



XM3-HP

ALPHA'S NEXT-GENERATION UNINTERRUPTIBLE POWER SUPPLY





NEXT-GENERATION POWER

From ground-breaking transformer design to the most intuitive and user-friendly interface in the industry, the XM3-HP sets the new standard in **intelligent power management**.



The **Alpha XM3-HP CableUPS** incorporates significant technological advancements across the entire power technology platform. These advancements focus on delivering three primary benefits: improved efficiency, optimized performance and reduced operating costs. The XM3-HP also incorporates a wide-range features including:

- 1 AlphaGuard™**
Embedded battery balancing to maximize battery life and optimize performance
- 2 Advanced Ferro Technology**
Maximum power efficiency under all modes of operation
- 3 AlphaApps**
Intelligent diagnostics for remote preventative maintenance of batteries and power train
- 4 Alpha DOC**
Dual Output Controller (DOC) provides two programmable outputs from a single XM3-HP
- 5 Alpha Smart-Display**
Four-line display with intelligent, virtual keypad for optimal provisioning and diagnostics
- 6 Advanced Battery Management**
Dynamic 5-stage charger technology maximizes AlphaCell® battery life
- 7 AlphaNet™ DOCSIS®-Based Communications**
Intelligent monitoring and power system management





ADVANCED EFFICIENCY TECHNOLOGY

The Alpha XM3-HP **triple efficiency** ferro technology optimizes the power supply's performance, resulting in significantly reduced utility power consumption and a direct savings in network operations.



Exclusive Patent Protected Design

Moving the inverter winding to the output side of the ferro transformer minimizes conversion losses, improving overall inverter efficiency.

Highest Line Mode Efficiency

The XM3-HP offers the highest line mode efficiency available, requiring less AC utility power to support a load.

$$\text{Utility Power (kW)} = \frac{\text{P}_{\text{Network Load}} + \sum \left[\left(\frac{\text{P}_{\text{Active}}}{\text{V}_{\text{Active}}} \right)^2 \times \Omega_{\text{Feet of cable}} \times \text{Feet Distance} \right]}{\text{Power Supply Efficiency}}$$

Cable Power Loss—I²R

Tightest Output Voltage Regulation

Alpha's XM3-HP provides the tightest output voltage regulation ever offered to reduce I²R cable power losses.

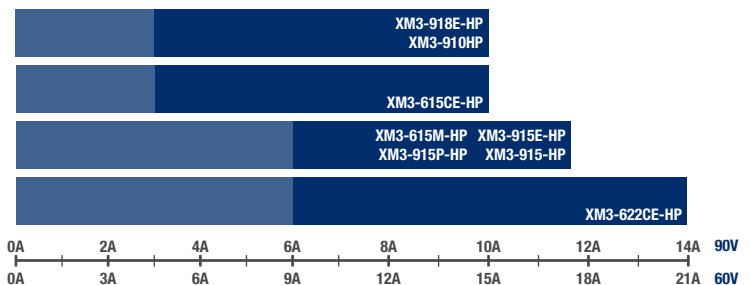
Maximum Inverter Efficiency

Significant gains in inverter efficiency directly translates into increased battery runtimes, further improving network performance and power outage recovery capabilities.

Load Optimization

The XM3-HP is available in several models to best match network load requirements.

Guide for Optimal Efficiency
Maximum Efficiency



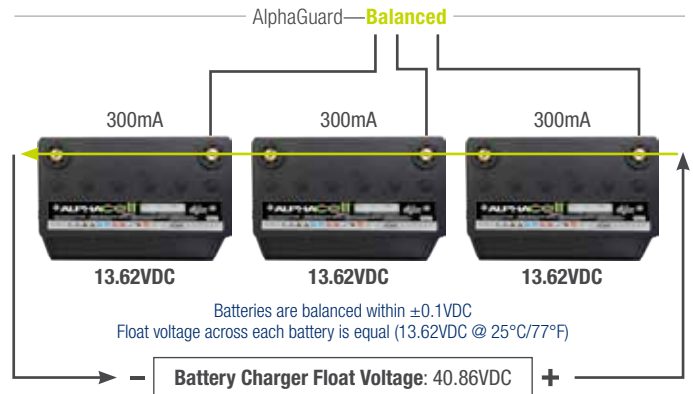
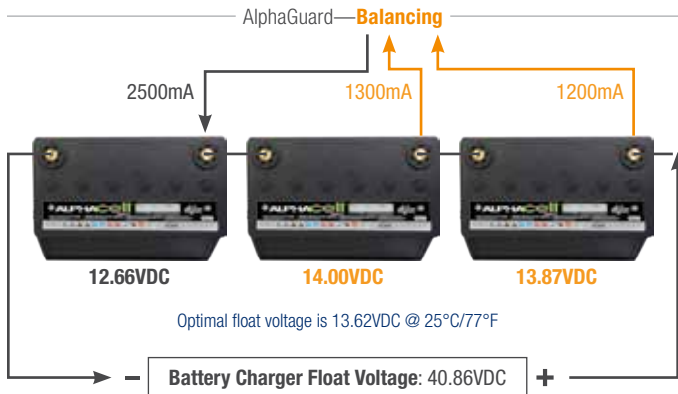


ADVANCED BATTERY MANAGEMENT

The Alpha XM3-HP's advanced battery management optimizes battery life and contributes to **reducing both capital expenditures and on-going operating costs.**

➤ Embedded Battery Balancing

The Alpha XM3-HP embedded AlphaGuard uses advanced battery balancing technology to redirect current from overcharged batteries to the undercharged battery, optimizing battery service life.



➤ Dynamic Multi-Stage Charging

The Alpha XM3-HP's dynamic 5-stage battery charging technology provides system batteries with optimal charge management.

BULK | ACCEPT | FLOAT | REFRESH | REST

➤ Extended Runtime

The Alpha XM3-HP's advanced battery management and increased inverter efficiency maximizes battery runtime in the network.

AlphaCell HP (Estimated runtime minutes using XM3-HP @ 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	588	358	394	263	295	204	234
6 Batteries:	1144	1264	771	841	574	624	450	491
	12A		14A		16A			
Models:	3.5HP	4.0HP	3.5HP	4.0HP	3.5HP	4.0HP		
3 Batteries:	165	193	137	164	116	142		
6 Batteries:	368	404	308	342	264	295		

AlphaCell GXL (Estimated runtime minutes using XM3-HP @ 90VAC)								
	4A		6A		8A		10A	
Models:	195GXL	220GXL	195GXL	220GXL	195GXL	220GXL	195GXL	220GXL
3 Batteries:	476	550	313	363	229	265	177	205
6 Batteries:	1026	1177	685	789	506	585	396	458
	12A		14A		16A			
Models:	195GXL	220GXL	195GXL	220GXL	195GXL	220GXL		
3 Batteries:	142	164	118	136	99	115		
6 Batteries:	322	373	269	311	229	266		





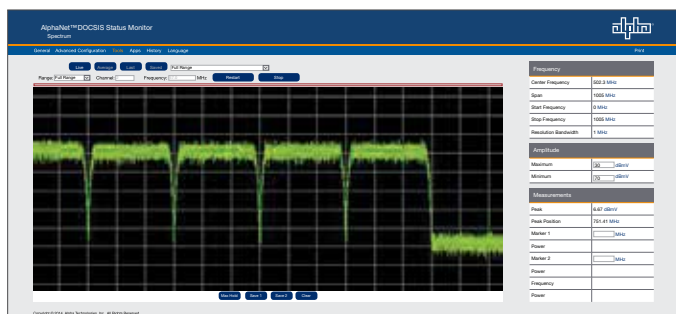
ADVANCED INTELLIGENCE PLATFORM

The Alpha XM3-HP's internal intelligence provides Network Operation Centers (NOC) with the critical and highly relevant data necessary to **reduce operating expenses** through remote management.

➤ Integrated DOCSIS® Communications

The XM3-HP can be used as a network test probe when equipped with an AlphaNet DM3.0 integrated management hub, integrated DOCSIS enables access to all of the XM3-HP's advanced information and diagnostics:

- Full Spectrum Capture
- Bonded Channel Micro Reflections
- Bonded Channel Constellations



➤ Integrated AlphaApps

Power reliability algorithms use real-time data to predict service intervals, battery replacements and offer real-time insights into the health of your HFC network via standard EMS interface. Parameters include:

- Battery Health
- Remaining Battery Runtime
- Trending Battery MHOs
- Utility Performance Reports
- Utility Meter



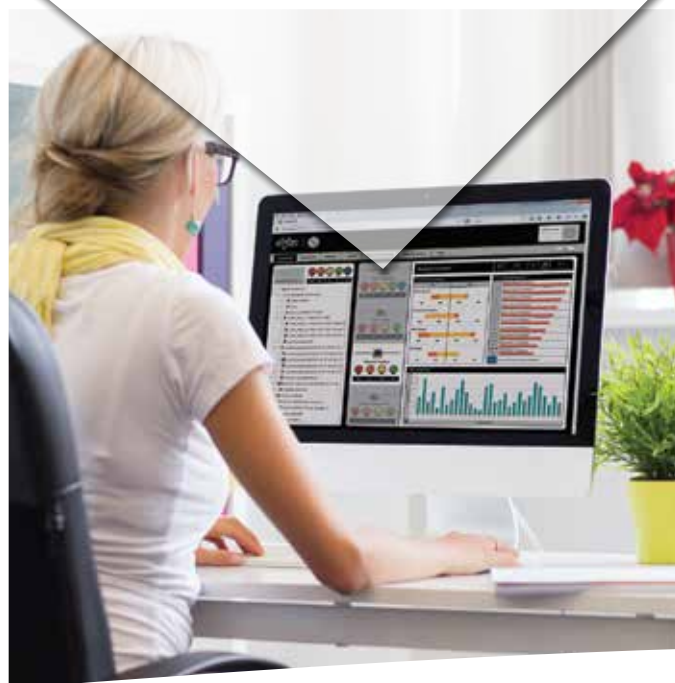
DOCSIS Communications Menu

COMM - GENERAL
CM MAC ADDRESS
00:90:EA:00:36:EA
↑ ↓ ESC

MAC Address

COMM - GENERAL
CM IP ADDRESS
192.168.1.120
↑ ↓ ESC

IP Address



Models:	915M-HP	915P-HP	910E-HP	915E-HP	615CE-HP	622CE-HP	908HP	910HP	915HP	918HP
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Parameters										
Nominal AC Input Voltage (VAC):	127	200-240	200-240	200-240	230	230	120	120	120	120
Nominal Input Frequency:	60Hz	60Hz	50Hz	50Hz	50Hz	50Hz	60Hz	60Hz	60Hz	60Hz
Input Frequency Tolerance (%):	±3	±3	±3	±3	±3	±3	±3	±3	±3	±3
Input Voltage Operating Range Tolerance (%):	-34 / +15	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +15	-30 / +15	-30 / +15	-30 / +15
Output Voltage (VAC):	63 / 89	63 / 89	48 / 63 / 89	63 / 89	48 / 63	63	63 / 89	63 / 89	63 / 89	63 / 89
Output Voltage Regulation:	-5 / +1	-5 / +1	-5 / +1	-5 / +1	-6 / +1.5	-6 / +1.5	-5 / +1	-5 / +1	-5 / +1	-5 / +1
Maximum Rated Output Current:	15 Amps	15 Amps	15 / 10 Amps	22 / 15 Amps	15 Amps	22 Amps	8 Amps	10 Amps	15 Amps	18 Amps
Output Power (VA):	1350	1350	900	1350	900	1408	720	900	1350	1620
Line Mode Efficiency:	Up to 94%									
Standby Efficiency:	Up to 91%									
Bulk Charger Current (@ 80% Load & Nom Line):	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps	10 Amps
Battery Voltage (VDC):	36	36	36	36	36	36*	36	36	36	36
<small>*XM2-622CE will continue as a 48V model until further notice.</small>										

Mechanical										
Inverter Module:	Front plug in, hot-swappable inverter module									
Dimensions H x W x D (in/mm):	7.8 x 15 x 10 / 198.1 x 381 x 254, With Handle: 7.8 x 16.7 x 10.7 / 198.1 x 424.18 x 271.8									
Weight (lb/kg):	60 / 27.2	60 / 27.2	53 / 24.1	67 / 30.5	53 / 24.1	67 / 30.5	48.5 / 22.0	49 / 22.3	60 / 27.2	60.5 / 27.5
Input Power Connector:	IEC 320 / C20									
Battery Connector:	Anderson style 75 Amps									
Remote Temperature Sensor:	Ring lug fastens to negative terminal on center battery									
Display:	4 line x 20 character blue LCD screen with soft-key menu controls									
LRI Connector:	Anderson PP30's									
Mounting:	Shelf mounts inside suitably rated electrical enclosure									

Environment										
Operating Temperature:	-40 to 60°C / -40 to 140°F (derate by 2°C / 3.6°F per 1,000 feet above 3,000 feet)									
Storage Temperature:	-40 to 70°C / -40 to 158°F									
Humidity:	0 to 95% non-condensing (relative)									
Conformal Coating:	All printed circuit board assemblies to prevent moisture related failure									

Voltage										
Name Plate Rating (VAC):	127	200-240	200-240	200-240	230	230	110-127	110+127	110-127	110-127
Input Window (% of Nominal Input):	-34 / +15	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +20	-30 / +15	-30 / +15	-30 / +15	-30 / +15
Input Range (VAC):	84-146	161-276	161-276	161-276	161-276	161-276	84-138	84-138	84-138	84-138
Output Voltage Regulation (%):	-5 / +1	-5 / +1	-5 / +1	-5 / +1	-6 / +1.5	-6 / +1.5	-5 / +1	-5 / +1	-5 / +1	-5 / +1
Load Range:	1-15 Amps	1-15 Amps	1-10 Amps	1-15 Amps	1-15 Amps	1-22 Amps	1-8 Amps	1-10 Amps	1-15 Amps	1-8 Amps
Output Voltage Min/Max (VAC):	84.6 / 90	84.6 / 90	84.6 / 90	84.6 / 90	59.2 / 64	59.2 / 64	84.6 / 90	84.6 / 90	84.6 / 90	84.6 / 90

Safety Compliance										
UL/CSA 60950-1, UL 1778, CSA 107.3 (NRTL/C):	✓	✓					✓	✓	✓	✓
IEC 60950-1 (CB):	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IEC 62040-1:					✓	✓				
Safety Mark:	NRTL/C	NRTL/C			CE	CE	NRTL/C	NRTL/C	NRTL/C	NRTL/C

EMC Compliance										
FCC Part 15 Class A:	✓	✓					✓	✓	✓	✓
IEC/EN 50083-2 (CATV):					✓	✓				
IEC/EN 65040-2 (UPS):			✓	✓	✓	✓				
CISPR22 Class A:			✓	✓	✓	✓				



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