

# Power

## FlexNet™ MPS48-7M

Supports Wi-Fi Routers in Outdoor Applications



- Rugged outdoor wall or pole mount 48V DC UPS battery backup power supply
- Aesthetically pleasing and minimizes presence in public locations
- Temperature compensated battery charging for optimum battery life
- Optional battery heater provides extended runtimes in cold conditions
- Local and remote status monitoring and reporting

Alpha's FlexNet MPS48-7M multipurpose power supply platform provides primary and standby power for Wi-Fi routers in outdoor applications. Integrating the wireless radios with MPS48-7M standby battery power allows service providers to extend uninterrupted, reliable data and Wi-Fi broadband service to cities for public safety, municipal service, and city-wide Hot-Zone access. This unit provides 48VDC power, diagnostics and network management information to the properly prepared Wi-Fi router. This power supply is suited for both North America and International Markets in a single unit.

## FlexNet MPS48-7M

### Specifications

#### Input

Voltage Range:	90 to 132, or 180 to 264VAC (switch selectable) or 250 to 305VAC with optional step-down transformer
Frequency:	47 to 63Hz
Surge Protection:	ANSI/IEEE Std. C62.41 to Category A, B, or C requirements, using a "Ring Wave" or "Combination" waveform, at a level of 6kV

#### Output

Voltage:	42 to 56VDC
Power:	50W continuous (over "PoE" like interface)
Ripple:	<250mVrms
Noise:	<2Vp-p
Transfer Characteristics:	Uninterrupted upon loss of AC service

#### Battery

Type:	Four Valve Regulated Lead Acid (VRLA) (Batteries sold separately)
Storage Temperature:	-4 to 104°F (-20 to 40°C)
Capacity:	7.2Ah @ 20hr rate to 1.75VDC
Dimensions (in):	5.94L x 2.56W x 3.86H with terminal
(mm):	151L x 65W x 98H
(in):	5.94L x 2.56W x 3.70H without terminal
(mm):	151L x 65W x 94H
Weight (lbs/kg):	5.95/2.7
Runtime @ 77°F (25°C):	18hrs 20W load, 8hrs 40W load
Recharge @ 77°F (25°C):	13hrs 20W load, 25hrs 40W load

#### LED Status Indicators

Green Steady:	Output within parameters
Green Blinking:	Standby Operation
Red Blinking:	Low or Missing Battery
Red Steady:	Replace Battery

#### Mechanical

Unit	
Dimensions (in):	17.5H x 12.75W x 5.25D
(mm):	445H x 324W x 133D
Weight (lbs/kg):	11/4.9 (not including battery)

Unit and carton	
Dimensions (in):	19.9H x 16W x 7.25D
(mm):	505H x 406W x 184D
Weight (lbs/kg):	11/4.9 (not including battery)
Weight (lbs/kg):	34.6/15.7 (including battery)

Operating Temperature	
With Heater Option:	-40 to 55°C
Without Heater Option:	-20 to 55°C
Storage Temperature:	-50 to 70°C
Humidity:	0 to 95%
Altitude:	Up to 10000ft with ambient derating Above 6000ft, 2°C/1000ft

#### Regulatory

Agency Compliance:	FCC part 15 Class A, CSA-NRTL\ (CSA60950), CE, C-Tic, RoHS compliant per European Union's Directive 2002/95/EC, Restrictions of Hazardous Substances Zone 4 rated per GR-63, NEMA 3R Designed to IPx5 water intrusion criteria per IEC 60529 standard
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Warranty:	3 year (repair or replace electronics) Battery warranty separate
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NOTE: "PoE" like interface is designed to 802.3 af

### Benefits

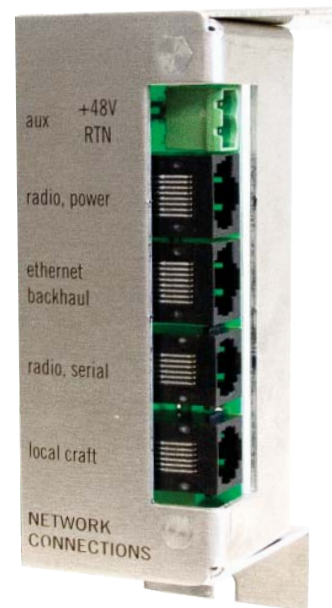
- Ethernet backhaul from MPS48-7M
- Craft port RS232 interface
- Keyed battery connection prevents miss wires
- Heater mat option provides greater runtime in cold climates
- Weather tight, aluminum construction supports installation in harsh environments
- Single mounting bracket supports all installations
- Batteries readily available through multiple suppliers
- Product options minimize installation errors and time
- Housing knockouts support variety of cable routing scenarios
- 277VAC step down transformer option
- Street light power tap option
- Power cord option



Front view  
MPS48-7M shown with batteries and AC service installed



Mounting Bracket  
(Included)



Interface Module

## FlexNet MPS48-7M

### Ordering Guide

The MPS48-7M provides up to 50Watts of continuous 48VDC standby power for Wi-Fi router in roof-top and pole-top applications.

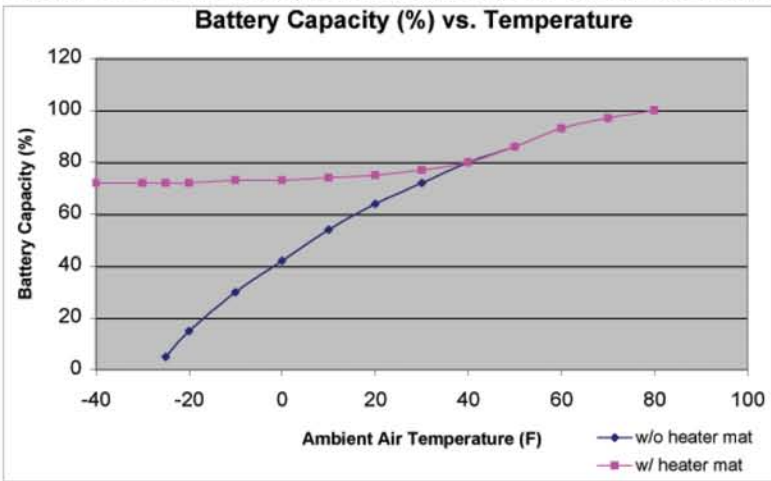
The MPS48-7M interface module includes an RJ11 connection providing RS232 craft access to the diagnostics and network management information from the MPS48-7M to the router, an RJ45 ethernet connection to the radio data for easy backhaul access connection. Auxiliary equipment such as a camera can be powered with the 48VDC terminal block.

A user selectable 120/240V slide switch located on the faceplate of the MPS48-7M supports input voltages from 90 to 264VAC. Several AC supply connection configurations are supported including an optional power cord, 1/2" EMT conduit routing with either 120VAC residential mains or commercial 208 or 240VAC and the optional preconnectorized streetlight tap cable. The step down transformer is required for streetlight tap applications with a 480 Y/277VAC source.

Local status is provided both visually with LED's and electrically through a serial RS232 RJ11 connector accessing the same data transmitted to the radio from the MPS48-7.

The MPS48-7M housing is constructed of weather/corrosion resistant powder coated aluminum providing protection from penetration by dust and wind driven rain. A universal mounting bracket is included supporting wall mounting or mounting onto concrete, steel or wood poles. Wall and pole mounting attachment hardware is not included.

Optional 120 or 240VAC battery heater kits support greater standby battery capacity in cold conditions. Battery performance is typically stated



at normal room ambient temperatures of 25°C/77°F. As ambient temperatures drop the chemical reaction occurring within a battery during a discharge becomes less and less efficient. Battery heaters elevate the battery temperature in order to extend cold weather runtimes. The chart provides a graphical representation of VRLA (valve regulated lead acid) battery capacity derating over temperature with and without a battery heater mat. Note that upon loss of AC power the temperature of the batteries will drop.

The AC service is routed into the enclosure through 1/2" EMT (Electrical Metal Tube) knockouts located on the bottom, sides or back surfaces of the housing. Separate 3/4" EMT knockouts on the bottom, sides or back surfaces of the housing support data and power cables. MPS48-7M is supplied with a single strain relief bushing supporting connection cables.

This chart is an approximation of the effectiveness of a heater verse no heater.

Model Number	Product Name
MPS48-7M	FlexNet Battery Backup Power Supply 48VDC 50Watt Supporting Outdoor Mesh Access Points - including mounting bracket, battery cable kit, AC cable strain relief Radio liquid tight fitting.
MPS-CWK-120	Battery Heater for the MPS48-7 120VAC
MPS-CWK-240	Battery Heater for the MPS48-7 240VAC
UPS-SDXB	Transformer Kit, 277VAC Step-Down to 115VAC
AX-STDBAT-7	Battery 7.2AH AGM Battery, 1 year Warranty
AX-LONGBAT-7	Battery 7.2AH AGM Battery, 3 year warranty
CBL-UPS-SL-25	Cable, UPS, Streetlight AC PWR Tap Cable, 2 Cond w/GND Lug and Wire, 25ft
UPS100-AC-Cord	AC Line Cord, 5-15P Right Angel Low Profile, 8ft



Streetlight AC Tap  
CBL-UPS-SL-25



Battery Heater  
MPS-CWK-120/240



Step-down Transformer  
UPS-SDXB



7.2Ah Battery  
AX-STDBAT-7  
AX-LONGBAT-7