



an EnerSys company

AlphaCell® HP

Broadband Pure Lead AGM Top Terminal Batteries



AlphaCell HP pure lead AGM batteries provide high power density and extended reliability for broadband applications.

AlphaCell HP batteries use fewer strings in broadband power systems compared to standard VRLA batteries while maintaining network runtime and reliability. For power supply loads that are less than 8A, 4 hours runtime can be achieved using a single string of AlphaCell 4.0HP batteries, compared to using two strings of competitive products. Additionally, AlphaCell HP batteries provide up to 50% more runtime in colder climates compared to standard batteries.

- Pure lead technology provides up to 20% increased life expectancy
- 3 to 5 times longer shelf life versus standard VRLA batteries
- Up to 50% increased runtime in cold climates
- Non-spillable rating for ease of transportation
- Higher runtime allows string count reduction
- Up to 5 year warranty

General	3.5HP	4.0HP
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	14 to 104°F / -10 to 40°C
Self Discharge:	Battery can be store for up to 18 months @ 77°F/25°C	
Voltage Per Unit:	12V	12V
Floater Charge Voltage:	13.5 to 13.8VDC average per 12V unit at 77°F/25°C	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	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 recommended for best results. Maximum voltage allowed = 4% P/P	
Terminal Type:	Threaded alloy insert terminal to accept ¼" 20UNC bolt	
Terminal Hardware Torque:	110in-lbs / 12.4NM	110in-lbs / 12.4NM
Case Sizes:	31	31
Dimensions H x L x W (in/mm):	8.5 x 13.4 x 6.8 / 223.5 x 337.0 x 172.7	8.5 x 13.4 x 6.8 / 223.5 x 337.0 x 172.7
Weight Approximate (lbs/kg):	68 / 30.8	74 / 35.6

Battery	3.5HP	4.0HP
Runtime Rating 25A (@ 25°C / 77°F to 1.75VPC):	210 minutes	240 minutes
Amp Hour Capacity 20Hr Rate (@ 25°C / 77°F to 1.75VPC):	104Ah	114Ah
Amp Hour Capacity 10Hr Rate (@ 20°C / 68°F to 1.80VPC):	95Ah	102Ah
Maximum Discharge Current:	800A	900A
Short Circuit Current:	2800A	3200A
Impedance 60Hz (Approximate):	0.0027Ω	0.0022Ω
Conductance Range Fully Charged New Battery (@ 25°C / 77°F):	1550 to 1850	1800 to 2100

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
3.5HP:	70.2	40.3	28.6	22.3	18.2	15.3	12.1	9.9	8.4	5.2
4.0HP:	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	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP
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	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP
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	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP
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	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP
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