# Battery Energy Storage System Solution Product Catalogue

Keep Forging Ahead with Boundless Energy



ENVICTA ENERGY

# Energy Storage Power Module Catalogue

## Energy Storage Power Module

| Type | Platform | Module | Input Voltage | Output Power | Output Voltage | Constant Power Voltage Range | Max Output Current | Certification | W*D*H (mm)/ Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| Bidirectional AC2DC (Isolation) | G2 Air-Cooled | BEG1K075G | 3L+(N)+PE, 260~530Vac | 22kW | 150~1000Vdc | 300~1000Vdc | 73.3A | TUV CE/cTUVus/UL | 300*395*84/14 |
| | | BEG1K0100G | 3L+(N)+PE, 156~530Vac | 30kW | | | 100A | TUV CE/cTUVus | 300*395*84/16 |
| | Air-Cooled | BSG1K037G | 3L+(N)+PE, 260~530Vac | 11kW | 150~1000Vdc | 300~1000Vdc | 37A | TUV CE/cTUVus | 369*105*530/20 |
| | Liquid-Cooled | LBG1K0120G | 3L+(N)+PE, 260~530Vac | 35kW | 150~1000Vdc | 300~1000Vdc | 117A | TUV CE/cTUVus | 300*453*123/32 |
| Bidirectional AC2DC (Non-Isolation) | G1 Air-Cooled | BEG1K0110G | 3L+(N)+PE 323~437Vac | 62.5kW | 680~1000Vdc | 680~950Vdc | 96A | TUV CE | 385*395*110/23.6 |
| | | BEG1K086U | 3L+(N)+PE 408~528Vac | | 750~1000Vdc | 750~950Vdc | 78A | cTUVus | |
| Bidirectional DC2DC (Isolation) | G2 Air-Cooled | BEC1K0135G | 300~950Vdc | 40kW | 150~1000Vdc | 300~1000Vdc | 133.3A | TUV CE/cTUVus | 300*395*84/16 |
| | Liquid-Cooled | LBC1K5180G | 400~1500Vdc | 62.5kW | 300~1500Vdc | 350~1500Vdc | 178.6A | | 300*453*123/30 |
| Bidirectional DC2DC (Non-Isolation) | Air-Cooled | BEC900280G | 650~900Vdc | 150kW | 300~870Vdc | 535.72~870Vdc | 280A | | 385*520*140/32 |

## STS Module

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Control Module | Auxiliary Bypass Unit | S380380C11-1 | | | | | | | 270*125*65/2 |
| Power Module | Static Transfer Switch | ICU250K380-S | 260~530Vac | 250kVA | | | 379A | | 433*412*193/50 |
| | | ICU500K380-S | | 500kVA | | | 758A | | |

# Power Module Platform



G1 AIR-COOLED



G2 AIR-COOLED



LIQUID-COOLED

# Product Overview

## Air-Cooled Energy Storage Power Module

### Bidirectional AC2DC (Isolation)


22/30kW BEG1K075G, BEG1K0100G ..... P04

11kW BSG1K037G ..... P06


### Bidirectional AC2DC (Non-Isolation)


62.5kW BEG1K0110G, BEG1K086U ..... P08


### Bidirectional DC2DC (Isolation)


40kW BEC1K035G ..... P10


### Bidirectional DC2DC (Non-Isolation)


150kW BEC900280G ..... P12


## Liquid-Cooled Energy Storage Power Module

### Bidirectional AC2DC (Isolation)


35kW LBG1K0120G ..... P14


### Bidirectional DC2DC (Isolation)


62.5kW LBC1K5180G ..... P16


## STS Module


250/500kVA S380380C11-1, ICU250K380-S, ICU500K380-S ..... P18


## Energy Storage System


218/241kWh ICB Series ..... P20

350kWh IEB Series ..... P22


## Energy Storage Charging System


350kWh IHEBS470K7D-350LL3C ..... P24

350kWh IHEBV470K7D-350LL3C ..... P26


## Application Cases


..... P28

# BEG1K075G, BEG1K0100G

## 22kW 1000V Bidirectional ACDC Power Module
## 30kW 1000V Bidirectional ACDC Power Module





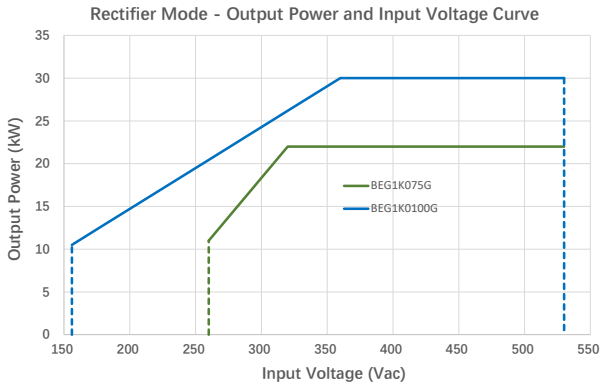
## Introduction

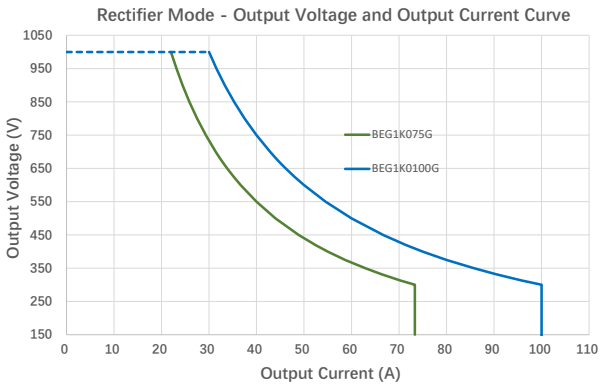
BEG1K075G/BEG1K0100G is a bidirectional ACDC power module used to connect the battery or DC bus to AC grid. It is specifically designed for bidirectional applications such as electric vehicle chargers with V2G/VPF function, second-life battery utilization and microgrids. It can also serve as a replacement for traditional Power Conversion System (PCS). By employing the high-frequency SiC MOSFET switching technology, it can deliver excellent performance, high power density, strong scalability and high reliability.

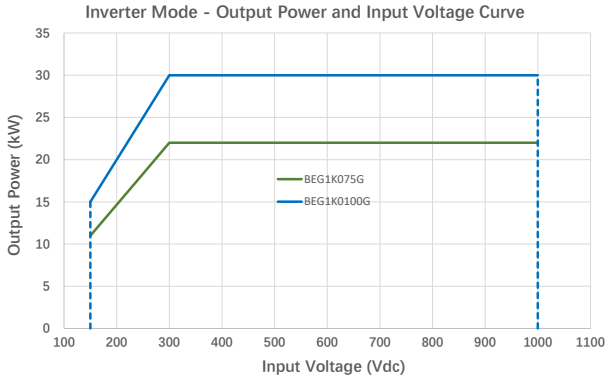
## Main Features

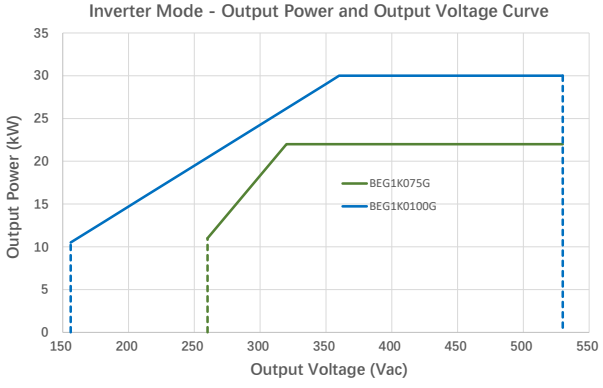
- Fully isolated bidirectional ACDC, V2G and off-grid support, max 32 modules in parallel on-grid and 16 modules in parallel off-grid
- Compatible in size and interface with DCDC, BiDi ACDC, BiDi DCDC, VPF and MCS power modules
- Rapid current direction change within 10ms, automatic constant bus voltage control
- BABA support, full SiC
- Constant power output @300Vdc~1000Vdc, full power output @320V~530Vac, 200V low voltage grid support
- Conformal coating and glue filling provide enhanced protection for high reliability
- Peak efficiency ≥97%, full load efficiency ≥96.5%
- Supports DC bus voltage regulation mode

## Curve Chart



# Technical Parameters

| Model | | | BEG1K075G | BEG1K0100G |
|---|---|---|---|---|
| Operating Environment | | Operating temperature | -40°C~+70°C, derating required above 55°C | |
| | | Transportation/Storage temperature | -40°C~+70°C | |
| | | Relative humidity | ≤95%RH, non-condensing | |
| | | Altitude | 2000m | |
| | | Atmospheric pressure | 79kPa~106kPa | |
| | | Protection rating | IP20 | |
| | | Cooling method | Forced air cooling | |
| Rectifier Mode | AC Input | Frequency | 45Hz~65Hz | |
| | | Input voltage | 3-phase+(N)+PE, 260Vac~530Vac | 3-phase+(N)+PE, 156Vac~530Vac |
| | | Rated voltage | 380/400/480Vac | 208/380/400/480Vac |
| | | Max input current | 45A | 60A |
| | | Power factor | ≥0.99 | |
| | | THDi | ≤5% | |
| | DC Output | Max output power | 22kW | 30kW |
| | | Output voltage | 150Vdc~1000Vdc | |
| | | Constant power voltage range | 300Vdc~1000Vdc | |
| | | Max output current | 73.3A | 100A |
| | | Voltage regulation accuracy | <±0.5% | |
| | | Current regulation accuracy | ≤±1% | |
| | | Current sharing | ≤±5% | |
| Rectifier and inverter mode conversion time (battery test) | | | 10ms | |
| Inverter Mode | DC Input | DC input voltage | 150Vdc~1000Vdc | |
| | | Max input current | 80A | 110A |
| | AC Output | Max output power | 22kW | 30kW |
| | | Output voltage | 260Vac~530Vac | 156Vac~530Vac |
| | | Max output current | 45A | 60A |
| Performance | | Peak efficiency | ≥97% | |
| | | Full load efficiency | ≥96.5% | |
| | | Standby power | 22W | |
| | | Noise | ≤65dB | |
| Control | | Communication | CAN bus, max 32 modules in parallel on-grid and 16 modules off-grid | |
| | | Operating mode | DC bus voltage regulation mode | |
| | | Indicator light | Green LED: ON for rectifier mode, breathing for inverter mode; Yellow LED: alarm; Red LED: fault | |
| | | Address indication | Automatic address identification, panel dial switch for group setting | |
| | | ESTOP | 12V dry-contact relay trigger, output voltage shall drop from 1000Vdc/450Vdc to below 60Vdc in 300ms | |
| Alarm and Protection | | Input overvoltage/undervoltage protection | Automatic shutdown, enters standby mode when the voltage returns to normal and requires a startup command from the monitoring unit to restore output | |
| | | Output overvoltage protection | Automatic shutdown, manual restart when the voltage returns to normal | |
| | | Overcurrent/short circuit protection | Automatic shutdown, enters standby mode when the overcurrent/short circuit is cleared and requires a startup command from the monitoring unit to restore output | |
| | | Overtemperature protection | Automatic shutdown, enters standby mode when the temperature returns to normal and requires a startup command from the monitoring unit to restore output | |
| Reliability and Safety | | Certification | TUV CE, cTUVus, UL | TUV CE, cTUVus |
| | | EMC/EMI | EN IEC 61000-6-1:2019/2:2019/3:2021/4:2019 Class B | |
| | | Safety | EN IEC 62909-1:2018/2:2019, EN IEC 62477-1:2012, UL 2202:2022, UL 9741:2021, UL 1741:2021, UL 508, CSA C22.2 No.107.1:2016 | |
| | | Grid connection | EN 50549-1:2019/-2:2022, DE-AR-N 4105:2018, CEI 0-21:2024, UL 1741SB:2021, CSA C22.3 No. 9 | |
| | | MTBF | >300,000h | |
| Mechanical Parameters | | Dimensions (W*D*H) | 300mm*395mm*84mm | |
| | | Weight | ≤14kg | ≤16kg |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# BSG1K037G

## 11kW 1000V Bidirectional V2G Power Module





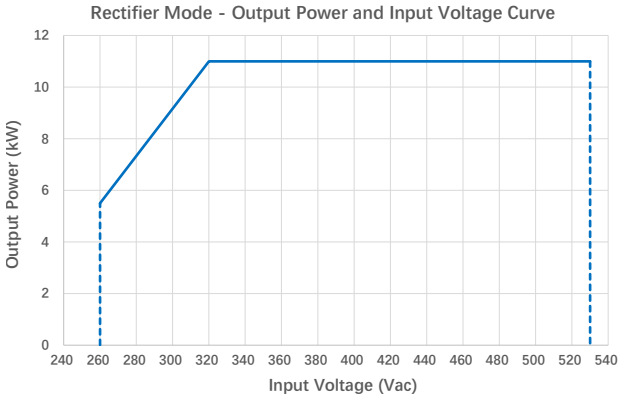
## Introduction

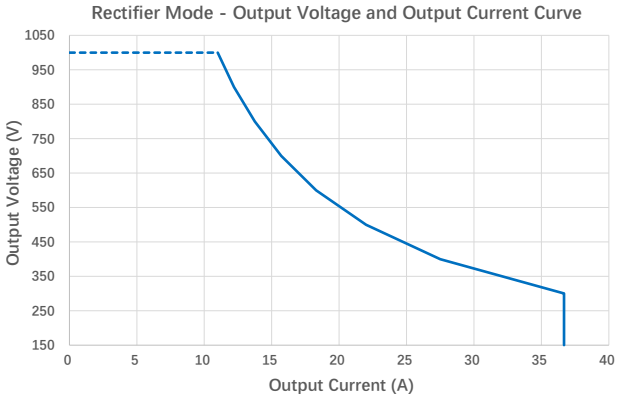
BSG1K037G is a bidirectional ACDC power module specifically designed for 11kW 3-phase V2G electric vehicle chargers. Featuring building-block design, IP65 protection and effective thermal management, it is well suited for V2G, battery energy storage systems (BESS), and smart grid applications. By adopting high-frequency SiC MOSFET switching technology, it can deliver excellent performance, high power density and high reliability.

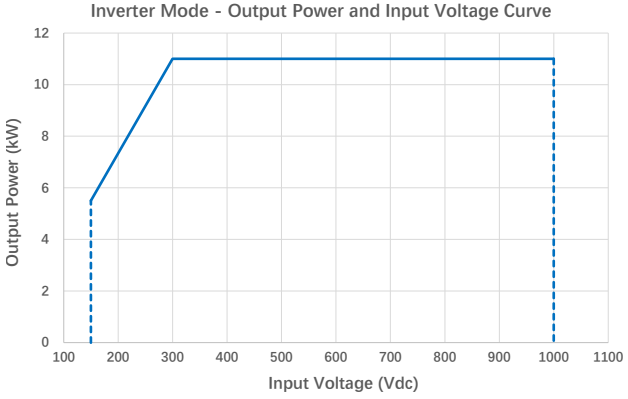
## Main Features

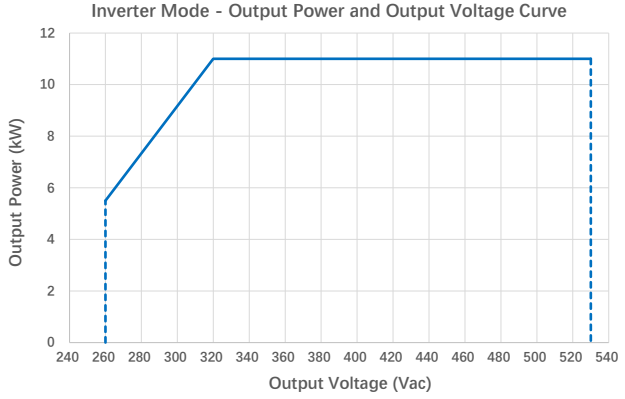
- Dimensions, installation and interface modes specifically designed for wall-mounted V2G chargers
- Fully isolated bidirectional V2G module, off-grid support
- Peak efficiency ≥97%, full load efficiency ≥97%
- Supports 380V/400V/480V grid, TUV CE/UL/ global grid code certification
- Conformal coating and glue filling provide enhanced protection for high reliability
- IP65 protection, reliable and robust

## Curve Chart



# Technical Parameters

| | | | |
|---|---|---|---|
| Operating Environment | | Operating temperature | -40°C~+75°C, derating required above 55°C |
| | | Transportation/Storage temperature | -40°C~+75°C |
| | | Relative humidity | ≤95%RH, non-condensing |
| | | Altitude | 2000m |
| | | Atmospheric pressure | 79kPa~106kPa |
| | | Cooling method | Forced air cooling |
| | | Protection rating | IP65 |
| Rectifier Mode | AC Input | Frequency | 45Hz~65Hz |
| | | Input voltage | 3-phase+(N)+PE, 260Vac~530Vac |
| | | Rated voltage | 380/400/480Vac |
| | | Max input current | 22A |
| | | Power factor | ≥0.99 |
| | | THDi | ≤5% |
| | DC Output | Max output power | 11kW |
| | | Output voltage | 150Vdc~1000Vdc |
| | | Constant power voltage range | 300Vdc~1000Vdc |
| | | Max output current | 37A |
| | | Voltage regulation accuracy | <±0.5% |
| | | Current regulation accuracy | ≤±1% |
| | | Current sharing | ≤±5% |
| Rectifier and inverter mode conversion time (battery test) | | | 100ms |
| Inverter Mode | DC Input | DC input voltage | 150Vdc~1000Vdc (300Vdc~1000Vdc full power output) |
| | | Max input current | 37A |
| | AC Output | Max output power | 11kW |
| | | Output voltage | 260Vac~530Vac |
| | | Max output current | 48A |
| Performance | | Peak efficiency | ≥97% |
| | | Full load efficiency | ≥97% @800V |
| | | Standby power | 15W |
| | | Noise | ≤50dB |
| Control | | Communication | CAN bus |
| | | ESTOP | 12V dry-contact relay trigger, output voltage shall drop from 1000Vdc to below 60Vdc in 300ms |
| Alarm and Protection | | Input overvoltage/undervoltage protection | Automatic shutdown, enters standby mode when the voltage returns to normal and requires a startup command from the monitoring unit to restore output |
| | | Output overvoltage protection | Automatic shutdown and lock, power off to start and unlock |
| | | Overcurrent/short circuit protection | Automatic shutdown, enters standby mode when the overcurrent/short circuit is cleared and requires a startup command from the monitoring unit to restore output |
| | | Overtemperature protection | Automatic shutdown, enters standby mode when the temperature returns to normal and requires a startup command from the monitoring unit to restore output |
| Reliability and Safety | | Certification | TUV CE, cTUVus |
| | | EMC/EMI | EN IEC 61000-6-1:2019/2:2019/3:2021/4:2019 Class B |
| | | Safety | EN IEC 62909-1:2018/2:2019, IEC 61851-23:2023, UL 2202:2022, UL 9741:2021, UL 1741:2021, CSA C22.2 No.107.1:2016 |
| | | Grid connection | VDE-AR-N 4105:2018, EN 50549-1:2019+A1, EN 50549-10:2022 |
| Mechanical Parameters | | Dimensions (W*D*H) | 369mm*105mm*530mm |
| | | Weight | ≤20kg |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# BEG1K0110G, BEG1K086U

## 62.5kW 1000V Bidirectional ACDC Power Module





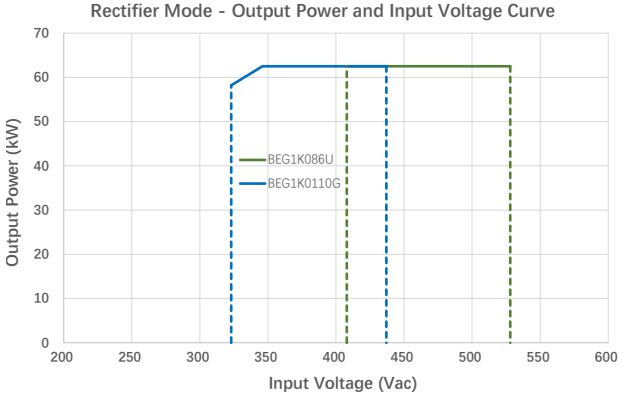
## Introduction

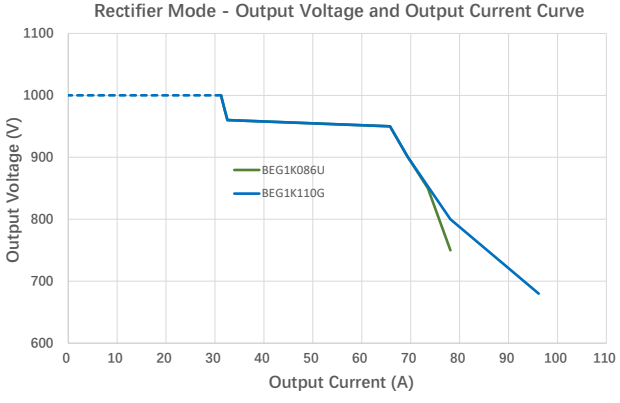
BEG1K0110G/BEG1K086U is a bidirectional ACDC power module used to connect the battery or DC bus to AC grid. It is specifically designed for bidirectional battery energy storage systems (BESS) with multiple battery groups connected in parallel, enabling electrical isolation, enhanced safety and flexible capacity expansion. It is also well suited for second-life battery and microgrid applications. By employing high-frequency SiC MOSFET switching technology, it can deliver excellent performance, high power density, high efficiency, and high reliability.

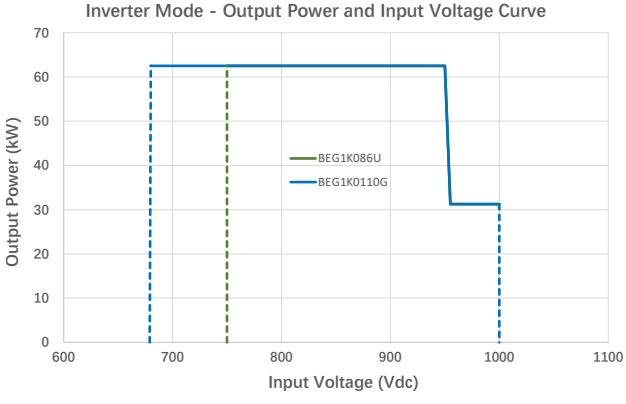
## Main Features

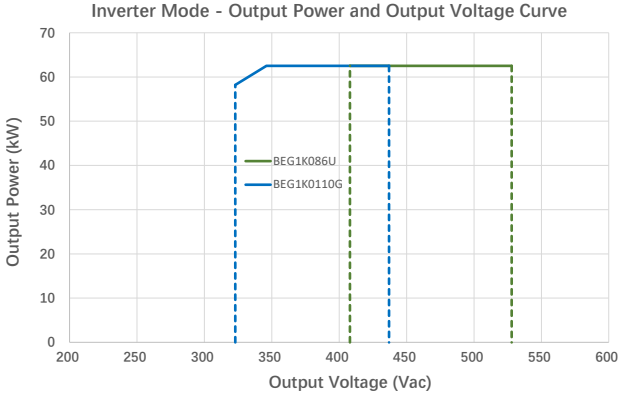
- Non-isolated bidirectional ACDC, off-grid support, max 16 modules in parallel on-grid and 8 modules in parallel off-grid
- Supports 380V/400V/480V grid, TUV CE/ cTUVus/global grid code certification
- Peak efficiency ≥98.7%, full load efficiency ≥98.25%
- Conformal coating and glue filling provide enhanced protection for high reliability
- Suitable for BESS, second-life battery and microgrid applications
- UHPD 2.1 times of the industry's average

## Curve Chart



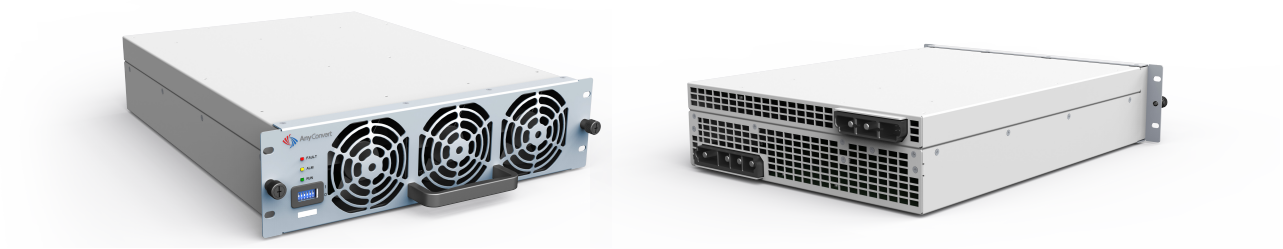
# Technical Parameters

| Model | | | BEG1K0110G | BEG1K086U |
|---|---|---|---|---|
| Operating Environment | | Operating temperature | -40°C~+70°C, derating required above 55°C | |
| | | Transportation/Storage temperature | -40°C~+70°C | |
| | | Relative humidity | ≤95%RH, non-condensing | |
| | | Altitude | 2000m | |
| | | Atmospheric pressure | 79kPa~106kPa | |
| | | Protection rating | IP20 | |
| | | Cooling method | Forced air cooling | |
| Rectifier Mode | AC Input | Frequency | 45Hz~65Hz | |
| | | Input voltage | 3-phase+(N)+PE, 323Vac~437Vac | 3-phase+PE, 408Vac~528Vac |
| | | Rated voltage | 380/400Vac | 480Vac |
| | | Max input current | 91A | 75.2A |
| | | Power factor | ≥0.99 | |
| | | THDi | ≤3% | |
| | DC Output | Max output power | 62.5kW | |
| | | Output voltage | 680Vdc~1000Vdc | 750Vdc~1000Vdc |
| | | Constant power voltage range | 680Vdc~950Vdc | 750Vdc~950Vdc |
| | | Max output current | 96A | 78A |
| | | Voltage regulation accuracy | <±1% | |
| | | Current regulation accuracy | ≤±2% | |
| | | Current sharing | ≤±5% | |
| Rectifier and inverter mode conversion time (battery test) | | | 10ms | |
| Inverter Mode | DC Input | DC input voltage | 680Vdc~1000Vdc | 750Vdc~1000Vdc |
| | | Max input current | 96A | 78A |
| | AC Output | Max output power | 62.5kW | |
| | | Output voltage | 323Vac~437Vac | 408~528Vac |
| | | Max output current | 91A | 75.2A |
| Performance | | Peak efficiency | ≥98.7% | |
| | | Full load efficiency | ≥98.25% | ≥98.45% |
| | | Standby power | <15W | |
| | | Noise | ≤65dB | |
| Control | | Communication | CAN bus, max 16 modules in parallel on-grid and 8 modules off-grid | |
| | | Indicator light | Green LED: ON for rectifier mode, breathing for inverter mode; Yellow LED: alarm; Red LED: failure | |
| | | Address indication | Automatic address identification, panel dial switch for group setting | |
| Alarm and Protection | | Input overvoltage/undervoltage protection | Automatic shutdown, enters standby mode when the voltage returns to normal and requires a startup command from the monitoring unit to restore output | |
| | | Output overvoltage protection | Automatic shutdown, manual restart when the voltage returns to normal | |
| | | Overcurrent/short circuit protection | Automatic shutdown, enters standby mode when the overcurrent/short circuit is cleared and requires a startup command from the monitoring unit to restore output | |
| | | Overtemperature protection | Automatic shutdown, enters standby mode when the temperature returns to normal and requires a startup command from the monitoring unit to restore output | |
| Reliability and Safety | | Certification | TUV CE | cTUVus |
| | | EMC/EMI | EN 61000-6-2:2019/-4:2019 | |
| | | Safety | EN 62477-1:2012/A12:2021 | UL 1741:2021 |
| | | Grid connection | EN 50549-1:2019, VDE-AR-N 4105:2018 | UL 1741SB:2021, IEEE 1547:2018, IEEE 1547.1:2020 |
| | | MTBF | >300,000h | |
| Mechanical Parameters | | Dimensions (W*D*H) | 385mm*395mm*110mm | |
| | | Weight | ≤23.6kg | |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# BEC1K0135G

## 40kW 1000V Bidirectional Isolated DCDC Converter



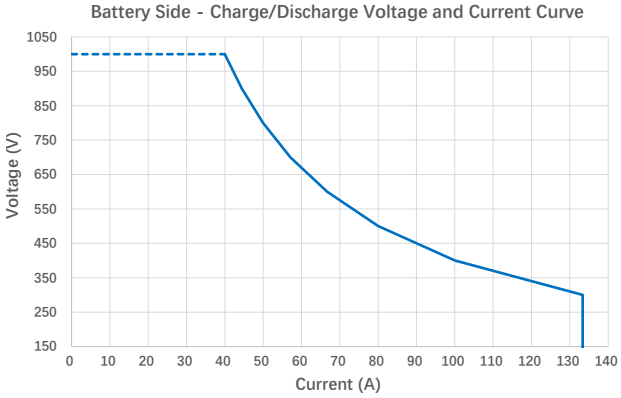
## Introduction

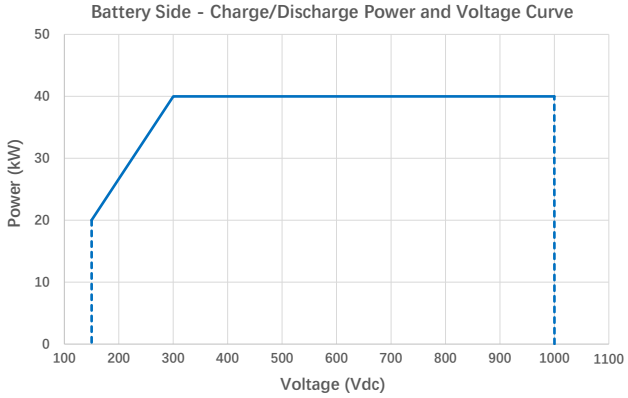
BEC1K0135G is a bidirectional DCDC power conversion module specifically designed for energy storage systems, DC microgrids and second-life battery cascade utilization. It enables efficient energy exchange between the battery and the DC bus through a built-in high-frequency isolation transformer. Using third-generation SiC semiconductor devices, it delivers high efficiency, high power density, strong scalability, ultra-low electromagnetic emissions and interference, and enhanced reliability. It stands as one of the world's leading power conversion modules.

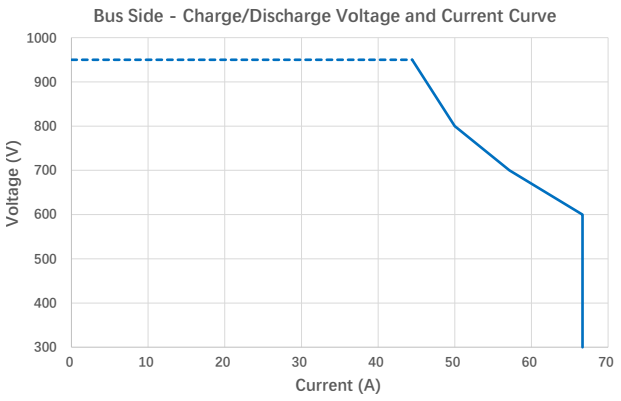
## Main Features

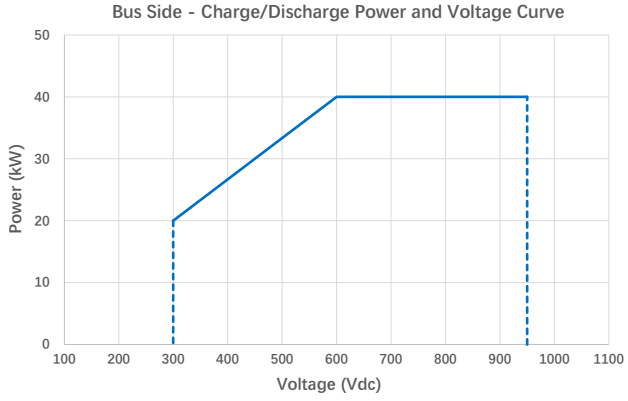
- Compatible in size and interface with DCDC, BiDi ACDC, BiDi DCDC, VPF and MCS power modules
- Fully isolated bidirectional DCDC, B2B support, max 32 modules in parallel
- Constant power output @600Vdc~950Vdc on the bus side, @300Vdc~1000Vdc on the battery side
- Peak efficiency ≥98.5%, full load efficiency ≥98.2%
- Supports DC bus voltage regulation mode
- Super standby power (battery side): <1W (max measured: approx. 0.6W)
- Conformal coating and glue filling provide enhanced protection for high reliability
- Rapid current direction change within 10ms, automatic constant bus voltage support
- Pulse charge/discharge function
- ESTOP function, 1ms shutdown; full SiC

## Curve Chart



# Technical Parameters

| | | |
|---|---|---|
| Operating Environment | Operating temperature | -40°C~+75°C, derating required above 55°C |
| | Transportation/Storage temperature | -40°C~+75°C |
| | Relative humidity | ≤95%RH, non-condensing |
| | Altitude | 2000m |
| | Atmospheric pressure | 79kPa~106kPa |
| | Cooling method | Forced air cooling |
| | Protection rating | IP20 |
| Battery Side | Max power | 40kW |
| | Voltage range | 150Vdc~1000Vdc |
| | Constant power voltage range | 300Vdc~1000Vdc |
| | Max current | 133.3A |
| | Voltage regulation accuracy | ≤±0.5% |
| | Current regulation accuracy | ≤±1% |
| | Current sharing | ≤±5% |
| Bus Side | Max power | 40kW |
| | Voltage range | 300Vdc~950Vdc |
| | Constant power voltage range | 600Vdc~950Vdc |
| | Max current | 66.7A |
| | Voltage regulation accuracy | ≤±0.5% |
| | Current regulation accuracy | ≤±1% |
| | Current sharing | ≤±5% |
| Performance | Peak efficiency | ≥98.5% |
| | Full load efficiency | ≥98.2% |
| | Standby power | 20W |
| | Super standby power | <1W |
| | Noise | Standard mode: ≤80dB; de-noise mode: ≤70dB; silent mode: ≤60dB |
| Control | Communication | CAN bus, max 32 power modules in parallel |
| | Operating mode | DC bus voltage regulation mode |
| | Indicator light | Green LED: normal operation; Yellow LED: alarm; Red LED: failure |
| | Address indication | Automatic address identification, panel dial switch for group setting |
| | ESTOP | 12V dry-contact relay trigger, output voltage shall drop from 1000Vdc to below 60Vdc in 300ms |
| Alarm and Protection | Input overvoltage/undervoltage protection | Automatic shutdown, enters standby mode when the voltage returns to normal and requires a startup command from the monitoring unit to restore output |
| | Output overvoltage protection | Automatic shutdown, manual restart when the voltage returns to normal |
| | Overcurrent/short circuit protection | Automatic shutdown, enters standby mode when the overcurrent/short circuit is cleared and requires a startup command from the monitoring unit to restore output |
| | Overtemperature protection | Automatic shutdown, enters standby mode when the temperature returns to normal and requires a startup command from the monitoring unit to restore output |
| Reliability and Safety | Certification | TUV CE, cTUVus |
| | EMC/EMI | EN IEC 61851-21-2:2021, EN 61000-1:2019/-2:2019/-3:2021/-4:2019 |
| | Safety | EN IEC 62477-1:2023, EN IEC 61851-1:2019, EN IEC 61851-23:2023, UL 2202:2022 |
| | MTBF | >500,000h |
| Mechanical Parameters | Dimensions (W*D*H) | 300mm*395mm*84mm |
| | Weight | ≤16kg |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# BEC900280G

## 150kW 900V Bidirectional DCDC Power Converter



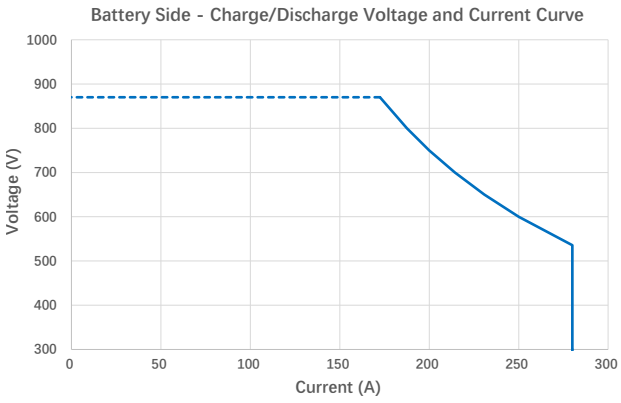
## Introduction

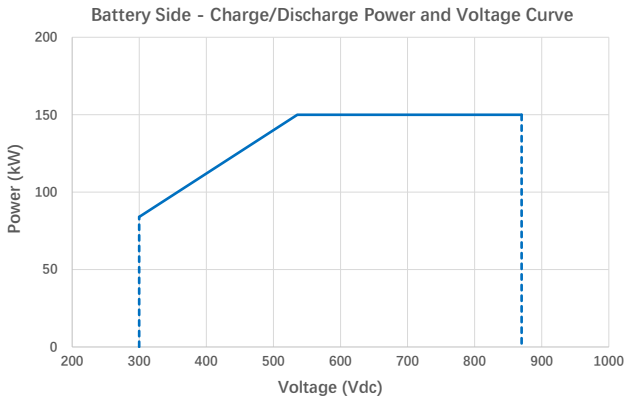
BEC900280G is a bidirectional DCDC converter used to connect the battery to DC bus. It is specifically designed for bidirectional DCDC applications in battery energy storage systems with multiple battery groups in parallel, providing electrical isolation, enhanced safety, and flexible capacity expansion. It is also suitable for second-life battery and DC microgrid applications. By employing high-frequency SiC MOSFET switching technology, it delivers excellent performance, high power density, high efficiency and high reliability.

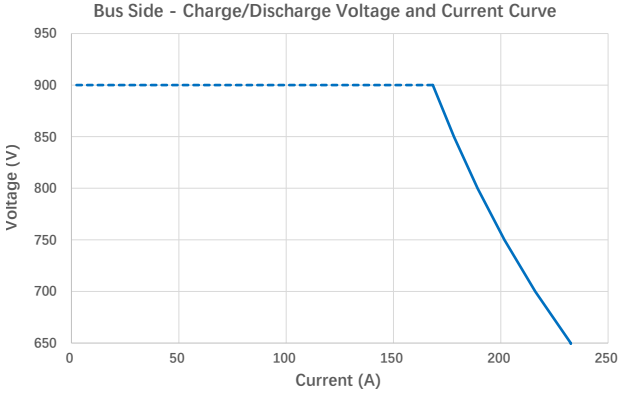
## Main Features

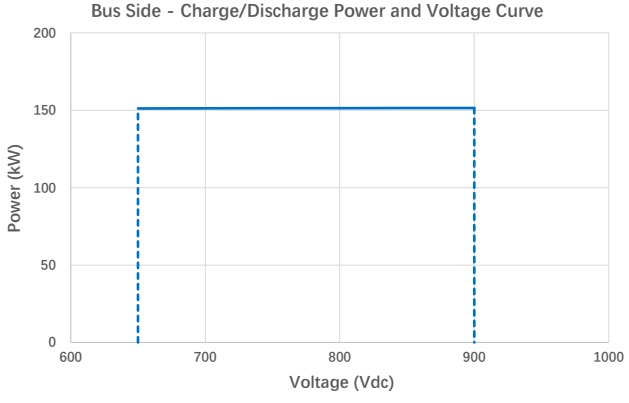
- Wide voltage range: 300Vdc~870Vdc on the battery side, 650Vdc~900Vdc on the bus side
- Non-isolated bidirectional DCDC, UHPD 2.1 times of the industry's average
- Peak efficiency ≥99.6%, full load efficiency ≥98%
- Rapid current direction change within 10ms, automatic constant bus voltage support
- Conformal coating and glue filling provide enhanced protection for high reliability
- 280A constant current

## Curve Chart



# Technical Parameters

| | | |
|---|---|---|
| Operating Environment | Operating temperature | -20°C~+75°C, derating required above 55°C |
| | Transportation/Storage temperature | -20°C~+55°C |
| | Relative humidity | ≤95%RH, non-condensing |
| | Altitude | 2000m |
| | Atmospheric pressure | 79kPa~106kPa |
| | Cooling method | Forced air cooling |
| | Protection rating | IP20 |
| Battery Side | Max power | 150kW |
| | Voltage range | 300Vdc~870Vdc |
| | Constant power voltage range | 535.72Vdc~870Vdc |
| | Max current | 280A |
| | Voltage regulation accuracy | ≤±1% |
| | Current regulation accuracy | ≤±1% |
| | Current sharing | ≤±5% |
| Bus Side | Max power | 150kW |
| | Voltage range | 650Vdc~900Vdc |
| | Constant power voltage range | 650Vdc~900Vdc |
| | Max current | 230A |
| | Voltage regulation accuracy | ≤±1% |
| | Current regulation accuracy | ≤±1% |
| | Current sharing | ≤±5% |
| Performance | Peak efficiency | ≥99.3% |
| | Full load efficiency | ≥98% |
| | Standby power | <15W |
| | Noise | ≤65dB |
| Control | Communication | CAN bus, max 16 power modules in parallel (parallel operation on the bus side, but not on the battery side) |
| | Indicator light | Green LED: normal operation; Yellow LED: alarm; Red LED: failure |
| | Address indication | Automatic address identification, panel dial switch for group setting |
| | ESTOP | 12V/24V dry-contact relay trigger |
| Alarm and Protection | Input overvoltage/undervoltage protection | Automatic shutdown, enters standby mode when the voltage returns to normal and requires a startup command from the monitoring unit to restore output |
| | Output overvoltage protection | Automatic shutdown, manual restart when the voltage returns to normal |
| | Overcurrent/short circuit protection | Automatic shutdown, enters standby mode when the overcurrent/short circuit is cleared and requires a startup command from the monitoring unit to restore output |
| | Overtemperature protection | Automatic shutdown, enters standby mode when the temperature returns to normal and requires a startup command from the monitoring unit to restore output |
| Reliability and Safety | Certification | TUV CE, cTUVus |
| | EMC/EMI | EN IEC 61000-6-2:2019/-4:2019 |
| | Safety | EN IEC 62477-1:2023, UL 1741:2021, CSA C22.2 No.107.1:2016 |
| | MTBF | >300,000h |
| Mechanical Parameters | Dimensions (W*D*H) | 385mm*520mm*140mm |
| | Weight | 32kg |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# LBG1K0120G

## 35kW 1000V Liquid-Cooled Bidirectional ACDC Power Module





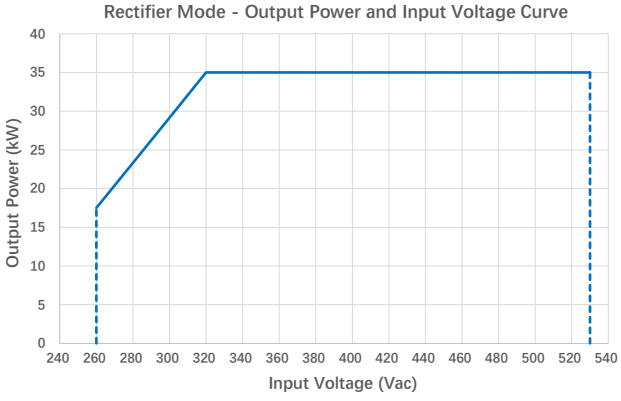
## Introduction

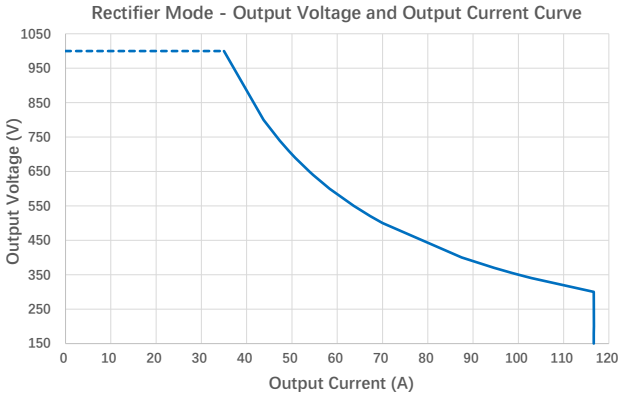
LBG1K0120G is a bidirectional ACDC power module used to connect the battery or DC bus to AC grid. It is specifically designed for electric vehicle chargers with V2G/VPF function, second-life battery utilization and microgrids. It can also serve as a replacement for traditional PCS in energy storage systems. By adopting high-frequency SiC MOSFET switching technology, it delivers excellent performance, high power density, strong scalability and high reliability. Featuring a liquid-cooled design, it provides a high protection level and enables zero noise operation.

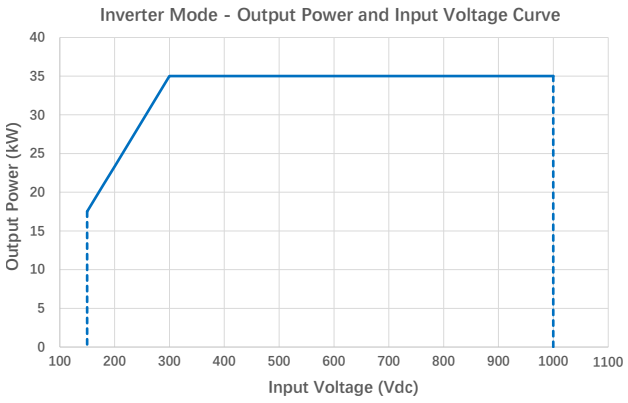
## Main Features

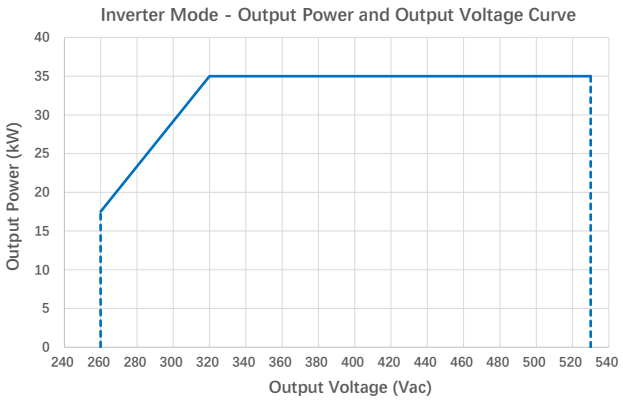
- Fully isolated bidirectional ACDC, off-grid support, max 32 modules in parallel on-grid and 15 modules in parallel off-grid
- Supports 380V/400V/480V grid, TUV CE/ cTUVus/global grid code certification
- Rapid current direction change within 10ms, automatic constant bus voltage support
- Supports DC bus voltage regulation mode
- Anti-condensation design, full hot plug support for liquid-cooling and electrical interfaces, quick-plug connectors for liquid cooling loop
- Conformal coating and glue filling provide enhanced protection for high reliability
- Constant power output @300Vdc~1000Vdc, full power output @320Vac~530Vac
- Peak efficiency ≥97%, full load efficiency ≥96%

## Curve Chart



# Technical Parameters

| | | | |
|---|---|---|---|
| Operating Environment | | Operating temperature | -40°C~+75°C, derating required above 60°C |
| | | Transportation/Storage temperature | -40°C~+70°C |
| | | Relative humidity | ≤95%RH, non-condensing |
| | | Altitude | 2000m |
| | | Atmospheric pressure | 79kPa~106kPa |
| | | Cooling method | Liquid cooling |
| | | Protection rating | IP50 |
| Coolant Requirements | | Coolant type | G65 Antifreeze (60% Ethylene Glycol + 40% pure $H_2O$) |
| | | Temperature | -20°C~+75°C, derating required above 60°C |
| | | Flow rate | 6L~10L/min |
| | | Pressure differential | Min 0.22bar pressure differential between liquid inlet and outlet |
| | | Coolant volume | Max 120PSI 8 bar, 0.25L in the module |
| Rectifier Mode | AC Input | Frequency | 45Hz~65Hz |
| | | Input voltage | 3-phase+(N)+PE, 260Vac~530Vac |
| | | Rated voltage | 380/400/480Vac |
| | | Max input current | 75A |
| | | Power factor | ≥0.99 |
| | | THDi | ≤5% |
| | DC Output | Max output power | 35kW |
| | | Output voltage | 150Vdc~1000Vdc |
| | | Constant power voltage range | 300Vdc~1000Vdc |
| | | Max output current | 117A |
| | | Voltage regulation accuracy | <±0.5% |
| | | Current regulation accuracy | ≤±1% |
| | | Current sharing | ≤±5% |
| Rectifier and inverter mode conversion time (battery test) | | | 100ms |
| Inverter Mode | DC Input | DC input voltage | On-grid: 150Vdc~1000Vdc; Off-grid: 200Vdc~1000Vdc |
| | | Max input current | 135A |
| | AC Output | Max output power | 35kW |
| | | Output voltage | 260Vac~530Vac |
| | | Max output current | 72A |
| Performance | | Peak efficiency | ≥97% |
| | | Full load efficiency | ≥96% |
| | | Standby power | 30W |
| Control | | Communication | CAN bus, max 32 modules in parallel on-grid and 15 modules off-grid |
| | | Operating mode | DC bus voltage regulation mode |
| | | Indicator light | Green LED: ON for rectifier mode, breathing for inverter mode; Yellow LED: alarm; Red LED: failure |
| | | Address indication | Automatic address identification, panel dial switch for group setting |
| | | ESTOP | 12V dry-contact relay trigger, output voltage shall drop from 1000Vdc to below 60Vdc in 300ms |
| Alarm and Protection | | Input overvoltage/undervoltage protection | Automatic shutdown, enters standby mode when the voltage returns to normal and requires a startup command from the monitoring unit to restore output |
| | | Output overvoltage protection | Automatic shutdown and lock, power off to start and unlock |
| | | Overcurrent/short circuit protection | Automatic shutdown, enters standby mode when the overcurrent/short circuit is cleared and requires a startup command from the monitoring unit to restore output |
| | | Overtemperature protection | Automatic shutdown, enters standby mode when the temperature returns to normal and requires a startup command from the monitoring unit to restore output |
| Reliability and Safety | | Certification | TUV CE, cTUVus |
| | | EMC/EMI | EN 61000-6-1:2019/-2:2019/-3:2021/-4:2019 Class B |
| | | Safety | EN 62477-1:2012, EN IEC 62477-1:2023, EN IEC 62909-1:2018/-2:2019, UL 2202:2022, UL 9741:2023, UL 1741:2021, CSA C22.2 No. 107.1:2016 |
| | | Grid connection | VDE-AR-N 4105:2018, DIN VDE V 0124-100:2020, EN 50549-1:2019/-10:2022, UL 1741SB:2021, IEEE 1547:2018, IEEE 1547.1:2020 |
| Mechanical Parameters | | Dimensions (W*D*H) | 300mm*453mm*123mm |
| | | Weight | ≤32kg |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# LBC1K5180G

## 62.5kW 1500V Liquid-Cooled Bidirectional DCDC Power Module

reddot winner 2026





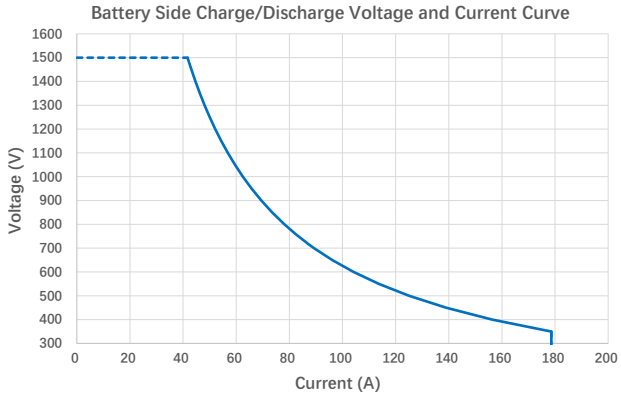
## Introduction

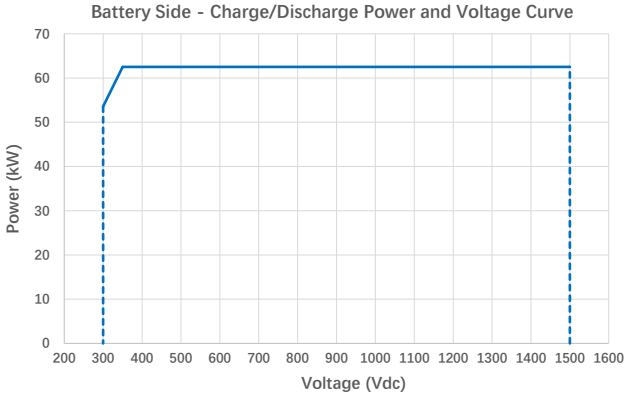
LBC1K5180G is a bidirectional DCDC conversion module designed for energy storage systems, DC microgrids, and second-life battery cascade utilization applications. It supports an ultra-wide operating voltage range of 300Vdc to 1500Vdc on the battery side and 400Vdc to 1500Vdc on the bus side. It has TUV CE and cTUVus certification.

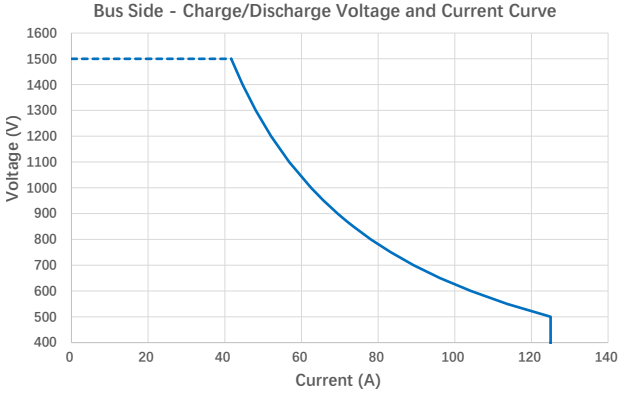
## Main Features

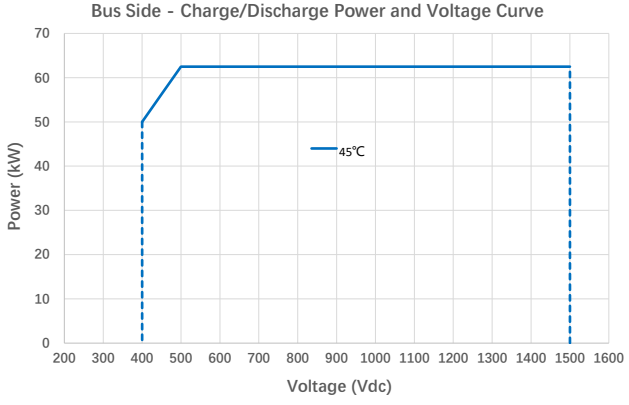
- Ultra-wide voltage range: 300Vdc~1500Vdc on the battery side and 400Vdc~1500Vdc on the bus side, suitable for most DC bus applications
- G65 Antifreeze, normal operation from -40°C, with no power derating up to 45°C
- Peak efficiency ≥98.5%, full load efficiency ≥97%; pulse charging/discharging function
- Supports MCS charging with voltage up to 1500V
- Anti-condensation design, full hot-plug support for both liquid cooling and electrical interfaces, quick-plug connectors for liquid cooling loop
- Conformal coating and glue filling provide enhanced protection for high reliability
- Supports rectifier and inverter operating modes, with power density up to 59.8W/in³

## Curve Chart



# Technical Parameters

| | | |
|---|---|---|
| Operating Environment | Operating temperature | -40°C~+70°C, derating required above 45°C |
| | Transportation/Storage temperature | -40°C~+70°C |
| | Relative humidity | ≤95%RH, non-condensing |
| | Altitude | 2000m |
| | Atmospheric pressure | 79kPa~106kPa |
| | Cooling method | Liquid cooling |
| | Protection rating | IP50 |
| Coolant Requirements | Coolant type | G65 Antifreeze (60% Ethylene Glycol + 40% pure $H_2O$) |
| | Temperature | -40°C~+75°C, derating required above 45°C |
| | Flow rate | 6L~10L/min |
| | Pressure differential | Min 0.21bar pressure differential between liquid inlet and outlet |
| | Coolant volume | Max 120PSI 8 bar, 0.25L in the module |
| Battery Side | Max output power | 62.5kW |
| | Voltage range | 300Vdc~1500Vdc |
| | Constant power voltage range | 350Vdc~1500Vdc |
| | Max current | 178.6A |
| | Voltage regulation accuracy | ≤±0.5% |
| | Current regulation accuracy | ≤±1% |
| | Current sharing | ≤±5% |
| Bus Side | Max output power | 62.5kW |
| | Voltage range | 400Vdc~1500Vdc |
| | Constant power voltage range | 500Vdc~1500Vdc |
| | Max current | 125A |
| | Voltage regulation accuracy | ≤±0.5% |
| | Current regulation accuracy | ≤±1% |
| | Current sharing | ≤±5% |
| Performance | Peak efficiency | ≥98.5% |
| | Full load efficiency | ≥97% |
| | Standby power | <8W |
| Control | Communication | CAN bus, max 40 power modules in parallel |
| | Indicator light | Green LED: normal operation; Yellow LED: alarm; Red LED: failure |
| | Address indication | Automatic address identification, panel dial switch for group setting |
| | ESTOP | 5V/12V dry-contact relay trigger, output voltage shall drop from 1500Vdc to below 60Vdc in 300ms |
| Alarm and Protection | Input overvoltage/undervoltage protection | Automatic shutdown, enters standby mode when the voltage returns to normal and requires a startup command from the monitoring unit to restore output |
| | Output overvoltage protection | Automatic shutdown, manual restart when the voltage returns to normal |
| | Overcurrent/short circuit protection | Automatic shutdown, enters standby mode when the overcurrent/short circuit is cleared and requires a startup command from the monitoring unit to restore output |
| | Overtemperature protection | Automatic shutdown, enters standby mode when the temperature returns to normal and requires a startup command from the monitoring unit to restore output |
| Reliability and Safety | Certification | TUV CE, cTUVus |
| | EMC/EMI | EN IEC 61851-21-2:2021 Class B |
| | Safety | IEC 61851-1:2023, EN IEC 61851-1:2019, EN 61851-23:2014, IEC 61851-23:2023, UL 2202:2022 |
| | MTBF | >400,000h |
| Mechanical Parameters | Dimensions (W*D*H) | 300mm*453mm*123mm |
| | Weight | ≤30kg |
| Blind-mating connector (optional) | CGD08.5421/L, quick-release coupling for liquid cooling | |

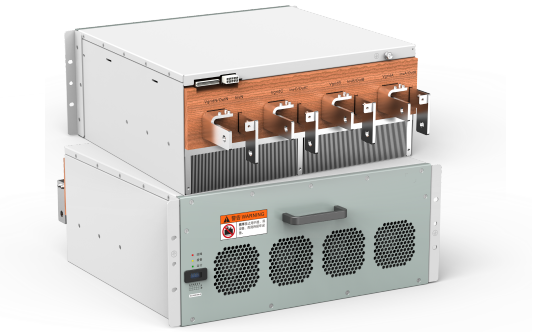
*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# S380380C11-1, ICU250K380-S/ICU500K380-S

## Auxiliary Bypass Unit, 250kVA/500kVA Static Transfer Switch



S380380C11-1
Auxiliary Bypass Unit



ICU250K380-S, ICU500K380-S
250kVA/500kVA Static Transfer Switch

## Introduction

S380380C11-1 and ICU250K380-S/ICU500K380-S form an STS unit. The STS unit consists of two modules: an STS control module and an STS power module. The unit is designed to operate in conjunction with bidirectional ACDC modules.

S380380C11-1 is a control module developed to meet the requirements of PCS systems. Its main functions include system status monitoring, logic control, and protection; fast response to BMS for rapid control and protection; power dispatch in response to EMS; communication coordination between the monitoring system and power module; on-grid/off-grid mode switching control; current sharing control in parallel operation; and rapid response to grid disturbances.

ICU250K380-S/ICU500K380-S power module supports on-grid/off-grid switching within 10ms. In on-grid mode, the neutral line of the power module is disconnected from the grid neutral; in off-grid mode, the neutral line of the power module is connected to the grid neutral. Featuring high reliability and compact design, it is suitable for both on-grid and off-grid energy storage systems.

## Main Features

- Strong anti-interference performance and signal processing capability
- Operate in conjunction with PCS modules to form an energy storage system
- System status monitoring, logic control, and protection for PCS systems
- Seamless on-grid/off-grid switching
- Excellent design flexibility enabled by a modular architecture
- Communication interfacing between monitoring system and PCS modules
- Acts as the host controller of PCS system in off-grid mode
- High level of integration and reliability

# Technical Parameters

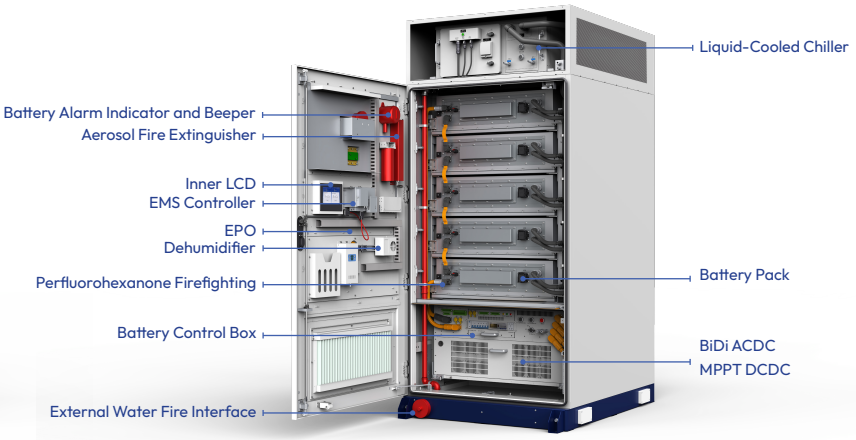
| Control Module | | S380380C11-1 | |
|---|---|---|---|
| Operating Environment | Operating temperature | -40°C~+75°C | |
| | Transportation/Storage temperature | -40°C~+70°C | |
| | Relative humidity | ≤95%RH, non-condensing | |
| | Altitude | ≤3000m | |
| | Atmospheric pressure | 67kPa~106kPa | |
| | Cooling method | Natural cooling | |
| | Protection rating | IP20 | |
| Power Supply | Voltage | 12V±10% | |
| | Power | ≥48W | |
| Communication | CAN1 | Communication bus for monitoring | |
| | CAN2 | In-cabinet parallel communication | |
| | CAN3 | BMS communication bus | |
| | CAN4 | Out-of-cabinet parallel communication | |
| | RS485 | Reserved | |
| Indicator Light | Green | On | On-grid operation |
| | | On for 2s, off for 1s | Off-grid operation |
| | | Flashing for 0.5s | Power-on, standby, fault, shutdown, upgrade (abnormal operation state) |
| | | Off | No power |
| | Red | On | N/A |
| | | Flashing for 0.5s | Fan fault |
| | Yellow | On | N/A |
| | | Flashing for 0.5s | SPI communication fault |
| Alarm and Protection | Input overvoltage/undervoltage protection | Automatic shutdown and restart when the voltage returns to normal | |
| | Short circuit protection | Automatic shutdown | |
| | EPO+ | Emergency stop signal terminal, normally closed, passive dry-contact input signal, to common ground GND | |
| | EPO- | Emergency stop signal terminal, voltage ≤6V | |
| Mechanical Parameters | Dimensions (W*D*H) | 270mm*125mm*65mm | |
| | Weight | <2kg | |
| Power Module | | ICU250K380-S/ICU500K380-S | |
| Operating Environment | Operating temperature | -40°C~+75°C | |
| | Transportation/Storage temperature | -40°C~+70°C | |
| | Relative humidity | ≤95%RH, non-condensing | |
| | Altitude | ≤3000m | |
| | Atmospheric pressure | 67kPa~106kPa | |
| | Cooling method | Forced air cooling | |
| | Protection rating | IP20 | |
| Main Power Supply | Voltage | 260Vac~530Vac | |
| | Rated current | 379A@250kVA, 758A@500kVA | |
| | Peak efficiency | ≥99.6% | |
| | Full load efficiency | ≥99.6% | |
| Auxiliary Power Supply | Voltage | 24V±10% | |
| | Power | 240W | |
| | Current | 10A | |
| On-grid/off-grid switching time | | ≤10ms | |
| Mechanical Parameters | Dimensions (W*D*H) | 433mm*412mm*193mm | |
| | Weight | 50kg | |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# ICB Series All-in-One Liquid-Cooled Energy Storage Solution

## 218kW/218kWh (1P/1 Hour), 120kW/241kWh (0.5P/2 Hours)






## Introduction

The ICB series all-in-one liquid-cooled energy storage system is specifically designed for commercial and industrial energy storage as well as EV charging energy storage applications. It offers two configurations: one with a rated power of 218kW and a capacity of 218kWh, with optional 30kW PV input; the other with a rated power of 120kW and a capacity of 241kWh, with optional 30kW/60kW PV input. It supports both standalone operation and multi-unit parallel expansion, allowing flexible adaptation to different capacity requirements. It complies with IP55 protection rating for outdoor use, ensuring safe installation and reliable operation in outdoor environments.

## Main Features

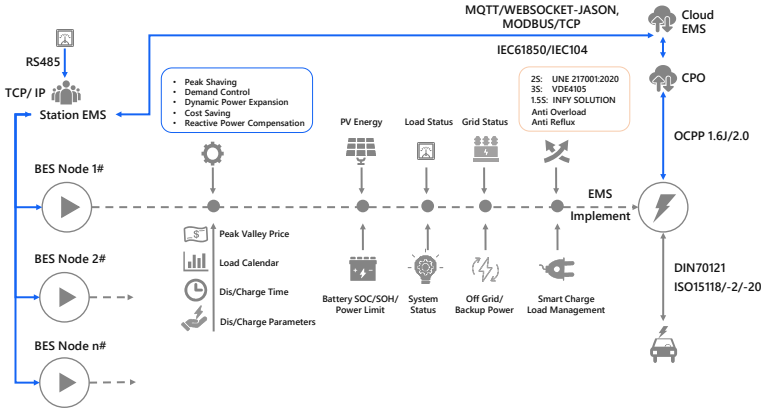
- PCS maximum efficiency ≥98.7%
- 1P capability to enhance CPO operation efficiency
- Multi-dimensional large-surface liquid cooling, ≤3°C battery cell temperature difference
- Flexible expansion to meet CPO's phased operational requirements
- Robust 5-level comprehensive fire protection
- Building-block design for hassle-free future installation
- Optional STS cabinet ensures 20ms instant backup power supply to loads when off grid
- Anti-reverse protection through coordination between gateway AC meter and EMS

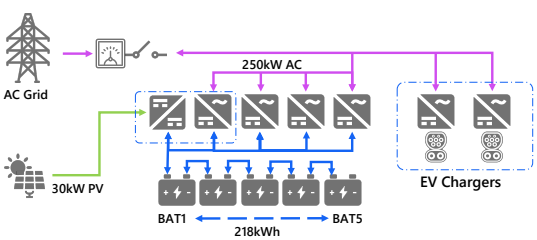
## Energy Expansion




**On grid**
Max 5 sets in parallel + AC cabinet
Up to 1.09MWh (1P) or 1.2MWh (0.5P)

**Off grid**
Max 2 sets in parallel + STS cabinet, up to 436kWh (1P) or
Max 4 sets in parallel + STS cabinet, up to 964kWh (0.5P)



# Technical Parameters

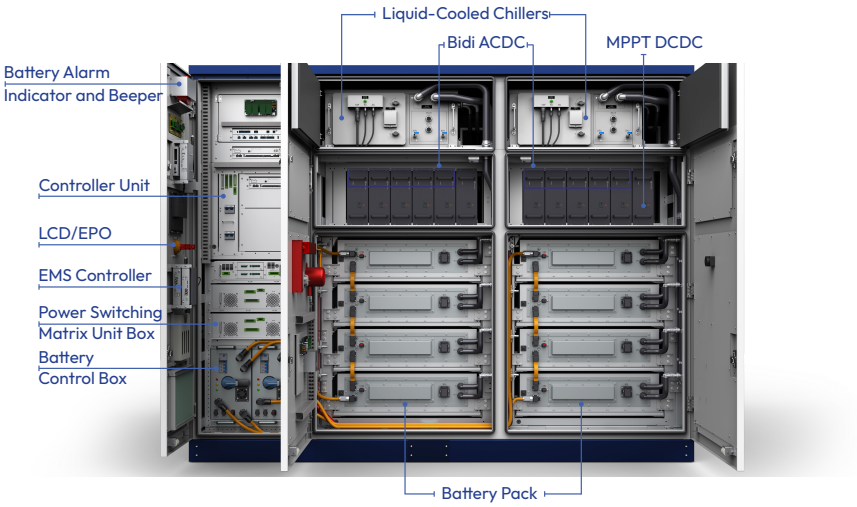
| Model | | ICB218kWh-218kW | ICB218kWh-187kW-30kW | ICB241kWh-120kW | ICB241kWh-120kW-60kW |
|---|---|---|---|---|---|
| Operating Environment | Operating temperature | -30°C~+50°C | | | |
| | Transportation/Storage temperature | -30°C~+60°C | | | |
| | Relative humidity | ≤95%RH, non-condensing | | | |
| | Altitude | 2000m | | | |
| | Atmospheric pressure | 70kPa~106kPa | | | |
| | Cooling method | Intelligent air cooling for PCS, liquid cooling for battery pack | | | |
| | Protection rating | IP67 for battery pack, IP55 for cabinet | | | |
| AC Grid Access | Frequency | 45Hz~55Hz | | | |
| | Voltage | 3-phase+N+PE, 230Vac/400Vac±10% | | | |
| | Max input current | 350A | | 192A | |
| | Rated input power | 218kW/250kW (1 min) | 187kW/187.5kW (1 min) | 120kW/125kW (1 min) | |
| | Power factor | ≥0.99 (pure active power mode); -1~+1 adjustable (reactive/active power mode) | | | |
| | THD | ≤3% | | | |
| PV Access | Voltage | N/A | DC+/DC-+PE, 300Vdc~825Vdc | N/A | DC+/DC-+PE, 300Vdc~825Vdc |
| | Channel | | 1 | | 2 |
| | Power | | 30kW | | 30kW/60kW |
| Battery Parameters | Dis/charging power ratio | 1P/1 Hour | 0.85P/1 Hour | 0.5P/2 Hours | 0.5P/2 Hours |
| | Liquid-cooled battery pack | 153.6V, 285Ah, 43.7kWh, UL 9540A | | 153.6V, 314Ah, 48.2kWh | |
| | Liquid-cooled battery cluster | 768V (672V~864V), 285Ah, 218kWh | | 768V (672V~864V), 314Ah, 241kWh | |
| | Number of battery clusters | 1 | | | |
| | BMS | Infypower 2-level architecture: battery pack BSU + high voltage control box BMU | | | |
| STS Cabinet (Optional) | STS configuration | 250kVA/500kVA | | | |
| | STS power switching time | 20ms | | | |
| | Function | Automatic/manual mode (on-grid/off-grid), 3-phase 4-wire operation (off-grid) | | | |
| | Protection | Anti-reverse | | | |
| | Bypass/off-grid function | Optional | | | |
| Performance | STS efficiency | 99.5% | | | |
| | PCS efficiency | Max: 98.7%; Full load: >98% | | | |
| | Standby power | 250W | | | |
| | Noise | 72dB (25°C, 1m) | | 60dB (25°C, 1m) | |
| Parallel Configuration | On grid | Max 5 sets in parallel + AC cabinet; Up to 1.09MW/ 1.09MWh | Max 5 sets in parallel + AC cabinet; Up to 150kW solar/937.5kW/ 1.09MWh | Max 5 sets in parallel + AC cabinet; Up to 625kW/ 1.205MWh | Max 5 sets in parallel + AC cabinet; Up to 300kW solar/625kW/ 1.205MWh |
| | Off grid | Max 2 sets in parallel + STS cabinet Up to 436kW/436kWh + 500kVA STS | Max 2 sets in parallel + STS cabinet Up to 60kW solar/375kW/ 436kWh + 500kVA STS | Max 4 sets in parallel + STS cabinet Up to 500kW/964kWh + 500kVA STS | Max 4 sets in parallel + STS cabinet Up to 240kW solar/500kW/ 964kWh + 500kVA STS |
| Metering | AC grid side | 1 bidirectional AC energy meter | | | |
| | Backup load side (optional) | | | | |
| | Station transformer input side (optional) | | | | |
| EMS | Local EMS | IMMU2 controller, built-in algorithms, big data analytics | | | |
| | Remote EMS platform | Ethernet: TCP/IP; Protocol: Websocket+Json, MQTT+Json, Modbus, IEC 104, IEC 61850 | | | |
| | Remote hardware interface | 4G/WiFi/WLAN/LAN | | | |
| HMI | Internal 7" TFT touch screen (English by default, multi-language supported), 5 * status LED, E-STOP, battery fire alarm indicator/beeper | | | | |
| Reliability and Safety | Certification | TUV CE, RED | | | |
| | EMC/EMI | EN 301 908-1/-13, EN 62311, EN IEC 62311, EN 301 489-1/-52, EN IEC 61000-6-2/-4 | | | |
| | Safety | EN 62477-1, EN 62109-1/-2, IEC 62619, IEC 63056, UL 9540A | | EN 62477-1, EN 62109-1/-2, IEC 62619, IEC 63056 | |
| | Grid connection | UNE 217001/217002, RD 244, RfG Type B, NA/EEA-NE7-CH, PGS 37-1, TOR Erzeuger Type A/Type B, OVE-Richtlinie R 25, C10/11 Type B, CEI-0-16/21, VDE-AR-N 4110, EN 50549-1/-2 | | | |
| Others | Electrical isolation | PCS: non-isolated; PV DCDC: isolated | | | |
| | Insulation detection | Each battery/PV channel: +/PE and -/PE | | | |
| | Fire protection | Completely submerged aerosol fire extinguishing system, water fire interface, optional pack-level active perfluorohexanone firefighting | | | |
| | Fire sensor | Smoke • combustible gas | | | |
| | Environmental sensor | Water • temperature • humidity • door access | | | |
| | Safety design | Explosion-proof board configuration, fire-proof structure design, emergency fan | | | |
| | High voltage control box | Infypower high voltage control box | | | |
| | Thermal management | Infypower liquid cooling unit | | | |
| Mechanical Parameters | Dimensions (W*D*H) | 1100mm*1350mm*2400mm | | | |
| | Weight | ≤2800kg (including power module and battery pack) | | | |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# IEB Series All-in-One Liquid-Cooled Energy Storage Solution

## Standard BESS & Construction Site Power Backup BESS




## Introduction

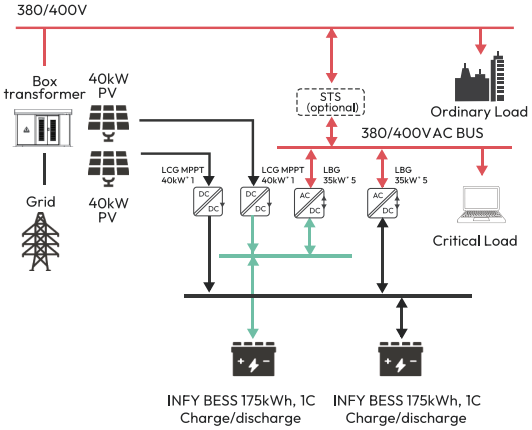
IEB350kWh standard battery energy storage system is specifically designed for commercial and industrial applications. Featuring a fully liquid-cooled, all-in-one design, it achieves electrical isolation between input and output, significantly improving safety performance. The system is equipped with two 175kWh battery clusters and supports 1P high power charging/discharging, making it highly efficient in heavy-load electricity usage scenarios. It supports PV access, helping businesses reduce electricity costs.

IEB350kWh construction site power backup BESS focuses on areas with no or weak power grids. It offers plug and play convenience. With rapid automatic on-grid and off-grid function, it enables seamless switching between power supply modes. Supporting lower power charging and high power discharging, it delivers stable power supply for critical loads. This makes it ideal for high-demand scenarios such as construction sites and oilfields, ensuring uninterrupted power supply even during emergencies or in hash environments.

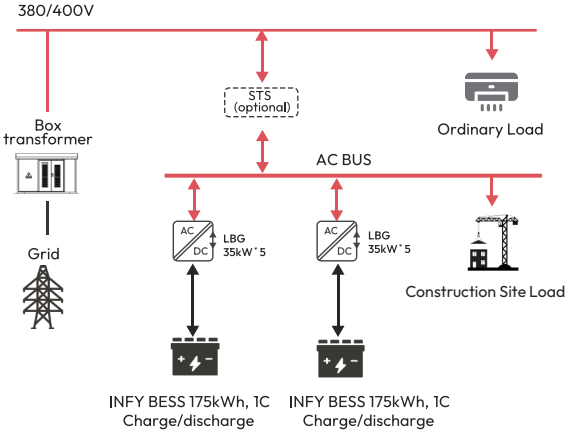
## Main Features

- 1P fast charge/discharge
- Plug & play socket
- Building block design for hassle-free future installation
- Pre-assembled all-in-one design to improve space efficiency and cost efficiency
- Low noise ≤65dB
- Construction site power backup support
- Optional STS cabinet ensures 20ms instant backup power supply to loads when off grid
- Anti-reverse protection through coordination between gateway AC meter and EMS

### IEB350kWh Standard BESS




### IEB350kWh Construction Site Power Backup BESS



# Technical Parameters

| Model | | IEB350kWh Standard BESS | IEB350kWh Construction Site Power Backup BESS |
|---|---|---|---|
| Operating Environment | Operating temperature | -20°C~+50°C | |
| | Transportation/Storage temperature | -30°C~+60°C | |
| | Relative humidity | ≤95%RH, non-condensing | |
| | Altitude | 2000m | |
| | Atmospheric pressure | 80kPa~110kPa | |
| | Cooling method | Liquid cooling | |
| | Protection rating | NEMA 3R, IP67 for battery pack, IP55 for battery area, IP54 for distribution area | |
| AC Grid Access | Frequency | 50Hz/60Hz | |
| | Voltage | 3-phase+N+PE, 380/400Vac±10% | |
| | Max input current | 600A | |
| | Rated input power | 350kW (420kW for 1 minute) | 33kW grid power<br>350kW (420kW for 1 minute) construction site load power |
| | Power factor | 0.8 leading ~ 0.8 lagging | |
| PV Access | Voltage | DC+/DC-+PE, 300Vdc~740Vdc | N/A |
| | Channel | 2 | |
| | Power | 40kW/80kW | |
| Battery Parameters | Battery dis/charging power ratio | 1P; 1.1P (10 minutes) | |
| | Liquid-cooled battery pack | 153.6V, 285Ah, 43.7kWh, liquid-cooled, UL 9540A | |
| | Liquid-cooled battery cluster | 614.4V (547.2V~696.9V), 285Ah, 175kWh | |
| | Number of battery clusters | 2 | |
| | BMS | Infypower 2-level architecture: battery pack BSU + high voltage control box BMU | |
| STS Support (Optional) | STS configuration | 250kVA/500kVA | |
| | STS power switching time | 20ms | |
| | Function | Automatic/manual mode (on-grid/off-grid), 3-phase 4-wire operation (off-grid) | |
| | Protection | Anti-reverse | |
| | Bypass/off-grid function | Optional | |
| Performance | STS efficiency | 99.5% | |
| | PCS efficiency | ≥92.5% | |
| | Noise | ≤65dB | |
| Metering | AC grid side | 1 bidirectional AC energy meter | |
| | Backup load side (optional) | | |
| | Station transformer input side (optional) | | |
| EMS | Local EMS | IMMU2 controller, built-in algorithms, big data analytics | |
| | Remote EMS platform | Ethernet: TCP/IP; Protocol: Websocket+Json, MQTT+Json, Modbus, IEC 104, IEC 61850 | |
| | Remote hardware interface | 4G/WiFi/WLAN/LAN | |
| HMI | Inner 10" TFT touch screen (English by default, multi-language support), 5 * status LED, E-STOP, battery fire alarm indicator/beeper | | |
| Others | Electrical isolation | Full electrical isolation between the grid, battery and PV | |
| | Insulation detection | Each battery/PV channel: +/PE and -/PE | |
| | Fire protection | Completely submerged aerosol fire extinguishing system, water fire interface, optional pack-level active perfluorohexanone firefighting | |
| | Fire sensor | Smoke • combustible gas | |
| | Environmental sensor | Water • temperature • humidity • door access | |
| | Safety design | Explosion-proof board configuration, fire-proof structure design, emergency fan | |
| | High voltage control box | Infypower high voltage control box | |
| | Thermal management | Two liquid cooling units, each with 7.5kW refrigerating and 2.5kW heating capacity. Fully designed and manufactured by Infypower | |
| | Certification | TUV CE, CB | |
| | Grid connection | EN 50549, VDE-AR-N 4105, VDE-AR-N 4110 | |
| Mechanical Parameters | Dimensions (W*D*H) | 2800mm*1400mm*2200mm | |
| | Weight | ≤6500kg (including power module and battery pack) | |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# IHEBS470K7D-350LL3C Liquid-Cooled Split Type Battery Buffer Charger

## 400kW Charging Power/6 Charging Connectors/350kWh Charger

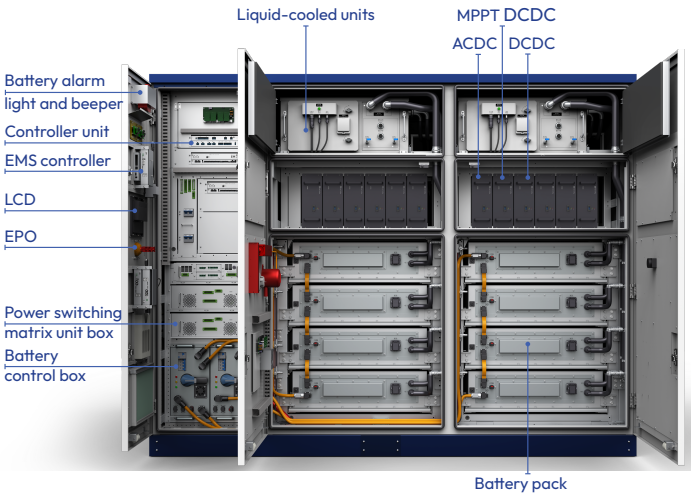


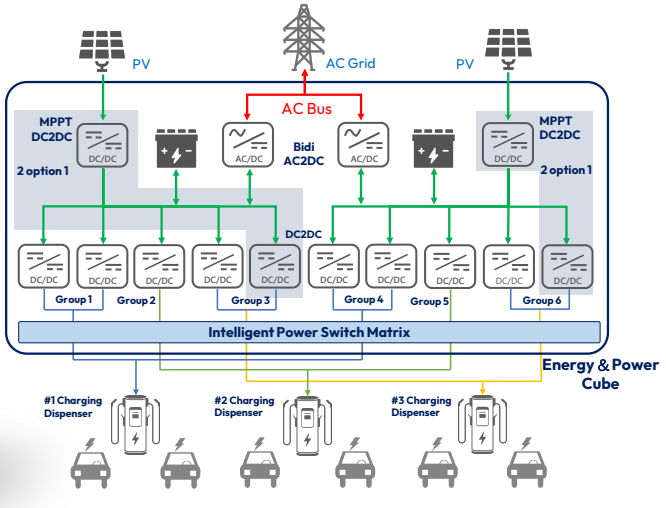
## Introduction

IHEBS470K7D-350LL3C Liquid-Cooled Split Type Battery Buffer Charger utilizes LFP battery for energy storage. With the support of local and cloud-based EMS, it helps balance power supply and demand among the grid, battery system, EV charging and renewable energy sources. A fully liquid-cooled solution enables 1P discharge performance, allowing the system to operate under limited AC grid capacity while still delivering high-power charging. This approach achieves high cost efficiency and a compact footprint. The system provides significant value in grid peak shaving, renewable energy integration, and grid capacity expansion by discharging battery power to grid.

## Main Features

- Fully liquid-cooled design from power modules to battery packs and charging cables
- Total electrical isolation between the grid, battery, EV and PV input
- 1P fast charging/discharging
- Ultra-low noise
- Highly integrated solution combining PV, BESS, EV charging and V2G functions
- Micro-grid enabling high-power charging
- Easy relocation between sites
- Backup power enabled by B2G



# Technical Parameters

| Power Cube | | IHEBS470K7D-350LL3C 470kW/350kWh | |
|---|---|---|---|
| AC Input (On-Grid) | Frequency/Voltage | 50Hz/60Hz, 3-phase+N+PE, 380/400Vac±10% | |
| | Max input current/power | 133A/70kW | |
| | Power factor | 0.8 leading ~ 0.8 lagging | |
| PV Input | Voltage | DC+/- +PE, 300Vdc~740Vdc, max 900Vdc | |
| | Max input current/power | 70A (with 1 PV module); 140A (with 2 PV modules)/40kW (with 1 PV module); 80kW (with 2 PV modules) | |
| DC Output | Voltage | 150Vdc~1000Vdc | |
| | Max output current | 6 outputs, each output max 600A | |
| | Max output power | 400kW (320kW @300Vdc~1000Vdc) | |
| | Output channel | Max 6 output charging channels via 3 dual-connector dispensers or 6 single-connector dispensers | |
| Power Module/ 12 Slots | LCG1K0135G-M | DC2DC converter, 40kW/1kV, MPPT support | Max 2 * 40kWp PV input support (optional) |
| | LCG1K0135G | DC2DC converter, 40kW/1kV | Max 10 * 40kW DC bus discharging power/EV charging power |
| | LRG1K0100G | AC2DC rectifier, 30kW/1kV | Max 2 * 30kW DC bus charging power |
| | LBG1K0120G | Bidirectional AC2DC inverter, 35kW/1kV | Max 2 * 35kW AC feedback power (optional) |
| Battery Pack | Energy storage battery | 2*175kWh/285Ah liquid-cooled battery packs, 547.2~696.96Vdc, 1P dis/charge, max 1.1P discharge for 10 min | |
| | High voltage control box | Two Infypower high voltage control boxes | |
| | BMS | Infypower 2-level BMS structure: battery pack BSU + high voltage control box BMU | |
| Performance | System efficiency | 94% | |
| | Standby power | 216W | |
| | Noise | <60dB | |
| Mechanical Parameters | Dimensions (W*D*H) | 2800mm*1400mm*2200mm | |
| | Weight (cabinet+module) | 6140kg+12*30kg=6500kg | |
| Others | Power switching mode | Intelligent power switching matrix dynamically allocates power modules among charging connectors, maximizing overall power utilization efficiency | |
| | HMI | 10" TFT touch screen, 2 RGB LED, E-STOP, battery alarm light and beeper | |
| | Metering | 1 AC energy meter, optional MID-certified meter | |
| | | 1 or 2 DC energy meters, optional NMI Eichrecht-certified meter | |
| | Fire suppression system | Completely submerged aerosol fire extinguishing system, water fire interface, emergency fan | |
| | Safety design | Explosion-proof board configuration and fire-proof spread structure design | |
| | Environment sensor | Water/temperature/humidity/door access/smoke/combustible gas sensor | |
| | Protection rating | NEMA 3R, IP54 for power cube, IP55 for battery cabinet, IP67 for battery pack | |
| | Certification | TUV CE, CB | |
| | Grid connection | EN 50549, VDE-AR-N 4105, VDE-AR-N 4110 | |

| Charging Dispenser | | Floor-Standing Dispenser | | | | Overhead Dispenser | |
|---|---|---|---|---|---|---|---|
| | | EXP250-FDC | EXP400-FDC | EXP500-LDC | EXP500-LLDC | EXP250-FSW | EXP400-FSW |
| DC Input | Voltage | 150Vdc~1000Vdc | | | | | |
| | Input channel (DC bus) | 2 | | | | 1 | |
| DC Output | Charging cable | 2 | | | | 1 | |
| | Voltage | 150Vdc~1000Vdc | | | | | |
| | Max output current | 2*250A | 2*375A | 500A+250A | 2*500A | 250A | 375A |
| | Optional (boost current) | 2*375A | 2*500A | 700A+375A | 2*700A | 375A | 500A |
| | Max output power | 2*250kW | 2*375kW | 500kW+250kW | 2*500kW | 250kW | 375kW |
| Mechanical Parameters | Dimensions (W*D*H) | 500mm*260mm*1800mm | | | | 763mm*240mm*415mm | |
| | Weight | 185kg | | 195kg | | 50kg | |
| Others | HMI | Tempered glass protective 7" capacitive touch screen LCD for floor-standing dispenser, RGB panel LED, E-STOP, RFID, POS (optional) | | | | | |
| | Metering | DC energy meter, GB/T 29318 and JJG1149 standard, optional MID-certified meter | | | | | |
| | Monitoring interface | OCPP 1.6J, support update to 2.0, PnC/smart charging/power management support, LAN 100M and LTE wireless modem support | | | | | |
| | Cable management | Top-mounted two cable retractors and a light bar for floor-standing dispenser. Select one or two cable retractors based on cable length for overhead dispenser | | | | | |
| | MBE function | WEB/APP Maintenance Backend System enhances the operation and maintenance effectiveness | | | | | |
| | Charging protection | Overcurrent/short circuit/overvoltage/undervoltage/RCD/insulation/overtemperature protection | | | | | |
| | | Reverse polarity protection | | | | | |
| | Charging connector | 2*GBT/CCS/NACS or CCS+NACS/GBT/CHAdeMO or 1*GBT/CCS/NACS | | | | CCS/GBT/NACS | |
| | Charging connector capacity | CCS: 200A/250A/300A/375A/500A; NACS: 200A/300A/380A; CHAdeMO: 125A/200A; GBT: 250A/400A/500A | | | | | |
| | Protection rating | IP55/IK10 | | | | IP65 | |
| | Certification | TUV CE, cTUVus, RED, CB, OCA, FCC, CTEP, Energy Star | | | | | |
| | Noise | 0 | | 55dB | | 0 | |

## Operating Environment

| | |
|---|---|
| Operating temperature | -20°C~+70°C, full power output up to 50°C, power derating 5%/°C above 50°C |
| Transportation/Storage temperature | -30°C~+60°C |
| Relative humidity | ≤95%RH, non-condensing |
| Altitude | 2000m |
| Atmospheric pressure | 80kPa~110kPa |
| Cabinet cooling | Liquid cooling |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.

# IHEBV470K7D-350LL3C Liquid-Cooled All-in-One Movable Battery Buffer Charger

## 400kW Charging Power/2 Charging Connectors/350kWh Charger





## Introduction

IHEBV470K7D-350LL3C Liquid-Cooled Movable All-in-One Battery Buffer Charger supports temporary rescue charging and off-grid power supply services. With the support of local and cloud-based EMS, it helps balance power supply and demand among the grid, battery system, EV charging and renewable energy sources. A fully liquid-cooled battery design enables 1P discharge performance, ensuring compliance with AC grid power limits while delivering high-power charging with improved energy cost efficiency and space utilization, as well as extended battery life. Its fully off-grid electrical design and reinforced structural design make it suitable for long-term transportation under vibration conditions and temporary on-site charging applications.

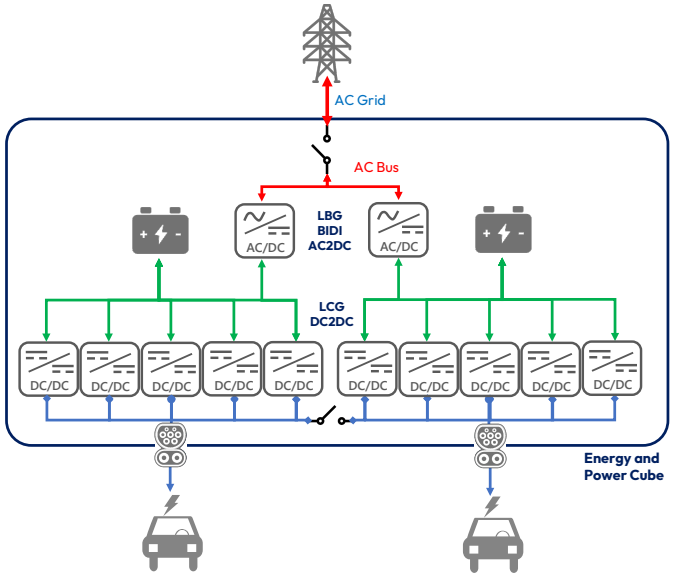
## Main Features

- Fully liquid-cooled design from power modules to battery packs and charging cables
- Total electrical isolation between the grid, battery, and EV
- 1P fast charging/discharging
- Ultra-low noise
- All-in-one design integrating BESS, EV charging and V2G functions
- Micro-grid enabling high-power charging
- Movable application, easy relocation
- Backup power enabled by B2G

# Technical Parameters

| | | | |
|---|---|---|---|
| Operating Environment | Operating temperature | -20°C~+70°C, full power output up to 50°C, power derating 5%/°C above 50°C | |
| | Transportation/Storage temperature | -30°C~+60°C | |
| | Relative humidity | ≤95%RH, non-condensing | |
| | Altitude | 2000m | |
| | Atmospheric pressure | 80kPa~110kPa | |
| | Cooling method | Liquid cooling | |
| | Protection rating | NEMA 3R, IP54 for power cube, IP55 for battery cabinet, IP67 for battery pack | |
| AC Input (On-Grid) | Frequency | 45Hz~65Hz | |
| | Voltage | 3-phase+(N)+PE/260Vac~530Vac | |
| | Max input power | 70kW | |
| | Max output power (optional) | 70kW | |
| | Off-grid operation | Support | |
| | Grid access interface | Industrial socket inlet | |
| DC Output | Voltage | 150Vdc~1000Vdc | |
| | Max output current | 375A | |
| | Max output power | 400kW | |
| | Output channel | 2 | |
| Performance | Standby power | 246W | |
| | Noise | <60dB | |
| Metering | AC input side | 1 AC energy meter, optional MID-certified meter | |
| | DC output side | 1 or 2 DC energy meters, optional NMI Eichrecht-certified meter | |
| Power Module/12 Slots | LCG1K0135G | DC2DC converter, 40kW/1kV | 10 * 40kW ES battery bus discharging/EV charging power |
| | LBG1K0120G | Bidirectional AC2DC inverter, 35kW/1kV | 2 * 35kW AC power |
| Battery Pack | Energy storage battery | 2*175kWh/285Ah liquid-cooled battery packs, 547.2~696.96Vdc, 1P dis/charge, max 1.1P discharge for 10 min | |
| | High voltage control box | Two Infypower high voltage control boxes | |
| | BMS | Infypower 2-level BMS structure: battery pack BSU + high voltage control box BMU | |
| Mechanical Parameters | Dimensions (W*D*H) | 2800mm*1400mm*2200mm | |
| | Weight (cabinet+module) | 6640kg+12*30kg=7000kg | |
| Others | Charging modes | Auto/By Time/By Plan/By kWh/By SOC | |
| | Charging connector | 2 * CCS/NACS/GBT, or CCS + NACS/GBT | |
| | Power switching mode | Simultaneous charging: both charging connectors can receive 200kW<br>Sequential charging: both charging connectors can receive 400kW | |
| | HMI | Tempered glass protective 10" capacitive touch screen LCD, RGB LED, E-STOP, battery alarm light and beeper | |
| | Payment | RFID, optional credit card reader installation | |
| | Monitoring interface | OCPP 1.6J, support update to 2.0, PnC/smart charging/power management support, LAN 100M and LTE wireless modem support | |
| | Certification | TUV CE, CB | |
| | Grid connection | EN 50549, VDE-AR-N 4105, VDE-AR-N 4110 | |

*The product is continuously evolving. Please refer to the latest datasheet for specifications.



# APPLICATION CASES





2.64MW/5.302MWh

Dongguan



1.75MW/3.01MWh

Shenzhen



1.25MW/2.15MWh

Foshan



0.75MW/1.29MWh

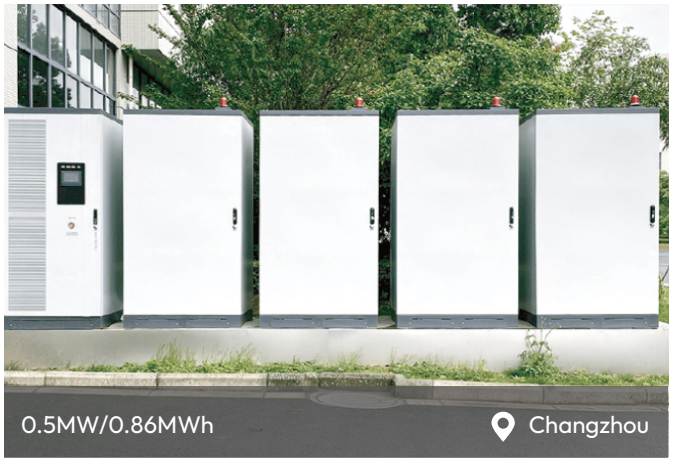
Jiangmen




0.75MW/1.29MWh

Zhuhai


1.25MW/2.15MWh
Shantou


0.5MW/0.86MWh
Changzhou


2MW/3.44MWh
Zhaoqing


2.1MW/4.3MWh
Zhongshan


1MW/1.72MWh
Dongguan

# APPLICATION CASES



















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