



an EnerSys company

AlphaCell® HP+

Broadband Pure Lead AGM Top Terminal Batteries

Designed as a single, electrochemically stable TPPL platform for distributed outdoor deployments where predictable replacement interval behavior matters at scale.



AlphaCell HP+ is an electrochemically stable TPPL battery engineered to improve replacement interval stability across distributed outdoor operating conditions, including sustained elevated temperature exposure.

AlphaCell HP+ batteries with integrated Catalyst technology are designed to improve service life stability in sustained elevated temperature environments by promoting internal gas recombination during float operation, helping reduce water loss, which can contribute to improved internal component stability over time. Catalyst technology reduces energy draw and dry-out risk, improving efficiency, lowering operational costs, and minimizing maintenance. Backed by a 6-year warranty, AlphaCell HP+ battery delivers reliable performance and a lower total cost of ownership.

- **TPPL technology** for enhanced electrochemical stability in float operation
- **Integrated catalyst** minimizes water loss and improves recombination efficiency
- **Stable float performance** with reduced sensitivity to current variations
- **Extended service life** under elevated temperature conditions
- **Footprint-compatible design** for easy drop-in replacement
- **Low water loss** extends life, reducing maintenance requirements
- **6-year warranty** for long-term reliability

AlphaCell HP and HP+ batteries are fully **BABAA (Build America, Buy America Act)** compliant.

General		4.OHP / HP+	
Operating Temperature Range (w/ Temperature Compensation)	-40 to 140°F / -40 to 60°C (Charger temperature compensation 4mVpC per °C)		
Storage Temperature	14 to 104°F / -10 to 40°C		
Self Discharge	Battery can be stored for up to 24 months @ 60°F/20°C		
Voltage Per Unit	12V		
Float Charge Voltage	13.5 to 13.8VDC average per 12V unit at 77°F/25°C		
Refresh/Boost Charging Voltage	14.4 to 15.0VDC average per 12V unit at 77°F/25°C		
Maximum AC Ripple (Charger)	0.5% RMS or 1.5% of float is recommended for best results. Maximum voltage allowed = 4% P/P		
Terminal Type	Threaded alloy insert terminal to accept 1/4-20UNC bolt		
Terminal Hardware Torque	110 in-lbs / 12.4 Nm		
Case Sizes	Group 31		
Dimensions H x L x W (in/mm)	8.5 x 13.4 x 6.8 / 215.9 x 340.6 x 172.7		
Weight Approximate (lbs/kg)	74 / 33.6		

Battery		4.OHP / HP+	
Runtime Rating 25A (@ 25°C / 77°F to 1.75VPC)	240 minutes		
Amp Hour Capacity 20Hr Rate (@ 25°C / 77°F to 1.75VPC)	114Ah		
Amp Hour Capacity 10Hr Rate (@ 20°C / 68°F to 1.80VPC)	102Ah		
Maximum Discharge Current	900A		
Short Circuit Current	3200A		
Impedance 60 Hz (Approximate)	0.0022Ω		
Conductance Range Fully Charged New Battery (@ 25°C / 77°F)	1800 to 2100S		

Note: Terminal hardware included with every battery.

Constant Current Nominal Ratings in Amps (@ 77°F / 25°C to 1.75V per Cell)											
Discharge Time (Hours)	1	2	3	4	5	6	8	10	12	20	
4.OHP / HP+	81.9	45.8	32.2	25.0	19.9	16.7	13.1	10.6	9.1	5.7	

Estimated Runtime Minutes Using XM3-918HP (Deduct 4 to 6% for Legacy XM Power Supplies)									
90VAC @	4A		6A		8A		10A		
Models	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	
3 Batteries	540	585	358	391	263	291	204	229	
6 Batteries	1144	1254	771	839	574	620	450	487	
9 Batteries	1757	1957	1191	1308	892	969	704	762	
90VAC @	12A		14A		16A		18A		
Models	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	
3 Batteries	165	189	137	159	116	137	100	119	
6 Batteries	368	401	308	337	264	291	227	252	
9 Batteries	578	625	486	527	418	454	361	392	

Estimated Runtime Minutes Using XM3-918HP (Deduct 4 to 6% for Legacy XM Power Supplies)									
60VAC @	4A		6A		8A		10A		
Models	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	
3 Batteries	797	865	534	579	395	429	308	337	
6 Batteries	1669	1859	1131	1235	846	919	667	721	
9 Batteries	2551	2889	1737	1932	1305	1440	1034	1125	
60VAC @	12A		14A		16A		18A		
Models	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	3.5HP	4.OHP / HP+	
3 Batteries	251	277	209	234	178	202	152	175	
6 Batteries	547	593	461	500	396	430	341	372	
9 Batteries	852	925	720	781	620	672	537	582	

Based on .92 cable plant factor @ 25°C / 77°F

For more information visit www.enersys.com



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