# BSI 50/109



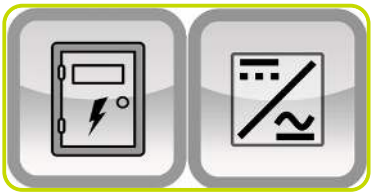
**FEATURES:**

- Preconfigured battery storage kit for indoor use
- Battery inverter and energy management system (EMS) perfectly harmonised by in-house development
- Modular battery and combiner racks for simple capacity and power expansion
- Comprehensive EMS with peak shaving, self-consumption optimisation, time-of-use and much more integrated into the system at the factory
- Maximum security with state-of-the-art software architecture (GDPR-compliant)
- High accessibility for user-friendly maintenance (max. once a year)
- 10-year performance warranty with a wide temperature range

| General technical data | | |
|---|---|---|
| Rated apparent power | kVA | 50 |
| Rated voltage | Vac | 400 |
| Frequency | Hz | 50 |
| Maximum AC current | A | 73 |
| Battery cell | Type | Li-Ion (LFP) Pouch |
| Total capacity | kWh | 109 |
| Rated net capacity (90%DoD) | kWh | 98 |




| Inverter | | |
|---|---|---|
| Quantity | n. | 1 |
| Rated apparent power | kVA | 50 |
| Maximum AC current | A | 73 |
| Power factor / Range | | 1 / 0i ... 0c |
| Initial short circuit current (Ik“) | A | 73 |



| Battery | | |
|---|---|---|
| Quantity of module | n. | 23 |
| Module capacity | kWh | 4.74 |
| Rated Voltage | V | 736 |
| Max. C-rate | | 1C |
| Battery cell | Type | Li-Ion (LFP) Pouch |
| Cycles @ 90% DoD \| 65% SoH | n. | 7300 |

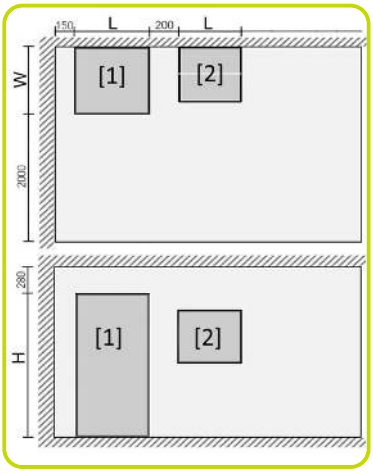


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| Technical data - Energy Management System | | |
|---|---|---|
| Voltage supply | VDC | 24 |
| RJ45 dedicated MAC adresses for OT/IT use | n. | 2 |
| Encrypted MQTTS communication | | √ |
| Digital cloud twin | | √ |
| 2-factor authentication | | √ |
| Communication Interface Ethernet (Modbus TCP/IP / local and cloud-to-cloud REST API) | | √ |
| • **Possible Applications** | | : |
| Self-consumption optimization (SCO) | | √ |
| Peak shaving (PS) | | √ |
| Time-based charging/discharging (ToU) | | √ |
| Combined operation (multi-use e.g. PS and SCO) | | √ |
| Energy trading | | √ |
| Simple management of charging stations | | √ |
| Load management and prioritisation for charging points | | √ |
| Integration of Plant controllers | | √ |



| Installation data | | |
|---|---|---|
| AC-Grid connection ON-Grid | | 3P, PE / TT / TN-C |
| Communication Interfaces RJ45 (Ethernet) | | √ |
| [1] Battery Rack | (L/W/H) mm | 815x696x2130 |
| [2] ConnectionBox | (L/W/H) mm | 670x692x163 |
| [2] Inverter | (L/W/H) mm | 673x626x621 |
| Weight Battery Rack | kg | 1250 |
| Weight ConnectionBox | kg | 25 |
| Weight Inverter | kg | 69 |
| Protection rating Battery Rack | IP | 20 |
| Protection rating Inverter | IP | 65 |
| Max. permissible installation height | m | 2000 |
| Operating temperature range | °C | 10-40 |
| Product warranty | Years | 5 |
| Performance warranty | Years | 10 |




**Safety devices**

| | |
|---|---|
| Permanent monitoring of the battery cells | √ |

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## Certificates / Approvals

**Battery Rack**
**Modul:**
UN38.3 / UL 9540A
**Rack:**
CE / IEC 62619 / IEC 63056 / UL 1973 / VDE 2510 50 / EN 61000-6-2 / EN 61000-6-4




**Battery Inverter**
**EU- Directives:**
2014/30/EU / 2014/35/EU / 2011/65/EU / 2015/863/EU
**Safety Battery Inverter:**
IEC 62109-1 / IEC 62109-2 / IEC 62116 / IEC 61727 / IEC 62477-1 / IEC 61439-1 / IEC 61439-2
**EMC:**
EN 61000-6-2 / EN 61000-6-4 / EN 61000-3-12 / EN 61000-3-11
**Grid codes:** DIN VDE V 0126-1-1 / VDE AR-N 4105:2018 / VDE AR-N 4110:2023 / C10/C11 / G99/1-9 / TOR Stromerzeugungsanlagen Typ A/B / CEI 0-16, CEI 0-21 / EN 50549-1/-2 / AS4777.2 / NTS 631, UNE 27002
For other grid codes please contact your local sales representative

| Optional features | |
|---|---|
| Optional Router | • |
| Optional Energy Meter Ethernet | • |
| Optional Energy Meter RS485 | • |
| CombinerRack Single / Dual | • |
| Extension Kit 109 | • |
| Upgrade Kit CombinerRack | • |



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