XM3-HP

ALPHA'S NEXT-GENERATION UNINTERRUPTIBLE POWER SUPPLY

ALPHA OUTBACK ENERGY

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

e³ 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.

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

Cable Power Loss—I^2R

Tightest Output Voltage Regulation

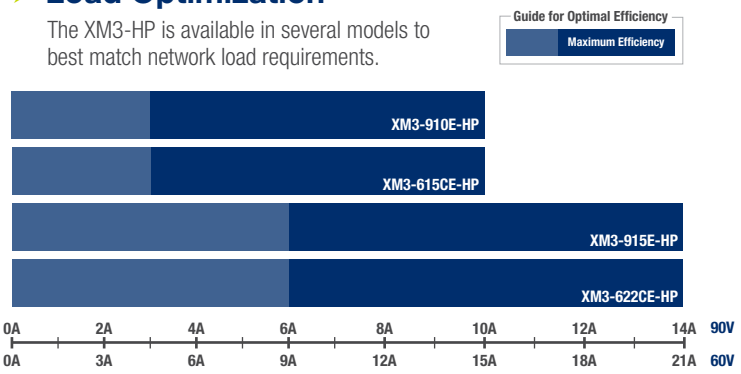
Alpha's XM3-HP provides the tightest output voltage regulation ever offered to reduce I^2R cable power losses.

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.

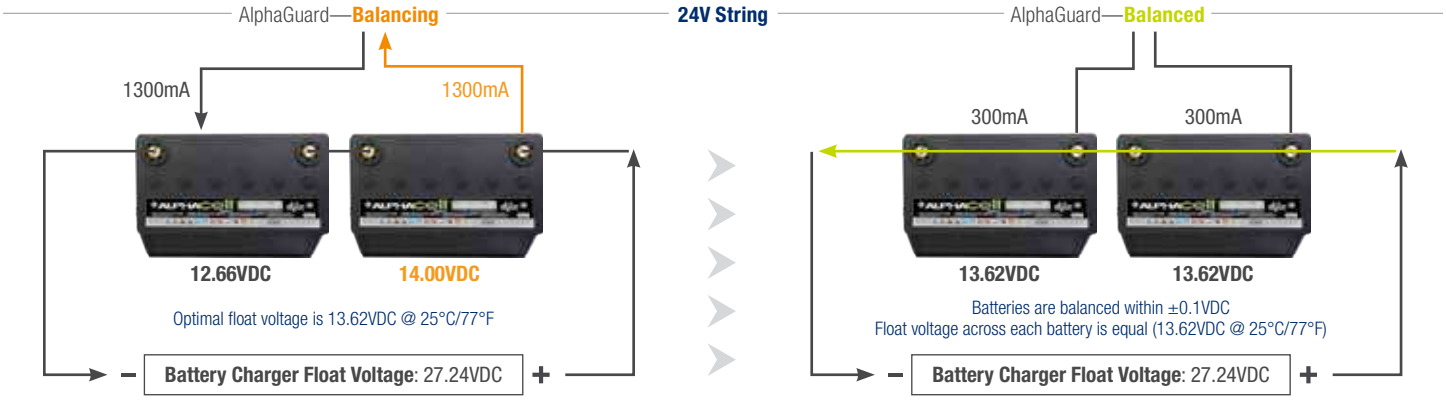


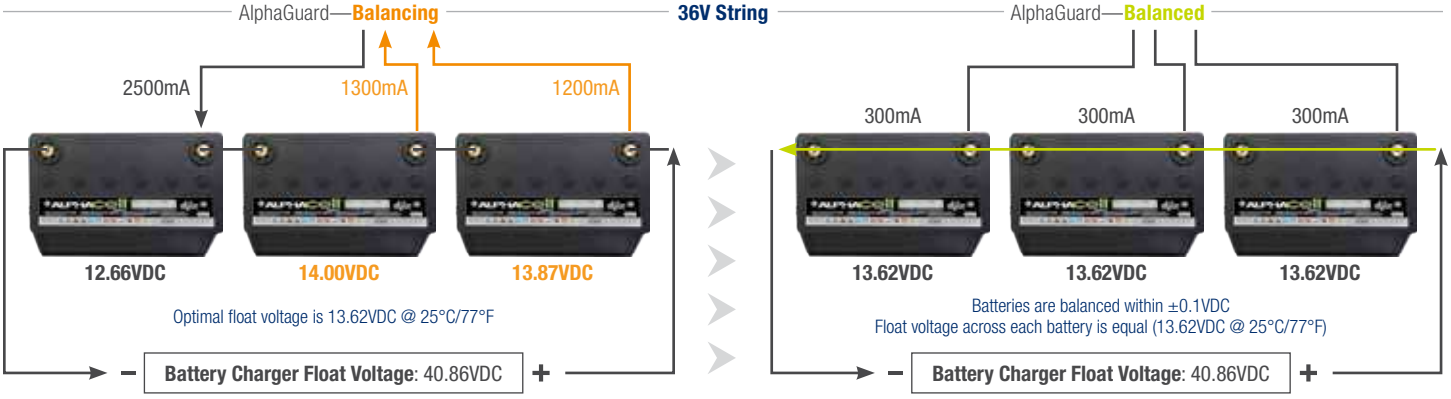
ADVANCED BATTERY MANAGEMENT

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.





Extended Runtime

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

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

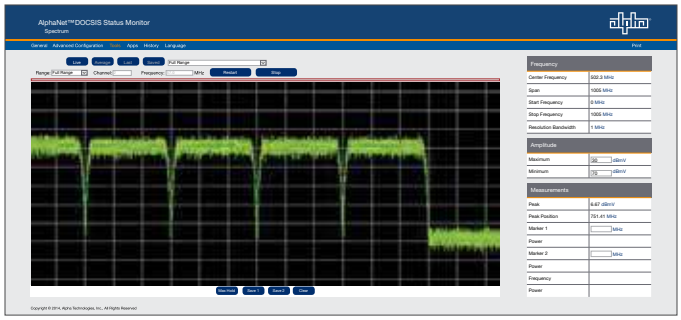
ADVANCED INTELLIGENCE PLATFORM

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.

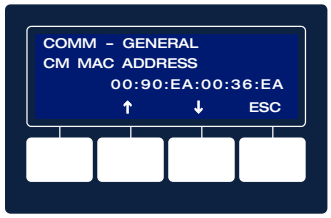
Integrated DOCSIS® Communications

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:

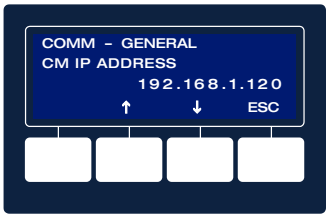
- Full Spectrum Capture
- Bonded Channel Micro Reflections
- Bonded Channel Constellations



DOCSIS Communications Menus



MAC Address



IP Address

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

ALPHA OUTBACK ENERGY

XM3-HP CableUPS® European Specifications

08/2020

Models:	906E-HP	906E-HP-24	910E-HP	915E-HP	608CE-HP	608CE-HP-24	615CE-HP	622CE-HP
Parameters								
Nominal AC Input Voltage:	200–240VAC	200-240VAC	200-240VAC	200-240VAC	230VAC	230VAC	230VAC	230VAC
Nominal Input Frequency:	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Input Frequency Tolerance:	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%
Input Voltage Operating Range Tolerance:	-30% / +20%	-30% / +20%	-30% / +20%	-30% / +20%	-25% / +20%	-25% / +20%	-25% / +20%	-25% / +20%
Output Voltage (VAC, Quasi-square wave):	48 / 63 / 89VAC	48 / 63 / 89VAC	48 / 63 / 89VAC	63 / 89VAC	48 / 63VAC	48 / 63VAC	48 / 63VAC	63VAC
Output Voltage Regulation:	-5 / +1	-5 / +1	-5 / +1	-5 / +1	-3.5 / +1.5	-3.5 / +1.5	-3.5 / +1.5	-3.5 / +1.5
Maximum Rated Output Current:	8 / 8 / 6A	8 / 8 / 6A	15 / 15 / 10A	22 / 15A	8 / 8A	8 / 8A	15 / 15A	22A
Output Power:	534VA	534VA	900VA	1350VA	504VA	504VA	900VA	1408VA
Line Mode Efficiency:	Up to 94%	Up to 94%	Up to 94%	Up to 94%	Up to 94%	Up to 94%	Up to 94%	Up to 94%
Standby Efficiency:	Up to 91%	Up to 91%	Up to 91%	Up to 91%	Up to 91%	Up to 91%	Up to 91%	Up to 91%
Bulk Charger Current (@ 80% Load & Nom Line)**:**	6A	6A	10A	10A	6A	6A	10A	10A
Battery Voltage: *XM2-622CE will continue as a 48V model until further notice.	36VDC	24VDC	36VDC	36VDC	36VDC	24VDC	36VDC	36VDC*
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)**:**	48.4 / 22.0	48.6 / 22.0	53 / 24.1	67 / 30.5	48.4 / 22.0	48.4 / 22.0	53 / 24.1	67 / 30.5
Input Power Connector:	IEC 320/C20							
Battery Connector:	Anderson style 75A							
Remote Temperature Sensor:	Ring lug fastens to negative terminal on center battery							
Display:	4 line by 20 character LCD with soft-key menu controls							
LRI Connector:	Anderson PP30's	Anderson PP30's	Anderson PP30's	Anderson PP30's	Anderson PP30's	Anderson PP30's	Anderson PP30's	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:	≤ 95% non-condensing (relative)							
Conformal Coating:	All printed circuit board assemblies to prevent moisture related failure							
Safety Compliance								
EN 60728-11:					✓	✓	✓	✓
IEC 60950-1 Ed 2 (CB)**:**	✓	✓	✓	✓	✓	✓	✓	✓
IEC 62040-1-2:					✓	✓	✓	✓
Safety Mark:					CE	CE	CE	CE
EMC Compliance								
Category C3, Class B Conducted Limits:					✓	✓	✓	✓
EN 50083-2 (CATV)**:**					✓	✓	✓	✓
EN 62040-2 (UPS)**:**					✓	✓	✓	✓
CISPR Class A:	✓	✓	✓	✓				

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