

Pytes Small & Medium C&I ESS systems



TYPICAL PROJECTS

- Commercial Buildings
- Light Industrial
- Agriculture
- EV Charging
- Off-Grid

TYPICAL USE CASES

- Demand Charge Reduction
- Solar Self-Consumption Optimization
- EV Charging Load Management
- Commercial Backup Power
- Energy Cost Optimization

APPLICATIONS

WHY CHOOSE PYTES C&I HV BATTERIES

- ✓ Certified to UL Standards & Compliant with Local Codes
- ✓ All-Weather Durability for Extreme Temperatures and Coastal Environments
- ✓ Modular & Flexible Configurations from 25 kWh to MWh+
- ✓ Local Inventory with U.S. Based Technical Support



NFPA 68/69/855
Code-Compliant



UL 9540/9540A (2025)/1973
Certified Safety



Fire Suppression System Safety Oriented

Multi-Level Active Fire Suppression

1. Smoke, Heat & Hazardous Detector (Detection)
2. Explosion Relief Fan (Ventilation)
3. Aerosol Suppression
4. Explosion Relief Panel
5. Fire Hose Port
6. Fire Alarm Control Panel

5
Fire Hose Port

2

Explosion Relief Fan
(Ventilation)

Smoke and Heat Detector
(Detection)

4

Explosion Relief Panel

3
Aerosol Suppression

1
Hazardous Gas Detector

6
Fire Alarm
Control Panel



INVERTER COMPATIBILITY LIST



PARTNERS

HV48100 SE SPECIFICATIONS

(WITH IP55 OUTDOOR CABINET)



Battery Module (BMU)							
Chemistry	Lithium Iron Phosphate (LFP)						
Nominal Energy	5.12 kWh						
Nominal Voltage	51.2 V						
Operating Voltage	47.5 V ~ 57.6 V						
Nominal Capacity	100 Ah						
Weight	99 lb / 45 kg						
System							
BMU Internal Configuration ¹	5S2P	6S2P	7S2P	12S1P	13S1P	14S1P	15S1P
Rated Energy	51.20 kWh	61.44 kWh	71.68 kWh	6144 kWh	66.56 kWh	71.68 kWh	76.80 kWh
Rated Power	25.60 kW	30.72 kW	35.84 kW	30.72 kW	33.28 kW	35.84 kW	38.40 kW
Operating Voltage	237.5 V ~ 288 V	285 V ~ 345.6 V	332.5 V ~ 403.2 V	570 V ~ 691.2 V	617.5 V ~ 748.8 V	665 V ~ 806.4 V	712.5 V ~ 864 V
Charge/Discharge Current	50 A*2			50 A			
General							
Dimensions (W x D x H)	43 × 47 × 79 inch / 1100 × 1193 × 2015 mm						
Approximate weight	2029 lb / 920 kg	2234 lb / 1013 kg	2439 lb / 1106 kg	2203 lb / 999 kg	2306 lb / 1046 kg	2408 lb / 1092 kg	2511 lb / 1139 kg
Communication	CAN / RS485/ RS232 / Dry Contact / WiFi						
Ingress Protection Rating	IP55						
Anti-Corrosion Grade	C4-M						
Cycle Life ²	6000 cycles						
Warranty ³	System: 3 Years ⁴ Battery module: 10 Years						
Battery Module Internal Heating Film							
Rated Input Voltage	110Vac @ 60 Hz						
Rated Power	176 W						
Control Temperature	On: ≤50 °F / 10 °C Off: ≥59 °F / 15 °C						
Environmental							
Operating Temperature	-4 °F ~ 131 °F / -20 °C ~ 55 °C						
Operating Altitude	≤ 9843 ft / 3000 m						
Relative Humidity	5% ~ 80 % non-condensing						
Fire Suppression System							
Level 1: Detection & Ventilation	Hazardous gas detection activates ventilation system						
Level 2: Aerosol Suppression	Heat and smoke detection activates aerosol fire suppression system						
Level 3: Pressure Relief	The explosion relief valve opens automatically if internal pressure exceeds safe limits						
Level 4: Fire Hose Connection Port	Equipped with a fire hose connection port for firefighter hose attachment						
HVAC							
Max. Cooling Capacity	2300 W (L35)						
Max. Heating Capacity	1050 W						
Ingress Protection Rating	IP55						
Compliance							
Certifications	UL 9540 Ed.3 (2023), UL 9540A, UL 1973, UN 38.3						
Code Compliance	NFPA 68 / 69 / 855						
Listings	CEC, SGIP, OGP _e						

1. Flexible Configuration: Number of connectable BMUs per Battery Control Unit (BCU) ranges from 3 to 15. Voltage Range: 47.5 V x (3 ~ 15) ~ 57.6 V x (3 ~ 15). The HV48100SE has 16 available positions for BMU and BCU. The maximum configuration per HV48100 SE cabinet is 15S1P / 7S2P.

2. Operating conditions: 77°F / 25°C, 0.5C @ 90% DOD, ret @70% (EOL).

3. Warranty: 3 years for the cabinet system (excludes the BMU and BCU), 10 years or 6000 cycles for the battery (whichever comes first).

4. Optional 2 year warranty extension available for purchase.

HV48300SE MAX SPECIFICATIONS

(WITH IP55 OUTDOOR CABINET)

Pytes

Battery Module (BMU)				
Chemistry	Lithium Iron Phosphate (LFP)			
Nominal Voltage	51.2 V			
Operating Voltage	46.5 ~ 56.8 V			
Nominal Capacity	314 Ah			
Energy	16.076 kWh			
Weight	262 ± 11 lb / 119 ± 5 kg			
System				
BMU Internal Configuration ¹	7S2P	12S1P	14S1P	15S1P
Nominal Energy	225.07 kWh	192.92 kWh	225.07 kWh	241.15 kWh
Nominal Output Power	112.53 kW	96.46 kW	112.53 kW	120.57 kW
Operating Voltage	325.5 ~ 397.6 V	558 ~ 681.6 V	651 ~ 795.2 V	697.5 ~ 852 V
Recommended Charge / Discharge Current	157 A*2	157 A	157 A	157 A
Peak Charge / Discharge Current	205 A*2	205 A	205 A	205 A
General				
Dimensions (W x D x H)	69 x 57 x 93 inch / 1750 x 1450 x 2350 mm			
Weight	5388 lb / 2444 kg	4667 lb / 2117 kg	5291 lb / 2400 kg	5454 lb / 2474 kg
Communication	CAN / RS485/ RS232 / Dry Contact / WiFi			
Ingress Protection Rating	IP55			
Anti-Corrosion Grade	C4-L			
Cycle Life ²	6000 cycles			
Warranty ³	System: 3 Years ⁴ Battery module: 10 Years			
Environmental				
Operating Temperature	Charging: 32 °F ~ 131 °F / 0 °C~55 °C Discharging: -4 °F ~ 131 °F / -20 °C~55 °C			
Operating Altitude	≤ 6561.68 ft / 2000 m			
Relative Humidity	5 % ~ 95 %, non-condensing			
Fire Suppression System				
Level 1: Detection & Ventilation	Hazardous gas detection activates ventilation system			
Level 2: Aerosol Suppression	Heat and smoke detection activates aerosol fire suppression system			
Level 3: Pressure Relief	The explosion relief valve opens automatically if internal pressure exceeds safe limits			
Level 4: Fire Hose Connection Port	Equipped with a fire hose connection port for firefighter hose attachment			
HVAC				
Rated Cooling Capacity	5000 W (L35)			
Rated Heating Capacity	2500 W			
Ingress Protection Rating	IP55			
Compliance				
Certifications	UN 38.3, UL 1973, UL 9540A (2025), UL 9540 Ed.3 (2023) – July			
Code Compliance	NFPA 68 / 69 / 855			
Listings	CEC, SGIP, OGPe			

1.Flexible Configuration: Number of connectable BMUs per Battery Control Unit (BCU) ranges from 1 to 15. Voltage Range: 46.5 V x (1 ~ 15) ~ 56.8 V x (1 ~ 15). The HV48300SE MAX has 16 available positions for BMU and BCU. The maximum configuration per HV48300SE MAX cabinet is 15S1P / 7S2P.

2. Operating conditions: 77 °F / 25°C, 0.5 P @ 90% DOD, ret @70% (EOL)

3. Warranty: 3 years for the cabinet system (excludes the BMU and BCU), 10 years or 6000 cycles for the battery (whichever comes first).

4.Optional 2 year warranty extension available for purchase.