



BlokSeT™ Lean



Innovative & Sustainable LV Switchboard

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Life Is On

Schneider
Electric



BlokSeT

A global success leading to a large installed base of more than

700 000 cubicles

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A sustainable green future

The Intergovernmental Panel on Climate Change (IPCC) warns we must limit human-caused global warming to 1.5 °C or risk catastrophic planetary impacts.¹ The impacts being felt today will increase dramatically without immediate and substantial greenhouse gas emissions reductions.

Climate change is now a top concern among government leaders and major corporations. Corporate strategies are evolving, driven by regulations and a growing understanding that environmental, social, and governance (ESG) issues impact financial performance and corporate value.

- ~140 countries have proposed or committed to net-zero 2050 goals.
- 80% of the top 100 companies per country now publicly report on their sustainability.²
- 63% of the 2022 Global Fortune 500 companies committed to delivering a significant climate milestone by 2050, a 12% increase in one year.³



The technology and services to support this transformation are available today

Schneider Electric™ is a leading expert in sustainability and decarbonization solutions. We're also a clean energy leader in microgrid systems and consulting on renewable energy purchasing.⁴ 40% of the Fortune 500 companies trust Schneider Electric to provide cost-effective, sustainable energy solutions, and services.

Data Centers

Data centers represent 1~2%⁴ of total global electricity consumption today. Digital transformation and automation occurring all around us requires more IT compute capacity and more data centers, which has drawn the attention of environmental groups and consumers concerned about the climate change, the most pressing issue society faces today.

Data center colocation providers have focused on improving energy efficiency over the last two decades. Not only has this been good for business, but good for the planet as well. Today, the focus is expanding beyond efficiency into environmental sustainability including renewable energy, greenhouse gas (GHG) emissions, water, waste, and land & biodiversity. Data center owners benefit from improving their overall environmental footprint by making improvements beyond efficiency.



Every data center project comes with its unique parameters and requirements, so it is necessary to create the best-fit data center design for your facility to operate effectively and efficiently.

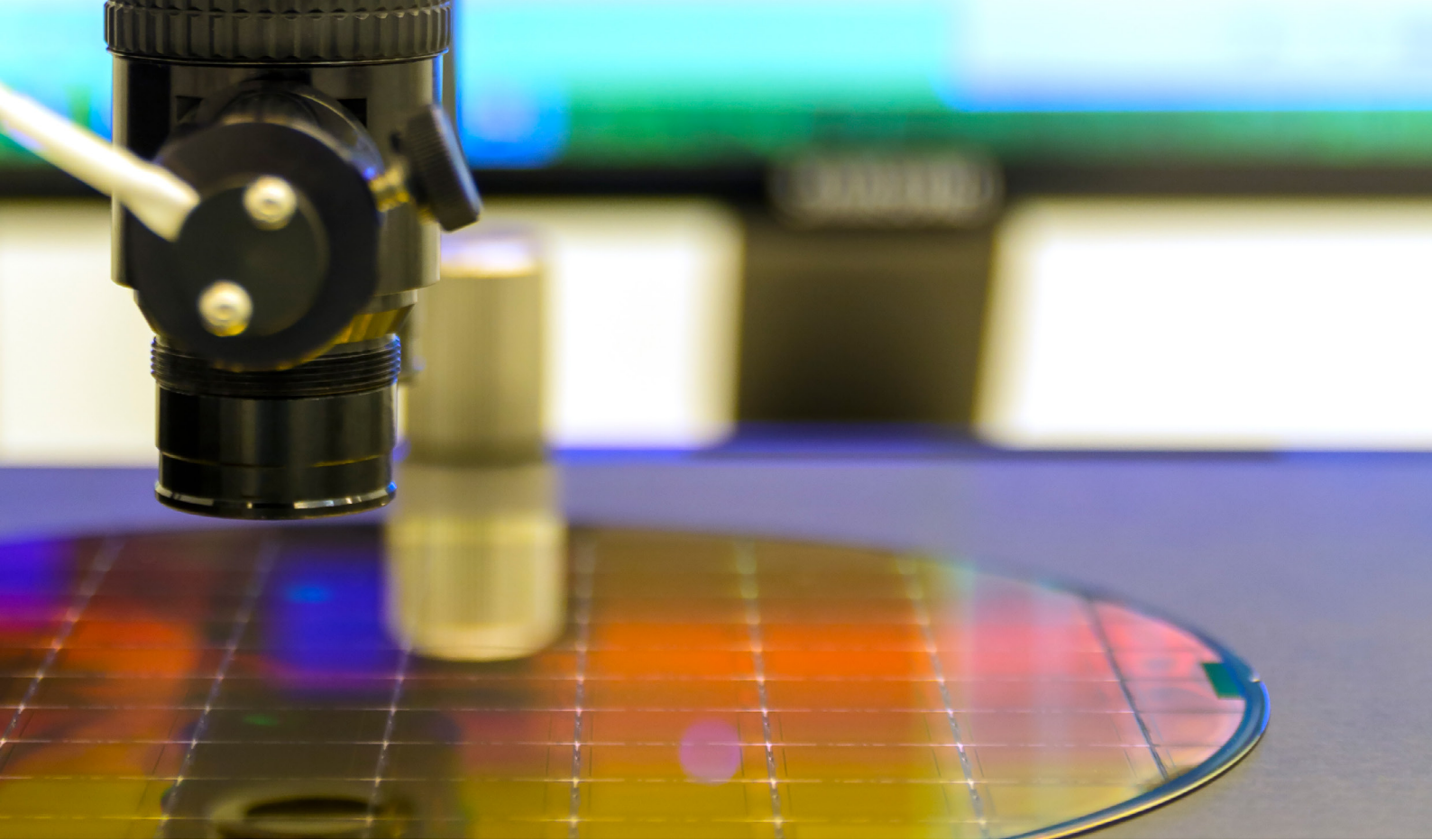
Reference:

1 "Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments," IPCC, 2018

2 "The time has come - KPMG Survey of Sustainability Reporting 2020," KPMG

3 "Big companies keep increasing their climate commitments—especially when governments tell them to," Fortune, September 2022

4 Masanet, Shehabi, Lei, Smith, Koomey, Recalibrating global data center energy-use estimates, 2020



Semiconductors

Imagine life without computers, mobile phones, sophisticated medical devices, and even video game consoles. We've grown accustomed to these technologies to manage our day-to-day lives, communicate with each other, keep us healthy, and entertain ourselves. The truth is: semiconductors allow us to take advantage of these modern conveniences.

For companies in the high-tech and manufacturing industries involved in processes to transform bare silicon into ingots, wafers, chips, and ultimately circuits used in electronics and electrical devices, power availability of critical systems is paramount for precision-intensive physical and chemical processes. In addition, reliability, maintainability, safety, and efficiency of sensitive equipment and clean room applications are required at the highest levels to ensure productive and profitable manufacturing environments.

BlokSeT Lean

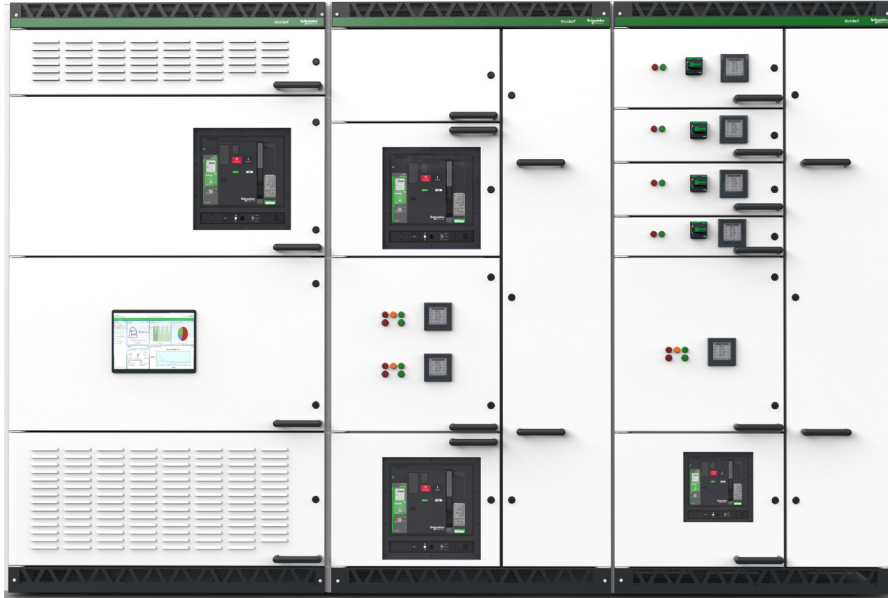
Benefits at an glance

- **Sustainable** – saving material and reducing power loss by innovative busbar architecture
- **Reliable** – Minimize downtime through 24/7 thermal-risk detection by Predictive Maintenance
- **Safe** – Up to form 4 separation, up to IP54 and internal arc compliance
- **High Performance** – Full in-panel rating, and Icw up to 100kA/1s
- **Compliant** – IEC 61439 -1/2 & IEC TR 61641 & IEC 60068-3-3

In addition to our overall offering and expertise, Schneider Electric is a trusted advisor. Our capabilities include designing and delivering high quality, end-to-end solutions for excellent power quality and energy efficiency, continuous availability of equipment and utilities, increased power availability of tools and utilities, and environmental compliance.



Innovation on BlokSeT Lean



Innovative Architecture in Low-voltage switchboard

- Main busbar at the rear middle low/high position, can provide max. flexibility for customer connection
- Single run of main busbar up to 5000A thanks to unique architecture
- Flexible shipping unit single or multi columns

Innovative design of Busbar support and fishplate connection

Provide customer easier connection/access from the front side, minimize the labor cost from installation/maintenance time saving.

- HBB ends inside cubicle and two cubicle connection by fishplates
- Fishplate for Easy connection/access from the front side

Enhanced safety and reliability within your reach

Embodying decades of expertise, BlokSeT Lean solutions are engineered to be complete and personalized low voltage switchboards for power distribution. BlokSeT Lean switchboards answer the need for superior operational safety in today's high performance LV power applications. Versatile and durable, BlokSeT Lean switchboards have the comprehensive capabilities and intelligence you need to keep your business competitive.

Greater reliability, flexibility, and intelligence

BlokSeT Lean solutions combine industry-leading features and designs with Schneider Electric™ support to make implementation and operation quicker and more reliable so that you can lower costs and realize a faster return on your investment. A fully functional switchboard with built-in intelligence for energy efficiency, BlokSeT Lean is a simple and modular solution. It is easy to choose, intuitive to use, cost effective and simple to install and upgrade.

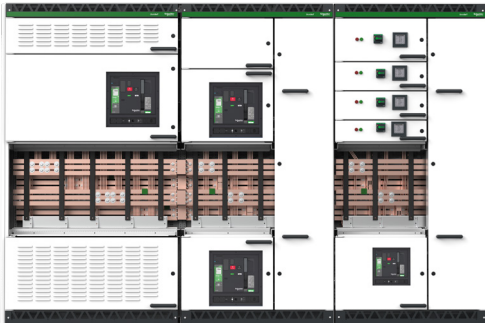
Decarbonization

Schneider Electric™ is helping our customers and partners to decarbonize is at the core of Energy Management strategy. BlokSeT Lean provides the fastest path to Net Zero and we need more experts who understand the complexities and best practices of decarbonization to help our customers reach their sustainability ambitions faster.



Decarbonization

Up to **30%** CO₂ reduction
Material saving & power loss reduction

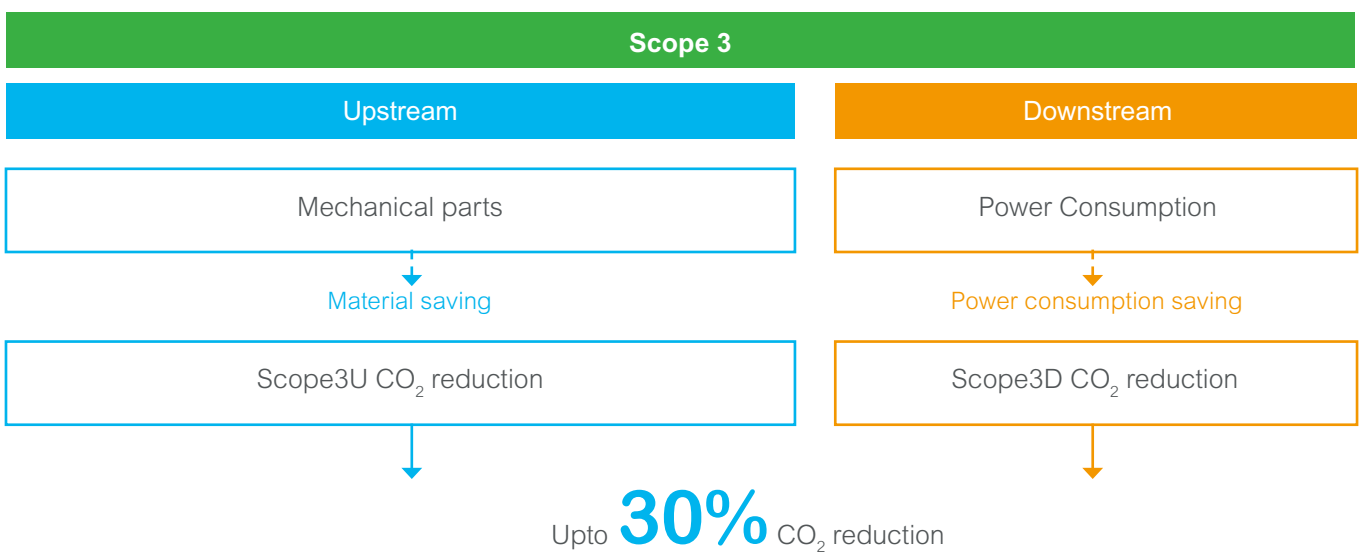


Material saving & Power loss reduction

BlokSeT Lean reduce carbon and frame footprints, help you to meet the sustainability goals. The product is also simplified and streamline power distribution system, making you easier to install, commission, and maintain. Additionally, the real-time thermal monitoring solution, advanced wireless connection, and predictive maintenance features ensure the reliable and efficient operation of power distribution systems, minimizing energy waste and reducing emissions.

Investing in sustainable BlokSeT Lean solution can also help future-proof operations by ensuring that power distribution systems can adapt to changes in energy efficiency regulations, energy costs, and other factors that may affect operations.

BlokSeT Lean is promising solutions for the low-carbon future of LV power distribution. As more companies prioritize sustainability, these products can help to a more sustainable and environmentally responsible future. By adopting low-carbon power distribution solutions, these industries can reduce their carbon footprint, improve their operational efficiency, and enhance the reputation as environmentally responsible companies.



Compact design

Horizontal busbar system

Blok**SeT** Lean is redesigned the architecture with innovation. The horizontal busbar system is arranged in the rear middle low/high positions of the switchboard. This compact design brings the benefits for framework and total footprint of a sets of switchboards.

No additional holes are required for connection, make manufacturing and assembly simplify.

The innovation main busbar system reserved the maximum space between the operators and the busbar for easy installation and maintenance.

Incomers Air Circuit Breakers up to 5000A

High design quality provides high performance, the rated current of ACB provide up to 5000A performance.

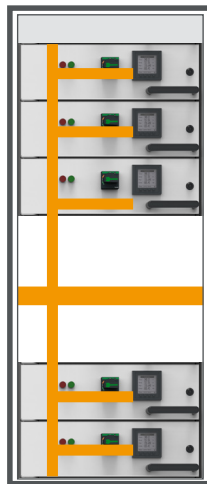
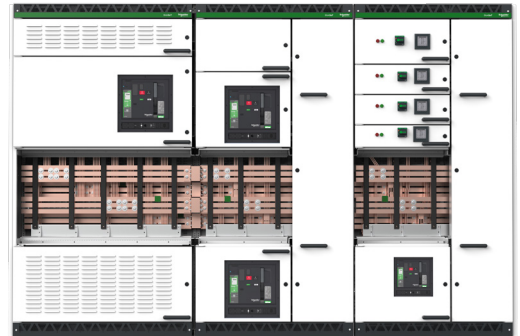
Vertical busbar system

Optimized Vertical busbar system & link bar system, no need additional space for VBB arrangement.



Compact Design

Up to **30%** footprint reduction
thanks to new busbar architecture



From preventive to predictive maintenance

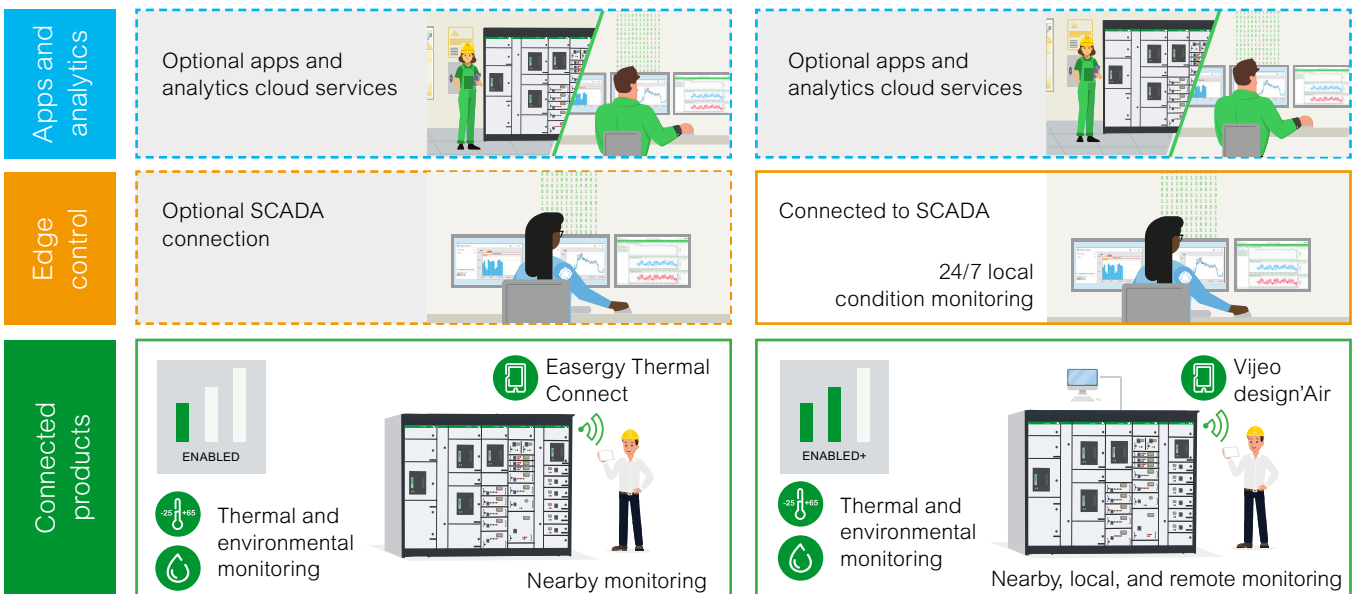
Minimize downtime, increase reliability



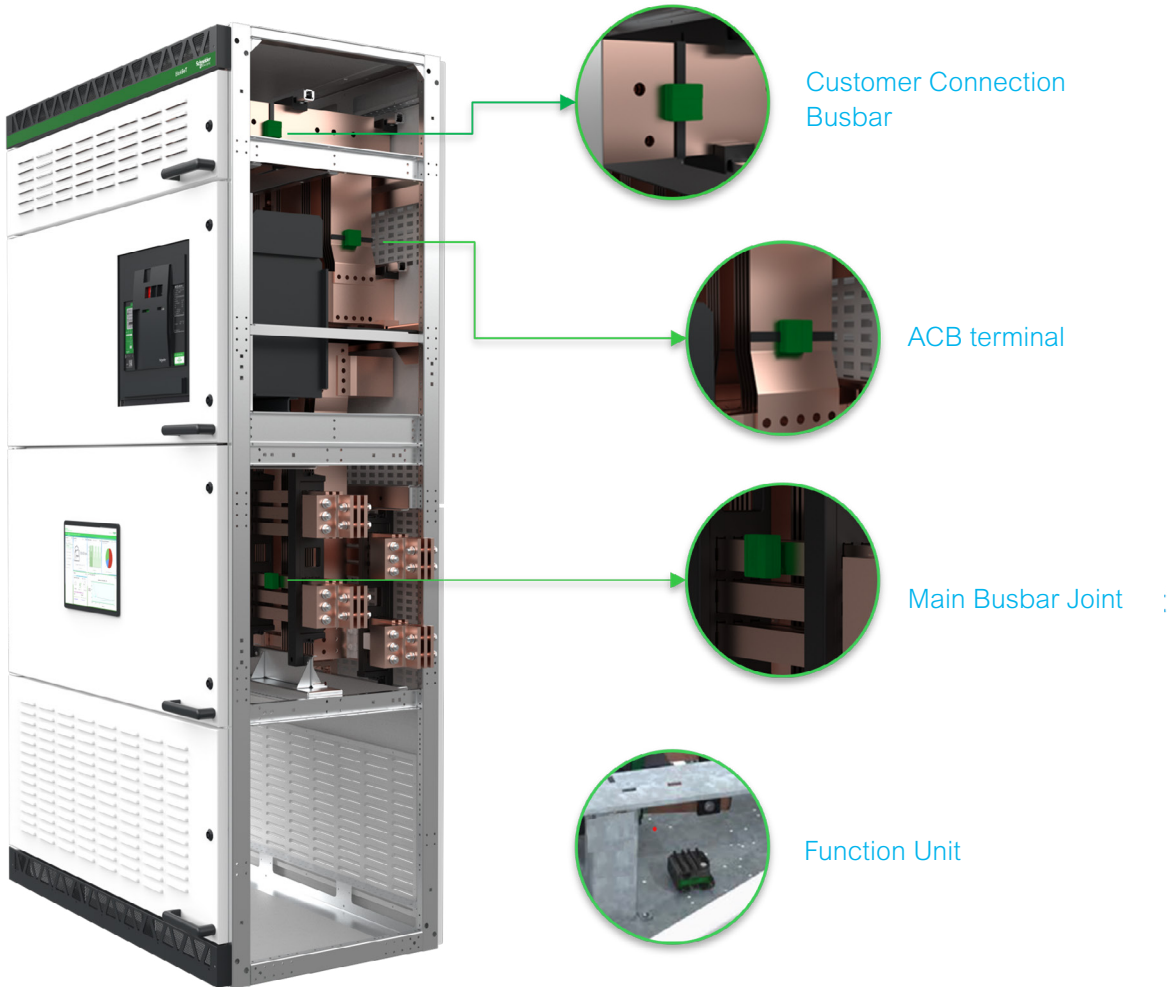
Predictive Maintenance

24/7

Minimize downtime through thermal risk detection via real time monitoring



Wireless BlokSeT LV thermal monitoring solution



Easergy TH110 Wireless Thermal sensor

- Temperature

Easergy CL110 Wireless Environmental sensor

- Temperature
- Humidity



BlokSeT lean thermal monitoring minimizes downtime and increase safety while reducing insurance premiums related to fire risks. To keep critical equipment up and running is a priority in Data centers and Semiconductors worldwide.

The objectives are three-fold:

- Maintain operational uptime and business continuity
- Reduce operational expenses and total cost of ownership
- Protect building occupants and electrical distribution equipment

The BlokSeT Lean Thermal Monitoring design combines a robust and proven architecture, standardized modules, and Schneider Electric devices. Permanently installed sensors on busbar connections, cable Environmental sensor compartments, and breaker contacts provide continuous monitoring perform predictive maintenance. While IR inspections may miss critical conditions that happen between scheduled scans.

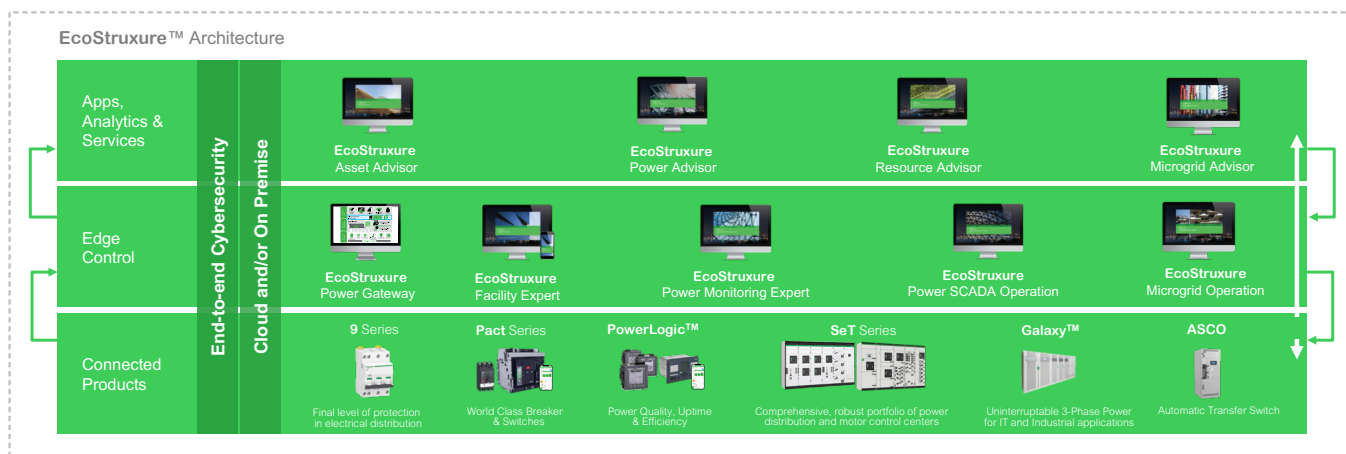
BlokSeT Lean Thermal Monitoring not only detects potential hazards but immediately sends alerts to operations and maintenance teams, allowing them to respond before any unsafe or damaging conditions occur.

EcoStruxure Power – your complete solution

Innovation at every level for a connected, three-tiered system

At the core of all the EcoStruxure Power solutions are three interwoven levels of innovation: connected products, edge control, and apps, analytics, and services. Continuously communicating in real time within a cybersecure environment, they give you complete visibility to optimize your network.

EcoStruxure™ Power Innovation At Every Level



Toss the paper, deliver switchboard project digitally!

Project location <ul style="list-style-type: none"> • Project location • EU customer info • Commissioning date 	Design docs <ul style="list-style-type: none"> • Single line diagram • Protection setting 	Switchboard docs <ul style="list-style-type: none"> • CAD Drawings • Switchboard photos • User manual • Single line diagram • Bill of material • Device serial number 	Commissioning doc <ul style="list-style-type: none"> • Device password • IT network configuration • EPC project report • EPC com test report 	Commercial docs <ul style="list-style-type: none"> • Product & service brochure • Warranty doc 	Maintenance docs <ul style="list-style-type: none"> • Maintenance plan • Maintenance guide • Spare part lists
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Receive digital twin of the switchboard through QR code, information at fingertips!



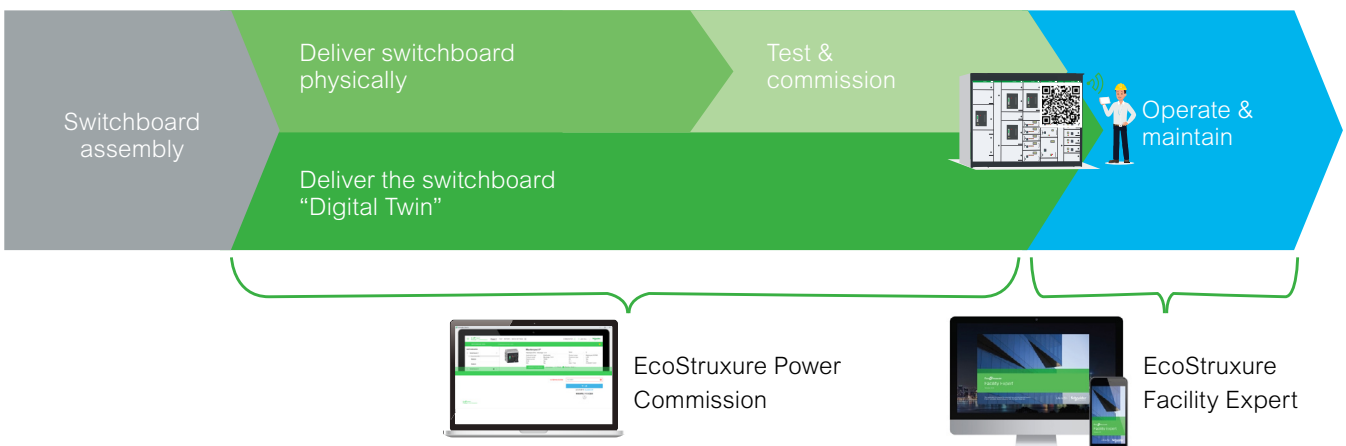
Panel Builder



Contractor



End User





BlokSeT Lean

The future of electrical solutions incorporating the **Sustainable**, **digital proficiency**, **innovative compact design**, and with **predictive maintenance** products and systems from **Schneider Electric™**.

Innovative horizontal busbar architecture,

- Main busbar at the rear middle low/high position
- Provide maximum flexibility for customer connection
- Easy manufacturing, and easy installation.
- Access from the front side possible.
- Integrated horizontal busbar support
- Lcw up to 100kA/1s

Fishplate

- Innovation design of fishplate connection
- Easy connection/access from the front side

Link bar

- Optimize the route of ACB connection
- Simplify installation thus reducing labor time.

High performance

- Single run of main busbar up to 5000A thanks to the unique architecture
- Single or multi columns are available for shipping

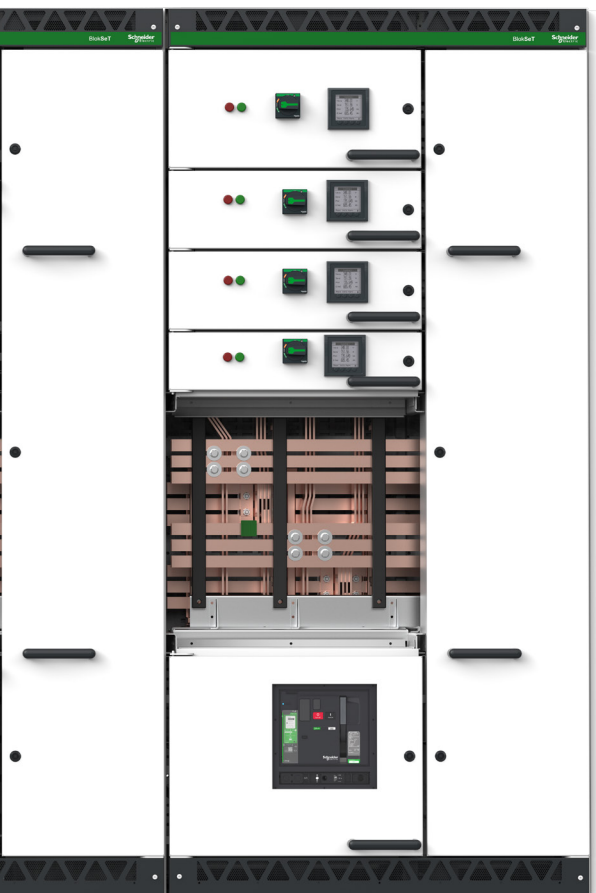
Safety

- Ingress protection up to IP54
- Forms of internal separation up to 4b
- Operator protection at horizontal & vertical busbars



IEC 61439-1/2
IEC TR 61641 edition 3





Internal arc containment 100 kA/0.5s

- High internal arc withstand performance
- Certified on the 7 criteria as per standard requirement (IEC TR 61641 edition 3)
- Arc Flash monitoring with VAMP

Wireless LV thermal monitoring

- Predictive maintenance
- Nearby or remote monitoring
- 24/7 access

Full compliance with IEC standards

- Type test campaign carried out according to IEC 61439-1/2
- Certificated by ASTA, tested by recognized laboratories.

Designed for harsh environment

- H₂S/SO₂ chemical atmospheres
- Severe earthquake conditions 2G, Zone 4 (Richter scale level 9)

Flexibility

- Cable connections from rear side, to optimize the switchboard length footprint
- Cable connections from front side for limited area at backside of switchboard.
- Cable connections from top or bottom, according to application needs

Schneider Electric inside

- Best-in-class power distribution with connected devices
- Designed, tested, and manufactured to rigorous quality standards

Technical specification

General data	
Rating	incomer & feeder up to 5000 A
Standards	IEC 61439-1 & 2, IEC TR 61641, IEC 60529
Certification	ASTA
Electrical data	
Voltage	up to 480 Vac (50/60 Hz)
Main busbar rating	up to 5000 A
Distribution busbar rating	up to 1900 A
Rated short-time current (I _{cw})	
horizontal main busbar	up to 100 kA rms - 1s (peak current I _{pk} up to 220 kA)
vertical distribution busbar	up to 100 kA rms - 1s (peak current I _{pk} up to 220 kA)
Conditional short-circuit current (I _{sc})	up to 100 kA
Internal arc withstand current	100 kA – 0.5 s (IEC TR 61641 edition 3)
Earthing system	TT-IT-TNS-TNC
Mechanical data	
Form	2b/3b/4a/4b
Seismic withstand	IBC 2006/AC 156 (site class B-C-D, floor level only), IEC68-3-3 (equivalent to Richter scale up to level 9), AS1170, EAK-2000, ENDESA-1986, GOST 17516.1-90 (civil market, all seismic intensity, up to installation level 2), IEEE 693-1997, EDF CRT 91 C 112 00 (2G)
Installation	indoor environment type 2
Degree of protection	IP20, IP31, IP42, IP54
Operating temperature	- 5 °C to 50 °C



Green
Premium™



BlokSeT Lean

A Green Premium™ Equipment



Green Premium™

More than 75% of our product sales offer superior transparency on the material content, regulatory information and environmental impact of our products:

- RoHS compliance
- REACH substance information
- Industry leading # of PEP's*
- Circularity instructions



Learn more about
Green Premium

Green Premium promises compliance with the latest regulations, transparency on environmental impacts as well as circular and low-CO₂ products.

CO₂ and P&L impact through... Resource Performance

Green Premium brings improved resource efficiency throughout an asset's lifecycle. This includes efficient use of energy and natural resources, along with the minimization of CO₂ emissions.

Cost of ownership optimization through... Circular Performance

We're helping our customers optimize the total cost of ownership of their assets. To do this, we provide IoT-enabled solutions, as well as upgrade, repair, retrofit, and remanufacture services.

Peace of mind through... Well-being Performance

Green Premium products are RoHS and REACH compliant. We're going beyond regulatory compliance with step-by-step substitution of certain materials and substances from our products.

Improved sales through... Differentiation

Green Premium delivers strong value propositions through third-party labels and services. By collaborating with third-party organizations we can support our customers in meeting their sustainability goals such as green building certifications.

*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)

Well-being and circularity

Superior environmental performance with Green Premium

The Blok**SeT** lean is RoHS and REACH compliant

- Transparent environment information
- Product Environment Profile, compliant with ISO14025
- Circular instructions



Resource

Sustainable packaging

- Complying with sustainable packaging guideline, wood pallet is certified as FSC 100% from DC



Well-Being

Legal compliance

- Ensure full regulation compliance about substances and chemical components

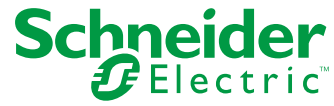


Circular

Upgradeability and recyclability

- The function of equipment can be improved when the devices installed in enclosure are updated
- Recycling rate: 94%

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