

PHI 3.8™ BATTERY



| | |
|---------------|--|
| CHEMISTRY | Lithium Ferro Phosphate (LFP) The safest Lithium Ion chemistry available No cobalt or risk of thermal runaway |
| OCPD | Built-in, accessible 80 Amp DC breaker on/off switch |
| BMS | Built-in Battery Management System |
| COMPATIBILITY | Compatible with all industry standard inverters and charge controllers Battery bank-to-inverter output sizing must adhere to a 2:1 ratio: $\text{battery quantity} = \frac{\text{inverter } kW_{AC} \text{ rating} \div \text{inverter efficiency}}{\text{battery MAX Continuous Discharge Rate (kW}_{DC})}$ |
| MAINTENANCE | Maintenance-free No ventilation, cooling or thermal regulation required |

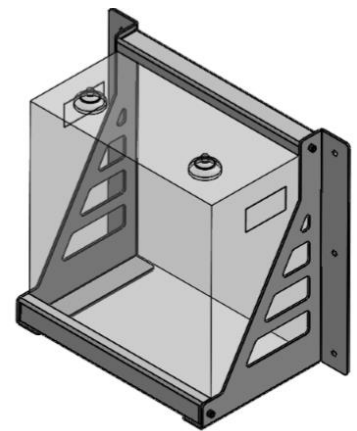
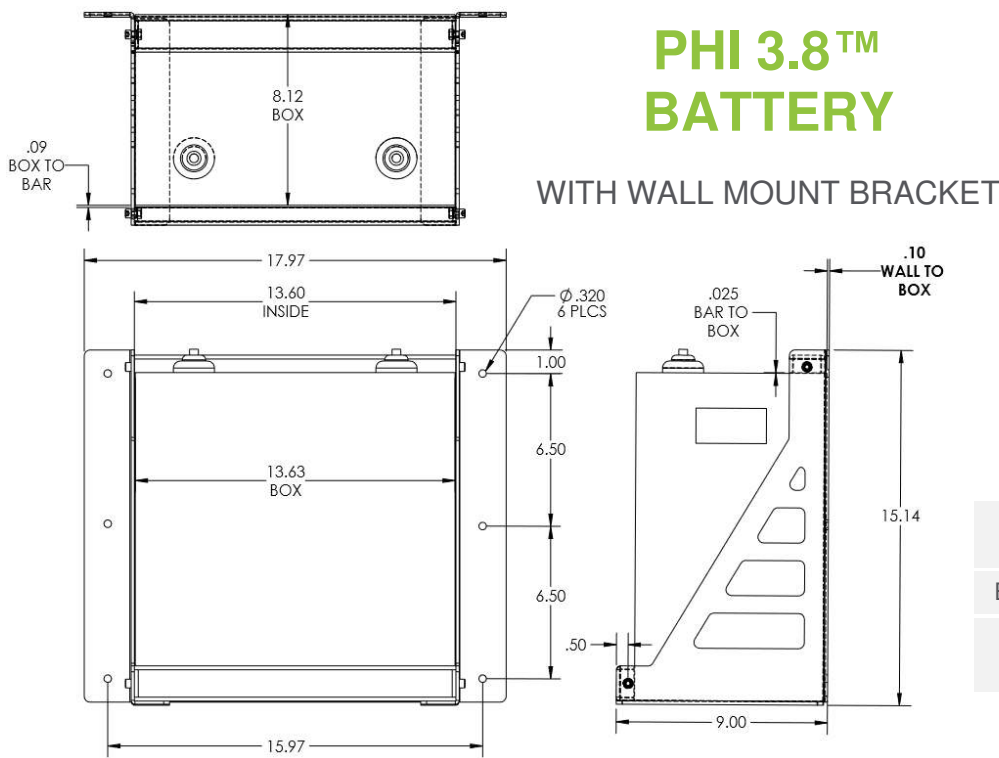
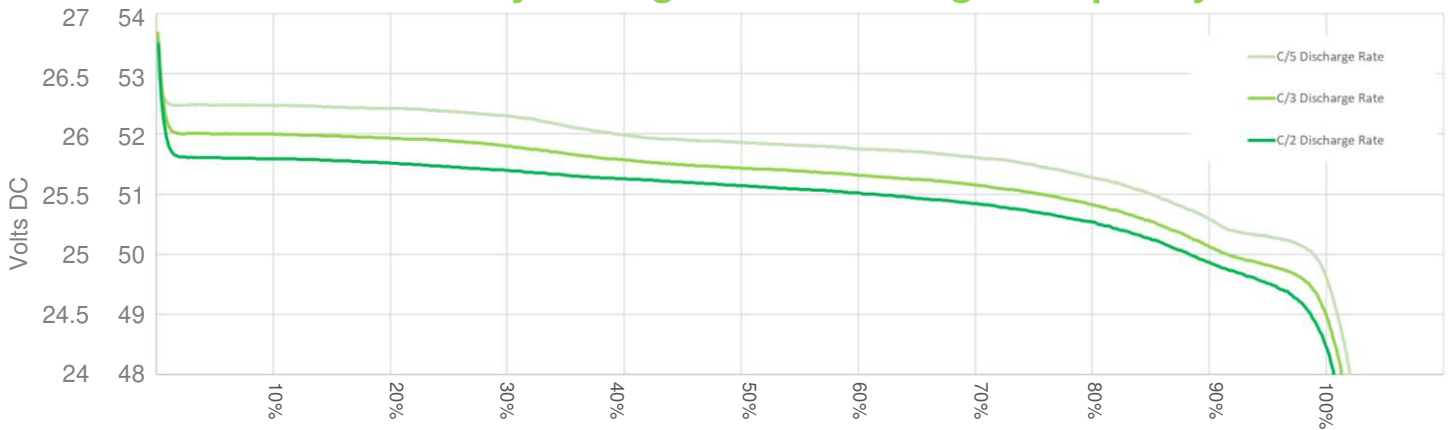
| PHI 3.8 kWh Module | 24V | 48V |
|------------------------------------|---|--|
| DC Voltages - Nominal | 25.6 VDC | 51.2 VDC |
| Amp-Hours | 151 Ah | 75 Ah |
| Rated kWh Capacity | 3.8 kWh DC @ 100% DOD 3.04 kWh DC @ 80% DOD | 3.8 kWh DC @ 100% DOD 3.04 kWh DC @ 80% DOD |
| MAX Discharge Rate (10 minutes) | 60 Amps DC (1.53 kW DC) | 60 Amps DC (3.07 kW DC) |
| MAX Continuous Discharge Rate | 45 Amps DC (1.15 kW DC) | 37.5 Amps DC (1.92 kW DC) |
| MAX Continuous Charge Rate | 45 Amps DC (1.15 kW DC) | 37.5 Amps DC (1.92 kW DC) |
| DC Voltage Range ¹ | 24 VDC to 28 VDC | 48 VDC to 56 VDC |
| Depth of Discharge ¹ | up to 100% | |
| Operating Efficiency | 98% | |
| Charging Temperature ¹ | 32° to 120° F (0° to 49° C) | |
| Operating Temperature ¹ | -4° to 140° F (-20° to 60° C) | |
| Storage Temperature | 6 months: 14° to 77° F (-10° to 25° C) 3 months: -4° to 113° F (-20° to 45° C) | |
| Self-Discharge Rate | < 1% per month | |
| Cycle Life | 10,000+ cycles (@ 80% DOD) | |
| Memory Effect | None | |
| Warranty | 10 Years or 10,000 cycles (@ 80% DOD) | |
| Weight | 78.24 lbs. (35.5 kg) | |
| Dimensions (W x H x D) | 13.5 x 14 x 8 in. (15.5" H w/terminals) / 0.88 ft ³ (34.3 x 35.6 x 20.3 cm / 0.025 m ³) | |

1. Max operating ranges. Refer to Warranty for recommended conditions.

- All specifications listed are typical/nominal and subject to change without notice.
- UN 3480, Lithium ion batteries, 9, II
- UL, CE, UN/DOT and RoHS compliant components - UL Compliant
- Designed and manufactured in California, USA

CERTIFIED
TO UL 1973

Battery Voltage VS. Discharged Capacity



| | | |
|---|---------------|-------|
| Terminals | 3/8 IN | 10 MM |
| Battery Cables | 6 AWG MINIMUM | |
| See Installation Manual for detailed wiring instructions. | | |

Short Circuit Current

Absolute discharge rate limits:

| Based on | Amps DC |
|----------------------------|--------------------------|
| internal battery impedance | ~2,000 A |
| battery management system | ~200 A |
| built-in circuit breaker | 80 A (continuous) |
| | 200 A (1 second) |
| | 400 A (100 microseconds) |
| | 550 A (10 microseconds) |

All PHI batteries monitor internal temperatures. Operating within the specified and warranted parameters ensures these temperatures are not exceeded and the battery is not adversely stressed. When critical temperatures are exceeded, the BMS will disconnect the battery from the DC Bus at indeterminate times and without notice/warning. Repeated exposure to these extremes adversely affects the health of the battery and voids the Warranty.

| PHI 3.8™ | 24V | 48V |
|--------------------------------|------------------|----------|
| Bulk & Absorb Charge | 27.2 VDC | 54.4 VDC |
| Absorb Time | 1 HR | 1 HR |
| Charge Controller Float Charge | 27 VDC | 54 VDC |
| Inverter Charging | 2 STAGE NO FLOAT | |
| Equalization Charge | NONE | |
| Temperature Compensation | NONE | |

Refer to the Integration Guide section of SimpliPhi's [Product Documentation](#) web page for inverter and/or charge controller specific settings. Must be followed to maintain PHI Warranty.