MICROGRID SOLUTIONS

Reliable power wherever and whenever it is required.

PowerStore™

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Introducing PowerStore™, our latest Microgrid solution exclusively designed to ensure reliable power availability, grid stability, highest possible penetration of renewable energy into existing grid together with intelligent control system for both grid connected and off-grid systems.

Transformation through smart energy
PowerStore™ is a reliable containerized plug-and-play microgrid solution, available in various ratings with a standardized specification for installations including remote villages as well as industry and utilities. PowerStore™ is the heartbeat of any microgrid and its “Virtual Generator” can form the grid, integrating up to 100% of renewable energy; enabling affordable and reliable power whenever and wherever it is needed.

The many benefits of PowerStore™
Designed-in flexibility & control.

Seamless transition from grid connection to islanded mode
Meet the challenges for robust power supply in isolation from national grid infrastructure and gain control of your power needs on "local" level.

New developments are accelerating the adoption of affordable Microgrids. Power electronics and energy storage are key. ABB’s plug and play PowerStore™ offers easy transportation, installation and commissioning in one ready to use product, designed and supplied to meet your specifications and requirements.

Reliable and affordable flow of power whenever it is required
PowerStore™ stabilizes an electricity network by rapidly absorbing power surges or by injecting power to make up for short-term decline, in order to maintain high quality.

A compact and versatile grid equalizing system capable of stabilizing power systems against fluctuations in frequency and voltage. This is an especially important challenge in Microgrids with high shares of fluctuating renewables, like wind and solar. We are capable to manage up to 100% renewable energy in the microgrid.

Flexible and scalable with distributed control system
Specially designed Microgrid Plus control system responsible for efficient and reliable power flow management.

Microgrid Plus control system optimizes use of renewable energy in systems with or without fossil fuel technologies. You can optimize the renewable energy generated and reduce fuel cost. Modular and scalable, distributed logic enhances reliability and scalability for future system expansions.

Driving the transition to a carbon neutral tomorrow, today.
PowerStore™ acts as “Virtual Generator” and can form the grid, handling up to 100% of renewable energy.

With our Microgrid Plus control system, PowerStore™ maximizes fossil fuel savings by being able to form the grid without any rotating machine. This further decreases dependency on fossil fuels and delivers cost savings by reducing the financial burden associated with the procurement of fossil fuels.

Running the world without consuming the earth.
Smart energy distribution from ABB.

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01 PowerStore™ Remote Monitoring
Simultaneous monitoring of devices and system level data.
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02 PowerStore™ Configuration
Specifically designed for the integration of generation devices into isolated power supply systems (mostly microgrids).

Remote Operation and Maintenance
A comprehensive solution for unmanned sites to increase productivity, improve energy efficiency reduce operational costs.

Management of customers and assets from the remote monitoring web portal.

Featuring
- Energy production reports and forecasts
- Condition based monitoring
- Real time data production
- List of customers and assets

Consulting and Design tools
Our experience, capabilities and tools enable our customers to plan and operate the microgrid reliably at maximum economic benefit.

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01

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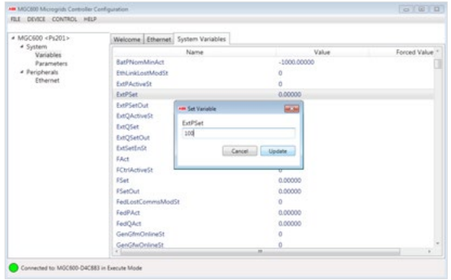
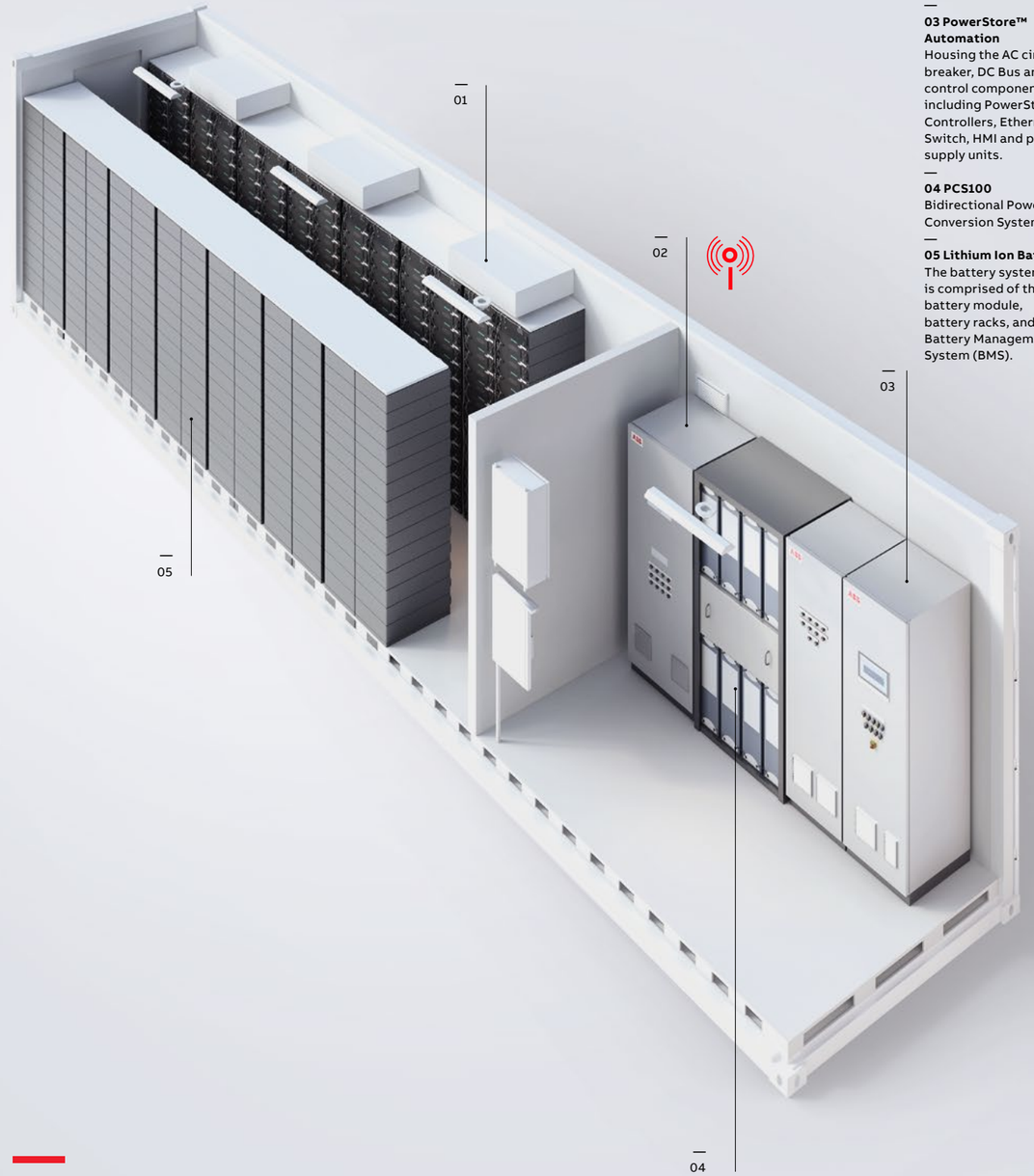
02





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01 Climate Control
Maintaining temperature inside the container within an acceptable operating limit at all times.
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02 Remote Monitoring
Comprises of dedicated industrial PC facilitating remote data access with high security.
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03 PowerStore™ Automation
Housing the AC circuit breaker, DC Bus and control components including PowerStore™ Controllers, Ethernet Switch, HMI and power supply units.
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04 PCS100
Bidirectional Power Conversion System.
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05 Lithium Ion Batteries
The battery system is comprised of the battery module, battery racks, and Battery Management System (BMS).

100%
Renewable
Power Availability

PowerStore™
Standalone 20'

PCS100 & Controller.

PowerStore™ Standalone is for installations that have a power requirement up to 1160kW. Designed for island utilities, industry and commercial applications and urban communities.

Specification	
Model Number	SA-1
Nominal rating (kW)	1160
Rating (kVA)	1160
Design Energy (kWh)	NA
Current (A)	1920
Nominal AC coupling voltage (VAC)	400
Over-voltage allowance (%)	110
Under-voltage allowance (%)	90
DC voltage (min) (VDC)	633
DC voltage (nom) (VDC)	736
DC voltage (max) (VDC)	820
Modified HC ISO Container	20'

PowerStore™
Integrated 40'

PCS100, Controller & Battery.

PowerStore™ Integrated is for installations that have a power requirement up to 580kW. Designed for industrial and commercial, institutes and campuses that require peak shaving & reliable power provision.

Specification	
Model Number	IN-1
Nominal rating (kW)	580
Rating (kVA)	580
Design Energy (kWh)	2055
Current (A)	690
Nominal AC coupling voltage	400
Over-voltage allowance (%)	110
Under-voltage allowance (%)	90
DC voltage (min) (VDC)	633
DC voltage (nom) (VDC)	736
DC voltage (max) (VDC)	820
Modified HC ISO Container	40'

PowerStore™
Station 20'

PCS100, Controller, Battery & Coupling Transformer.

PowerStore™ Station is for installations that have a power requirement up to 180kW. Designed for small industrial and commercial applications.

Specification	
Model Number	ST-1
Nominal rating (kW)	180
Rating (kVA)	180
Design Energy (kWh)	730
Current (A)	252
Nominal AC coupling voltage (VAC)	480
Over-voltage allowance (%)	110
Under-voltage allowance (%)	90
DC voltage (min) (VDC)	844
DC voltage (nom) (VDC)	982
DC voltage (max) (VDC)	1096
Modified HC ISO Container	20'

PowerStore™
Hybrid 10'

PCS100, Controller with Battery, Coupling Transformer, LV Switchgear & Solar inverter.

PowerStore™ Hybrid is for installations that have a power requirement up to 60kW. Designed for remote communities and small industries that have a solar installation or plan to have a solar PV system installed.

Specification	
Model Number	HY-1
Nominal rating (kW)	60
Rating (kVA)	60
Design Energy (kWh)	365
Current (A)	84
Nominal AC coupling voltage (VAC)	480
Over-voltage allowance (%)	110
Under-voltage allowance (%)	90
DC voltage (min) (VDC)	844
DC voltage (nom) (VDC)	982
DC voltage (max) (VDC)	1096
Modified HC ISO Container	10'

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