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Introduction

Characteristics of Gemini switchboards

Gemini, something completely different in switchboards

ABB SACE's Gemini range is revolutionizing the market of low voltage electric insulating switchboards.

The reason for this is that it is the first switchboard made in thermoplastic material, to which the co-injection molding technique gives the same mechanical characteristics as polyester. This means that it is extremely sturdy, with its rigid covering and expanded internal core. Moreover, it contains no fiberglass, a material that with time rises to the surface, jeopardizing the functioning and safety of switchboards made in polyester with which it is usually mixed.

Gemini switchboards have IP66 degree of protection (IP40 with the door open and with the appropriate components installed) and a very high resistance to chemical and atmospheric agents. This is the reason why Gemini guarantees excellent performances even in particularly severe operating conditions.

Strong outside and versatile inside, Gemini is fit for all applications

There are as many configurations as there are ABB devices for low voltage automation and distribution: moulded-case circuit breakers, modular circuit breakers, monitoring, control and signaling devices, wiring ducts and electrical connection systems.

All of these components give the "Gemini system" an enormous range of ad hoc solutions that are easy to assemble with the snap-on system.



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Gemini switchboards are made with co-injection, which ABB SACE is the first manufacturer in the electric field to use as a molding technique. This process obtains a "sandwich" of two materials with a compact external covering and an expanded core, guaranteeing the highest level of mechanical protection against impacts (IK10) without the need to add hardening substances.

Polyester is usually mixed with fiberglass, which, with wear, rises to the surface and can become a risk factor for skin burns that may occur during installation and maintenance and accidental contact.

Moreover, it causes deterioration of the technical strength and lasting characteristics of the material to which it is added: Gemini, on the other hand, keeps its mechanical characteristics in the long term.

The co-injection technique makes the manufacturing operations themselves safe because the products are completely finished when they come out of the mold without any flash or other surface irregularities.



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Introduction

Characteristics of Gemini switchboards

Nothing can be compared with Gemini, even when the switchboards have reached the end of their life cycle: they are totally ecologically compatible. The material used to manufacture them is 100% recyclable. Polyester, on the other hand, cannot be recovered.

Moreover, to make sure that correct disposal procedures are followed, instructions are provided about how to identify materials and what to do with the product once it has served its useful purpose.

Quality and safety

ABB's Gemini is designed and built in compliance with reference Standards that define its constructional and functional characteristics.

In particular, the IP66 degree certifies that Gemini is totally protected against the infiltration of solid bodies and is resistant to the penetration of jets of water similar to sea waves.

Absolute protection is provided by double insulation even in the event of indirect contact. Rated uninterrupted current can reach a threshold of 400 A.

Even in very difficult application circumstances, Gemini gives high-level performances, with resistance to fire and abnormal heat up to a temperature of 750 °C and a functioning temperature from -25 °C to 100 °C. Moreover, the material with which it is manufactured retains its characteristics for a long time since it is not subject to corrosion by chemical or atmospheric agents. Also it does not turn yellow when exposed to UV rays.



Gemini is made in a thermoplastic material that has a very low halogen content and is 100% recyclable. The environmental compatibility of Gemini is an important objective right from the design phase where the Life Cycle Assessment (LCA) procedure, defined in 1990 during the Society of Environmental Toxicology and Chemistry Conference (Vermont, USA), is followed. Life Cycle Assessment is an objective method for analyzing the energy and environmental loads relating to a product, process or activity, carried out by identifying and quantifying energy, the materials used and emissions released into the environment. Divided into four phases, the assessment covers the entire life cycle of the product, process or activity, from the extraction and transformation of raw materials to manufacturing and distribution, and from usage to recycling and decommissioning.



Introduction

Characteristics of Gemini switchboards

A switchboard that is not just one system, but three

Gemini is the result of design work conducted by ABB with the direct collaboration of switchboard manufacturers, installers and designers who considered versatility to be the discriminating element when purchasing a switchboard, equally as important as sturdiness and reliability.

Gemini fulfils this requirement by providing a product that can be used for three different purposes: in addition to the basic configuration it also provides the components necessary for equipping it as an automation switchboard or as a distribution and mixed switchboard.

In all applications, compatibility with ABB protection, control and monitoring products means that a real system of integrated and complementary functions can be configured.

Typical examples of some Gemini applications can be seen in installations in industrial production departments and on board machines, in galvanization plants and varnishing cabins, in petrol stations and car-washing plants, boiler-rooms, car parks, shopping malls and in any other environments where distribution and automation demand specific safety requirements and service continuity. Gemini also has flexible measurements, with six different box sizes and internal space to accommodate from 24 to 216 DIN modules.

To respect safety standards, all the switchboard's components can be fixed to the base plate or to the box frame without ha-



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Written in full, its name "Protect IT Multipurpose Box Gemini" says that no switchboard is more reliable. Integration of Gemini with other ABB low voltage protection, monitoring and control products fulfils the objective of offering the market a complete range of products and systems.

In particular, Industrial^{IT} is the solution ABB has developed for integrating company activities at all levels, in which each product is seen as one element of a single solution. Products and technologies are grouped into functional suites, each of which

measures, monitors, optimizes and supports a specific "block" of activities, interacting in a coordinated manner thanks to the platform created by ABB (AIP: Aspect Integrator Platform).

Not only are all the certified products interactive, but they also ensure that all the information needed to operate them is readily available in the latest edition: technical characteristics, installation, user and maintenance instructions, environmental certificates and declarations.

More information is given in the section entitled Products and services/Industrial^{IT} on the ABB website www.abb.com

Industrial^{IT}
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ving to use any tools; wiring is carried out from the front followed by snapping the base plate or the frame onto the box. The patented frame is fitted with the cable duct incorporated in the uprights.

In its design, Gemini repeats the shapes and RAL 7035 grey color of the ArTu switchboards with which it can be configured as a main protection switchboard.

Experience and innovation

Gemini has two central aspects. It is both the result of years of work in the production of installation material and the expression of the most advanced technology, from design to distribution.

In the laboratory, computer-

aided design programs simulate all types of application conditions translating virtual checks into a process to improve the performances of Gemini so that it will be able to respond more accurately to market requirements.

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Characteristics



PROTECTION

- IP66 (IEC EN 60529)
- Class II insulation



STRENGTH

- Thermoplastic material moulded in co-injection
- Resistance to abnormal heat and fire up to a temperature of 750 °C (IEC EN 60695-2-1)
- IK10 (IEC EN 50102) degree of resistance to impacts
- Protection against chemical and atmospheric agents (water, saline solutions, acids, basic agents, mineral oils, UV rays)
- Operating temperature -25 °C ÷ +100 °C



PERFORMANCE

- Rated uninterrupted current up to 400 A
- Rated service voltage up to 690 V



FLEXIBILITY OF USE

- 6 sizes from 335x400x210 mm to 840x1005x360 mm (WxHxD, external dimensions)
- DIN 24 to 216 modules



INSTALLATION-FRIENDLY

- Snap-on mounting of all components in compliance with safety Standards



QUALITY AND ENVIRONMENT

- Compliance with international reference Standards EN 50298, EN 60670, EN 60439-1
- IMQ mark according to Standard EN 50298
- 100% recyclable



Order codes

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.



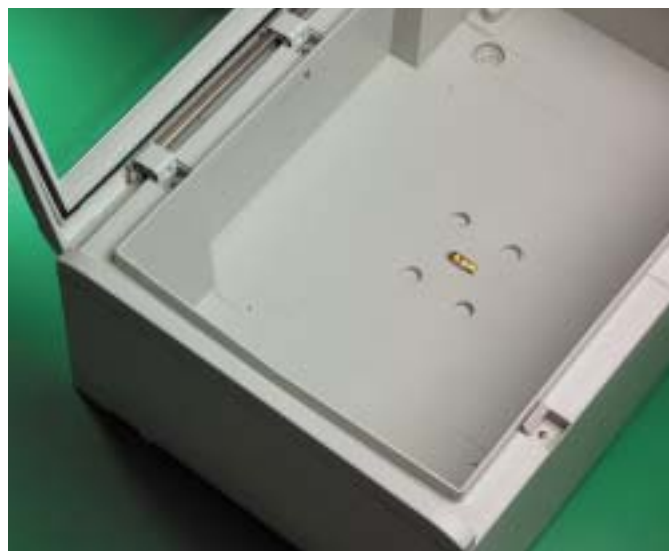
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Gemini doors open at an angle of more than 180° giving easy access to the devices installed inside the switchboard.



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

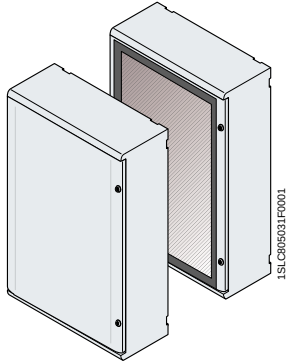


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The special structure of the inner perimeter of the box ensures further protection against the penetration of water. The box is supplied with a spirit level.

Order codes / el.nummer

Basic configurations



Size	Dimensions	Modules	Codes / el.nummer
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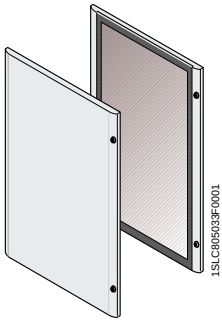
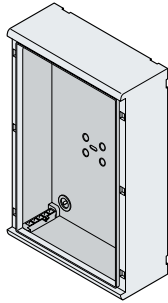
Boxes and doors

- Available in 6 sizes
- Single order code combined with box and transparent and opaque door
- Pack with door dismounted and wrapped separately
- Door designed so that it can be hooked onto hinges at both vertical sides and mounted without the use of tools
- To be mounted to the wall using internal holes or fixing brackets supplied as accessories
- Door opening at an angle of more than 180°
- RAL 7035 grey color
- Doors supplied with 2 standard double bit locks (3 for sizes 5 and 6) that can be replaced with locks for ciphered key or with square/triangular impression (the standard triplex key is suitable for use with three types of impressions).

	External WxHxD (mm)	Internal WxHxD (mm)	Max no. DIN mod.	No. vertical mod. (H=150 mm)	With transparent door	With opaque door
1	335x400x210	250x300x180	24 (12x2)	2	1SL0211A00 / 2444310	1SL0201A00 / 2444304
2	460x550x260	375x450x230	54 (18x3)	3	1SL0212A00 / 2444311	1SL0202A00 / 2444305
3	460x700x260	375x600x230	72 (18x4)	4	1SL0213A00 / 2444312	1SL0203A00 / 2444306
4	590x700x260	500x600x230	96 (24x4)	4	1SL0214A00 / 2444313	1SL0204A00 / 2444307
5	590x855x360	500x750x330	120 (24x5)	5	1SL0215A00 / 2444314	1SL0205A00 / 2444308
6	840x1005x360	750x900x330	216 (36x6)	6	1SL0216A00 / 2444315	1SL0206A00 / 2444309

Order codes / el.nummer

Basic configurations



Size	Internal dimensions	External dimensions	Codes	Unit/Pack
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Single box

	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

Size	Box dimensions	Codes / el.nummer
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Single doors

	WxHxD (mm)	Transparent door	Opaque door
1	335x400x210	1SL0241A00 / 2444322	1SL0231A00 / 2444316
2	460x550x260	1SL0242A00 / 2444323	1SL0232A00 / 2444317
3	460x700x260	1SL0243A00 / 2444324	1SL0233A00 / 2444318
4	590x700x260	1SL0244A00 / 2444325	1SL0234A00 / 2444319
5	590x855x360	1SL0245A00 / 2444326	1SL0235A00 / 2444320
6	840x1005x360	1SL0246A00 / 2444327	1SL0236A00 / 2444321

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Order codes

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.



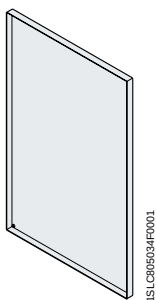
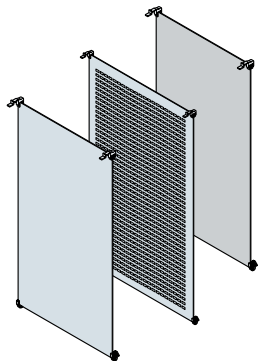
The base plate can be snap-mounted inside the switchboard.



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.

Order codes / el.nummer

Components for automation applications



Size of the switchboard Code / el.nummer

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

	In blank metal	In drilled metal	Insulating material	
1	1SL0259A00 / 2444333	1SL0275A00 / 2444345	1SL0267A00 / 2444339	1/6
2	1SL0260A00 / 2444334	1SL0276A00 / 2444346	1SL0268A00 / 2444340	1/6
3	1SL0261A00 / 2444335	1SL0277A00 / 2444347	1SL0269A00 / 2444341	1/4
4	1SL0262A00 / 2444336	1SL0278A00 / 2444348	1SL0270A00 / 2444342	1/4
5	1SL0263A00 / 2444337	1SL0279A00 / 2444349	1SL0271A00 / 2444343	1/4
6	1SL0264A00 / 2444338	1SL0280A00 / 2444350	1SL0272A00 / 2444344	1/2

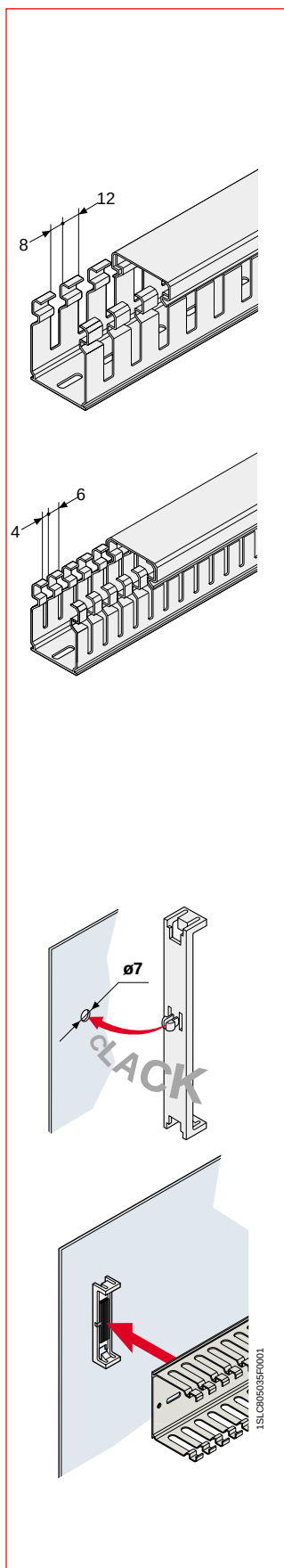
Inner doors

- Available for size 2 to size 6 boxes
- 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	-	-
2	1SL0252A00 / 2444328	1/4
3	1SL0253A00 / 2444329	1/2
4	1SL0254A00 / 2444330	1/2
5	1SL0255A00 / 2444331	1/2
6	1SL0256A00 / 2444332	1/1

Order codes

Components for automation applications



Code	Dimensions	Weight (kg/m)	Unit/Pack-meters
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Wiring ducts

- Made in self-extinguishing thermoplastic material (UL 94 V0), resistant to abnormal heat and fire up to 960 °C (IEC 695-2-1)
- RAL 7035 grey color
- Available in version with 8/12 mm and 4/6 mm slots
- Base strip designed to snap onto Fix-O-Rapid
- Available in standard lengths of 2 m

With 8/12 mm slots	With 4/6 mm slots	WxH (mm)		
05 019	05 119	15x17	0.06	46
05 033	05 133	25x30	0.21	58
05 043	05 143	25x40	0.25	48
05 063	05 163	25x60	0.24	34
05 083	05 183	25x80	0.29	28
05 094	05 194	25x100	0.46	20
05 035	05 135	40x30	0.27	40
05 045	05 145	40x40	0.31	30
05 065	05 165	40x60	0.34	22
05 085	05 185	40x80	0.38	36
05 095	05 195	40x100	0.53	28
05 037	05 137	60x30	0.38	52
05 047	05 147	60x40	0.46	40
05 067	05 167	60x60	0.47	32
05 087	05 187	60x80	0.50	24
05 096	05 196	60x100	0.73	20
05 049	05 149	80x40	0.47	32
05 069	05 169	80x60	0.52	24
05 089	05 189	80x80	0.59	16
05 097	05 197	80x100	0.91	14
05 051	05 151	100x40	0.55	24
05 071	05 171	100x60	0.59	20
05 091	05 191	100x80	0.68	16
05 098	05 198	100x100	1.06	8
05 053	05 153	120x40	0.65	20
05 073	05 173	120x60	0.73	14
05 093	05 193	120x80	0.89	12
05 099	05 199	150x100	1.37	8

Code	Description	Unit/Pack-no. pieces
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Fix-O-Rapid

Rapid mounting device for attaching wiring ducts to the base plate: it snaps onto the plate after drilling a $\varnothing$ 7 mm hole. Two Fix-O-Rapid devices are enough for each wiring duct section. Fix-O-Rapid guarantees maximum insulation since it does not involve the use of any metal component inside the wiring duct.

If the wrong wiring duct is selected, it can be dismantled and a version with the same base and a different height can be attached to the Fix-O-Rapid.

05 270	Rapid mounting device for wiring duct, W 25 mm	20/600
05 272	Rapid mounting device for wiring duct, W 40 mm	20/600
05 274	Rapid mounting device for wiring duct, W 60 mm	20/600
05 276	Rapid mounting device for wiring duct, W 80 mm	20/240
05 278	Rapid mounting device for wiring duct, W 100 mm	20/240
05 280	Rapid mounting device for wiring duct, W 120 mm	20/240
05 282	Rapid mounting device for wiring duct, W 150 mm	20/240

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Order codes

Components for distribution and mixed applications

In distribution and mixed applications, the Gemini switchboard is designed to be fitted with System pro *M* modular devices and Tmax moulded-case circuit breakers.

The frame is the load-bearing element of the configuration: DIN rails, partial modular plates and the special Tmax 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 a distance of 75 mm between the rows.

Blank or drilled 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 switchboard after the job is finished.



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



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.



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



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.



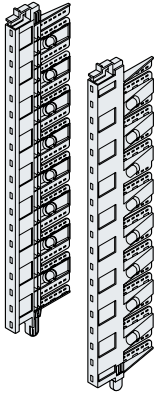
Fixing hooks and feet allow the frame to be snap-mounted inside the box.



The upright with the incorporated wiring duct is an exclusive ABB patent that rationalizes the path of cables inside the switchboard.

Order codes / el.nummer

Components for distribution and mixed applications

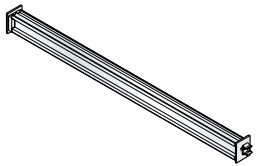


Size of the switchboard	Code / el.nummer	Unit/Pack
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Uprights

- Incorporated vertical wiring duct (ABB patent)
- Snap-on mounting of all components (installation pitch of 75 mm)
- Snap-on insertion into box
- Depth of installed components adjusted at a pitch of 12.5 mm (4 positions for uprights of size 1 and 6 positions for the remaining ones)
- Ergonomic grip to make it easy to insert and extract

1	1SL0283A00 / 2444351	1/4
2	1SL0284A00 / 2444352	1/4
3	1SL0285A00 / 2444353	1/4
4	1SL0285A00 / 2444353	1/4
5	1SL0286A00 / 2444354	1/2
6	1SL0287A00 / 2444355	1/1



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Size of the switchboard	Modules per row	Code / el.nummer	Unit/Pack
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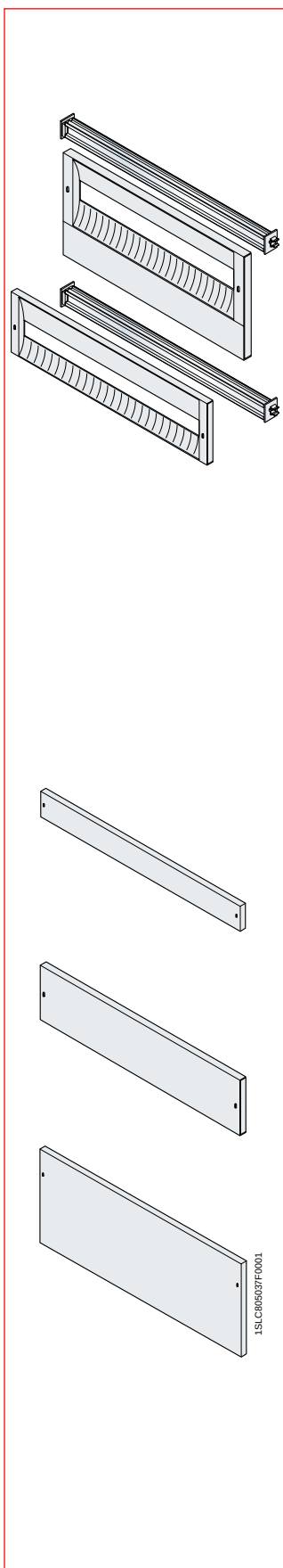
DIN rail

- Two-sided version
- Supplied with mounting supports that snap onto uprights
- Depth adjustment on uprights
- Designed so that rapid Unifix L mounting bars can be snapped on

1	12	1SL0290A00 / 2444356	1/10
2	18	1SL0291A00 / 2444357	1/10
3	18	1SL0291A00 / 2444357	1/10
4	24	1SL0292A00 / 2444358	1/10
5	24	1SL0292A00 / 2444358	1/10
6	36	1SL0293A00 / 2444359	1/10

Order codes / el.nummer

Components for distribution and mixed applications



Size of the switchboard

Code / el.nummer

Unit/Pack

Drilled panels

- Supplied with DIN rail complete with supports to snap onto uprights and adjustable in depth
- Available in 1 module (H 150 mm) and 1+1/2 module (H 225 mm, sizes 2-6) dimensions
- Designed to be hinged onto both vertical sides
- Snap-on mounting onto uprights (in compliance with reference Standards a tool must be used for removing the panel)
- Document pocket for storing descriptions of installed devices

	1 module	1 + 1/2 module	
1	1SL0307A00 / 2444367	-	1/8
2	1SL0308A00 / 2444368	1SL0313A00 / 2444371	1/8
3	1SL0308A00 / 2444368	1SL0313A00 / 2444371	1/8
4	1SL0309A00 / 2444369	1SL0314A00 / 2444372	1/4
5	1SL0309A00 / 2444369	1SL0314A00 / 2444372	1/4
6	1SL0310A00 / 2444370	1SL0315A00 / 2444373	1/2

Blank panels

- Available in 1/2 module (H 75 mm), 1 module (H 150 mm) and 2 modules (H 300 mm) dimensions
- H 150 mm and H 300 panels designed to be hinged onto both vertical sides
- Snap-on mounting onto uprights (in compliance with reference Standards a tool must be used for removing the panel)

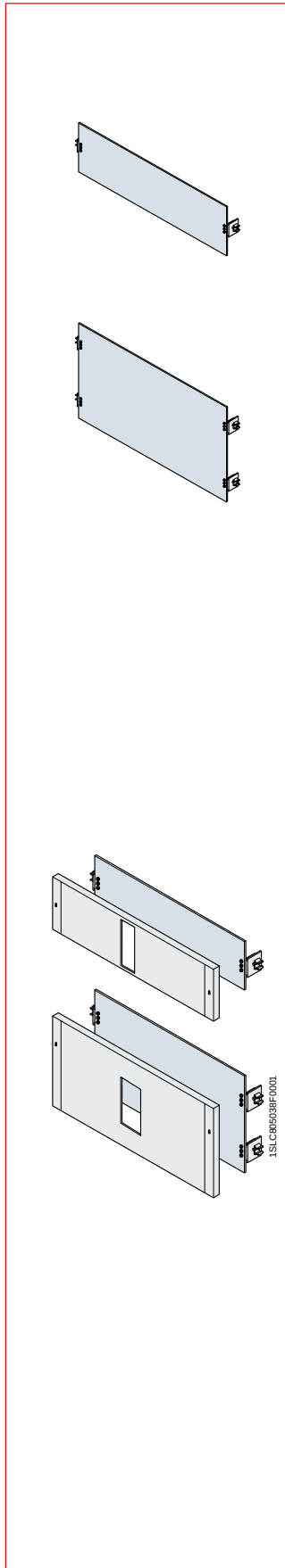
	1/2 module	
1	1SL0318A00 / 2444374	1/10
2	1SL0319A00 / 2444375	1/10
3	1SL0319A00 / 2444375	1/10
4	1SL0320A00 / 2444376	1/6
5	1SL0320A00 / 2444376	1/6
6	1SL0321A00 / 2444377	1/4

	1 module	
1	1SL0324A00 / 2444378	1/8
2	1SL0325A00 / 2444379	1/8
3	1SL0325A00 / 2444379	1/8
4	1SL0326A00 / 2444380	1/4
5	1SL0326A00 / 2444380	1/4
6	1SL0327A00 / 2444381	1/4

	2 modules	
1	1SL0330A00 / 2444382	1/6
2	1SL0331A00 / 2444383	1/6
3	1SL0331A00 / 2444383	1/6
4	1SL0332A00 / 2444384	1/4
5	1SL0332A00 / 2444384	1/4
6	1SL0333A00 / 2444385	1/4

Order codes / el.nummer

Components for distribution and mixed applications



Size of the switchboard	Code / el.nummer	Unit/Pack
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Partial modular plates

- Available in 1 module (H 150 mm) and 2 module (H 300 mm, sizes 2-6) dimensions
- Snap-on mounting onto uprights with depth adjustment

1 module		
1	1SL0296A00 / 2444360	1/6
2	1SL0297A00 / 2444361	1/4
3	1SL0297A00 / 2444361	1/4
4	1SL0298A00 / 2444362	1/4
5	1SL0298A00 / 2444362	1/4
6	1SL0299A00 / 2444363	1/2
2 modules		
1	-	-
2	1SL0302A00 / 2444364	1/4
3	1SL0302A00 / 2444364	1/4
4	1SL0303A00 / 2444365	1/4
5	1SL0303A00 / 2444365	1/4
6	1SL0304A00 / 2444366	1/2

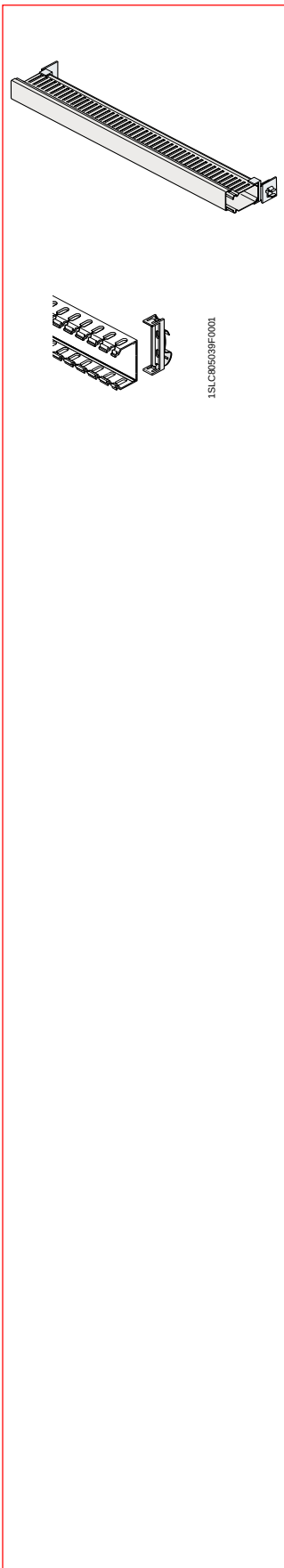
Kit for installing Tmax moulded-case circuit breakers

- For installing Tmax moulded-case circuit breakers in fixed version with front terminals
- Composed of a plate with special drilled holes and a protection panel with vertical slots that can be hinged on both sides and snap-on mounted (in compliance with reference Standards a tool must be used for removing the panel)
- Available for sizes 2-6
- Version H 150 with drillings for Tmax T1 3 poles (with and without residual current releaser), Tmax T1 4 poles (with and without residual current releaser), Tmax T2 3 poles (with and without residual current releaser), Tmax T2 4 poles (without residual current releaser)
- Version H 300 with drillings for Tmax T2 4 poles (with residual current releaser), Tmax T3 3 poles (with and without residual current releaser), Tmax T3 4 poles (with and without residual current releaser)
- Snap-on mounting onto uprights with the possibility of adjusting the plate depth

	H 150 mm	H 300 mm	
1	-	-	-
2	1SL0336A00 / 2444386	1SL0370A00	1/4
3	1SL0336A00 / 2444386	1SL0370A00	1/4
4	1SL0337A00 / 2444387	1SL0371A00	1/4
5	1SL0337A00 / 2444387	1SL0371A00	1/4
6	1SL0338A00 / 2444388	1SL0372A00	1/2

Order codes

Components for distribution and mixed applications



Size of the switchboard	Code	Unit/Pack
-------------------------	------	-----------

Wiring kit

- Composed of wiring duct in versions 25x60 mm and 40x60 mm (WxH, 8-12 mm slots) and Fix-O-Rapid
- Snap-on mounting on uprights with depth adjustment

	Wiring duct 25x60 mm	Wiring duct 40x60 mm	
1	1SL0353A00	1SL0360A00	1/4
2	1SL0354A00	1SL0361A00	1/4
3	1SL0354A00	1SL0361A00	1/4
4	1SL0355A00	1SL0362A00	1/4
5	1SL0355A00	1SL0362A00	1/4
6	1SL0356A00	1SL0363A00	1/4

grunnenhet
automasjon
distribusjon
tilbehør



Order codes

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 pro-

tection when the door is open in distribution and mixed configurations.



Gemini wall-mounted installation using the special mounting brackets.



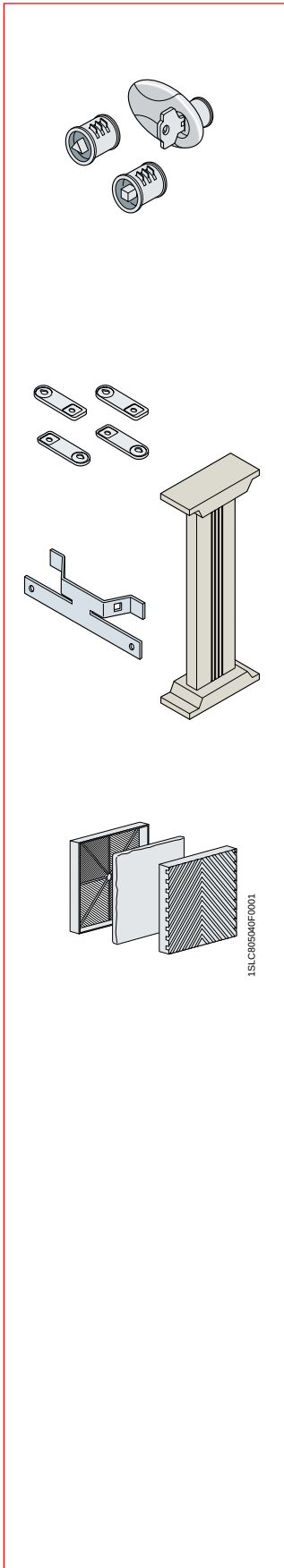
The standard locks supplied can be replaced by the version with ciphered key and handle or with square or triangular impression.



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.

Order codes / el.nummer

Accessories



Code / el.nummer	Description	Unit/Pack
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Locks

- Available in three versions with ciphered key and handle, with triangular and square impressions

1SL0340A00 / 2444390	Lock with Yale type ciphered key and handle	1/10
1SL0341A00 / 2444391	Lock with triangular impression	1/10
1SL0339A00 / 2444389	Lock with square impression	1/10

Mounting elements

- Guarantee optimum wall, pole and floor mounting conditions

1SL0342A00 / 2444392	Horizontal and vertical wall brackets	1/10
1SL0343A00 / 2444393	Pole mounting kit for sizes 1 switchboards	1/4
1SL0344A00 / 2444394	Pole mounting kit for sizes 2-3 switchboards	1/4
1SL0345A00 / 2444395	Pole mounting kit for sizes 4-5 switchboards	1/2
1SL0346A00 / 2444396	Pole mounting kit for size 6 switchboards	1/2
1SL0352A00 / 2444399	Floor mounting pedestal for sizes 1-4	1/1

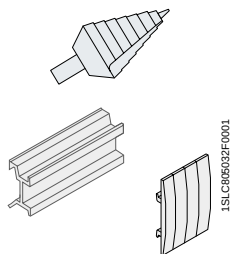
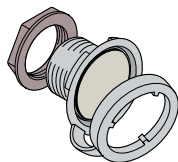
Ventilation kit

- Composed of plastic grills and filter to ensure switchboard ventilation
- IP42
- The filter must be cleaned periodically

1SL0350A00 / 2444397	Ventilation kit	1/1
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Order codes

Accessories



Code / el.nummer	Description	Unit/Pack
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Anti-condensation kit

- Kit in special material to prevent condensation from forming inside the switchboard: it include **Gore™ MEMBRANE VENTING**
- 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 / 2444398	Anti-condensation kit	1/6
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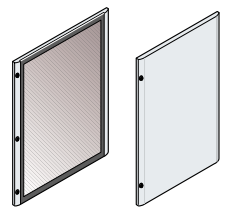
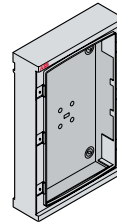
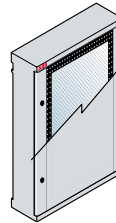
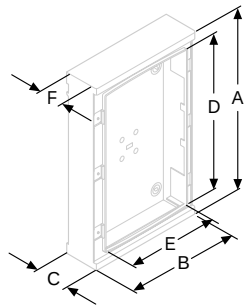
Other accessories

12894	Universal drill bit	1/30
12863	Module covers in RAL 7035 grey, 4 modules	50/600
12851	Plastic spacer for installing modular devices and moulded-case circuit breakers at the same depth	10/60

Order codes

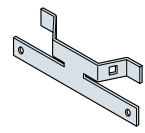
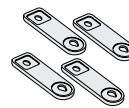
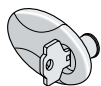
Rapid selection table

Basic configuration



Size	No. of installable DIN modules (mod. x row)	No. of vertical mod. (H=150 mm)	External dimensions			Internal dimensions			Complete switchboard		Box	Door	
			A	B	C	D	E	F	Transparent 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

Accessories common to the whole range

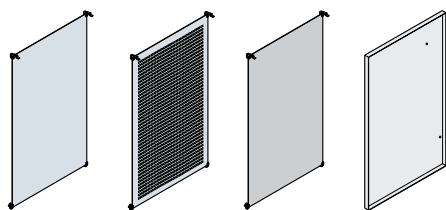


Size	Lock with handle	Lock with triangular impression	Lock with square impression	Installation brackets	Pole installation kit
1	1SL0340A00	1SL0341A00	1SL0339A00	1SL0342A00	1SL0343A00
2					1SL0344A00
3					1SL0344A00
4					1SL0345A00
5					1SL0345A00
6					1SL0346A00

Order codes

Rapid selection table

Components for automation

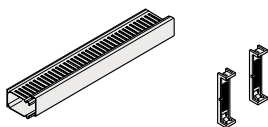


Base plate

Inner door

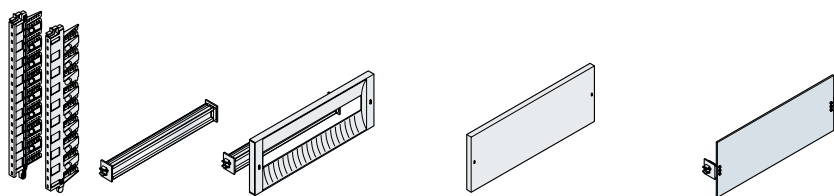
Blank	Drilled	Insulating	
1SL0259A00	1SL0275A00	1SL0267A00	-
1SL0260A00	1SL0276A00	1SL0268A00	1SL0252A00
1SL0261A00	1SL0277A00	1SL0269A00	1SL0253A00
1SL0262A00	1SL0278A00	1SL0270A00	1SL0254A00
1SL0263A00	1SL0279A00	1SL0271A00	1SL0255A00
1SL0264A00	1SL0280A00	1SL0272A00	1SL0256A00

Accessories for automation



Size	Wiring ducts	Fix-O-Rapid
1		
2		
3		
4	See page 2/9	See page 2/9
5		
6		

Components for distribution



Uprights

DIN rail

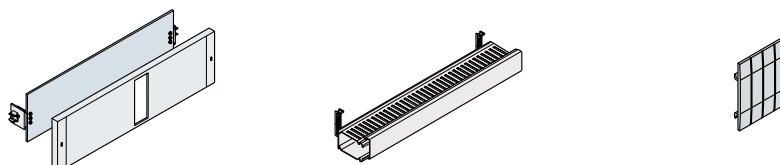
Drilled panel

Blank panel

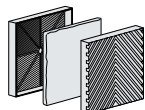
Modular plate

		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	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00
1SL0285A00	1SL0291A00	1SL0308A00	1SL0313A00	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00
1SL0285A00	1SL0292A00	1SL0309A00	1SL0314A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00
1SL0286A00	1SL0292A00	1SL0309A00	1SL0314A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00
1SL0287A00	1SL0293A00	1SL0310A00	1SL0315A00	1SL0321A00	1SL0327A00	1SL0333A00	1SL0299A00	1SL0304A00

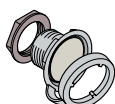
Accessories for distribution



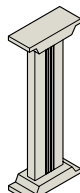
Kit for Tmax		Fix-O-Rapid kit with wiring duct		Module covers RAL 7035
H=150 mm	H= 300 mm	25x60 mm	40x60 mm	
-	-	1SL0353A00	1SL0360A00	
1SL0336A00	1SL0370A00	1SL0354A00	1SL0361A00	
1SL0336A00	1SL0370A00	1SL0354A00	1SL0361A00	
1SL0337A00	1SL0371A00	1SL0355A00	1SL0362A00	
1SL0337A00	1SL0371A00	1SL0355A00	1SL0362A00	
1SL0338A00	1SL0372A00	1SL0356A00	1SL0363A00	12863



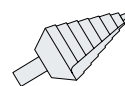
Ventilation kit



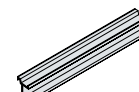
Anti-condensation kit



Pedestal



Universal drill bit



Depth adapter

1SL0350A00	1SL0351A00	1SL0352A00	12894	12851
		-		
		-		

Technical information

Technical characteristics

Table of Gemini switchboards' 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 °C	-25 °C ÷ +100 °C	-25 °C ÷ +100 °C	-25 °C ÷ +100 °C	-25 °C ÷ +100 °C
No. of DIN modules	24 (12x2)	54 (18x3)	72 (18x4)	96 (24x4)	120 (24x5)	216 (36x6)
No. of vertical modules (H=150 mm)	2	3	4	4	5	6
Material	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
Color	Grey RAL7035	Grey RAL7035	Grey RAL7035	Grey RAL7035	Grey RAL7035	Grey RAL7035
Fast wiring system	Unifix L	Unifix L	Unifix L	Unifix L	Unifix L	Unifix L
No. of locks	2	2	2	2	3	3
Rated current In	≤ 400 A	≤ 400 A	≤ 400 A	≤ 400 A	≤ 400 A	≤ 400 A
Rated frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	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	≤ 690 V	≤ 690 V	≤ 690 V	≤ 690 V
- Rated insulation voltage	≤ 800 V	≤ 800 V	≤ 800 V	≤ 800 V	≤ 800 V	≤ 800 V
- Rated impulse withstand voltage	8 kV	8 kV	8 kV	8 kV	8 kV	8 kV
Short circuit withstand (par. 8.2.3)						
- Rated peak short-circuit current	-	-	-	-	-	-

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

⁽²⁾ **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.



UNI EN ISO 9001

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.

1SEC800010C2101

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