TECHNICAL DATA SHEET

ABB eStorage Flex 10
Fully integrated Energy Storage System

The state-of-the-art ABB eStorage Flex is a compact and walk-in, fully integrated, pre-engineered energy storage system designed to maximize the return of investment with an industrialized solution that reduces installation time and complexity as well as transportation costs. The solution is optimized for functionality featuring digital intelligence that improves solution performance and operating costs.

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eStorage Flex
outside view

Plug-and-play
Provides all required batteries, power conversion, coupling transformer, safety features, cooling, and protection and controls.

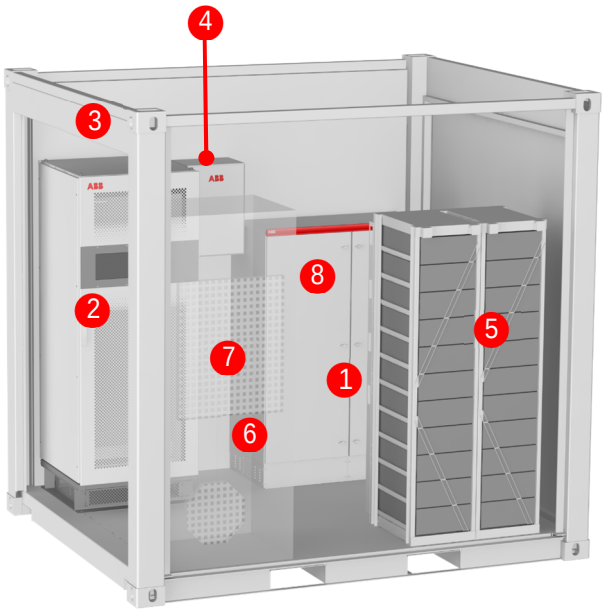
Factory tested
Factory built solution integrates comprehensive safety features that bring extensive quality control for the highest level of safety.

Pre-engineered
Designed with careful equipment selection, catering for a long lifespan in all conditions.

Applications

- Peak shaving: reducing energy and power tariffs by capping the consumption peaks.
- Intermittent power generation: using more of the power generated with distributed energy resources.
- Charging infrastructure: integrating charging stations by providing peak shaving, self-consumption optimization and grid system services.
- Islanding: supporting microgrids and loads during power outages with seamless transition and black start capabilities.
- Time of use: using of the storage system is dependent on the electricity cost (charge when low, discharge when high).
- Multiuse applications: combining several applications with dedicated priorities.

*The graphics shown might differ from the actual structure

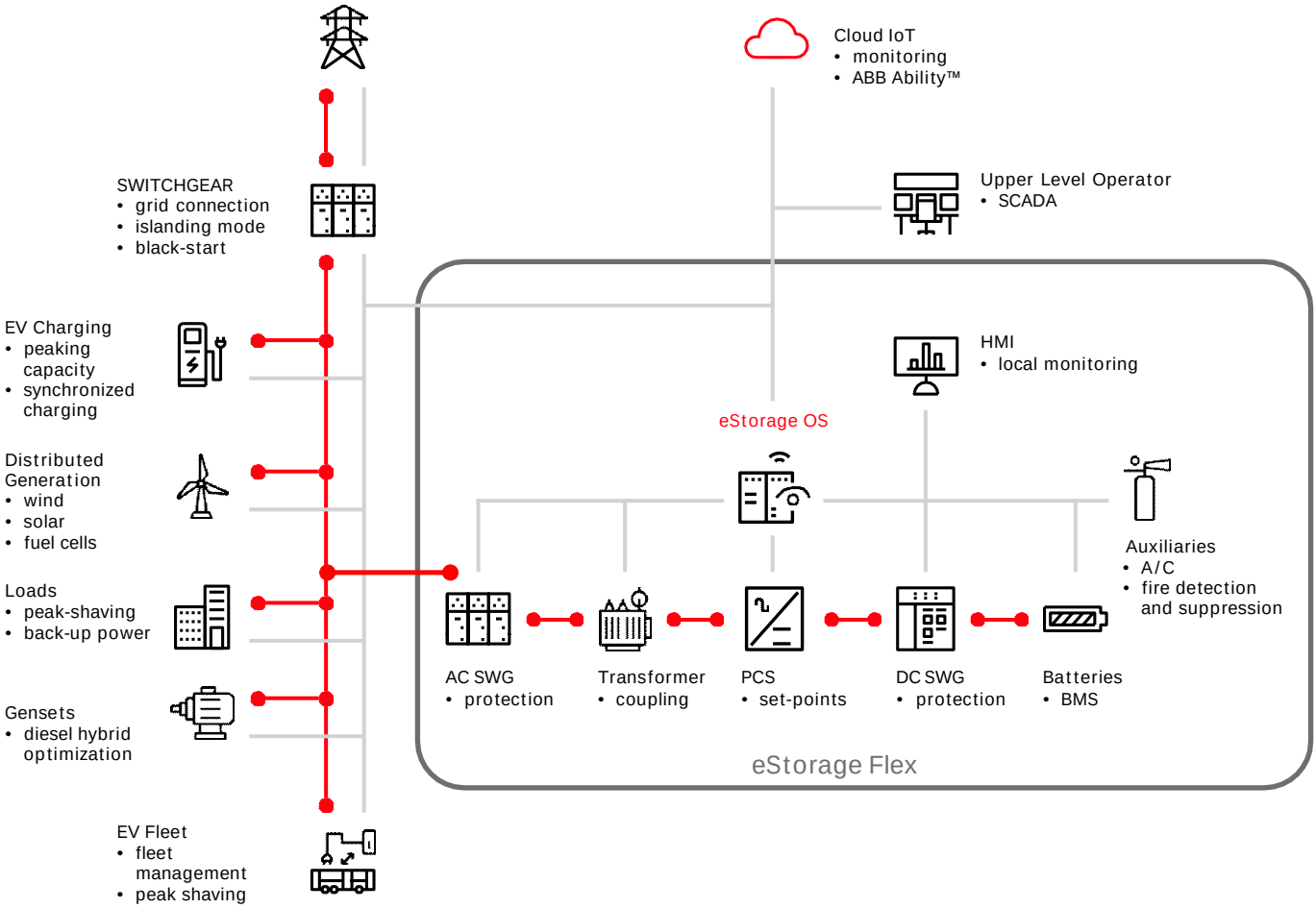


Integrated Equipment

1. AC switchgear
2. Coupling transformer
3. Inverter
4. DC switchgear
5. Battery Modules + BMS
6. Fire suppression system
7. HVAC
8. eStorage OS

System Architecture

The eStorage OS is a fully integrated digital operating system for the energy storage that provides asset management, monitoring, control and protection; Fieldbus connectivity for remote control and monitoring as predefined option and embedded energy management functions for different applications and remote connectivity are available upon request.



Technical data

Description	eStorage Flex 10-95	eStorage Flex 10-190	eStorage Flex 10-240
Electrical specifications			
Maximum Output power (S) [1]	85kVA	170kVA	170kVA
Typical Output power (P) [1, 2]	80kW	160kW	160kW
Installed Energy	95kWh	190kWh	240kWh
Max C-rate	<1C	<1C	<1C
Nominal voltage	400Vac, 480Vac	400Vac, 480Vac	400Vac, 480Vac
Frequency	50/60Hz	50/60Hz	50/60Hz
Power factor range	4-quadrant, 0 to 1	4-quadrant, 0 to 1	4-quadrant, 0 to 1
Connection method	3-phase	3-phase	3-phase
Equipment			
Enclosure	ABB EcoFlex	ABB EcoFlex	ABB EcoFlex
Inverter operations modes	VSI PQ, VSI Vf, CSI PQ, Islanding, Black-start	VSI PQ, VSI Vf, CSI PQ, Islanding, Black-start	VSI PQ, VSI Vf, CSI PQ, Islanding, Black-start
Battery chemistry	NMC	NMC	LFP
Transformer type	Dry-type integrated within inverter cabinet	Dry-type integrated within inverter cabinet	Dry-type integrated within inverter cabinet
Environmental conditions			
Ambient temp. range (nom. ratings)	-20°C to +50°C	-20°C to +50°C	-20°C to +50°C
Relative humidity	5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing
IP degree battery compartment	IP54	IP54	IP54
General specifications			
Overall dimensions (LxWxH)	3050x2450x2900mm (ISO 10ft)	3050x2450x2900mm (ISO 10ft)	3050x2450x2900mm (ISO 10ft)
Weight (maximum)	4400(kg)	5300(kg)	5650(kg)
Product compliance			
Power conversion system	IEC 62103, IEC 61000-6-2, UL1741, IEEE1547	IEC 62103, IEC 61000-6-2, UL1741, IEEE1547	IEC 62103, IEC 61000-6-2, UL1741, IEEE1547
Batteries	IEC 62619, UL1973, UN 38.3, UL9540A	IEC 62619, UL1973, UN 38.3, UL9540A	IEC 62619, UL1973, UN 38.3, UL9540A
Transformer	IEC 60076	IEC 60076	IEC 60076
Low-voltage distribution	IEC 61439	IEC 61439	IEC 61439
User interface and communications options			
Fieldbus connectivity (predefined option)	Modbus, Ethernet for remote control and monitoring	Modbus, Ethernet for remote control and monitoring	Modbus, Ethernet for remote control and monitoring
Local user interface (upgrade package)	ABB local control panel and embedded ABB Energy Management System	ABB local control panel and embedded ABB Energy Management System	ABB local control panel and embedded ABB Energy Management System
Remote connectivity (upgrade package)	Advanced SCADA and cloud connection, IEC62351	Advanced SCADA and cloud connection, IEC62351	Advanced SCADA and cloud connection, IEC62351

[1] Derating applies above 1000m
[2] Power factor and performances considered

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