## Gemini

Low voltage electric insulating switchboards

1SLC805001D0203





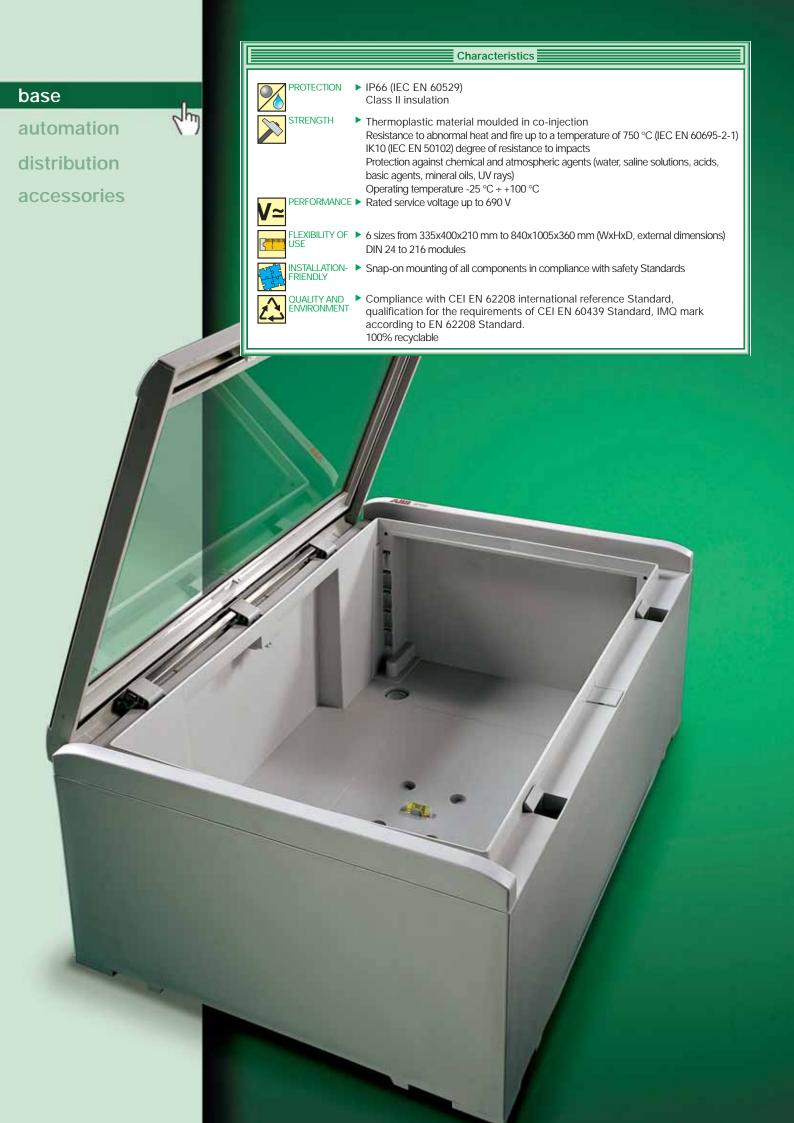


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## Basic configurations

In the basic configuration, Gemini switchboards are composed of boxes in six different sizes ranging from 335x400x210 mm to 840x1005x360 mm (WxHxD, external measurements) and with opaque or transparent doors.

In both versions, the doors are reversible and clip onto the hinges without the need to use tools; the fact that they open at an angle of more than 180° means that it is easy to work on the components installed inside the switchboard. The seal applied by extrusion along the sides of the doors guarantees IP66 degree of protection. Access to the inside of the switchboard is protected by a standard double bit lock that can

be replaced by locks of another type available in the accessories.

Boxes and doors can be requested either separately or as combined "box + door" codes, to make filling out the order form more flexible.

Inside the packages, the door is always wrapped separately and inserted inside a pocket that protects it from accidental damage until wiring is completed and the switchboard is installed.

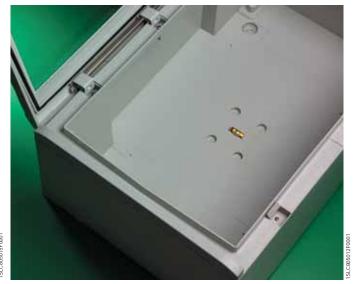
Hole-cover plugs to guarantee IP protection and double insulation for wall mounting are also supplied with the pack together with the instruction sheet.



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



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



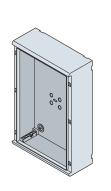
The special structure of the inner perimeter of the box ensures further protection against the penetration of water. The box is supplied with a spirit

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Unit/Pack

## Order codes

## Basic configurations



Size	Internal dimensions	External dimensions	Codes	Unit/Pack
Single	hox			
Jirigic	DUX			
	WxHxD (mm)	WxHxD (mm)		
1	335x400x210	250x300x180	1SL0221A00	1/1
2	460x550x260	375x450x230	1SL0222A00	1/1
3	460x700x260	375x600x230	1SL0223A00	1/1
4	590x700x260	500x600x230	1SL0224A00	1/1
5	590x855x360	500x750x330	1SL0225A00	1/1
6	840x1005x360	750x900x330	1SL0226A00	1/1



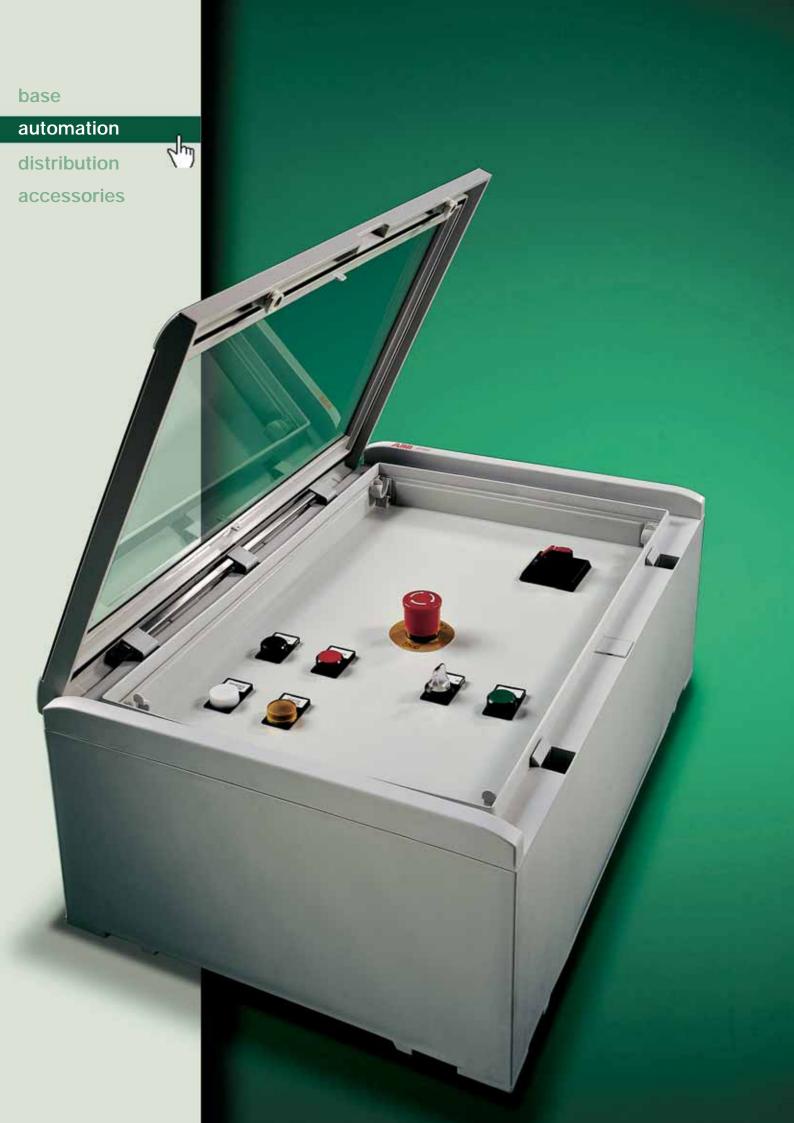
## Single doors

Box dimensions

	WxHxD (mm)	Transparent door	Opaque door	
1	335x400x210	1SL0241A00	1SL0231A00	1/1
2	460x550x260	1SL0242A00	1SL0232A00	1/1
3	460x700x260	1SL0243A00	1SL0233A00	1/1
4	590x700x260	1SL0244A00	1SL0234A00	1/1
5	590x855x360	1SL0245A00	1SL0235A00	1/1
6	840x1005x360	1SL0246A00	1SL0236A00	1/1

Codes

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### Components for automation applications

Gemini switchboards 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 moulded-case circuit-breakers and control and signaling devices, creating a truly integrated automation system.

When deciding the Gemini layout for control and monitoring applications, not only is it

possible to select the box and door in the required size, but you can also select the 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 IP40 degree of protection when the switchboard door is open.

No tools are needed unless the inner door is equipped with buttons, warning lights, etc.





The fixing hooks and feet supplied in the standard versions are applied without having to use tools, making it possible to install the base plate at seven different depths inside the switchboard. They can also be adjusted at three further positions.





Application of the inner door guarantees IP40 degree of protection when the switchboard door is open.



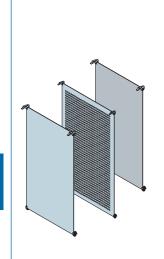
The base plate can be snap-mounted inside the switchboard.



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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## Components for automation applications



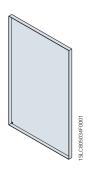


### Base plates

- Available in three versions in blank or drilled metal and insulating material
  Positioning at 3 different depths for size 1, 4 different depths for sizes 2-3-4 and 7 different depths for sizes 5-6 (adjustments with 30 mm pitch)
- Supplied with feet and hooks adjustable at three further positions (with 7.5 mm pitch)
  Snap-on mounting
  Plates can also be mounted directly on the base with the special kit

	In blank metal	In drilled metal	Insulating material	
1	1SL0259A00	1SL0275A00	1SL0267A00	1/6
2	1SL0260A00	1SL0276A00	1SL0268A00	1/6
3	1SL0261A00	1SL0277A00	1SL0269A00	1/4
4	1SL0262A00	1SL0278A00	1SL0270A00	1/4
5	1SL0263A00	1SL0279A00	1SL0271A00	1/4
6	1SL0264A00	1SL0280A00	1SL0272A00	1/2

Code	Description	Unit/Pack
1SL0383A00	Base mounting kit for metal plate	1/10



Size of the s	witchboard	Code	Unit/Pack
Size of the S	witchboard	Code	Unit/Pac

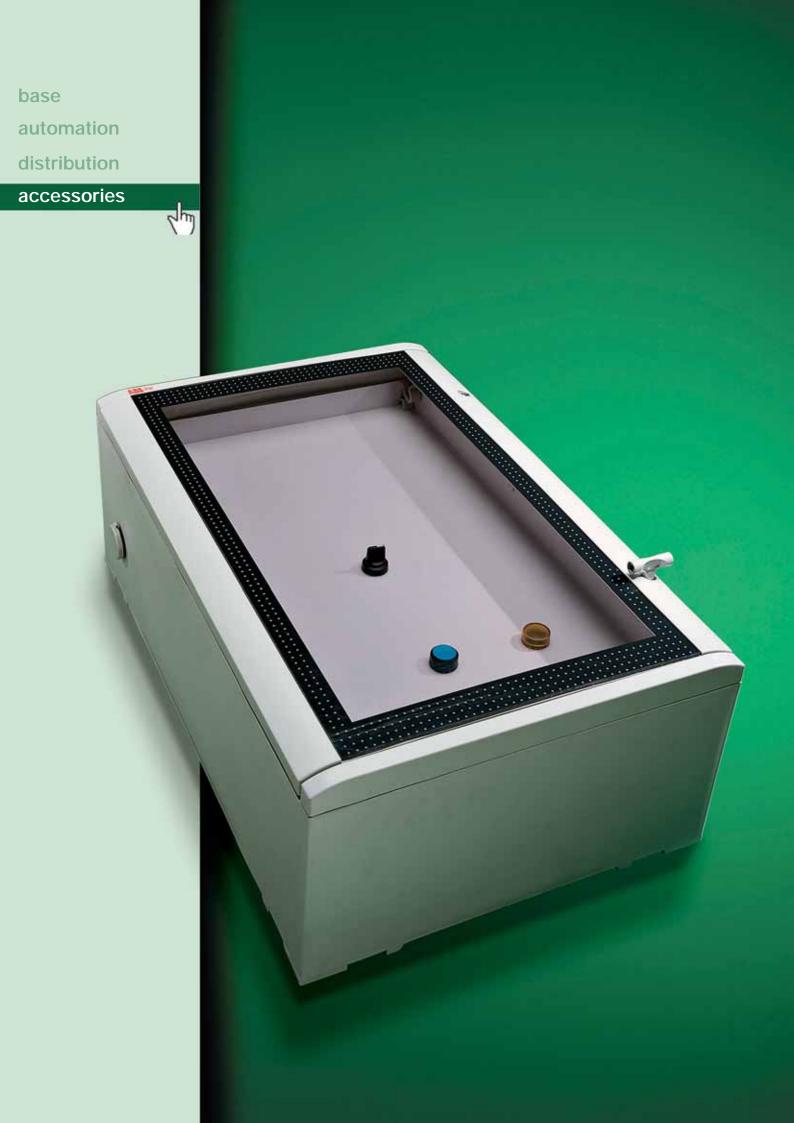
#### Inner doors

- Made in insulating material
- IP40 degree of protection with door open
- Designed so that door can be hinged onto both vertical sides
- Snap-on mounting and fixing

1	1SL0251A00	1/4
2	1SL0252A00	1/4
3	1SL0253A00	1/2
4	1SL0254A00	1/2
5	1SL0255A00	1/2
6	1SL0256A00	1/1

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### Accessories

Gemini switchboards have the same accessories for both automation and distribution applications, ensuring maximum versatility and integration of functions.

In particular, the ventilation and anti-condensation kits make it even safer for the devices to run, protecting them from the effects of heat and humidity while the wall brackets, pole mounting kit and pedestal make it easier to install the switchboards in any context.

Three different kinds of locks are supplied for the doors with which it is possible to replace the standard double bit model. The universal drill bit can be used to open the side branch connections. Module covers hide the unused modules of the DIN rail guaranteeing IP40 protection when the door is open in distribution and mixed configurations.



Gemini wall-mounted installation using the special mounting brackets.





The standard locks supplied can be replaced by the version with ciphered



key and handle or with square or triangular impression.



The fact that Gemini switchboards can also be pole-mounted (see photo above) or mounted on a special pedestal (see photo at the side) makes them suitable for any application situation.

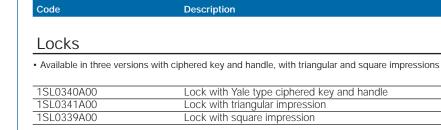


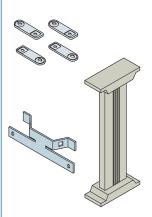
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### Accessories







### Mounting elements

• Guarantee optimum wall, pole and floor mounting conditions

1SL0342A00	Horizontal and vertical wall brackets*	1/10
1SL0343A00	Pole mounting kit for sizes 1 switchboards**	1/4
1SL0344A00	Pole mounting kit for sizes 2-3 switchboards**	1/4
1SL0345A00	Pole mounting kit for sizes 4-5 switchboards**	1/2
1SL0346A00	Pole mounting kit for size 6 switchboards**	1/2
1SL0352A00	Floor mounting pedestal for sizes 1-4	1/1

Unit/Pack

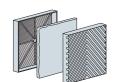
1/10

1/10

1/10

Unit/Pack

- $^{\star}$  There are two types of inserts for adapting brackets to Ø 6 e 8 mm fixing devices.
- \*\* The kit includes two elements for fixing the upper and the lower part of the switchboard.



#### Ventilation kit

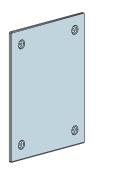
Size of the switchboard

• Composed of plastic grills and filter to ensure switchboard ventilation

Code

- IP42
- · The filter must be cleaned periodically

1SL0350A00	Ventilation kit	1/1



Base cov	ver	
- For aesthetic as	is well as functional purposes, in particular for pedestal installations.	
1	1SL0385A00	1/4
2	1SL0386A00	1/4
3	1SL0387A00	1/2
4	1SL0388A00	1/2
6	1SL0390A00	1/2

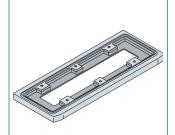


Code	Description	Unit/Pack
Coupling kit		
- It follows the aesthetic of	outline of the boxes	
1SL0413A00	Vertical coupling kit for sizes 2-3 switchboards*	1/2
1SL0414A00	Vertical coupling kit for sizes 2-3 switchboards*	1/2
1SL0415A00	Vertical coupling kit for sizes 5 switchboards*	1/2
1SL0416A00	Vertical coupling kit for sizes 6 switchboards*	1/2

<sup>\*</sup> Upon request, contact ABB for minimum order quantities.

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### Accessories



Code	Description	Unit/Pack
Pottom has	50 H 20	
Bottom bas	se H 30	

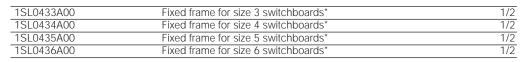
- For fixing the Gemini switchboard directly to the floor

1SL0423A00	Bottom base for size 3 switchboards*	1/2
1SL0424A00	Bottom base for size 4 switchboards*	1/2
1SL0425A00	Bottom base for size 5 switchboards*	1/2
1SL0426A00	Bottom base for size 6 switchboards*	1/2

<sup>\*</sup> Upon request, contact ABB for minimum order quantities.

### Fixed frame

- In combination with bottom base H 30
- For fixing onto poured concrete floors and bases



<sup>\*</sup> Upon request, contact ABB for minimum order quantities.

#### Fixing kit

- For fixing inner doors with screws

1SL0400A00	Kit for fixing inner doors with screws	1/2

Code	Description	Unit/Pack

#### Anti-condensation kit

• Kit in special material to prevent condensation from forming inside the switchboard: it include

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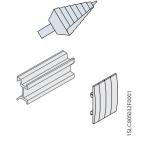
- Impermeable to water (pressure): 1 bar
- Air flow: 68/h (dp = 70 mbar)
- •1 kit for sizes 1-2, 2 kits for sizes 3-4 and 3 kits for sizes 5-6 are recommended to guarantee adequate dissipation; in any case the number of kits to be installed depend on the number and type of devices installed inside the switchboard.

1SL0351A00	Anti-condensation kit	1/6



### Other accessories



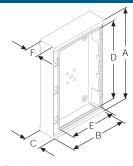


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## Rapid selection table

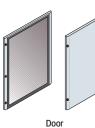
#### Basic configuration

No. of









Size	installable DIN modules	No. of vertical mod.	External dimensions		d	Internal limension	S	
	(mod. x row)	(H=150 mm)	Α	В	С	D	Е	F
1	24 (12x2)	2	400	335	210	300	250	180

(mod. x row)	(H=150 mm)	A	В	С	D	Е	F
24 (12x2)	2	400	335	210	300	250	180
54 (18x3)	3	550	460	260	450	375	230
72 (18x4)	4	700	460	260	600	375	230
96 (24x4)	4	700	590	260	600	500	230
120 (24x5)	5	855	590	360	750	500	330
216 (36x6)	6	1005	840	360	900	750	330

Complete switchboard					
Trasparent door	Opaque door				
1SL0211A00	1SL0201A00				
1SL0212A00	1SL0202A00				
1SL0213A00	1SL0203A00				
1SL0214A00	1SL0204A00				
1SL0215A00	1SL0205A00				
1SL0216A00	1SL0206A00				

	Transparent	Opaque
1SL0221A00	1SL0241A00	1SL0231A00
1SL0222A00	1SL0242A00	1SL0232A00
1SL0223A00	1SL0243A00	1SL0233A00
1SL0224A00	1SL0244A00	1SL0234A00
1SL0225A00	1SL0245A00	1SL0235A00
1SL0226A00	1SL0246A00	1SL0236A00

### Accessories common to the whole range













Size
1
2
3
4
5
6

Lock with handle 1SL0340A00

Lock with triangular impression

1SL0341A00

Lock with square impression

1SL0339A00 1SL0342A00

Installation brackets Pole installation kit 1SL0343A00 1SL0344A00 1SL0344A00 1SL0345A00 1SL0345A00 1SL0346A00

Universal drill bit

Base mounting kit for metal plate

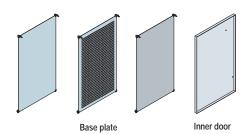
1SL0383A00

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### Rapid selection table

#### Components for automation

#### Components for distribution



Blank	Drilled	Insulating	
1SL0259A00	1SL0275A00	1SL0267A00	1SL0251A00
1SL0260A00	1SL0276A00	1SL0268A00	1SL0252A00
1SL0261A00	1SL0277A00	1SL0269A00	1SL0253A00
1SL0262A00	1SL0278A00	1SL0270A00	1SL0254A00
1SL0263A00	1SL0279A00	1SL0271A00	1SL0255A00
1SL0264A00	1SL0280A00	1SL0272A00	1SL0256A00

#### Uprights DIN rail Drilled panel Blank panel Modular plate H=150 mm H=225 mm H=75 mm H=150mm H=300 mm H=150 mm H=300 mm 1SL0283A00 1SL0290A00 1SL0307A00 1SL0318A00 1SL0324A00 1SL0330A00 1SL0296A00 1SL0284A00 1SL0291A00 1SL0308A00 1SL0313A00 1SL0297A00 1SL0302A00 1SL0319A00 1SL0325A00 1SL0331A00 1SL0285A00 1SL0291A00 1SL0308A00 1SL0313A00 1SL0319A00 1SL0325A00 1SL0331A00 1SL0297A00 1SL0302A00 1SL0285A00 1SL0292A00 1SL0298A00 1SL0303A00 1SL0309A00 1SL0314A00 1SL0320A00 1SL0326A00 1SL0332A00 1SL0286A00 1SL0292A00 1SL0309A00 1SL0314A00 1SL0320A00 1SL0326A00 1SL0332A00 1SL0298A00 1SL0303A00

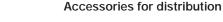
#### Accessories for automation

Size

2

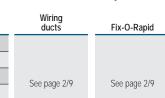
3

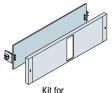
6



1SL0287A00 1SL0293A00 1SL0310A00 1SL0315A00



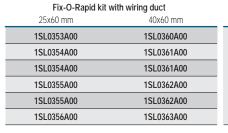




H=150 mm	H= 300 mm
-	-
1SL0336A00	1SL0370A00
1SL0336A00	1SL0370A00
1SL0337A00	1SL0371A00
1SL0337A00	1SL0371A00
1SL0338A00	1SL0372A00



1SL0321A00 1SL0327A00 1SL0333A00

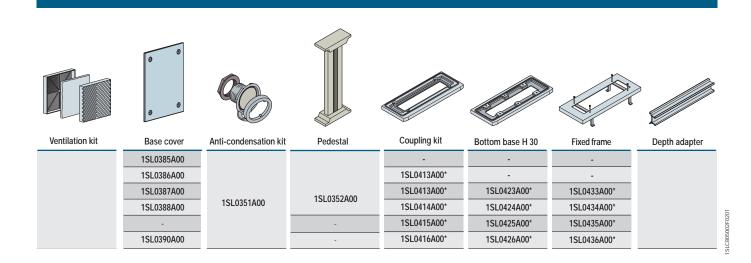




Module covers RAL 7035

1SL0299A00 1SL0304A00

12863





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### Compliance with Standards and technical characteristics

#### Reference Standards

Standard IEC 62208 ("Empty enclosures for low voltage switch-gear and control gear assemblies. General requirements."), that has implemented at an international level the Standard EN 50298, presently EN 62208, is the prescriptive reference for Gemini switchboards.

The object of Standard CEI EN 50298 is to formulate definitions, classifications, characteristics and test prescriptions for cases designed to be used as part of protection and operating equipment (switchboards) in compliance with the Standards of the EN 60439 series, that have a maximum rated voltage of 1000 V in alternating current for maximum frequencies of 1000 Hz or 1500 V in direct current and are suitable for general use in both internal and external applications. The Standard applies to empty enclosures, before the user has installed protection and operating devices inside them.

The Standard does not apply to enclosures with structural and functional characteristics that make them subject to other prescriptions (e.g. cases for domestic installations and the like). In this case Standards IEC 60670 – CEI 23-48 ("General requirements for enclosures for accessories for household and similar fixed electrical installations") and CEI 23-49 ("Enclosures for accessories for household and similar fixed electrical installations. Part 2: particular requirements for enclosures for protection devices and accessories dissipating a considerable power in normal use") apply.

On the basis of the indications of the ABB SACE technical characteristics' table, the installer may have to certify compliance with Standards CEI 23-51 – EN 60439-1 – CEI 17-13-1 ("Part 1: standard equipment subject to type tests – AS – and non-standard equipment partially subject to type tests – ANS).

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## Technical characteristics

Size	1	2	3	4	5	6
Gemini with transparent door	1SL0211A00	1SL0212A00	1SL0213A00	1SL0214A00	1SL0215A00	1SL0216A00
Gemini with opaque door	1SL0201A00	1SL0202A00	1SL0203A00	1SL0204A00	1SL0205A00	1SL0206A00
External dimensions WxHxD (mm	) 335x400x210	460x550x260	460x700x260	590x700x260	590x855x360	840x1005x360
Internal dimensions WxHxD (mm)	250x300x180	375x450x230	375x600x230	500x600x230	500x750x330	750x900x330
IP degree	IP66	IP66	IP66	IP66	IP66	IP66
Double isolation	Yes	Yes	Yes	Yes	Yes	Yes
IK degree	10	10	10	10	10	10
GWT (°C)	750	750	750	750	750	750
Operating temperature	-25 °C ÷ +100 °C	-25 °C ÷ +100				
No. of DIN modules	24 (12x2)	54 (18x3)	72 (18x4)	96 (24x4)	120 (24x5)	216 (36x6)
No. of vertical modules (H=150 m	<b>m)</b> 2	3	4	4	5	6
Material	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
Color	Grey RAL7035	Grey RAL7035				
Fast wiring system	Unifix L	Unifix L				
No. of locks	2	2	2	2	3	3
Rated frequency	50-60 Hz	50-60 Hz				
Maximum dissipation power (1)	45 W	72 W	85 W	102 W	156 W	248 W
STANDARD CEI EN 60439-1						
Over-temperature (par. 8.2.1) (2)						
- Max. dispersible power with						
over-temperature of 25 °C	40 W	65 W	77 W	91 W	133 W	205 W
- Max. dispersible power with						
over-temperature of 30 °C	45 W	72 W	85 W	102 W	156 W	248 W
- Max. dispersible power with						
over-temperature of 35 °C	52 W	85 W	100 W	121 W	187 W	299 W
- Max. dispersible power with						
over-temperature of 40 °C	62 W	100 W	118 W	143 W	221 W	355 W
Impulse withstand (par. 8.2.2)						
- Rated service voltage	≤ 690 V	≤ 690 V				
- Rated insulation voltage	≤ 800 V	≤ 800 V				
- Rated impulse withstand voltage		8 kV	8 kV	8 kV	8 kV	8 kV
Short circuit withstand (par. 8.2.3)						
<ul> <li>Rated peak short-circuit current</li> </ul>	-	-	-	-	-	-

<sup>(1)</sup> Maximum dissipation power data was obtained following the indications of **Standard CEI 23-49**, with a temperature difference of Dt=30 °C.

<sup>(2)</sup> Note to paragraph 8.2.1 of Standard CEI EN 60439-1

The table gives the thermal dissipation values of Gemini switchboards when they are wall-mounted. The dispersible power figures (in Watts) vary according to the overtemperature allowed in the accessible parts of the switchboard and must be compared with the total amount of power dissipated by all the components installed inside the switchboard taking into due account the factor of contemporaneity.

## IP degree of protection

#### IP degree of protection

As indicated in the following table, the IP degree of protection is expressed by two characteristic numbers depending on the behavior of the product to which it refers according to the prescriptions of CEI 70-1 and IEC 529 Standards.

With IP66 degree of protection, Gemini switchboards are totally protected against the penetration of dusts and sprays of seawater.

## First number: protection against the penetration of solid bodies

## Second number: protection against the penetration of water

ΙP			IP	
0		No protection	0	No protection
1	ø 50 mm	Protection against the penetration of solid bodies with a diameter of over 50 mm	1	Protection against the penetration of drops of water falling vertically
2	ø 12 mm	Protection against the penetration of solid bodies with a diameter of over 12 mm or a length of over 80 mm	2	Protection against the penetration of drops of water falling at an angle of up to 15° from vertical
3	ø 2.5 mm	Protection against the penetration of solid bodies with a diameter or thickness of over 2.5 mm	3	Protection against the penetration of drops of water falling at an angle of up to 60° from vertical
4	0 1 mm	Protection against the penetration of solid bodies with a diameter or thickness of over 1.0 mm	4	Protection against the penetra- tion of splashes of water from all directions
5		Protection against the penetration of dusts	5	Protection against the penetration of water sprayed by a hose from all directions
6		Total protection against the pene- tration of dusts	6	Protection against the penetration of sea water
1 <sup>st</sup> nu	umber defined by Standards C	CEI 70-1 – IEC 60529	7	Protection against the penetration of water during temporary

2<sup>nd</sup> number defined by Standards CEI 70-1 - IEC 60529

immersion

Protection against the penetration of water during continual immer-

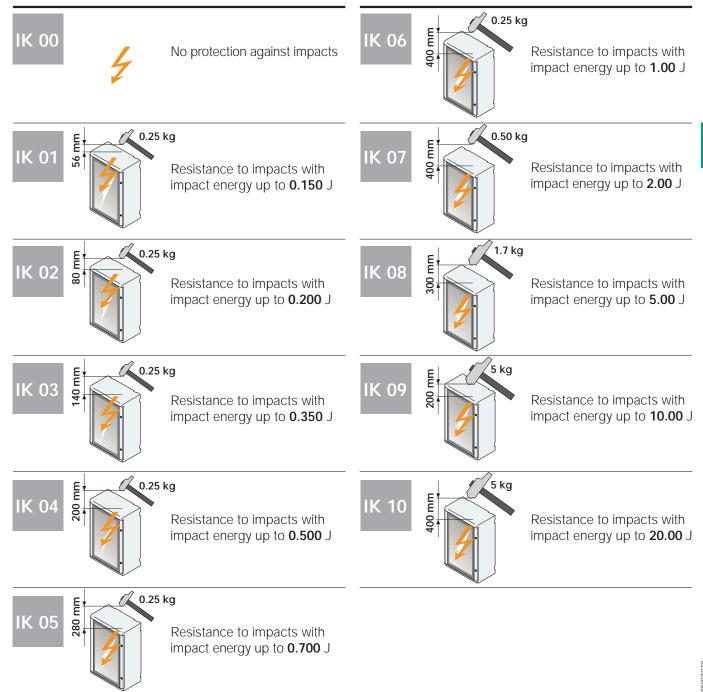
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## IK degree of resistance to impacts

### IK degree of resistance to impacts

The IK degree is expressed in Joules in compliance with Standard CEI EN 50102.



## Double insulation and self-extinguishing tests

### Double insulation

Double insulation guarantees that Gemini is protected against indirect contacts on condition that the manufacturer's instructions are observed when carrying out mounting and wiring operations on the switchboard and that the appropriate accessories are used (e.g. screw-cover caps).

Double insulation is indicated by the graphic symbol

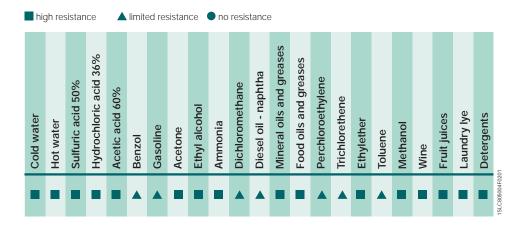
Self-extingui  Test text  Characteristic	Equipment required	Compliance with Standard	Purpose Is	Test results of the test		Test c Heat	onditions Length
					source	of test	elements
GLOW-WIRE TEST		IEC 695-2-1 CEI 50-11	To assess the danger of fire by simulating thermal stresses produced by heat sources or by ignition (e.g. glowing elements, resistances overloaded for short intervals)	If a flame is generated, it must go out within 30 seconds of removing the glow wire. The test is conducted at temperatures of: - 650 °C - 750 °C - 850 °C - 960 °C	Glow wire ø 4 mm	30 sec.	Assessment of the time it takes for the flame to go out

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Resistance to chemical agents

### Resistance to chemical agents

The behavior of Gemini switchboards in the presence of chemical agents is indicated in the table with the symbols:



## Integration with ABB products

#### Installation of Tmax moulded-case circuit breakers

The table indicates the type of installation required for the different versions of Tmax moulded-case circuit breakers in Gemini switchboards.

Before carrying out wiring operations check compliance with Standards on the basis of the technical characteristics of the switchboard and circuit breaker (CEI EN 60439-1).

Size	Installation	Tmax T1	Tmax T2	Tmax T3	Tmax T4	Tmax T5
	D	•	•	•		
1	01	•	•			
	T	•	•	•	• (3)	• (3)
	D	•	•	•		
	K1	•	• (1)			
2	K2		• (2)	•		
2	01	•	•	•	• (4)	
	O2	•	•	•	•	• (3)
	T	•	•	•	•	•
	D	•	•	•		
	K1	•	• (1)			
3	K2		• (2)	•		
3	01	•	•	•	<ul><li>(4)</li></ul>	
	O2	•	•	•	•	• (3)
	T	•	•	•	•	•
	D	•	•	•		
	K1	•	• (1)			
4	K2		• (2)	•		
4	01	•	•	•	<ul><li>(4)</li></ul>	
	<u>O2</u>	•	•	•	•	•
	T	•	•	•	•	•
	D	•	•	•		
	K1	•	• (1)			
5	K2		• (2)	•		
3	01	•	•	•	<ul><li>(4)</li></ul>	
	<u> </u>	•	•	•	•	•
	T	•	•	•	•	•
	D	•	•	•		
	K1	•	• (1)			
6	K2		• (2)	•		
U	01	•	•	•	<ul><li>(4)</li></ul>	
	O2	•	•	•	•	•
	T	•	•	•	•	•

#### Caption

- **D**, installation on DIN rail
- K1, installation with Tmax kit H = 150 (holes made)
- K2, installation with Tmax kit H = 300 (holes made)
- O1, installation on modular plate (1 module, H = 150 mm)
- O2, installation on modular plate (2 modules, H = 300 mm)
- T, installation on total base plate
- (1), Tmax T2 3 poles (with or without residual current release) and Tmax T2 4 poles (without residual current release)
   (2), Tmax T2 4 poles (with residual current release)
- (3), only version without residual current release
   (4), only version with 3 poles

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### Integration with ABB products

#### Unifix L fast wiring system

Unifix is the system patented by ABB for the fast and safe wiring of equipment in the System pro *M* range and Tmax and Isomax moulded-case circuit breakers. It is available in three versions, of which Unifix L is the one most suitable for installing in Gemini switchboards with rated currents of up to 100 A and short-circuit currents of up to 25 kA.

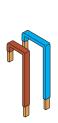
Unifix L is composed by assembling its components listed in the following tables that should be referred to when ordering.

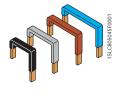
The busbars are housed in a system of ducts with a capacity of 100 A and short-circuit current of 25 kA. They are supplied in two and four-pole versions with from 12 to 32 modules. They snap onto the back of the DIN rail.



Code	Description	Pack/Pieces
ED2993	Busbar 100 A, 2 poles, 12 modules	1/6
ED3009	Busbar 100 A, 2 poles, 18 modules	1/6
ED3017	Busbar 100 A, 2 poles, 24 modules	1/6
ED3025	Busbar 100 A, 2 poles, 36 modules	1/6
ED2944	Busbar 100 A, 4 poles, 12 modules	1/6
ED2951	Busbar 100 A, 2 poles, 18 modules	1/6
ED2969	Busbar 100 A, 4 poles, 24 modules	1/6
ED2977	Busbar 100 A, 4 poles, 36 modules	1/6

Connections are made in copper, cut to size and bent to allow power supply between the terminals of the modular System pro M devices and the Unifix system busbars. They are supplied in the versions L1, L2, L3, N and 1p+N depending on the polarity of the device to be wired.





Code	Description	Pack/Pieces
ED3355	Connections with 2 cables, 40 A	1/6
ED3363	Connections with 3 cables, 40 A	1/6
ED3371	Connections with 4 cables, 40 A	1/6
ED3074	Connections 1P+N, 40 A, for DS 121, 1 mod.	1/10
ED3272	Connections L1-N, 40 A, for S91N with neutral on the rig	
ED3280	Connections L2-N, 40 A, for S91N with neutral on the rig	ht 1/10
ED3298	Connections L3-N, 40 A, for S91N with neutral on the rig	ht 1/10
ED3033	Connections L1, 100 A	1/10
ED3041	Connections L2, 100 A	1/10
ED3058	Connections L3, 100 A	1/10
ED3066	Connections N, 100 A	1/10

Feeder modular devices are available with and without cable. Modular devices with cable have a capacity of 36 A and 2-module dimensions; they are supplied in two and four pole versions. Modular devices with cable have a capacity of 100 A and 1-module dimensions; they are supplied in the L1, L2, L3 and N version. Both modular devices connect to the conductors feeding the busbars directly when installation of the main line switch is not envisaged.





Code	Description I	Pack/Pieces
ED3082	Feeder modular device with cable, 63 A, 2 poles, L 250 mm	1/6
ED3090	Feeder modular device with cable, 63 A, 4 poles, L 250 mm	1/6
ED3405	Feeder modular device with cable, 63 A, 4 poles, L 400 mm	1/6
ED3413	Feeder modular device with cable, 63 A, 4 poles, L 800 mm	1/6
ED3439	Feeder modular device with cable, 63 A, 4 poles, L 1500 mi	m 1/6
ED3101	Feeder modular device without cable, 100 A, L1	1/10
ED3102	Feeder modular device without cable, 100 A, L2	1/10
ED3103	Feeder modular device without cable, 100 A, L3	1/10
ED3104	Feeder modular device without cable, 100 A, N	1/10

Uni-polar feed terminals are available in 63 A and 100 A versions. They connect directly to the front terminals on the modular circuit breakers feeding the busbars through the main line switch. They are designed for the connection of a conductor with a 32 mm<sup>2</sup> and 25 mm<sup>2</sup> section respectively

Code	Description	Pack/Pieces
ED3100	Terminals for 100 A feed for 35 mm <sup>2</sup> cable	1/10
ED3140	Terminals for 63 A feed for 25 mm <sup>2</sup> cable	1/10

## Integration with ABB products

## Electrical connection systems

	MA 2,5/5	MA 2,5/5.D2	M 4/6	MS 4/6	M 4/6.D2	M 6/8
Pitch (mm)	5	5	6	6	6	8
Maximum section (mm²)	2,5	2,5	4	4	4	6
Connection 5	0115 486.03	0115 490.13	0115 116.07	0115 265.24	0115 271.22	0115 118.11
Neutral	0125 486.05	0125 490.15	0125 116.01	0125 265.26	0125 126.03	0125 118.13
Protection	0165 488.27	-	0165 113.16	-	-	0165 114.17
Term. Plate	0118 368.16	0118 499.23	0118 368.16	0113 885.01	0118 499.23	0118 368.16
Head separator	0116 728.25	0116 720.21	0113 003.10	-	0113 482.05	0113 003.10
Test plug ø 2 mm	0163 046.24	0164 950.00	0163 043.21	-	0163 070.00	0163 043.21
Test device	0105 028.21	0173 058.02	0173 059.03	0173 059.03	0163 218.05	0173 060.00
Colour Test plug						
ø 2 mm	0007 865.26	0007 865.26	0007 865.26	0007 865.26	0007 865.26	0007 865.26
IP20 inter. bar 10 poles	0176 282.23	0176 740.11	0176 667.04	-	0179 672.21	0176 673.02
IP20 inter. bar without screw 10 poles	0199 443.24	-	0299 702.14	-	-	0299 720.11
Protection plate	-	-	0163 427.17 0163 433.15	-	-	0163 428.20 0163 433.15
Combs 10 poles	0113 544.12	0113 544.12	0113 548.26	0113 548.26	0163 311.22	0163 313.24
Shielding bar	0178 745.14	0173 530.24	0178 745.14	-	-	<u>-</u>

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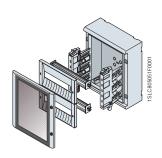
## Integration with ABB products

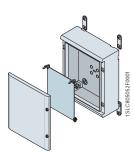
M 6/8.D2	MS 6/8	M 10/10	M 16/12	M 35/16	M 70/22	M 95/26
8	8	10	12	16	22	26
6	6	10	16	35	70	95
0115 501.12	0115 278.01	0115 120.17	0115 129.14	0115 124.07	0115 216.13	0115 556.10
-	0125 278.03	0125 120.11	0125 129.16	0125 124.01	0125 126.15	0125 556.12
-	-	0165 115.10	0165 130.23	0165 111.14	0165 596.13 without rail	<b>0165 556.22</b> without rail
0116 656.25	0114 195.06	0118 368.16	0118 618.01	0118 233.27	0113 065.15	-
0113 482.05	-	0113 003.10	0113 102.10 terminal plate separat.	-	0113 851.16 terminal plate separat.	-
0163 043.21	-	0163 043.21	0163 043.21	<b>0168 237.05</b> ø 4mm	-	-
-	0173 060.00		-	-	-	-
0007 865.26	0007 865.26	0007 865.26	0007 865.26	<b>0167 860.01</b> ø 4mm	-	-
0176 673.02	-	0176 679.10	0179 631.03	0179 617.05 no IP20	-	-
0299 720.11	-	-	-	-	-	-
-	-	0163 429.21 0163 433.15	0163 430.26 0163 432.14	0163 431.13 0173 147.20	0173 328.05 0173 323.20	-
-	0163 313.24	0163 315.26	-	-	-	-
-	-	-	-	-	-	-

## Examples of orders

### **Examples of orders**

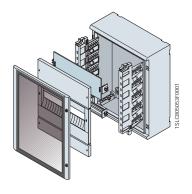
The selection of components for the configuration of Gemini switchboards depends on the space available and the type of application. Two examples for each size are given below.

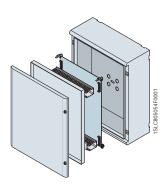




#### Size 1

	Distribution		Automation
1SL0211A00	Box + transparent door	1SL0201A00	Box + opaque door
1SL0283A00	Uprights	1SL0259A00	Metal base plate
1SL0307A00 (x2)	1-mod. drilled panel + DIN rail	1SL0342A00	Wall-mounting brackets



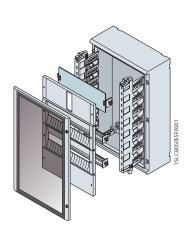


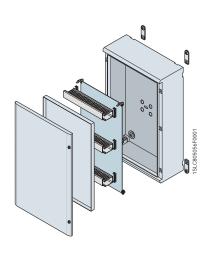
#### Size 2

	Distribution/Mixed		Automation
1SL0212A00	Box + transparent door	1SL0202A00	Box + opaque door
1SL0284A00	Uprights	1SL0260A00	Metal base plate
1SL0297A00	Modular plate 1 mod.	1SL0252A00	Inner door
1SL0325A00	Blank panel 1 mod.	Vedi pag. 2/9	Wiring duct
1SL0313A00	Drilled panel 1+1/2 mod. + DIN rail	Vedi pag. 2/9	Fix-O-Rapid
1SL0319A00	Blank panel 1/2 mod.		
12863	Module covers		

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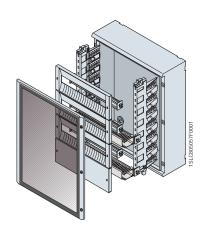
## Examples of orders

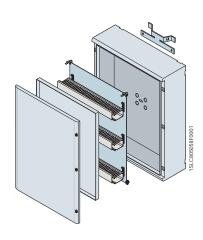




Size 3

	Distribution/Mixed		Automation
1SL0213A00	Box + transparent door	1SL0203A00	Box + opaque door
1SL0285A00	Uprights	1SL0269A00	Base insulating plate
1SL0336A00	Kit for Tmax	1SL0253A00	Inner door
1SL0308A00 (x2)	Drilled panel 1 mod. + DIN rail	See page 2/9	Wiring duct
1SL0291A00	DIN rail	See page 2/9	Fix-O-Rapid
1SL0325A00	Blank panel 1 mod.	1SL0342A00	Wall-mounting brackets
See pages 3/10-3/	11 Entrelec terminals		

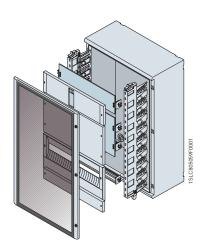


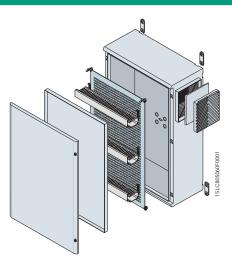


Size 4

	Distribution/Mixed		Automation
1SL0214A00	Box + transparent door	1SL0204A00	Box + opaque door
1SL0285A00	Uprights	1SL0262A00	Metal base plate
<b>1SL0309A00</b> (x3)	Drilled panel 1 mod. + DIN rail	1SL0254A00	Inner door
1SL0326A00	Blank panel 1 mod.	See page 2/9	Wiring duct
1SL0355A00 (x2)	Wiring kit 25x60 mm	See page 2/9	Fix-O-Rapid
1SL0292A00	DIN rail	1SL0345A00	Fixing on pole kit
12863	Module covers		
Vedi pagg. 3/10-3/1	11 Entrelec terminals		

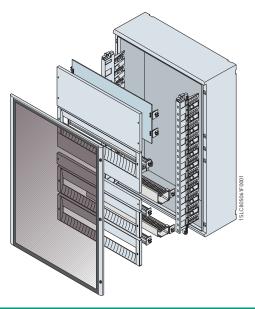
## Examples of orders

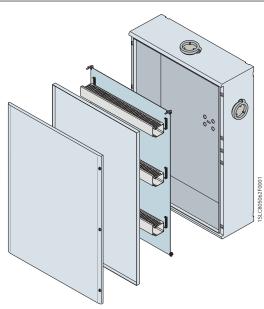




#### Size 5

	Distribution/Mixed		Automation
1SL0215A00	Box + transparent door	1SL0205A00	Box + opaque door
1SL0286A00	Uprights	1SL0279A00	Drilled base plate
1SL0337A00	Kit for Tmax	1SL0255A00	Inner door
1SL0303A00	Modular plate 2 mod.	See page 2/9	Wiring duct
1SL0332A00	Blank panel 2 mod.	See page 2/9	Fix-O-Rapid
1SL0314A00	Drilled panel 1+1/2 mod.	1SL0342A00	Wall-mounting brackets
1SL0320A00	Blank panel 1/2 mod.	1SL0350A00	Ventilation kit
12863	Module covers		





#### Size 6

	Distribution/Mixed		Automation
1SL0216A00	Box + transparent door	1SL0206A00	Box + opaque door
1SL0287A00	Uprights	1SL0264A00	Metal base plate
1SL0304A00	Modular plate 2 mod.	1SL0256A00	Inner door
1SL0333A00	Blank panel 2 mod.	See page 2/9	Wiring duct
1SL0315A00	Drilled panel 1+1/2 mod.	See page 2/9	Fix-O-Rapid
1SL0321A00	Blank panel 1/2 mod.	<b>1SL0341A00</b> (x3)	Triangular lock
1SL0310A00 (x2)	Panel with holes 1 mod.	<b>1SL0351A00</b> (x3)	Anti-condensation kit
1SL0356A00	Wiring kit 25x60 mm	•	
1SL0363A00	Wiring kit 40x60 mm		

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## Component mounting distances

#### Component mounting distances

MIN.

16.3

36.4

36.4

47

47

The reference mounting distances between components for the functional configuration of Gemini switchboards are shown in the diagrams.

#### **Automation** components

size

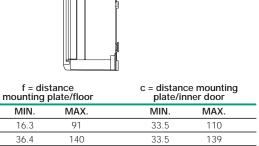


140

140

244

244



33.5

33.5

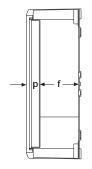
33.5

139

139

228

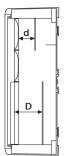
228



size	p = distance inner door/door	f = distance inner door/floor
1	63	128
2	63	177
3	63	177
4	63	177
5	63	277
6	63	277

#### Distribution components



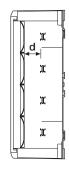


#### d = distance drilled panel/plate

pos. 1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6
54.7	67.2	79.7	92.2	-	-
54.7	67.2	79.7	92.2	104.7	117.2
54.7	67.2	79.7	92.2	104.7	117.2
54.7	67.2	79.7	92.2	104.7	117.2
54.7	67.2	79.7	92.2	104.7	117.2
54.7	67.2	79.7	92.2	104.7	117.2



		•			
pos. 1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6
71.5	84	96.5	109	-	-
71.5	84	96.5	109	121.5	134
71.5	84	96.5	109	121.5	134
71.5	84	96.5	109	121.5	134
71.5	84	96.5	109	121.5	134
71.5	84	96.5	109	121.5	134

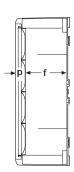


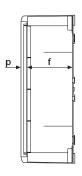
#### d = distance drilled panel/DIN rail

size	pos. 1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6
1	51	63.5	76	88.5	-	-
2	51	63.5	76	88.5	101	113.5
3	51	63.5	76	88.5	101	113.5
4	51	63.5	76	88.5	101	113.5
5	51	63.5	76	88.5	101	113.5
6	51	63.5	76	88.5	101	113.5

Measurements are expressed in millimeters

## Component mounting distances





size	p = distance drilled panel/door	f = distance drilled panel/floor
1	44	145
2	44	197
3	44	197
4	44	197
5	44	297
6	44	297

size	p = distance blank panel/door	f = distance blank panel/floor
1	26.5	162
2	26.5	214
3	26.5	214
4	26.5	214
5	26.5	314
6	26.5	314

## Disposal instructiones

#### Information about how to dispose of Gemini switchboards when they reach the end of their life

Instructions are given below about the procedures to adopt when disposing of Gemini switchboards at the end of their life cycle. The text is drafted in the form of a table referring to Standard CEI 308-1 "Information table concerning the end of life of electric and electronic products and a compilation guide", 2002-04, ed. 1, pamphlet number 308-1 6454.

### Section I - Global product specification

<b>Name</b> Size	Type of product				
	With transparent door	With opaque door	Rated weight (kg)	External dimensions WxHxD (mm)	
1	1SL0211A00	1SL0201A00	4,3	335x400x210	
2	1SL0212A00	1SL0202A00	7,9	460x550x260	
3	1SL0213A00	1SL0203A00	9,5	460x700x260	
4	1SL0214A00	1SL0204A00	12,0	590x700x260	
5	1SL0215A00	1SL0205A00	17,8	590x855x360	
6	1SL0216A00	1SL0206A00	21,1	840x1005x360	

#### Section II - Global product table

General code: CER 17 02 03 plastic (more than 95% of the product's weight)

No. of the component part (P1, P2, etc.)	Diagram	Quantity % over total weight	Material description	Symbol	Dangerousness (Yes/No)	CER Code
P1/BOX	P5/ACCESSORIES P2/ROOF	~ 80%	Polypropylene	>PP<	No	17 02 03
P2/ROOF		~ 00 70	Polypropylene	>PP<	No	17 02 03
P3/DOOR		~ 20%	Polycarbonate	>PC<	No	17 02 03
P4/ACCESSORIES	P3/DOOR P1/BOX	< 5%	Steel	-	No	17 04 05
P5/ACCESSORIES	P4/ACCESSORIES	< 5%	Brass	-	No	17 04 01

### Disposal instructiones

### Section III - Components to be removed from the product and sent for separate treatment

Refer to section II of the table for a description of the materials.

#### Notes for recovery and disposal

At the end of its life, after separating it from components, the product can be sent to be recovered.

The product is not biodegradable: do not dispose of it in the environment.

The product/waste product is assimilable as solid urban waste. It must be incinerated or disposed of in compliance with current EEC, national and local regulations. You are recommended to check all reutilization possibilities.

#### Other recommendations

The information in this table relates to the product in the condition it was supplied. Assembled parts coming from different supplies must be treated separately according to the reference specifications of the respective manufacturers.

#### Section IV - Safety instructions

#### Handling

No special instructions. Refer to the general regulations concerning hygiene on the workplace when using.

The product's main components contain mineral additives and coloring agents in concentrations that comply with current European Directives at the time this catalogue went to press: they do not contain substances classified as dangerous.

#### **Transport**

No special instructions.

#### Storage

No gas or harmful vapors are released during storage. Thermal decomposition in the event of fire or combustion may release dangerous products: if this should occur, specific means of protection must be used. In the event of fire, conventional fire extinguishing instruments are recommended (atomized water, foam, carbon dioxide, powder). Empty packages are not contaminated by the product and can therefore be recycled or reused.

#### Utilization

No special instructions.

#### Other instructions

The information given in this section is based on current ABB SACE know-how and is aimed at describing the product only for environmental, health and safety purposes. It must not, therefore, be considered as a guarantee of specific properties. ABB SACE assumes no responsibility for the behavior of buyers that do not comply with the information given in this table and for incorrect or improper usages of the product or usages that cannot reasonably be envisaged.

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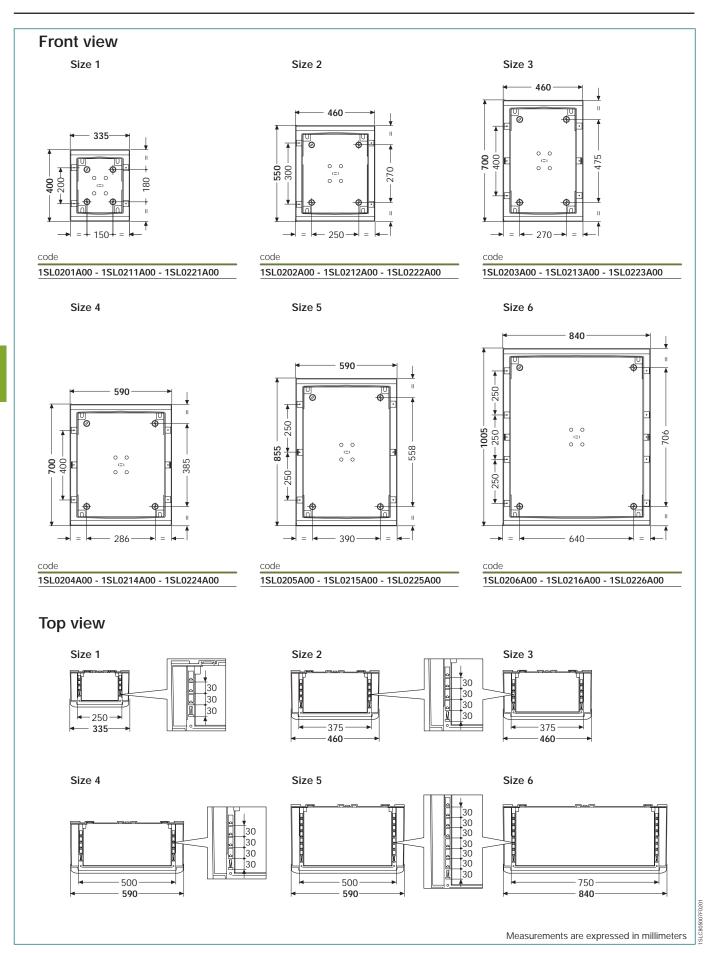
# ABB Overall dimensions

## Index

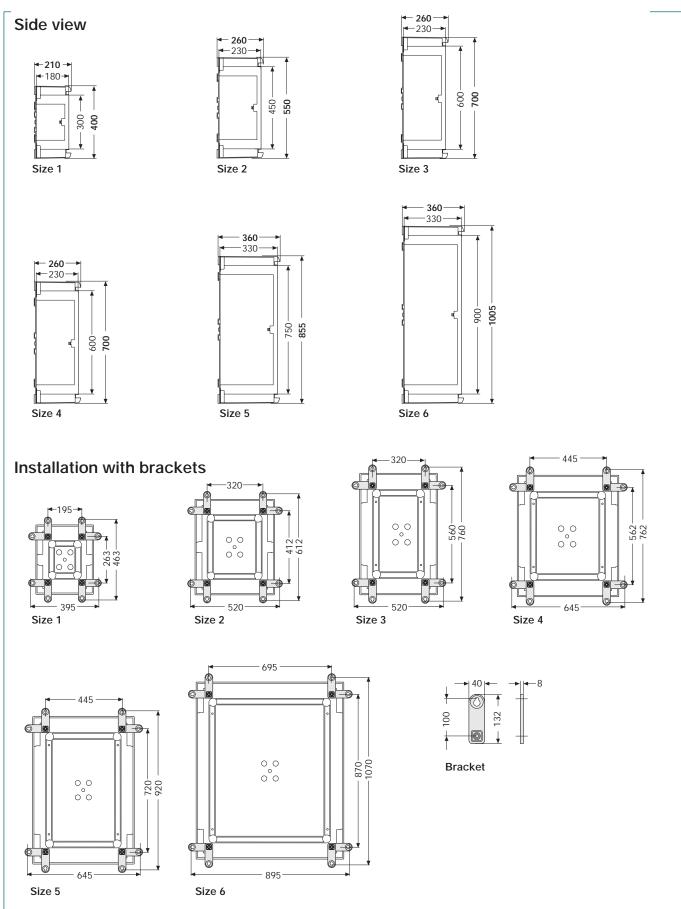
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## Basic configuration



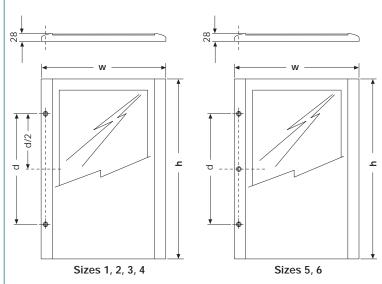
## Basic configuration



Measurements are expressed in millimeters

# Basic configuration

## External opaque and transparent doors



size	w	h	locks	d = distance locks		
1	325	349	2	200		
2	450	499	2	300		
3	450	649	2	400		
4	575 649		2	400		
5	575	799	3	500		
6	825	949	3	750		

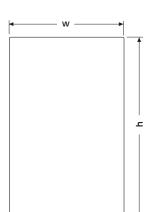
Measurements are expressed in millimeters

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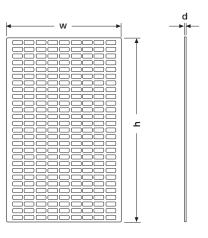
# Components for automation applications

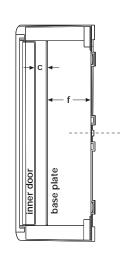
## Base plates

#### Blank and insulating



#### Drilled

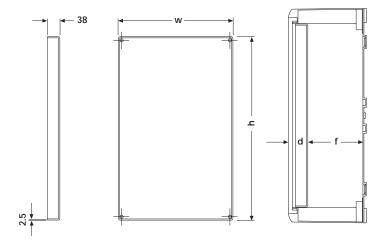




			drilled	insulating	dist	= ance ise	c dista inner	nce
size	w	h	d	d	MIN.	MAX.	MIN.	MAX.
1	235	285	2	5	16.3	91	33.5	110
2	360	435	2	5	36.4	140	33.5	139
3	360	585	2	5	36.4	140	33.5	139
4	485	585	2	5	36.4	140	33.5	139
5	485	735	2	5	47	244	33.5	228
6	735	885	2	5	47	244	33.5	228

The distance of the plate from the base and inner door depends on the installation point selected for mounting the plate on the box.  $\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left( \frac{1}{2} \int_{-\infty}^{\infty} \frac{$ 

### Inner doors



	distance in	ner door
	d door	f boo

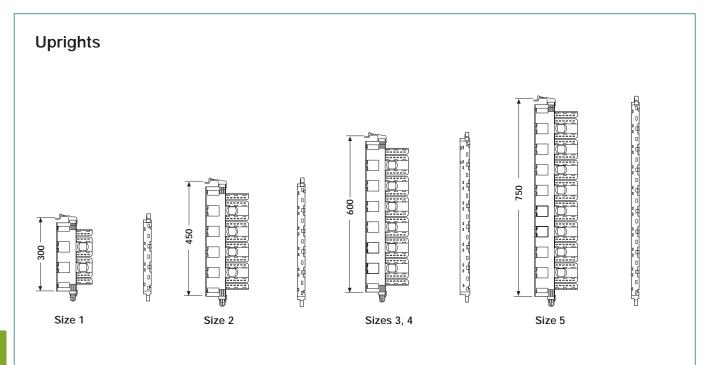
size	w	h	S	d = door	f = base
1	250	300	3	63	128
2	375	450	4	63	177
3	375	600	4	63	177
4	500	600	4	63	177
5	500	750	5	63	277
6	750	900	5	63	277

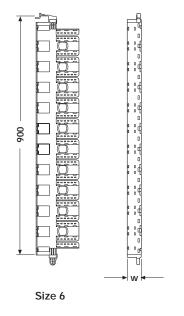
Measurements are expressed in millimeters

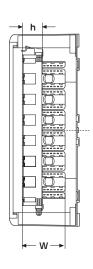
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# Components for distribution and mixed applications







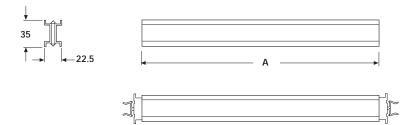
upright		duc	:t
size	W	w	h
1	132	18	46
2	152	27	46
3	152	27	46
4	152	27	46
5	152	36	46
6	152	55	46

Measurements are expressed in millimeters

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# Components for distribution and mixed applications

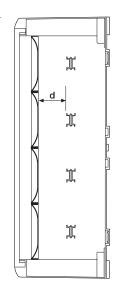
### **DIN** rail



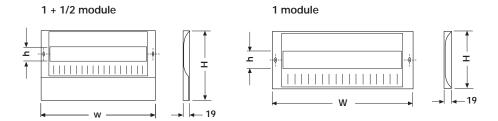
d = distance between panel with holes/DIN rail

			u u.	otanioo botti	oon panon		
size	Α	pos. 1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6
1	210	51	63.5	76	88.5	-	-
2	318	51	63.5	76	88.5	101	113.5
3	318	51	63.5	76	88.5	101	113.5
4	443	51	63.5	76	88.5	101	113.5
5	443	51	63.5	76	88.5	101	113.5
6	663	51	63.5	76	88.5	101	113.5

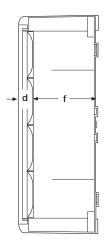
The distances of the DIN rail from the panel depend on the depth at which the DIN rail is regulated by using fixing devices.



## **Drilled panels**



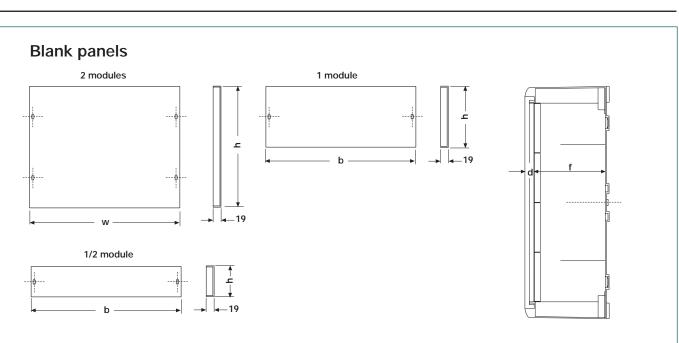
drilled panel	1 n	nod.	1+1/2	mod.	d. window		distance panel	
size	w	Н	w	Н	w	modules	d = door	f = base
1	250	150	-	-	46	12	44	145
2	375	150	375	225	46	18	44	197
3	375	150	375	225	46	18	44	197
4	500	150	500	225	46	24	44	197
5	500	150	500	225	46	24	44	297
6	750	150	750	225	46	36	44	297



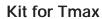
Measurements are expressed in millimeters

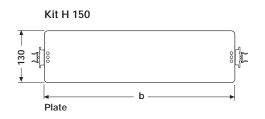
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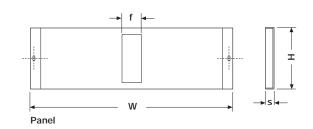
# Components for distribution and mixed applications



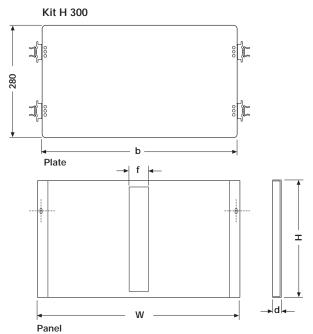
	1/2	mod.	1 n	nod.	2 m	od.	distanc	e panel
size	W	h	w	h	w	h	d = door	f = base
1	250	75	250	150	250	300	26.5	162
2	375	75	375	150	375	300	26.5	214
3	375	75	375	150	375	300	26.5	214
4	500	75	500	150	500	300	26.5	214
5	500	75	500	150	500	300	26.5	314
6	750	75	750	150	750	300	26.5	314







kit for Tmax H 150 (available for sizes 2-6)										
size W H d f b										
2	375	150	19	46	318					
3	375	150	19	46	318					
4	500	150	19	46	443					
5	500	150	19	46	443					
	750		4.0		//2					



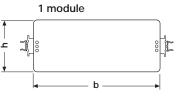
kit for Tmax H 300 (available for sizes 2-6)									
size W H d f b									
2	375	300	19	46	318				
3	375	300	19	46	318				
4	500	300	19	46	443				
5	500	300	19	46	443				
6	750	300	19	46	663				
		N 4			titus and title and a second				

Measurements are expressed in millimeters

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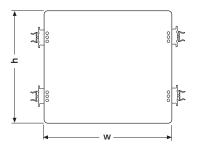
# Components for distribution and mixed applications

## Modular plates

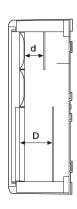


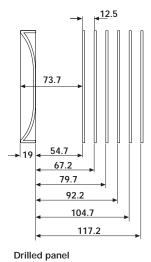


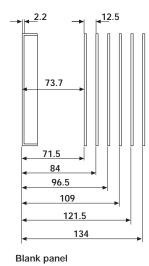
2 modules











	1 mod	dule	2 mo	dules	
size	w h		w	h	
1	210	130	-	-	
2	318	130	318	280	
3	318	130	318	280	
4	443	130	443	280	
5	<b>5</b> 443		443	280	
6	663	130	663	280	

D = distance blank panel/plate								
pos. 1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6			
71.5	84	96.5	109	-	-			
71.5	84	96.5	109	121.5	134			
71.5	84	96.5	109	121.5	134			
71.5	84	96.5	109	121.5	134			
71.5	84	96.5	109	121.5	134			
71.5	84	96.5	109	121.5	134			

d = distance drilled panel/plate						
pos. 1	os. 1 pos. 2 po		pos. 4	pos. 5	pos. 6	
54.7	67.2	79.7	92.2	-	-	
54.7	67.2	79.7	92.2	104.7	117.2	
54.7	67.2	79.7	92.2	104.7	117.2	
54.7	67.2	79.7	92.2	104.7	117.2	
54.7	67.2	79.7	92.2	104.7	117.2	
54.7	67.2	79.7	92.2	104.7	117.2	

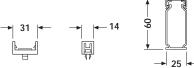
The distance of the panels from the modular plates depends on the depth at which the DIN rail is regulated by using fixing devices.

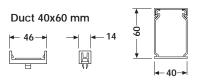
Measurements are expressed in millimeters

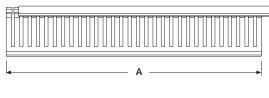
# Components for distribution and mixed applications

## Wiring kit









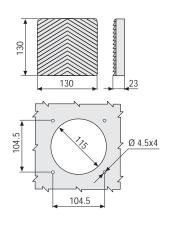
Α -	<b>=</b> ▶

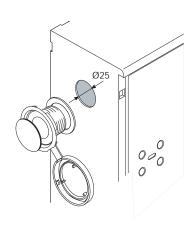
size	Α
1	210
2	318
3	318
4	443
5	443
6	663

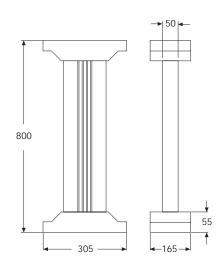
### Ventilation kit

### Anti-condensation kit

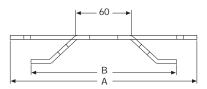
## **Pedestal**

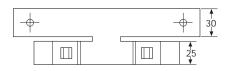






### Pole installation kit





size	Α	В	
1	232	206	
2-3	358	332	
4-5	483	457	
6	733	707	

Measurements are expressed in millimeters



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# Code list

Code	Chapter/Page	Code	Chapter/Page	Code	Chapter/Page	Code	Chapter/Page
05 019	2/9	05 270	2/9	1SL0272A00	2/8	1SL0351A00	2/19
05 033	2/9	05 272	2/9	1SL0275A00	2/8	1SL0352A00	2/18
05 035	2/9	05 274	2/9	1SL0276A00	2/8	1SL0353A00	2/15
05 037	2/9	05 276	2/9	1SL0277A00	2/8	1SL0354A00	2/15
05 043	2/9	05 278	2/9	1SL0278A00	2/8	1SL0355A00	2/15
05 045	2/9	05 280	2/9	1SL0279A00	2/8	1SL0356A00 1SL0360A00	2/15 2/15
05 047 05 040	2/9	05 282 1SL0201A00	2/9	1SL0280A00	2/8	1SL0361A00	2/15
05 049 05 051	2/9	1SL0201A00 1SL0202A00	2/4	1SL0283A00 1SL0284A00	2/12	1SL0362A00	2/15
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05 147	2/9	1SL0243A00	2/5	1SL0321A00	2/13	1SL0435A00	2/19
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05 173	2/9	1SL0256A00	2/8	1SL0336A00	2/14		
05 183	2/9	1SL0259A00	2/8	1SL0337A00	2/14		
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05 187	2/9	1SL0261A00	2/8	1SL0339A00	2/18		
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05 197 05 100	2/9	1SL0270A00	2/8	1SL0346A00	2/18		
05 199	2/9	1SL0271A00	2/8	1SL0350A00	2/18		

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Due to possible developments of standards as well as of materials, the characteristics and dimensions specified in the this document may only be considered binding after confirmation by ABB SACE.

voltimum

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