

SWITCHGEAR ENGINEERING

Power distribution boards **ALPHA 3200 Eco**

3D engineering with the digital twin.
[siemens.com/alpha](https://www.siemens.com/alpha)



SIEMENS

Digital engineering – the cornerstone of automation

Design your system in 3D with the ALPHA 3200 Eco power distribution board



SIMARIS configuration

Design faster digitally: Configure your system using SIMARIS configuration and represent it in full detail as a 3D digital twin with the 3D processor for further processing or coordination with your customer.

Visualization

Use the Siemens Solid Edge CAD program to process loss-free STEP design data from SIMARIS configuration in order to pick up product dimensions individually: defined tools, defined interfaces, and faster manufacturing processes.

Enjoy the **benefits** of the **digital twin**

Switchgear manufacturers are facing two challenges. Greater demands associated with electric power distribution require solutions of increasing complexity, while project run times are growing shorter. Our answer is 3D engineering with the digital twin of the ALPHA 3200 Eco power distribution board.



Fully digital engineering – with SIMARIS configuration

You can use the SIMARIS config configuration software to perform the entire engineering process digitally. That includes simple, fail-safe, and standards-compliant configuration of the power distribution board in accordance with IEC 61439-1/-2 as well as speeding up the process of calculation and drawing up offers and plant documentation. It can all be done quickly and intuitively using a single user interface.



Easy-to-follow visualization with the 3D processor in SIMARIS sketch

The more complex the switchgear, the more important it is to be able to visualize it in detail, preferably in 3D. The 3D processor in SIMARIS sketch lets you quickly and easily visualize the system down to the last detail. Show your customers what you've planned and how you respond to their specific problems. The better the visualization, the easier it will be to turn the system into reality later.



More engineering flexibility – with the digital twin

Use the digital twin of the ALPHA 3200 Eco power distribution board to manage even complex systems and shorter project run times – or run through options and illustrate alternatives for your customers. The digital twin opens up a range of new opportunities in switchgear construction.



The best technical foundation – The ALPHA 3200 Eco power distribution board

The ALPHA 3200 Eco power distribution board was developed with your success in mind – with innovative components for rapid installation, such as the centrally mounted busbar system and the use of less copper to save resources and make the system more sustainable. And a greater packing density to provide increased functionality in a very compact space.

Highlights



Easier on resources

- The centrally located busbar system makes device installation easier, and uses up to 30% less copper.
- Optimized for transformers up to I_n 3,200 A and 2,000 kVA



Practical

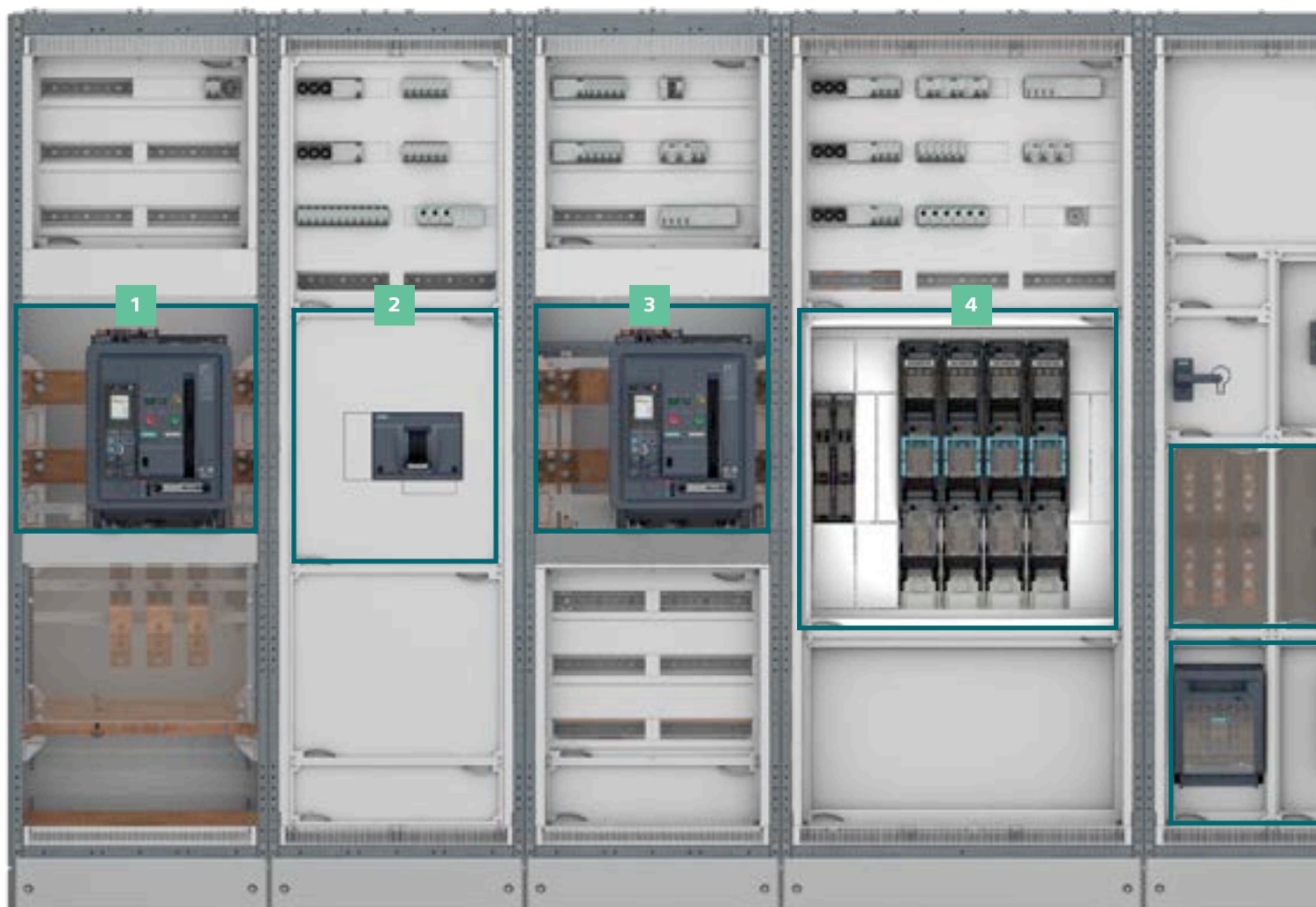
- Plan and coordinate more quickly and with greater certainty – with 3D engineering
- Application-based type testing
- Designing with 3D engineering saves time
- Detailed construction drawings make actual construction more convenient



Modular

- High packing density
- Can be flexibly combined with 8GK installation kits
- Flexible panel width (low space requirement and greater ease of connection)

ALPHA 3200 power distribution boards



1 3WA circuit breaker technology

- Air circuit-breakers 3WA size 0 to 3WA size 2, up to 3,200 A
- Different panel widths for compact design or more convenient connection

2 3VA circuit breaker technology

Full integration of the 3VA molded-case circuit-breaker, 630 A to 1,600 A

3 3WA bus coupler

Coupling with 3WA air circuit-breaker, size 1, 2,000 A

4 3NJ4 in-line fuse switch disconnectors

- From NH00 to NH3 630 A
- Optionally with second NH00 in-line level

5 ALPHA 8GK installation technology

- Fully compatible with installation kits for the ALPHA distribution board
- Panel width up to 1,100 mm

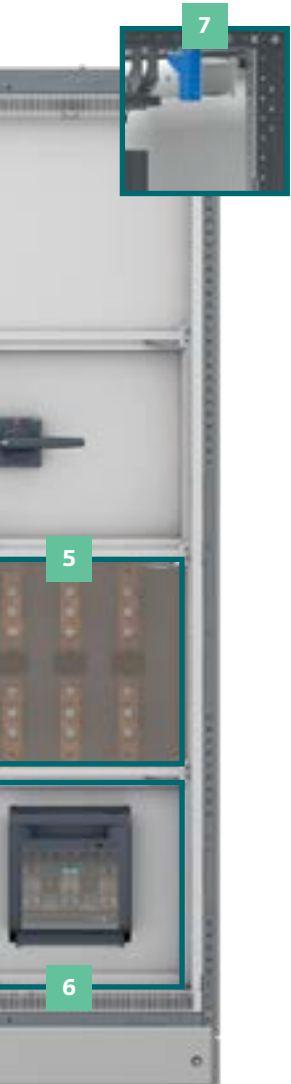
6 Transformer measurement

Tested function module in accordance with IEC 61439 with 3NP1 fuse switch disconnectors and 3KD switch disconnectors

7 Cross-wiring compartment

Control wiring perfectly organized across panels

Technical data



ALPHA 3200 power distribution board

Busbar	Rated current (I_n)	max. 3,200 A
	Rated operational voltage (U_e)	max. 400 V
	Rated peak withstand current (I_{pk})	max. 165 kA
	Rated short-time withstand current (I_{cw})	max. 75 kA, 1 s
Protection system	Acc. to IEC 60529, EN 60529	up to IP31 (ventilated)
		up to IP54 (non-ventilated)
Form of internal separation	Form 1 (with touch protection)	
Frame variants	Height	2,000 mm
	Depth	400 mm/600 mm
Standards and provisions	System to create a design-verified switchgear assembly	IEC 61439-1/-2
Clearance and creepage distances	Rated impulse withstand voltage (U_{imp})	8 kV
	Rated insulation voltage (U_i)	1,000 V
	Pollution degree	3
Degree of protection against mechanical impacts	IEC 62262	IK 07



Type-tested in accordance with IEC 61439

Application-based and transparent technical data directly from SIMARIS configuration

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