



# ETHOS ESS

FETHS-48051-G1-XX-INV020-XX

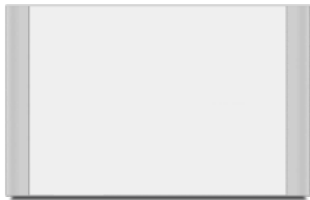
## FEATURES

- CANBus / RS485 communications
- Interactive LED display
- Up to (16) units per control box (81.6 kWh)
- Internal fire suppression
- IP65 / NEMA 4X protection rating
- Smart BMS with auto-cell balancing
- UL9540-certified ESS
- UL9540A, UL1973, & UN38.3 certified batteries
- UL1741-certified inverter(s)
- Stackable, expandable design

## SYSTEM COMPONENTS



**ETHOS Control Box**  
SKU: CNT060



**ETHOS Battery Module**  
SKU: FETHS-48051-G1



**12kW LUXPower Inverter**  
SKU: INV020

## CONTACT US

**Phone:** (818) 280-3091 **Email:** Sales@BigBattery.com

**Hours:** Monday - Friday, 9:00 AM - 5:00 PM PST

**Address:** 21314 Lassen St. Chatsworth, CA 91311



## FREQUENTLY ASKED QUESTIONS

### How do I connect this battery into my existing system?

These batteries use a standard amphenol ESS connector. Each module can be connected using the included cables. You may also purchase additional cables from BigBattery.

### How many times can I put this battery in parallel/series?

These batteries are not series capable but can be connected in parallel up to 16 times per control box. Make sure that the total amount of these batteries in your configuration never exceeds sixteen total batteries. When connecting batteries in parallel, ensure all batteries are within 0.3 volts of one another.

### How long will my battery last, and what do I do at the end of its life?

Lithium iron phosphate (LiFePO4) batteries can be cycled from 3500 - 5000 times (80% DoD, 0.5C). If you cycle the batteries daily, you can get 10+ years of use from your system. When your batteries are at the end of its lifespan, contact us & we'll recycle it for you, free of charge!

Last Revision Date: 2/6/2024

Model	FETHS-48051-G1-02-INV020-01	FETHS-48051-G1-03-INV020-01	FETHS-48051-G1-04-INV020-01	FETHS-48051-G1-05-INV020-01
Number of Batteries	2	3	4	5
Number of Inverters	1			
<b>BATTERY SPECIFICATIONS</b>				
Battery Type	LiFePO4			
Total Energy	10.24kWh	15.36kWh	20.48kWh	25.60kWh
Battery Voltage Range	44.8 - 56.0V DC			
Nominal Voltage	51.2V DC			
Max. Charge Current	200A DC	250A DC		
Max. Discharge Current	200A DC	250A DC		
Parallel Configuration	1S 2P	1S 3P	1S 4P	1S 5P
<b>PV INPUT SPECIFICATIONS</b>				
Max. Input Voltage	600V DC			
PV Input Voltage Range	120 - 500V DC			
Max. Continuous Input Current	25A DC / 15A DC / 15A DC			
Max. Short Circuit Current	31A DC / 19A DC / 19A DC			
<b>AC INPUT &amp; OUTPUT SPECIFICATIONS (ON-GRID)</b>				
Input Voltage	240V AC / 208V AC			
Max. Input/Output Current	50A AC			
Max. Short Circuit Current/Duration	156A (Peak) @ 100us (1pcs)			
Nominal Input/Output Power	12kW @ 240V AC / 10.4kW @ 208V AC			
Max. Continuous Discharge Power	12kW @ 240V AC / 10.4kW @ 208V AC			
Max. Output Current	63A			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
<b>AC OUTPUT SPECIFICATIONS (OFF-GRID)</b>				
Nominal Voltage	208V AC / 120/240V AC Split Phase			
Max. Continuous Current	50A AC			
Max. Power	12kVA @ 240V AC / 10.4kVA @ 208V AC			
AC Frequency	60Hz			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
<b>GENERAL SPECIFICATIONS</b>				
Ambient Temperature Range	23°F - 122°F (-5°C - 50°C)			
Install Location	Indoor / Outdoor			

Model	FETHS-48051-G1-06-INV020-01	FETHS-48051-G1-07-INV020-01	FETHS-48051-G1-08-INV020-01	FETHS-48051-G1-09-INV020-01
Number of Batteries	6	7	8	9
Number of Inverters	1			
<b>BATTERY SPECIFICATIONS</b>				
Battery Type	LiFePO4			
Total Energy	30.72kWh	35.84kWh	40.96kWh	46.08kWh
Battery Voltage Range	44.8 - 56.0V DC			
Nominal Voltage	51.2V DC			
Max. Charge Current	250A DC			
Max. Discharge Current	250A DC			
Parallel Configuration	1S 6P	1S 7P	1S 8P	1S 9P
<b>PV INPUT SPECIFICATIONS</b>				
Max. Input Voltage	600V DC			
PV Input Voltage Range	120 - 500V DC			
Max. Continuous Input Current	25A DC / 15A DC / 15A DC			
Max. Short Circuit Current	31A DC / 19A DC / 19A DC			
<b>AC INPUT &amp; OUTPUT SPECIFICATIONS (ON-GRID)</b>				
Input Voltage	240V AC / 208V AC			
Max. Input/Output Current	50A AC			
Max. Short Circuit Current/Duration	156A (Peak) @ 100us (1pcs)			
Nominal Input/Output Power	12kW @ 240V AC / 10.4kW @ 208V AC			
Max. Continuous Discharge Power	12kW @ 240V AC / 10.4kW @ 208V AC			
Max. Output Current	63A			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
<b>AC OUTPUT SPECIFICATIONS (OFF-GRID)</b>				
Nominal Voltage	208V AC / 120/240V AC Split Phase			
Max. Continuous Current	50A AC			
Max. Power	12kVA @ 240V AC / 10.4kVA @ 208V AC			
AC Frequency	60Hz			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
<b>GENERAL SPECIFICATIONS</b>				
Ambient Temperature Range	23°F - 122°F (-5°C - 50°C)			
Install Location	Indoor / Outdoor	Outdoor		

Model	FETHS-48051-G1-04-INV020-02	FETHS-48051-G1-06-INV020-02	FETHS-48051-G1-07-INV020-02	FETHS-48051-G1-08-INV020-02
Number of Batteries	4	6	7	8
Number of Inverters	2			
<b>BATTERY SPECIFICATIONS</b>				
Battery Type	LiFePO4			
Total Energy	20.48kWh	30.72kWh	35.84kWh	40.96kWh
Battery Voltage Range	44.8 - 56.0V DC			
Nominal Voltage	51.2V DC			
Max. Charge Current	500A DC			
Max. Discharge Current	500A DC			
Parallel Configuration	1S 4P	1S 6P	1S 7P	1S 8P
<b>PV INPUT SPECIFICATIONS</b>				
Max. Input Voltage	600V DC			
PV Input Voltage Range	120 - 500V DC			
Max. Continuous Input Current	25A DC / 15A DC / 15A DC (per inverter)			
Max. Short Circuit Current	31A DC / 19A DC / 19A DC (per inverter)			
<b>AC INPUT &amp; OUTPUT SPECIFICATIONS (ON-GRID)</b>				
Input Voltage	240V AC / 208V AC			
Max. Input/Output Current	100A AC			
Max. Short Circuit Current/Duration	156A (Peak) @ 100us (1pcs)			
Nominal Input/Output Power	24kW @ 240V AC / 20.8kW @ 208V AC			
Max. Continuous Discharge Power	24kW @ 240V AC / 20.8kW @ 208V AC			
Max. Output Current	250A			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
<b>AC OUTPUT SPECIFICATIONS (OFF-GRID)</b>				
Nominal Voltage	208V AC / 120/240V AC Split Phase			
Max. Continuous Current	100A AC			
Max. Power	24kW @ 240V AC / 20.8kW @ 208V AC			
AC Frequency	60Hz			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
<b>GENERAL SPECIFICATIONS</b>				
Ambient Temperature Range	23°F - 122°F (-5°C - 50°C)			
Install Location	Indoor / Outdoor		Outdoor	

Model	FETHS-48051-G1-09-INV020-02	FETHS-48051-G1-12-INV020-02	FETHS-48051-G1-06-INV020-03	FETHS-48051-G1-07-INV020-03
Number of Batteries	9	12	6	7
Number of Inverters	2		3	
<b>BATTERY SPECIFICATIONS</b>				
Battery Type	LiFePO4			
Total Energy	46.08kWh	61.44kWh	30.72kWh	35.84kWh
Battery Voltage Range	44.8 - 56.0V DC			
Nominal Voltage	51.2V DC			
Max. Charge Current	500A DC		600A DC	650A DC
Max. Discharge Current	500A DC		600A DC	650A DC
Parallel Configuration	1S 9P	1S 12P	1S 6P	1S 7P
<b>PV INPUT SPECIFICATIONS</b>				
Max. Input Voltage	600V DC			
PV Input Voltage Range	120 - 500V DC			
Max. Continuous Input Current	25A DC / 15A DC / 15A DC (per inverter)			
Max. Short Circuit Current	31A DC / 19A DC / 19A DC (per inverter)			
<b>AC INPUT &amp; OUTPUT SPECIFICATIONS (ON-GRID)</b>				
Input Voltage	240V AC / 208V AC			
Max. Input/Output Current	100A AC		150A AC	
Max. Short Circuit Current/Duration	156A (Peak) @ 100us (1pcs)			
Nominal Input/Output Power	24kW @ 240V AC / 20.8kW @ 208V AC		36kW @ 240V AC / 31.2kW @ 208V AC	
Max. Continuous Discharge Power	24kW @ 240V AC / 20.8kW @ 208V AC		36kW @ 240V AC / 31.2kW @ 208V AC	
Max. Output Current	250A			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
<b>AC OUTPUT SPECIFICATIONS (OFF-GRID)</b>				
Nominal Voltage	208V AC / 120/240V AC Split Phase			
Max. Continuous Current	100A AC		150A AC	
Max. Power	24kW @ 240V AC / 20.8kW @ 208V AC		36kW @ 240V AC / 31.2kW @ 208V AC	
AC Frequency	60Hz			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
<b>GENERAL SPECIFICATIONS</b>				
Ambient Temperature Range	23°F - 122°F (-5°C - 50°C)			
Install Location	Outdoor		Indoor / Outdoor	Outdoor

Model	FETHS-48051-G1-08-INV020-03	FETHS-48051-G1-09-INV020-03	FETHS-48051-G1-12-INV020-03	FETHS-48051-G1-18-INV020-03
Number of Batteries	8	9	12	18
Number of Inverters	3			
<b>BATTERY SPECIFICATIONS</b>				
Battery Type	LiFePO4			
Total Energy	40.96kWh	46.08kWh	61.44kWh	92.16kWh
Battery Voltage Range	44.8 - 56.0V DC			
Nominal Voltage	51.2V DC			
Max. Charge Current	700A DC	750A DC		
Max. Discharge Current	700A DC	750A DC		
Parallel Configuration	1S 8P	1S 9P	1S 12P	1S 18P
<b>PV INPUT SPECIFICATIONS</b>				
Max. Input Voltage	600V DC			
PV Input Voltage Range	120 - 500V DC			
Max. Continuous Input Current	25A DC / 15A DC / 15A DC (per inverter)			
Max. Short Circuit Current	31A DC / 19A DC / 19A DC (per inverter)			
<b>AC INPUT &amp; OUTPUT SPECIFICATIONS (ON-GRID)</b>				
Input Voltage	240V AC / 208V AC			
Max. Input/Output Current	150A AC			
Max. Short Circuit Current/Duration	156A (Peak) @ 100us (1pcs)			
Nominal Input/Output Power	36kW @ 240V AC / 31.2kW @ 208V AC			
Max. Continuous Discharge Power	36kW @ 240V AC / 31.2kW @ 208V AC			
Max. Output Current	250A			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
<b>AC OUTPUT SPECIFICATIONS (OFF-GRID)</b>				
Nominal Voltage	208V AC / 120/240V AC Split Phase			
Max. Continuous Current	150A AC			
Max. Power	36kW @ 240V AC / 31.2kW @ 208V AC			
AC Frequency	60Hz			
Output Power Factor Rating	0.8 Leading to 0.8 Lagging			
<b>GENERAL SPECIFICATIONS</b>				
Ambient Temperature Range	23°F - 122°F (-5°C - 50°C)			
Install Location	Outdoor			