



Facebook



LinkedIn



Tik Tok



YouTube

# ALL IN ONE Energy Storage System



Bldg.14&15,No.319,Xiangjiang Street,Hi-Tech Zone,Shijiazhuang Hebei,China

86-311-85903762

enquiry@scupower.com

<https://www.scupower.com>



**SICON CHAT UNION ELECTRIC CO., LTD**

Due to the continuous upgrading of products, the product information designed in this catalogue should be based on the physical object, we reserve the right to update or modify the data and other information at any time. The final interpretation right belongs to SCU.

Version: 25.03-V1



## PRODUCT SERIES

Make Energy more sustainable smarter and cleaner

GRES-40-25



GRES-300-200



## ABOUT US

SICON Chat Union Electric Co., Ltd. (SCU) , focuses on energy, power electronics and control technology, providing complete solutions for three major business areas: data center infrastructure, new energy vehicle charging, and green energy storage, offering sustainable energy and power management solutions for global customers.

Corporate Vision

"Building Digital Energy for a Green Future"

Corporate Mission

"Making energy more sustainable, smarter and cleaner"

2003

established

2015

went public

500+

employees

BRES-2400-1250



BRES-240-125



# GRES

## GRES

### Compact Multi Functional Solution

#### DESCRIPTION

The GRES (Grid Renewable Energy Storage Power Supply) is an intelligent, modular system integrating lithium batteries with multifunctional bidirectional PCSs. It combines lithium batteries, bidirectional DC/AC and DC/DC converters, static transfer switches (STS), and a power monitoring system (PMS) to provide on-grid, off-grid, and uninterrupted power supply, along with static reactive compensation and harmonic suppression. It enables flexible integration of renewable energy, grid, batteries, and loads for optimized, green, noise-free, and highly reliable power. The system features easy installation, simple operation, and broad application potential.

#### Features

- **Advanced multi-level safety with fire protection, fault isolation, and real-time monitoring**
- **Integrated battery air-conditioning**
- **On Grid, Off Grid, Microgrid, Grid Forming & VSG Capability**
- **PCS & BMS multi-layer protection**
- **Modular, all-in-one, easy to move**
- **Supports PV, Genset, Wind Turbine or any source and EMS**
- **Compact, long lifespan, low failure**

TOP BRAND PACK  
WITH ACTIVE BMS

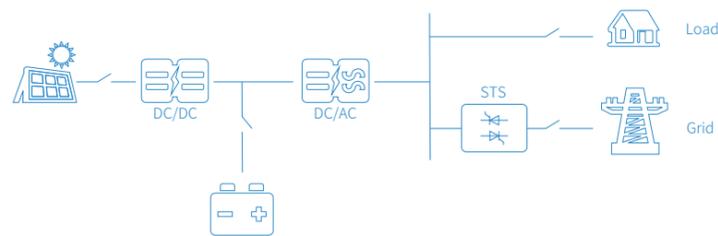
# GRES



## CORE ADVANTAGES

| Safety & Reliability  | Application Flexibility   | Cost reduction & efficiency  |
|---|---|--|
| <ul style="list-style-type: none"> <li>Cells are designed with isolation brackets to effectively prevent heat diffusion</li> <li>Shock-absorbing design, transportable on board</li> <li>Reduction, monitor and fire protection, three levels of safety management</li> <li>Battery pack string access to eliminate loop current and improve safety factor</li> </ul> | <ul style="list-style-type: none"> <li>Efficient and convenient one-touch switch-on</li> <li>Off-grid operation, black start support</li> <li>Intelligent human-computer interaction, support for various languages</li> <li>Accept grid dispatch, support multiple communication methods</li> <li>Capacity increase dynamically to ease the pressure on the power grid</li> <li>Wide-range DC access, battery laddering</li> </ul> | <ul style="list-style-type: none"> <li>Modular installation for easier operation and maintenance</li> <li>Long Life, Low Failure, Zero O&amp;M</li> <li>Low-pollution, low-energy, renewable</li> <li>All-in-one integration, flexible and rapid deployment</li> </ul> |

## TOPOLOGY DIAGRAM



# GRES Specifications

| Model                         | GRES-40-25                       | GRES-75-50  | GRES-150-100  | GRES-225-150   | GRES-300-200   |                |    |
|-------------------------------|----------------------------------|---|---|----------------|----------------|----------------|----|
| PV Parameter                  | MPPT Voltage Range (V)           | DC180~DC1000V   | DC200V~DC700V   |                |                |                |    |
|                               | MPPT Full-rate Voltage range (V) | DC360~DC850V  | DC370V~DC700V   |                |                |                |    |
|                               | No. of MPPT paths                | 1   | 0~2 (Optional)  |                |                |                |    |
|                               | Max. current per channel (A)     | 18A   | 135A  |                |                |                |    |
| AC Parameter (Grid)           | Rated Output Power (KW)          | 25  | 50  | 100            | 150            | 200            |    |
|                               | Max. Output Power (KW)           | 27.5  | 55  | 110            | 165            | 220            |    |
|                               | Rate Grid Voltage (KW)           | AC 380/400  |   |                |                |                |    |
|                               | Connection Method                | 3W+N+PE   |   |                |                |                |    |
|                               | Grid Voltage Range               | -15%~+10%   |   |                |                |                |    |
|                               | Rated Grid Frequency (Hz)        | 50/60   |   |                |                |                |    |
|                               | Grid Frequency Range (Hz)        | ±2  |   |                |                |                |    |
| AC Parameter (No Grid)        | Output Current Harmonic          | ≤3% (Rated Power)   |   |                |                |                |    |
|                               | Rated Output Power (KW)          | 25  | 50  | 100            | 150            | 200            |    |
|                               | Max. Output Power (KW)           | 27.5  | 55  | 110            | 165            | 220            |    |
|                               | Rated Output Voltage (V)         | 3W+N+PE, 380/400  |   |                |                |                |    |
|                               | Output Voltage Harmonic          | 3% (Linear Full)  |   |                |                |                |    |
|                               | Rated Frequency (Hz)             | 50/60   |   |                |                |                |    |
|                               | Overload Capability              | ≤105%: Long-time Running (105,110] : ≥10min                   | 105%]: Long-time Running (105%-120%]: 10min (120%) : Stop Running |                |                |                |    |
|                               |                                  | Cell Type   | LFP   |                |                |                |    |
|                               | Battery Parameter                | Single cell module capacity (KWh)                             | 5.12  |                |                |                |    |
|                               |                                  | No. of Battery Modules  | 8   | 15             | 30             | 45             | 60 |
| Battery System Capacity (KWh) |                                  | 40.96   | 76.8  | 153.6          | 230.4          | 307.2          |    |
| Running time (h)              |                                  | 1.5   |   |                |                |                |    |
| Battery Life                  |                                  | 25°C 0.5C/0.5C 100%DOD EOL80% ≥4000 Cycle                     |   |                |                |                |    |
| Max. Efficiency               |                                  | 95%   |   |                |                |                |    |
| Protection                    |                                  | DC (BAT) Switch   | -   | YES            |                |                |    |
|                               | PV Switch                        | YES   |   |                |                |                |    |
|                               | AC Switch                        | YES   |   |                |                |                |    |
|                               | DG Monitor                       | YES   |   |                |                |                |    |
|                               | Grid Monitor                     | YES   |   |                |                |                |    |
|                               | Insulation Monitor               | YES   |   |                |                |                |    |
|                               | Reverse DC Protection            | YES   |   |                |                |                |    |
|                               | Ground Fault Protection          | YES   |   |                |                |                |    |
|                               | Surge Protection                 | DC II / AC II   |   |                |                |                |    |
| Basic Parameter               | Size (W*D*H) (mm)                | 1000*1069*2180  | 1682*1502*1700  | 1682*2264*1700 | 1682*3026*1700 | 1682*3788*1700 |    |
|                               | Weight (kg)                      | 976.5   | 1395  | 2470           | 3545           | 4620           |    |
|                               | Isolation Method                 | Non-Isolation   |   |                |                |                |    |
|                               | IP Class                         | Outdoor IP54  |   |                |                |                |    |
|                               | Operation Temperature Range      | -20 ~ 55°C(>45°C Derate)                                      |   |                |                |                |    |
|                               | Relative Humidity                | 0 ~ 95%RH, Non-Condensing                                     |   |                |                |                |    |
|                               | Temperature Control Method       | PCS cabinet: smartair-cooled;Battery cabinet:air-conditioning |   |                |                |                |    |
|                               | Max. working altitude (m)        | 4000 (>2000 Derate)   |   |                |                |                |    |
|                               | Display                          | Touchscreen   |   |                |                |                |    |
|                               | Communication Interface          | LAN, RS485, CAN   |   |                |                |                |    |
|                               | Communication Protocol           | Modbus-TCP, Modbus-RTU, CAN2.0B                               |   |                |                |                |    |
|                               | Fulfilment                       | IEC62477, IEC61000, G99, VDE4115, EN50549-1, UN3480           |   |                |                |                |    |

# BRES

## BRES

Industrial & Commercial Solution

### DESCRIPTION

BRES Energy Storage System integrates long-life lithium batteries, BMS, bidirectional PCS, active safety, thermal control, and energy management into a standardized outdoor cabinet, enabling modular, plug-and-play deployment. Each standalone unit supports AC/DC power conversion, with climate control and safety systems for reliable operation. Parallel AC-side connectivity allows flexible capacity expansion of storage stations.

### Features

- **Advanced multi-level safety with fire protection, fault isolation, and real-time monitoring**
- **On Grid, Off Grid, Microgrid, Grid Forming & VSG Capability**
- **Built for extreme environments**
- **High-power PCS & multi-layer BMS protection**
- **Modular, scalable, easy deployment**
- **Supports PV, Genset, Wind Turbine or any source and EMS**
- **Containerized with industrial air-conditioning**

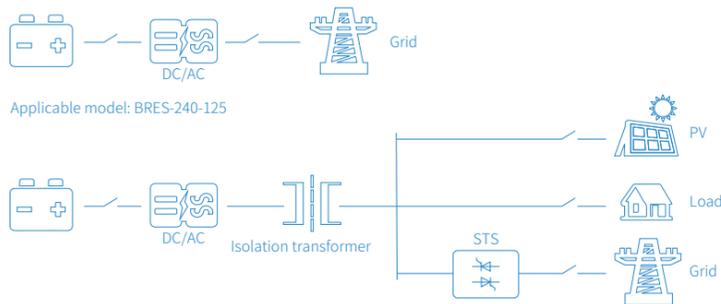
# BRES



## CORE ADVANTAGES

| Safety & Reliability  | Application Flexibility   | Cost reduction & efficiency  |
|---|---|--|
| <ul style="list-style-type: none"> <li>Cells are designed with isolation brackets to effectively prevent heat diffusion</li> <li>Shock-absorbing design, transportable on board</li> <li>Reduction, monitor and fire protection, three levels of safety management</li> <li>Battery pack string access to eliminate loop current and improve safety factor</li> </ul> | <ul style="list-style-type: none"> <li>Efficient and convenient one-touch switch-on</li> <li>Off-grid operation, black start support</li> <li>Intelligent human-computer interaction, support for various languages</li> <li>Accept grid dispatch, support multiple communication methods</li> <li>Capacity increase dynamically to ease the pressure on the power grid</li> <li>Wide-range DC access, battery laddering</li> </ul> | <ul style="list-style-type: none"> <li>Modular installation for easier operation and maintenance</li> <li>Long Life, Low Failure, Zero O&amp;M</li> <li>Low-pollution, low-energy, renewable</li> <li>All-in-one integration, flexible and rapid deployment</li> </ul> |

## TOPOLOGY DIAGRAM



Applicable model: BRES-240-125 / BRES-2400-1250/BRES-1200-625/BRES-720-375

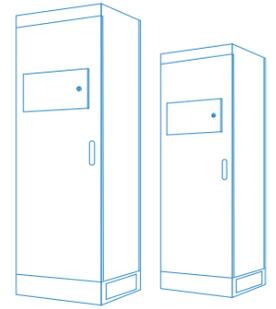
## BRES Specifications



| Model                  | BRES-240-125   | BRES-720-375  | BRES-1200-625                    | BRES-2400-1250 |                    |
|------------------------|--|---|----------------------------------|----------------|--------------------|
| AC Parameter (Grid)    | Rated Power (kW)   | 125   | 375                              | 625            | 1250               |
|                        | Rated Grid Voltage (V)   | 3W+N+PE, 380V/400V  |                                  |                |                    |
|                        | Grid Voltage Range   | -15%~+10%   |                                  |                |                    |
|                        | Rated Grid Frequency (Hz)  | 50Hz/60Hz   |                                  |                |                    |
|                        | Grid Frequency Range (Hz)  | ±2Hz  |                                  |                |                    |
|                        | Output Current Harmonics   | ≤3% (Rated power)   |                                  |                |                    |
|                        | DC Component   | < 0.5%In  |                                  |                |                    |
|                        | Power Factor Range   | -0.9~+0.9   |                                  |                |                    |
| AC Parameter (No Grid) | Rated Output Power (kW)  | 125   | 375                              | 625            | 1250               |
|                        | Max. Output Power (kW)   | 131   | 393                              | 656            | 1312.5             |
|                        | Rated Output Voltage (V)   | 3W+N+PE, 380V/400V  |                                  |                |                    |
|                        | Output Voltage Harmonics   | 3%  |                                  |                |                    |
|                        | Rated Frequency (Hz)   | 50Hz/60Hz   |                                  |                |                    |
|                        | Overload Capacity  | 105%]: Long-time Running<br>(105%~120%]: 10min<br>120%): 1min   |                                  |                |                    |
| Battery Parameter      | Cell Type  | LFP   |                                  |                |                    |
|                        | Single cell module capacity (KWh)  | 241.152   |                                  |                |                    |
|                        | No. of Battery Cabinets  | 1   | 3                                | 5              | 10                 |
|                        | Battery System Power (KWh)   | 241.152   | 723.456                          | 1205.76        | 2411.25            |
|                        | Rated operation hours (h)  | 2 (Changeable number of battery modules with othertime options) |                                  |                |                    |
|                        | Cycle Life   | 6000 (0.5C@25°C Charge/Discharge@90%DOD, EOL80%)                |                                  |                |                    |
| Protection             | AC Switch  | YES   |                                  |                |                    |
|                        | PV Electric Operated AC Switch   | YES   |                                  |                |                    |
|                        | Grid Monitor   | YES   |                                  |                |                    |
|                        | Surge Protection   | YES   |                                  |                |                    |
| Basic Parameter        | Size (W*D*H) (mm)  | 1600*1330*2250  | 3000*2438*2591                   | 6058*2438*2591 | 12192*2438*2591    |
|                        | Weight (kg)  | 2500  | 10000                            | 16000          | 28000              |
|                        | Isolation Method   | -   | Isolation Transformer (built-in) |                |                    |
|                        | NO/OFF Grid Switch Device  | STS (Optional)  |                                  |                | Electric Mechanism |
|                        | IP Class   | Outdoor IP54  |                                  |                |                    |
|                        | Working Temperature Range  | -20°C~55°C (Derated above 45°C)                                 |                                  |                |                    |
|                        | Relative Humidity  | 0%RH~95%RH, Non-condensing                                      |                                  |                |                    |
|                        | Temperature Control Method   | Batterycabinet:air-conditioned;electricalcabinet:air-cooled     |                                  |                |                    |
|                        | Max. Working Altitude (m)  | 45°C, 2000m; 2000~4000m Derate                                  |                                  |                |                    |
|                        | Display  | Touchscreen   |                                  |                |                    |
|                        | Communication Interface  | RS485, LAN  |                                  |                |                    |
|                        | Communication Protocol   | Modbus-RTU, Modbus-TCP  |                                  |                |                    |
| Fulfilment             | IEC62933, IEC62477, IEC61000, G99, VDE4110, EN50549-1, EN50549-2, UN3536 |   |                                  |                |                    |

# PowerSync

## Distribution Cabinet



### DESCRIPTION

As the center connecting multiple energy sources, the microgrid management system cabinet plays an important role in off-grid switching. There are four options: 250K, 500K, 750K, and 1000K. Genset, photovoltaic, and load mains control circuit breakers are brought together and equipped with EMS screen to manage them uniformly. The VSG mode is added on the basis of the original grid-connected mode, off-grid mode, etc., which has more advantages in the application situation of "optical firewood storage".



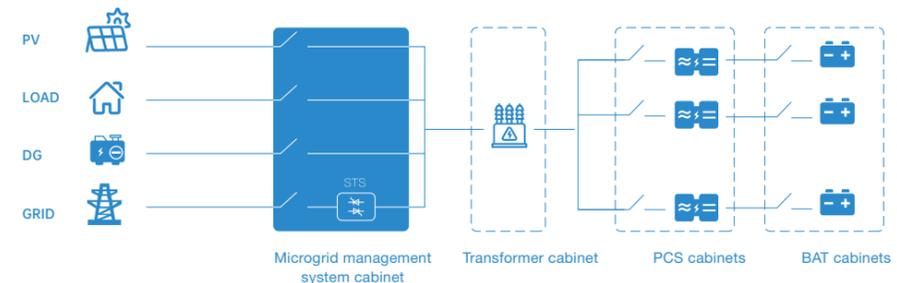
### Features

- **EMS unified management and scheduling, intelligent monitoring, and collective management.**
- **A variety of circuit breakers are integrated in the cabinet (must be equipped with: load, energy storage; optional: photovoltaic, oil engine, and municipal power), and are selected according to actual use.**
- **Respond quickly in the event of grid failure or change, and maintain stable power generation and injection power.**

### Specifications

| Model             | EIDC-C01D4                          | EIDC-E01D4                   | EIDC-G01D4 | EIDC-J01D4 |                |
|-------------------|-------------------------------------|------------------------------|------------|------------|----------------|
| Power Parameters  | Grid port power                     | 250                          | 500        | 750        | 1000           |
|                   | Load port power                     | 250                          | 500        | 750        | 1000           |
|                   | Maximum input power of photovoltaic | 300                          | 600        | 900        | 1200           |
|                   | Maximum input power of oil engine   | 250                          | 500        | 750        | 1000           |
|                   | PCS port power                      | 250                          | 500        | 750        | 1000           |
|                   | STS power                           | 250                          | 500        | 750        | 1000           |
|                   | Rated voltage                       | 400V                         |            |            |                |
|                   | Rated frequency                     | 50/60Hz                      |            |            |                |
|                   | Long-term overload capability       | 110%                         |            |            |                |
|                   | And switch off the grid time        | 10ms                         |            |            |                |
|                   | Efficiency                          | 99.8%                        |            |            |                |
| Communication     | Communication port                  | LAN/RS485                    |            |            |                |
|                   | Communication protocol              | Modbus TCP/RTU               |            |            |                |
| System Parameters | Human-computer interface            | Support                      |            |            |                |
|                   | Size(W*D*H)mm                       | 1000*1000*2000               |            |            | 1600*1000*2000 |
| Other             | Weight                              | 750kg                        | 800kg      | 1000kg     | 2000kg         |
|                   | Operating temperature               | -30~70°C                     |            |            |                |
|                   | Storage temperature                 | -40~70°C                     |            |            |                |
|                   | Relative humidity                   | <95% (no condensation)       |            |            |                |
|                   | Cooling method                      | Smart air-cooling            |            |            |                |
|                   | Protection level                    | IP54                         |            |            |                |
|                   | Wiring method                       | 3W+N+PE                      |            |            |                |
|                   | Altitude                            | ≤4,000 m (>2,000 m derating) |            |            |                |
|                   | Meet the criteria                   | IEC62477、IEC61000            |            |            |                |

### TOPOLOGY DIAGRAM



Note: Photovoltaic switch, diesel switch, transformer, and STS module are optional.

# CASE

20ft BRES Pig Farm Project  
Country: Belgium



40ft BRES Fuel Pumps Mining Project  
Country: Australia



20ft BRES Office Area Project  
Country: Thailand



20ft BRES Steel Plant Project  
Country: Czech Republic



BRES Vehicle Certification  
Lab Project  
Country: Germany



GRES Thermal Power  
Plant Project  
Country: Austria



GRES Pencil  
Factory Project  
Country: Hungary



Niger light wood storage project  
Country: Niger  
Configuration:  
Lithium battery system: 1224kWh  
PCS: 600kW  
PV: 600kW

GRES Port  
RTG Project  
Country: Thailand

