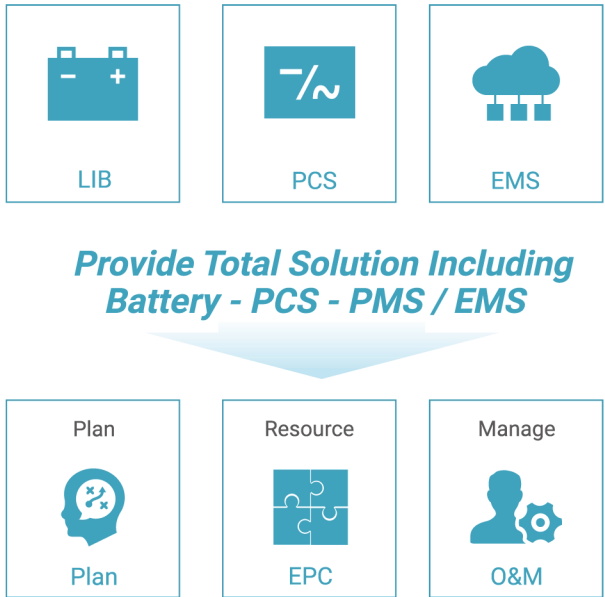


Energy Storage System

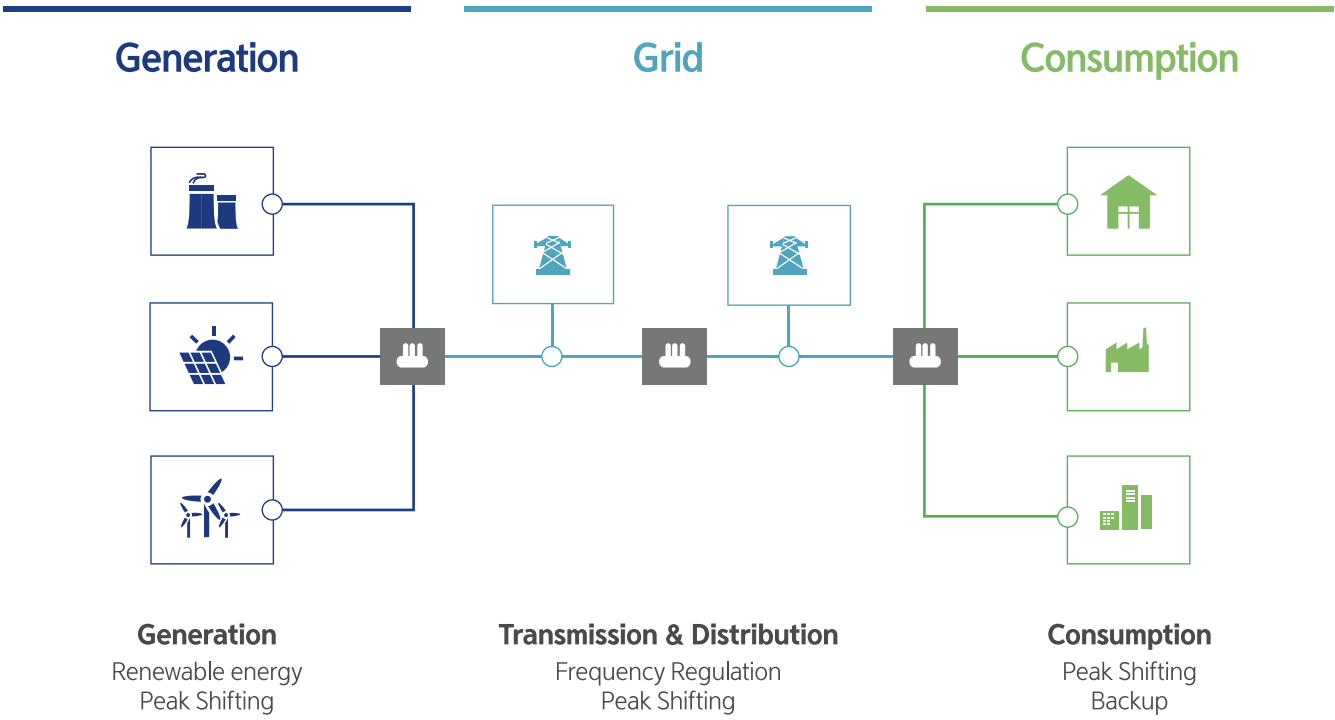
Total Solution

- Solar Power Plant
- Wind Power Plant
- Frequency Regulation
- Emergency Generator
- Building and Factory Power Demand Control

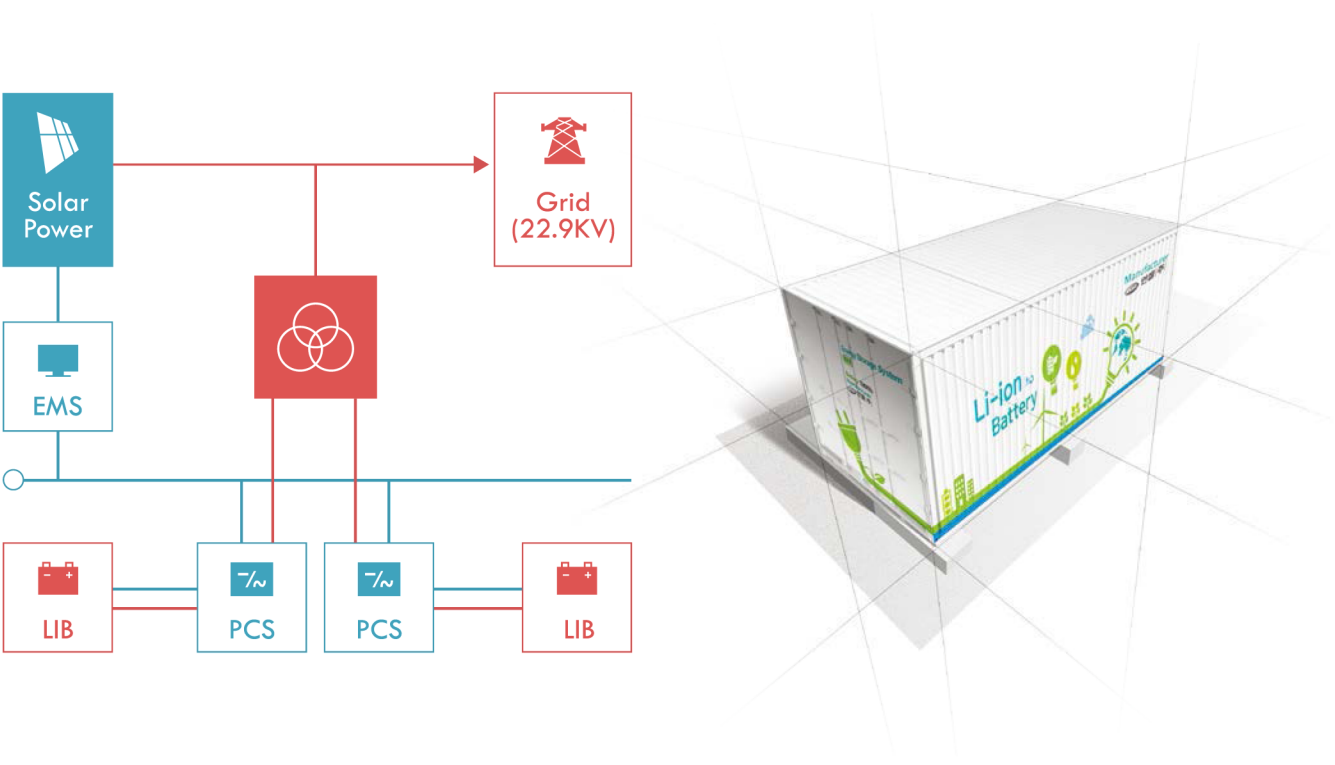


Energy Storage System

Application



Solar-linked ESS scheme




Lithium Battery System

For Utility / Industry

INCELL's lithium battery system uses SAMSUNG SDI high-performance ESS dedicated cells to achieve high efficiency and longevity, and also provides multi-level protection barriers to ensure excellent safety.

Features

- High performance and longevity
- Module level built-in detectors for battery protection
- Specially designed enclosure to prevent fire spread

Battery Module	Model	SP44-50-300	SP44-48-223	SP44-30T-60
	Voltage	43,56Vdc	43,68Vdc	43,20Vdc
	Energy	12,80kWh	9,74kWh	2,46kWh
	Capacity	294Ah	223Ah	57Ah
	Size(WHD)mm	498x90x915	776x94x495	498x90x357
	Weight	About 71kg	About 57kg	About 27kg

Battery Rack	Model	R50-20-300	R48-21-223T	LIB-R-09
	Battery Module	SP44-50-300	SP44-48-223	SP44-30T-60
	Voltage	871,20Vdc	917,28Vdc	864,00Vdc
	Energy(Design/Useable)	256kWh / 215kWh	204kWh / 163kWh	49kWh / 40kWh
	Capacity (Design/Useable)	294Ah / 246Ah	223Ah	57Ah / 47Ah
	Voltage Range	756~984Vdc	756~1033Vdc	720~996Vdc
	Max. C-rate (Cha./Discha.)	0,3C / 0,5C	1C / 1C	1C / 4C
	Size(WHD)mm	575x2297x973	855x2338x560	575x2297x565
	Weight	About 1620kg	About 1340kg	About 740kg
	Certification	IEC62619, UL1973, UL9540A	IEC62619	IEC62619
	Model	R50-17-300	R48-17-223T	LIB-R-09-1
	Battery Module	SP44-50-300	SP44-48-223	SP44-30T-60
	Voltage	740,52Vdc	742,56Vdc	734,40Vdc
	Energy(Design/Useable)	217kWh / 182kWh	165kWh / 132kWh	41kWh / 34kWh
	Capacity (Design/Useable)	294Ah / 246Ah	223Ah	57Ah / 47Ah
	Voltage Range	642~836Vdc	612~836Vdc	612~846Vdc
	Max. C-rate (Cha./Discha.)	0,3C / 0,5C	1C / 1C	1C / 4C
	Size(WHD)mm	575x2011x973	855x2050x560	575x1974x565
	Weight	About 1377kg	About 1140kg	About 630kg
	Certification	IEC62619, UL1973, UL9540A	IEC62619	

Battery Safety Technology

Battery Protection > TR Propagation Prevention > Fire Suppression

ESS goes through a charge/discharge cycle every day. Such a harsh operation condition requires higher safety measures to protect the system from potential incidents. INCELL offers innovative multi-level protection barriers to ensure safety from cell to system.

Cell

- Cylindrical cell with long production history and proven record
- Inherent safety features such as Current Interrupt Device

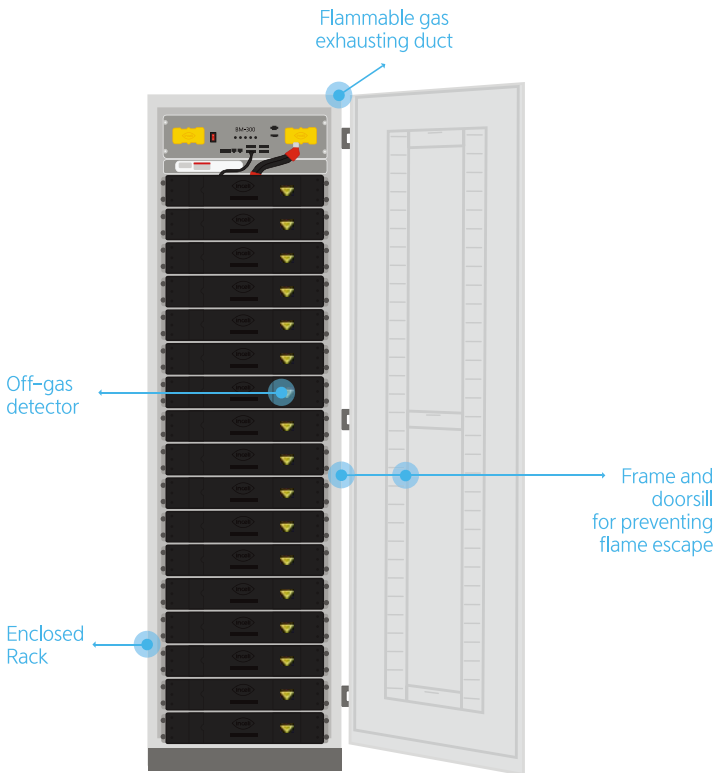


Module

- Built-in off-gas early detection system for battery protection
- Monitoring condensation for battery protection
- Passive thermal runaway (TR) propagation prevention design

Rack

- Enclosed rack design for preventing rack to rack fire spread
- Specially designed door and frame for preventing flame escape
- Duct for exhausting off-gas
- Safe separation distance between racks



Integral Fire Suppression System

- Early detection and early response system
- Integrated system with battery
- Targeting sprinkler with local injection method
- Passed UL9540A large-scale fire test



ESS Reference

Building, Plant, Renewable Energy

