

Microgrid System

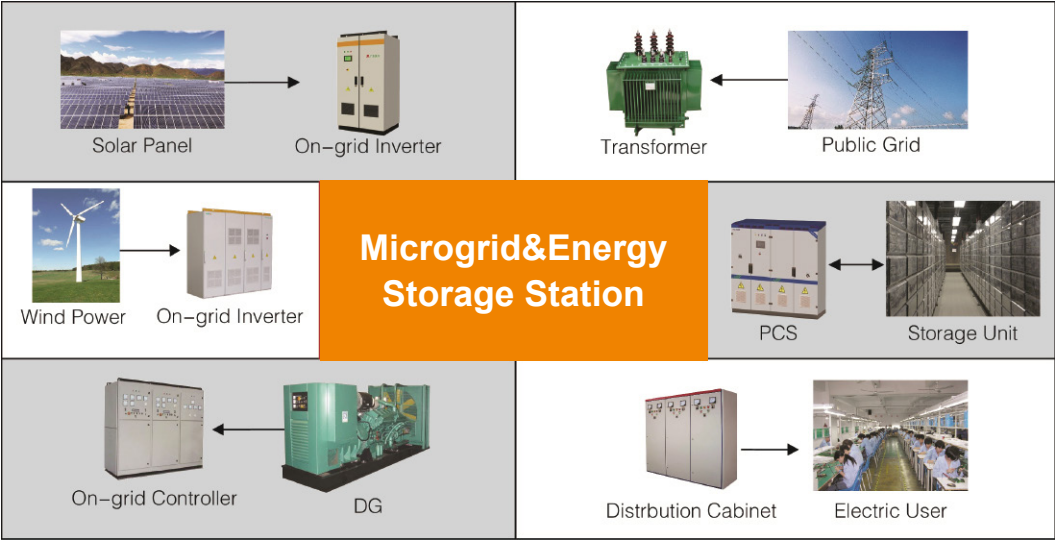


Add: Economic Development Zone, Jiangyan district, Taizhou, Jiangsu, China.
Zip: 225500
Tel: +86 523-88521888
Fax: +86 523-88521244
E-mail: office@shuangdeng.com.cn

shoto[®]

With Institute of Electrical Engineering of the Chinese Academy of Sciences, SHOTO, relying on leading edge in energy storage area R&D micro-grid energy control management. At present, micro-grid solutions which can meet the requirement of domestic and foreign market development have been developed.

The Microgrid consists of various electricity generating units, energy storage systems, microgrid energy management system and so on. The microgrid can operate with grid-tied or islanded mode, and can be transferred seamlessly between them. Rely on the leading superiority in energy storage field and research along with IEE-CAS, Shoto has developed the core technology of micro grid control, which applies standardized monitoring system based on IEC61850, energy optimization management strategies and can meet the increasing needs of the domestic and foreign market solutions.



Core Technology

- ▣ Distributed power plug and play
- ▣ Independent operation
- ▣ New energy power generation forecasting
- ▣ IEC 61850 communication system
- ▣ Independent / grid connected seamless switching technology

- ▣ Reverse power control / bidirectional transmission
- ▣ Energy control and management optimization
- ▣ Grid connected operation
- ▣ Islanding detection and control

Technical Features

- ▣ Advanced technology, safe and reliable
- ▣ In economic efficiency, service diversity
- ▣ Flexible, open and friendly

Application

Suitable for optical storage system, multi energy hybrid power supply system, peak shaving and valley filling system, remote area off grid system, distributed and grid connected system, independent Island photovoltaic power station and so on.

Case A

Micro-grid Demonstration Station in South and North Park of State Grid

State Grid Corporation of China established a new national customer service center (95598) whose power supply absorbs green composite energy grid. Multi-level effective management of power generation, transmission and load is available. It is one of the best design and the most complex micro-grid projects in China

The system contains 1MWp PV whose power generation is grid-connected; hybrid access management of multiple power generation units such as power generation floor, tree and bicycle; 500kWh gel battery as energy storage; and energy management unit of micro-grid for managing and monitoring each power generation unit to realize interworking with power grid.



Case B

CGN off-grid Micro-grid Energy Storage System in Gonghe Country

The station which is configured 9.261 PV, 3MWh lithium batteries and 28MWh lead-acid batteries, together with hydropower in local to be a micro-grid power supply system, solves Gonghe Country's problem of the stability of power supply in winter. It adopts micro-grid energy management system to realize operating and control coordinately of each system. It is the biggest off-grid power station in the global.

Shoto provides 14MWh lead-acid energy storage system, consisting of 7008 pieces of 2V1000Ah gel batteries in series.

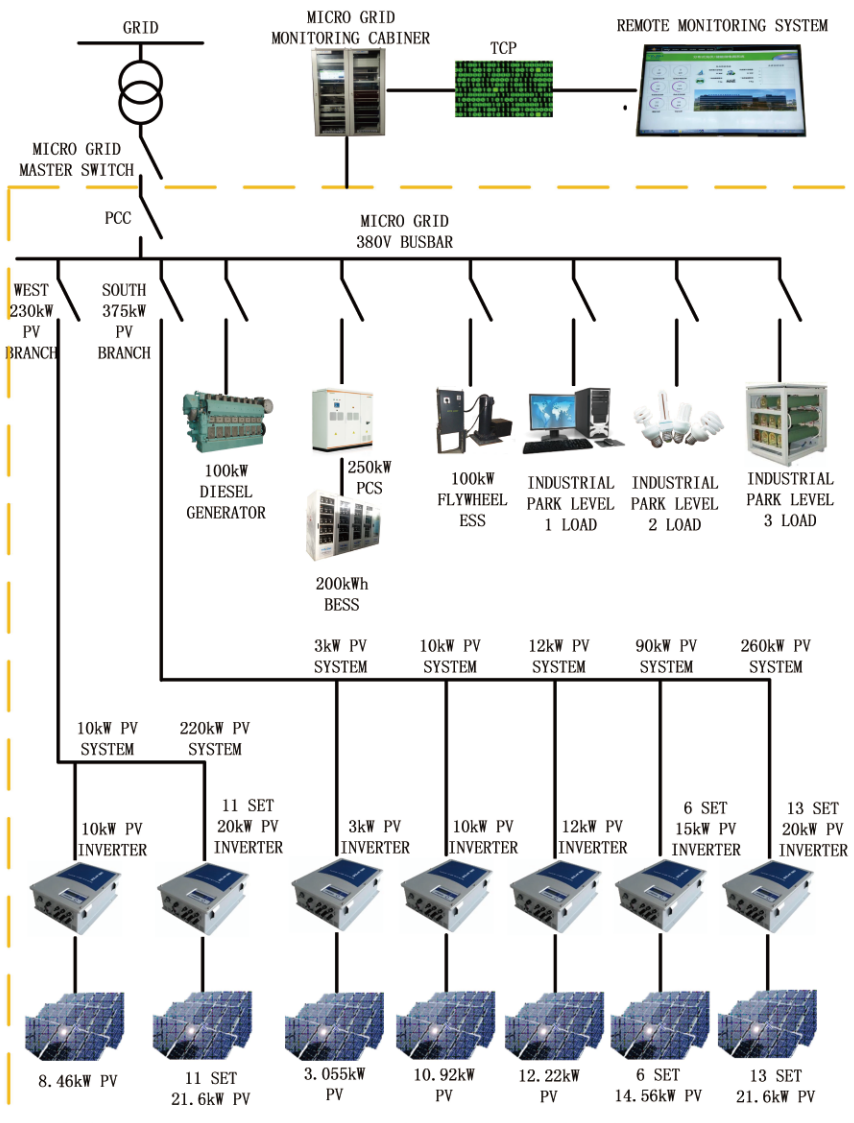


Case C

Micro-grid Energy Storage System in Yingli Group

The system consists of solar panels array (605kWp), lithium iron batteries array (200kWh), flywheel energy storage (1.5kWh), PV inverter, bidirectional converter, distributor, micro-grid controller, micro-meteorology device, data collector etc. Combining building load structure, the smart system can run under bot grid-connected and off-grid modes.

The system is an EPC project through effective energy management strategy to monitor and control each power generation unit and energy storage unit to ensure the reliability and economy of power supply.

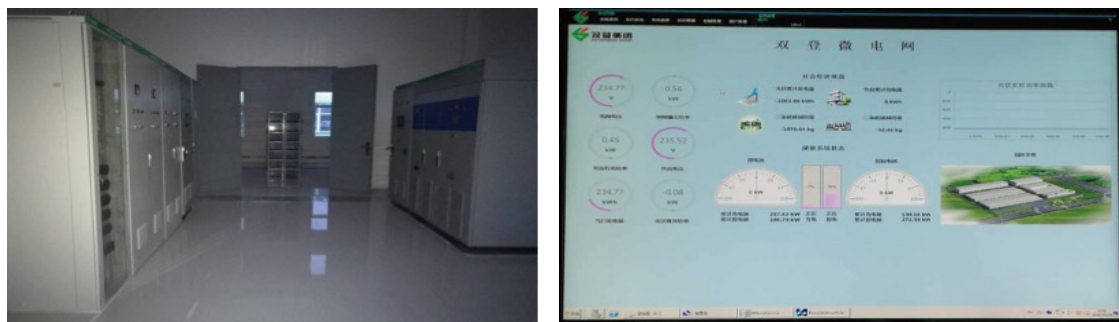


Case

D

Micro-grid Systemt in Jiangsu Front New Energy Company

The system consists of solar panels array (200kWp), lithium iron batteries array (100kW/100kWh), lead-carbon batteries array (100kW/400kWh), PV inverter, bidirectional converter, distributor, micro-grid controller, micro-meteorology device, data collector etc. It combines distributed power generation, energy storage and load, and can run under both grid-connected and off-grid modes. Under grid-connected mode, it has strong adjustment ability and can interact with power grid well. Energy storage can stabilize the volatility of distributed power source. When power grid fails, it can run under off-grid mode. Distributed power generation and energy storage can ensure the continuous power supply for local important load.



Passion for Storage
and Green Energy

Shoto, as the leading green storage integration service supplier in Big Data age, using the forward-looking energy technology to share the green earth with our customers.