

System family SIKUS 3200



Introduction

Applications are possible as main and sub-distribution boards in offices and functional buildings, industry and business buildings, and also in public buildings such as schools and hospitals.

Other uses as control cabinets or feeder/output panels for heating, ventilation, electronics and communication are also possible.

The partially equipped SIKUS 3200 modular cabinets have been tested as "type-tested low voltage switchgear combinations" (TTA) as per DIN EN 60 439-1 (VDE 0660 Part 500) IEC 60 439-1.

This means that the requirements for temperature rise limits, insulation resistance, short-circuit strength, PE effectiveness, air and creepage distances, mechanical functions and protection class are all met.

Design

All stable cabinet designs as per DIN 43 660 are modular in construction principle.

The enclosure consists of a stable, perforated bar frame (25 mm hole grid), with roof, floor and back wall, together with side walls and, depending on the width, a single or double door. It is made of electrogalvanised and powder-coated sheet steel and meets protection class 1 (protective earth connection). The enclosure can be combined with suitable assemblies, enclosure components and doors as required. The enclosures have IP 55 degree of protection as standard when fitted with doors. If individual cabinets are positioned together, the IP 55 degree of protection can only be achieved with seals between the bar frames. The cabinet-high doors with espagnolette lock can be positioned with left or right opening stops. They come with 4-point locking and a two-way key with 3 mm pin, and are fastened to the frame with self-threading screws.

The door opening angle is 180°, which improves escape routes if placed in small control rooms.

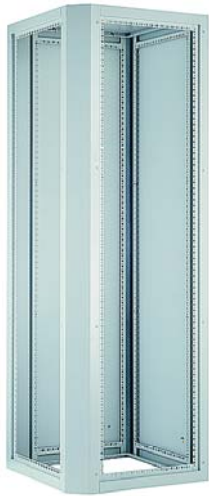
Suitable type-tested busbar systems are available for the enclosures. The busbars can be positioned vertically or horizontally in the cabinets. The base frame is accessible from all four sides.

A mature and appropriate range of assemblies is available. The cabinets can be equipped with Siemens switchgear devices and modular built-in devices, mounted on hat rails and mounting plates. Depending on requirements, assemblies for modular built-in devices can be installed with hat rail distances of 125, 150 or 200 mm.

Cables can be fed in from below or above.

For our customers, this means:

- Cabinet combinations for single and modular installation available with top quality and safety standards;
- Flexible design with numerous assemblies and accessories;
- Safe contacting through earthing concept with self-threading screws
- The right design for every requirement
- Simple planning and engineering of suitable designs
- Degree of protection available: IP 20/30/40/54/55
- Colour: RAL 7035 pale grey, other RAL colours on request

Framework and enclosure*Corner cabinet for connection to modular cabinets*

For connection to modular cabinets as per DIN VDE 0660 Part 500, DIN EN 60 439-1

Maximum achievable protection class IP 55

Protection class 1 (protective earth connection)

Enclosure completely mounted with rear wall and closed roof panel

Framework, 2 mm sheet steel, enclosure elements 1.5 mm sheet steel, electrogalvanised, powder coated

Colour: RAL 7035 pale grey, other RAL colours on request

Corner cabinet, mounted, consisting of:

- Control cabinet framework
- Roof panel
- Rear wall

Dimensions: H 2000

D 400/600/800

H 2200

D 600/800

Modular cabinet for single and modular installation



For single and modular installation as per DIN VDE 0660, Part 500, DIN EN 60439-1

Achievable degree of protection IP 55

Protection class 1 (protective earth connection)

Enclosure, complete mounted, consisting of:

Control cabinet framework

Rear wall sheet steel door closed, roof panel

Colour: RAL 7035 pale grey, other RAL colours on request

Mounting grid 25 mm vertical and horizontal, as per DIN 43 660

Mounting with self-threading screws

400 mm wide panels for lateral cable or busbar sections

Cabinet, mounted, consisting of:

- Control cabinet framework
- Roof panel
- Sheet steel door (double door from 1000 mm width)

Dimensions: H 2000/2200

W 400 bis 1200

D 400 bis 800

Cabinet framework for modular installation



As modular cabinet for modular installation

As per DIN VDE 0660 Part 500,

DIN EN 60 439-1

Achievable degree of protection IP 55

Protection class 1 (protective earth connection)

Control cabinet framework made of 2 mm sheet steel profile, electrogalvanised, powder coated

Colour: RAL 7035 pale grey, other RAL colours on request

Mounting grid 25 mm vertical and horizontal, as per DIN 43 660

Mounting with self-threading screws

400 mm wide panels for lateral cable or busbar sections

Cabinet, mounted, consisting of:

- Control cabinet framework
- Rear wall

Dimensions: H 2000/2200

B 400 to 1200

D 400/600/800

Additional parts:

- Standard busbar holder
- Fastening bracket
- Busbar holder 1-pole
- Base frame
- Base panel
- Side wall
- Locking systems
- Connection sets
- Cable brackets
- Partition walls

Partitions (barriers)

Partitions increase operating safety and protect against movements of solids between neighbouring units.

They prevent contact between live components of neighbouring functional switchpanels and limit the possibility of accidental arcing. In addition, they protect against the intrusion of solid foreign bodies between neighbouring switchpanels.

Environmental aspects:

The plastics used are free of PVC and halogens, and are recyclable. The colours used are free of solvents, cadmium and lead.

Construction and test regulations

FEAG, as a manufacturer of switchgear, complies during assembly with the instructions as per the standards EN 60 439-1 (VDE 0660 Part 500), IEC 60 439-1 and the specific instructions of the system suppliers for the partially equipped SIKUS 3200 modular cabinets and for the Siemens switching devices being built in.

Routine tests are made on wiring, electrical function, insulation and safety measures, and a test report is drawn up.

Internal arc tests are implemented as per EN 60 439-1, supplementary sheet 2 (VDE 0660, Part 500, supplementary sheet 2) or IEC 61 641 (report). Taking into account the standard IEC 60 204-1 (EN 60 204-1) device safety, this also enables use for control of machine and process systems.

Standards:

(TTA/PTTA), DIN 43 660,
DIN 43 870, DIN EN 60 439-1, IEC 60 439-1

Cabinet panel variants:

- Empty panel
- Panel with mounting plate for any devices
- Panel with assembly for circuit breaker
- Panel with hat rail for modular built-in devices
- Panel with assembly for switch disconnecter
- Panel with assembly for l.v.h.b.c. fuse switch-disconnectors
- Panel with assembly for l.v.h.b.c. strip-type fuse switch-disconnectors
- Panel with assembly for switch-disconnectors with l.v.h.b.c. fuses in strip format
- Panel with assembly for compensation assemblies
- Panel with assembly for 19" system configuration
- Panel with adapter assembly for installation of assemblies from the SIKUS installation distributor system with panel covers made of plastic.

Application example

Panels with circuit breakers



Panel with circuit breaker 3VF5, 3VF6

3-pole

Rated current $I_n = 200 \text{ A to } 800 \text{ A}$

For permanent installation

Device installation behind door

H 2000

W 600/800

D 600

Sammelschienen-Hochführungsfeld

Rated current $I_n \leq 3\,200 \text{ A}$

Can be equipped with compact circuit breakers (e.g. 3VF6)

Roof with ventilation domes

IP 30

H 2000

W 600

D 600

No illustration



Panel with circuit breaker 3VF8

Bemessungsstrom $I_n \text{ max. } 2500 \text{ A}$

für Festeinbau

Antrieb und Geräteeinbau hinter der Tür

Türen mit Doppelbartverschluss

H 2000

W 600

D 600



Panel with circuit breaker 3WN6

3-pole with measurement

Rated current $I_n = 630 \text{ A to } 3200 \text{ A}$

For permanent installation or plug-in technology with integrated mounting plate and horizontal partitions in measurement panel

Module doors with two-way key

H 2000

W 600

T 600



**Panel with circuit breaker 3WN6
3-pole max. 3200 A**

Rated current $I_n = 630 \text{ A}$ to 2500 A

For permanent installation

Can be used as coupler circuit breaker panel

Module doors with two-way key

H 2000

W 600

D 600

Panel with circuit breaker 3WN1

3-pole

Rated current $I_n = 3200 \text{ A}$, $I_{cw} = 100 \text{ kA}$

Coupler circuit breaker panel

For plug-in technology with integrated mounting plate and horizontal partitions

Module doors with two-way key

Ventilation in module door base

Roof with ventilation domes

IP 30

H 2000

W 600/800

D 800

No illustration



**Panel with vacuum circuit breaker 3WS,
with measurement**

Rated current $I_n = 630 \text{ A}$ to 3200 A

For permanent installation or plug-in technology

With integrated mounting plate and horizontal partitions in measurement panel

Doors with two-way key

H 2000

W 600

D 600

Technical data	SIKUS 3200
Overvoltage category V	1000/III, 600/IV
Rated impulse strength U_{imp} kV	8
Air and creepage distances	DIN VDE 0110
Rated insulation voltage U_i V	1000
Rated operating voltage U_e V	690
Rated current, main busbars A	3200
Short circuit strength, main busbars I_{pk} kA I_{cw} (1s) kA	Up to 220 Up to 100
Multi-terminal busbar I_{pk} kA I_{cw} (1s) kA	Up to 176 Up to 80
Safety measures	Protection class 1 (protective earth connection)
Number of circuits in busbar run	3, AC 4, AC 2 and 3, DC
Degree of protection as per DIN EN 60 529	IP 55, with touch guard and sealed door, IP 30 with touch guard without door
Contamination degree	3
Ambient temperature °C	35 (24h mean)
Relative humidity %	50 at 40 °C
Altitude m	Max. 2000 (above msl)
Enclosure	Framework and doors, 2 mm sheet steel
Plastic components	Halogen and PVC-free
Metal surfaces	Electrogalvanised and powder-coated
Colour	RAL 7035 pale grey (other RAL colours on request)

Application example

Panels with switch-disconnectors



Panel with I.v.h.b.c. strip-type fuse switch-disconnector 3NP4, 3-pole

Rated current $I_n = 630$ A

Devices and drive behind door, without insulation material panels, with cabinet-high door, degree of protection IP 55

H 2000

W 600/800

D 600



Panel with I.v.h.b.c. strip-type fuse switch-disconnector 3NJ4, 3-pole

Rated current $I_n = 160$ A to 630 A

Drive and device installation through door, IP 20

With module doors and busbars

H 2000

W 600/800

D 600



Panel with plug-in strip-type switch disconnectors with I.v.h.b.c. fuses 3NJ6/SASIL (J.Müller)

In sizes 00 to 3, in strip format, 3-pole, vertical

Rated current $I_n = 160$ A to 630 A

Busbar holder for multi-terminal busbar (required)

H 2000

W 600/1100

D 600

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Application example



Compensation panel

Compensation panel

Prepared for capacitor modules with or without impedance and controller modules for reactive power controller 4RF5 with roof panel including ventilation openings as compensation panel

Assemblies behind door

Cabinet-high door, right hinged, with ventilation slits and perforated roof panel, IP 30

Max. 5 assemblies can be built-in with 50 kvar each (impedance 5.67% or 7%) or 100 kvar

H 2000

W 850

D 600

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Rated insulation voltage U_i V	1000
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