BYD Battery-Box LV Compatible Inverter List

Battery-Box L 3.5/7.0/10.5/14.0(AU)

Version 1.0

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Minimum configuration with different inverters

The configuration in the on grid+ Backup mode is calculated based on the maximum backup power of inverter, and the loads power shouldn’ t exceed the battery maximum output power. The efficiency ratio between the loads and inverter should be considered.

1 Minimum configuration with SMA inverter

1.1 Minimum configuration with Sunny Island

Inverter Firmware version: minimum required firmware version for SI is V1.73.
BYD Battery-Box LV firmware version: minimum required firmware version for BCU is V1.0.

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
SI 3.0M	≥1	≥1
SI 4.4M	≥1	≥1
SI 6.0H	≥1	≥1
SI 8.0H	≥1	≥1
3 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
SI 3.0M	≥2	≥1
SI 4.4M	≥3	≥1
SI 6.0H	≥3	≥1
SI 8.0H	≥3	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
SI 3.0M	≥3	≥1
SI 4.4M	≥4	≥1
SI 6.0H	≥6	≥2
SI 8.0H	≥7	≥2
3 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
SI 3.0M	≥8	≥2
SI 4.4M	≥10	≥3
SI 6.0H		
SI 8.0H		
Remark:		

Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.

2 Minimum configuration with GOODWE inverter

2.1 Minimum configuration with ES

Inverter Firmware version: minimum required firmware version for ARM is 03.
BYD Battery-Box LV firmware version: minimum required firmware version for BCU is V1.0.

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
GW3648D-ES	≥1	≥1
GW5048D-ES	≥1	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
GW3648D-ES	≥2	≥1
GW5048D-ES	≥3	≥1
Remark: Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.		

2.2 Minimum configuration with EM

Inverter Firmware version: minimum required firmware version for ARM is 03.
BYD Battery-Box LV firmware version: minimum required firmware version for BCU is V1.0.

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
GW3048-EM	≥1	≥1
GW3648-EM	≥1	≥1
GW5048-EM	≥1	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
GW3048-EM	≥1	≥1
GW3648-EM	≥1	≥1
GW5048-EM	≥1	≥1
Remark: Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.		

2.3 Minimum configuration with SBP

Inverter Firmware version: minimum required firmware version for ARM is 03.
BYD Battery Box LV firmware version: minimum required firmware version for BCU is V1.0

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
GW3600S-BP	≥1	≥1
GW5000S-BP	≥1	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
GW3600S-BP	≥2	≥1
GW5000S-BP	≥3	≥1
Remark: Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.		

3 Minimum configuration with Victron inverter

3.1 Minimum configuration with Multiplus

Inverter Firmware version: minimum required firmware version for CCGX is V2.01, which applies to ESS mode.
BYD Battery-Box LV firmware version: minimum required firmware version for BCU is V1.0, which applies to ESS mode.

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35	≥1	≥1
48/5000/70	≥1	≥1
3 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35	≥2	≥1
48/5000/70	≥2	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35	≥2	≥1
48/5000/70	≥4	≥1
3 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU

48/3000/35	≥6	≥2
48/5000/70	≥11	≥3

Remark:
Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.

3.2. Minimum configuration with Multigrid

Inverter Firmware version: minimum required firmware version for CCGX is V2.01, which applies to ESS mode.
BYD Battery- Box LV firmware version: minimum required firmware version for BCU is V1.0, which applies to ESS mode.

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35	≥1	≥1
3 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35	≥2	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35	≥2	≥1
3 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35	≥6	≥2

Remark:
Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.

3.3. Minimum configuration with Quattro

Inverter Firmware version: minimum required firmware version for CCGX is V2.01, which applies to ESS mode.
BYD Battery- Box LV firmware version: minimum required firmware version for BCU is V1.0, which applies to ESS mode.

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
48/5000/70-100/100	≥1	≥1
48/8000/110-100/100	≥1	≥1
48/10000/140- 100/100	≥1	≥1
48/15000/200- 100/100	≥1	≥1
3 Phase on grid （Self consumption）		

Inverter Type	B-Plus L 3.5A	BCU
48/5000/70-100/100	≥2	≥1
48/8000/110-100/100	≥3	≥1
48/10000/140- 100/100	≥4	≥2
48/15000/200- 100/100	≥5	≥2
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
48/5000/70-100/100	≥4	≥1
48/8000/110-100/100	≥6	≥2
48/10000/140- 100/100	≥7	≥2
48/15000/200- 100/100	≥10	≥3
3 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
48/5000/70-100/100	≥11	≥3
48/8000/110-100/100	/	/
48/10000/140- 100/100	/	/
48/15000/200- 100/100	/	/
Remark: Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.		

3.4. Minimum configuration with CCGX of Easysolar

Inverter Firmware version: minimum required firmware version for CCGX is V2.01, which applies to ESS mode.

BYD Battery-Box LV firmware version: minimum required firmware version for BCU is V1.0, which applies to ESS mode.

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35-50 MPPT150/70	≥1	≥1
48/5000/70-100 MPPT150/100	≥1	≥1
3 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35-50 MPPT150/70	≥2	≥1
48/5000/70-100 MPPT150/100	≥2	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35-50 MPPT150/70	≥2	≥1

48/5000/70-100 MPPT150/100	≥4	≥1
3 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
48/3000/35-50 MPPT150/70	≥6	≥2
48/5000/70-100 MPPT150/100	≥11	≥3
Remark: Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.		

4 Minimum configuration with SUNGROW

4.1 Minimum configuration with SH5K+

Inverter Firmware version: minimum required firmware version is V13.
BYD Battery Box LV firmware version: minimum required firmware version for BCU is V1.0. Identification label on package is L2.1

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
SH5K+	≥1	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU
SH5K+	≥3	≥1
Remark: Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.		

5 Minimum configuration with Solis

5.1 Minimum configuration with Solis

Inverter Firmware version: minimum required firmware version is 11000F.
BYD Battery Box LV firmware version: minimum required firmware version for BCU is V1.2 Identification label on package is L2.1

1 Phase on grid （Self consumption）		
Inverter Type	B-Plus L 3.5A	BCU
RHI-3K-48ES	≥1	≥1
RHI-3.6K-48ES	≥1	≥1
RHI-4.6K-48ES	≥1	≥1
RHI-5K-48ES	≥1	≥1
1 Phase on grid （On grid+ Backup）		
Inverter Type	B-Plus L 3.5A	BCU

RHI-3K-48ES	≥2	≥1
RHI-3.6K-48ES	≥2	≥1
RHI-4.6K-48ES	≥2	≥1
RHI-5K-48ES	≥2	≥1

Remark:
Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.

6 Minimum configuration with Selectronic

6.1 Minimum configuration with Selectronic

Inverter Firmware version: minimum required firmware version is 11.06
BYD Battery Box LV firmware version: minimum required firmware version for BCU is V1.2
Identification label on package is L2.1

1 Phase on grid		
Inverter Type	B-Plus L 3.5A	BCU
SPMC481-AU	≥1	≥1
SPMC482-AU	≥1	≥1
1 Phase off grid		
Inverter Type	B-Plus L 3.5A	BCU
SPMC481-AU	≥5	≥2
SPMC482-AU	≥8	≥2
3 Phase on grid		
Inverter Type	B-Plus L 3.5A	BCU
SPMC481-AU	≥2	≥1
SPMC482-AU	≥2	≥1
Remark: Maximum quantity of B-Plus L 3.5A is 12, BCU quantity is 3.		

Common Failures Displayed on Inverter and Solution

Alarm code displayed on the SRC of SMA sunny island and solution

SMA SRC	Possible causes	Solution
F221	External Alarm-Invalid Bat Type	Reset battery type to "Li" on SRC.
F920(XA01General)	1.Any B-Plus L3.5A has failed to communicate with the BCU;	1. Check if the modules are connected correctly and all screws are fixed tightly. 2.Replace BCU ;
F921(XA02DcHiVolt)	External Alarm - Battery High Voltage	If the orange LED of the BCU is on, please contact the service provider to change the battery. If not, check the system setting according to the guidelines.
F922(XA03DcLoVolt)	External Alarm - Battery Low Voltage	System will recovery automatically
F923(XA04DcHiTmp)	External Alarm - Battery High Temp	System will recovery automatically
F924(XA05DcLoTmp)	External Alarm - Battery Low Temp	System will recovery automatically
F925(XA06DcHiTmpC)	External Alarm - Battery High Temp Charge	System will recovery automatically
F926(XA07DcLoTmpC)	External Alarm - Battery Low Temp Charge	System will recovery automatically
F927(XA08DcHiCur)	External Alarm - Battery High Current Discharge	System will recovery automatically
F928(XA09DcHiChgCur)	External Alarm - Battery High Current Charge	System will recovery automatically
F930(XA11Short)	External Alarm - Short circuit	1.Power off; 2.Check if batteries are short connected; 3.If short connection is confirmed, then reconnect cables correctly, and restart battery;

F931(XA12Bms)	External Alarm - BCU internal	If the orange LED of the BCU is lit, please contact the service provider to replace the battery. If not, check the system settings according to the guidelines.
F932(XA13CellBal)	External Alarm - Cell imbalance	System will recovery automatically
F952	External Alarm –Ext BCU Timeout	1.Check if the CAN communication cables are connected correctly and tightly ; 2.Replace BCU if the problem still exist after checking;

Alarm displayed on the APP of GOODWE and the solution

APP of GOODWE	Possible causes	Solution
BMS status: Battery communication fail	Inverter and BCU communication failure	1.Check if the CAN communication cables are connected correctly and tightly ; 2.Replace BCU if the problem still exist after checking ;

Contact Information

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