooks already in position for attaching to the uprights.

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03 The depth at which the DIN-rail, the modular plates, the kit for fixing the Tmax circuit breakers and the wiring duct are positioned can be adjusted with a simple sliding movement.

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04 The blank and drilled panels are hinged onto both sides; the description of the installed components can be kept in the special compartment protected by a transparent, hinged flange.
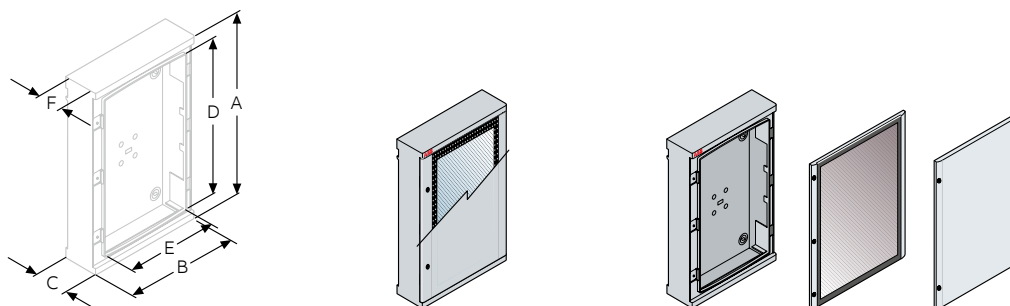
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Ordering codes
Fast selection table

Basic configuration

Size	No. of installable DIN modules	No. of vertical mod.	External dimensions			Internal dimensions			Complete switchboard		Box	Door	
	(mod. x row)	(H=150 mm)	A	B	C	D	E	F	Trasparent door	Opaque door		Transparent	Opaque
1	24 (12x2)	2	400	335	210	300	250	180	1SL0211A00	1SL0201A00	1SL0221A00	1SL0241A00	1SL0231A00
2	54 (18x3)	3	550	460	260	450	375	230	1SL0212A00	1SL0202A00	1SL0222A00	1SL0242A00	1SL0232A00
3	72 (18x4)	4	700	460	260	600	375	230	1SL0213A00	1SL0203A00	1SL0223A00	1SL0243A00	1SL0233A00
4	96 (24x4)	4	700	590	260	600	500	230	1SL0214A00	1SL0204A00	1SL0224A00	1SL0244A00	1SL0234A00
5	120 (24x5)	5	855	590	360	750	500	330	1SL0215A00	1SL0205A00	1SL0225A00	1SL0245A00	1SL0235A00
6	216 (36x6)	6	1005	840	360	900	750	330	1SL0216A00	1SL0206A00	1SL0226A00	1SL0246A00	1SL0236A00

Components for automation
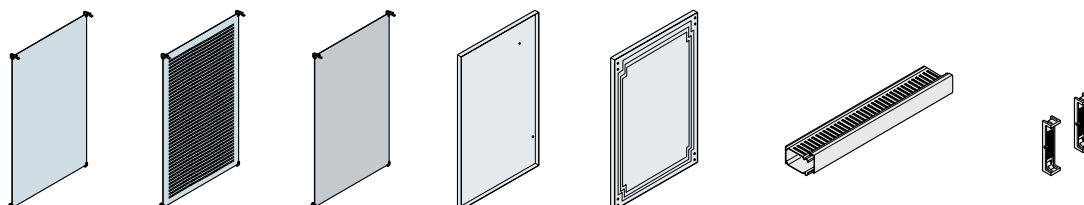
| Size	Base plate			Inner door	
	Blank	Drilled	Insulating	Former version	New version
1	1SL0259A00	1SL0275A00	1SL0267A00	1SL0251A00	-
2	1SL0260A00	1SL0276A00	1SL0268A00	1SL0252A00	-
3	1SL0261A00	1SL0277A00	1SL0269A00	-	1SL0253A00
4	1SL0262A00	1SL0278A00	1SL0270A00	-	1SL0254A00
5	1SL0263A00	1SL0279A00	1SL0271A00	-	1SL0255A00
6	1SL0264A00	1SL0280A00	1SL0272A00	-	1SL0256A00

Accessories for distribution

Wiring ducts	Fix-O-Rapid
Check the ABB Library	

Components for distribution and mixed applications
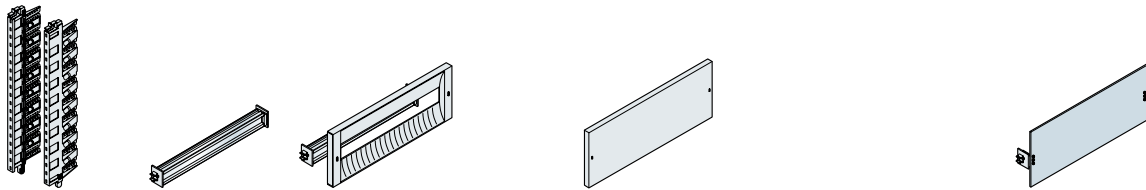
Size	Uprights	DIN-rail	Drilled panel		Blank panel			Modular plate	
			A H=150 mm	H=225 mm	H=75 mm	H=150mm	H=300 mm	H=150 mm	H=300 mm
1	1SL0283A00	1SL0290A00	1SL0307A00	-	1SL0318A00	1SL0324A00	1SL0330A00	1SL0296A00	-
2	1SL0284A00	1SL0291A00	1SL0308A00	1SL0313A00	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00
3	1SL0285A00	1SL0291A00	1SL0308A00	1SL0313A00	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00
4	1SL0285A00	1SL0292A00	1SL0309A00	1SL0314A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00
5	1SL0286A00	1SL0292A00	1SL0309A00	1SL0314A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00
6	1SL0287A00	1SL0293A00	1SL0310A00	1SL0315A00	1SL0321A00	1SL0327A00	1SL0333A00	1SL0299A00	1SL0304A00
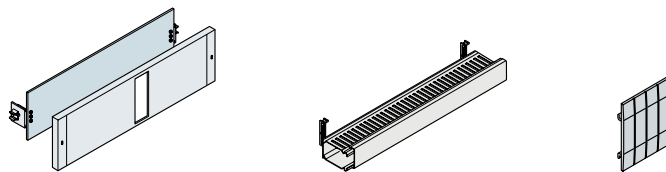
Accessories for distribution

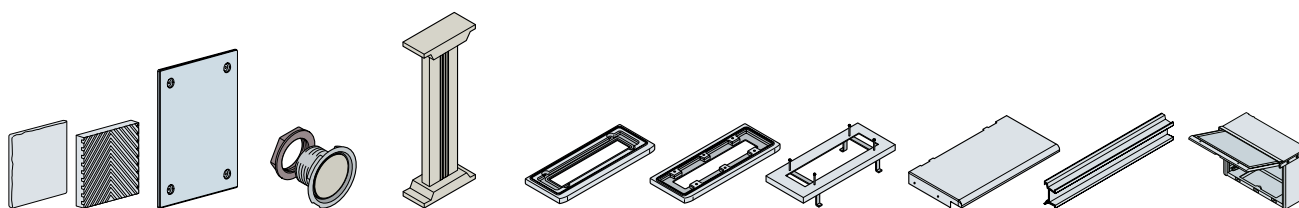| Size	Kit for Tmax XT		x-O-Rapid kit with wiring duct		Module covers RAL 7035
	H. 150 mm	H. 300 mm	25x60 mm	40x60 mm	
1	-	-	1SL0353A00	1SL0360A00	
2	1SL0373A00	1SL0376A00	1SL0354A00	1SL0361A00	
3	1SL0373A00	1SL0376A00	1SL0354A00	1SL0361A00	12863
4	1SL0374A00	1SL0377A00	1SL0355A00	1SL0362A00	
5	1SL0374A00	1SL0377A00	1SL0355A00	1SL0362A00	
6	1SL0375A00	1SL0378A00	1SL0356A00	1SL0363A00	

Ordering codes
Fast selection table

Accessories common to the whole range
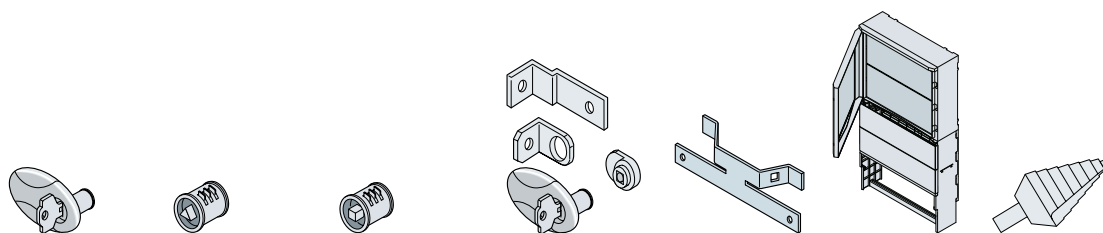
Size	Lock with handle	Lock with triangular impression	Lock with square impression	Anti tampering locking kit	Pole installation kit	Pedestal	Universal drill bit	Base mounting kit for metal plate
1					1SL0343A00	-		
2					1SL0344A00	-		
3	1SL0340A00	1SL0341A00	1SL0339A00	1SL0458A00		-	12894	1SL0383A00
4					1SL0345A00	1SL0464A00		
5						1SL0465A00		
6					1SL0346A00	1SL0466A00		

Size	Ventilation kit	Base cover	Anti condensa-tion kit	Floor pedestal	Coupling kit	Bottom base H 30	Fixed frame	Integral cover	Depth adapter	Horizontal kit
1	Check the ABB Library	1SL0385A00			-	-	-	1SL0451A00		-
2		1SL0386A00		1SL0352A00	1SL0413A00	1SL0423A00	1SL0433A00	1SL0452A00		1SL0470A00
3		1SL0387A00	1SL0351A00						12851	1SL0471A00
4		1SL0388A00			1SL0414A00	1SL0424A00	1SL0434A00	1SL0454A00		
5		1SL0389A00		-	1SL0415A00	1SL0425A00	1SL0435A00	1SL0455A00		1SL0472A00
6		1SL0390A00		-	1SL0416A00	1SL0426A00	1SL0436A00	1SL0456A00		-

Door with handle

Transparent door with handle

Size	Box dimensions WxHxD (mm)	Code
3	460x700x260	1SLM006600A0243
4	590x700x260	1SLM006600A0244
5	590x855x360	1SLM006600A0245
6	840x1005x360	1SLM006600A0246

Opaque door with handle

Size	Box dimensions WxHxD (mm)	Code
3	460x700x260	1SLM006600A0233
4	590x700x260	1SLM006600A0234
5	590x855x360	1SLM006600A0235
6	840x1005x360	1SLM006600A0236

Accessories

Lock with handle

Description	Code
Yale Lock for door with handle	1SLM006600A0459
Ronis 455 lock for door with handle	1SLM006600A0460

Mounting elements
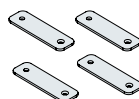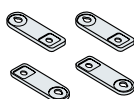
Horizontal and vertical plastic wall brackets (4 pieces)*	Horizontal and vertical stainless steel wall brackets (4 pieces)
1SL0342A00	1SL0401A00

* There are two types of inserts for adapting brackets to ø 6 e 8 mm fixing devices.

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Smart Buildings business line

new.abb.com/low-voltage/products/system-pro-e/

1SLC805001B0202