

## INDUSTRIES & APPLICATIONS



## DESCRIPTION

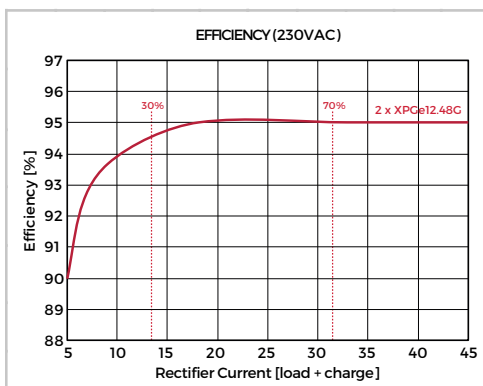
### KEY FEATURES

- ◆ >95% Efficiency Rectifiers
- ◆ 45A / 2.4kW Capacity
- ◆ Small Battery Low Power Version
- ◆ Remote Monitoring & Control
- ◆ Field Replaceable Controller
- ◆ Ethernet Comm. with SNMPv3
- ◆ 3 LED Alarm/Status Indicators
- ◆ 4 Form-C Relay Alarms
- ◆ 4 Load Breakers or 10 GMT Fuses
- ◆ 1 Battery Breaker
- ◆ LCD Display/Touchpad

### SAFETY CERTIFICATIONS

UL60950-1 2nd Ed.  
CSA22.2 No. 60950-1 2nd Ed.  
EN60950-1 2nd Ed.

### THREE YEAR WARRANTY



Aspiro 1U is a compact 1RU high 19/23" or ETSI rack-mounted, integrated DC power system providing an output of -48VDC. The system can accommodate 1 or 2 Aspiro family high efficiency hot-swap rectifiers. A total load + charge current of 45A/2.4kW is available. The rectifiers are internally fan cooled with speed control which is a function of load and temperature, keeping acoustic noise to a minimum.

The Aspiro 1RU family features a low power version fitted with a 20A shunt to provide improved management of small batteries (<10AH). This version is limited to a total load + charge current of 15A.

The DC output circuits can provide up to 4 loads with breakers rated from 1A to 30A or 10 loads with GMT fuses from 0.25A to 15A. An additional breaker provides battery protection. A programmable low voltage battery disconnect (LVD) is standard.

The ACX Advanced remote access controller monitors system parameters, controls rectifier output, and provides alarms for system failures. The Controller Module is also pluggable for easy field replacement in case of failure. There are 2 LED alarm indicators which indicate failures, (RED) Alarm and (YELLOW) Message. A third green LED indicates the controller is working properly. As standard four form-C relay outputs provide the alarms for remote use. Two digital inputs and outputs are also provided as well as a microSD card slot that accepts an up to 4GB card which is sufficient for more than 20 years data logging.

The system can be programmed by means of a remote PC web page display. Communication is by Ethernet LAN with SNMPv3 including alarm trapping. It also has provision for temperature compensated charging of an external battery using a supplied TC probe. An LCD Display/Touchpad is included for local metering, status, and setup.

The Aspiro 1RU is compatible with UNIPOWER's free [PowCom™ software](#) which offers local and remote management through an advanced Windows GUI.

## SYSTEM SPECIFICATION & CAPABILITY GUIDE

SYSTEM DESIGNATION		ASPIRO 1U - 1-M00035			
<b>OUTPUT</b>					
System Voltage		-48VDC nominal   53.5V float			
		STANDARD VERSION		LOW POWER VERSION	
Maximum Power @ 120VAC nom.		1600W		800W	
Maximum Power @ 230/400VAC nom.		2400W		800W	
Maximum Current @ 120VAC nominal	Load	23A @90-100VAC, 25A @ 100-180VAC		15A	
	Battery	25A discharge   s/w controlled (deducted from load capacity)		15A discharge   s/w controlled (deducted from load capacity)	
Maximum Current @ 230/400VAC nominal	Load	45A		15A	
	Battery	45A discharge   s/w controlled (deducted from load capacity)		15A discharge   s/w controlled (deducted from load capacity)	
No. Rectifier Slots		2			
<b>DC DISTRIBUTION</b>					
Loads Circuits		4 x Breakers 1A to 30A OR 10 x GMT Fuses 0.25A to 15A (see configuration guide on page 5)			
Battery Circuits		1 x 40A to 65A (see configuration guide on page 5)			
<b>INPUT</b>					
Voltage (nominal)		1-phase 100-120/200-240VAC (L + N + PE) 2 x 1-phase 100-120/200-240VAC (L + N + PE)			
Frequency		47-63Hz			
Maximum Input Current		1-phase - 16A   2-phase - 8A each input		1-phase - 9A   2-phase - 4.5A each input	
Rectifier Power Factor		>0.98 (typical)			
<b>MONITORING &amp; CONTROL (ACX Advanced Controller)</b>					
Alarm Relays		4			
Local Interface		4 x 20 LCD, 4-key menu, USB / RS232, microSD card slot (4GB max,) for data logging			
Remote Interface		Ethernet / Modem using PowCom™ software package Ethernet port allows monitoring and control over a TCP/IP network. Web browser support + SNMPv3			
LED Indications		Green - System ON; Yellow - Message(s); Red LED - Alarm(s)			
External Digital I/O		2 x Inputs, 2 x Outputs (Open Collector)			
<b>BATTERY MANAGEMENT</b>					
Symmetry Inputs		6 or 12 (can be redefined as analog inputs up to 100VDC)			
Low Voltage Battery Disconnect (LVBD)		1 x 80A Programmable			
Temperature Compensated Charging		Programmable			
<b>COMPLIANCE</b>					
EMC		EN 300 386 ; EN61000-6-3 (Emission) ; EN61000-6-2 (Immunity)			
Safety		IEC60950-1:2005 2 Ed. +A1:2009			
<b>ENVIRONMENTAL</b>					
Operating Temperature		-40°C to +55°C			
Storage Temperature		-40°C to +85°C			

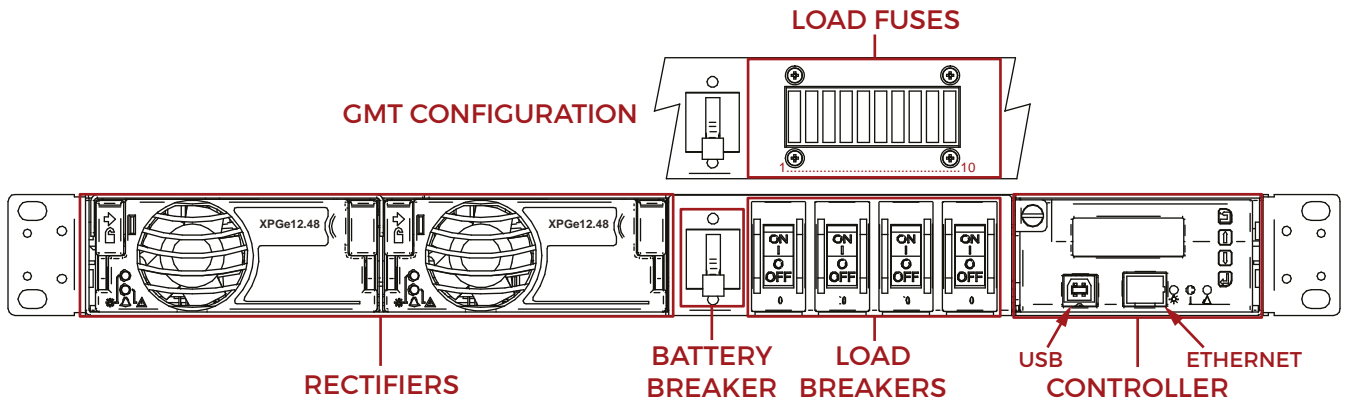
### RECTIFIER MODULES vs. SYSTEM CAPACITIES

RECTIFIER MODULES (float voltage 53.5V)						SYSTEM CAPACITY			
MODEL NUMBER	EFFICIENCY <sup>1</sup>	INPUT VOLTAGE <sup>2</sup>	INPUT CURRENT <sup>3</sup>	OUTPUT POWER	OUTPUT CURRENT	MAX. LOAD CURRENT STANDARD VERSION		MAX. LOAD CURRENT LOW POWER VERSION <sup>5</sup>	
						TOTAL	1+1 <sup>4</sup>	TOTAL	1+1 <sup>4</sup>
XR08.48G	>90.0%	85-275VAC	10.5A/4.9A	800W	15.0A	30.0A	15.0A	15.0A	7.5A
XPGe12.48G	>95.0%	90-180VAC	7.3A	600W	11.2A	22.4A	11.2A	15.0A	7.5A
		180-275VAC	7.0A	1200W	22.4A	44.8A	22.4A	15.0A	7.5A

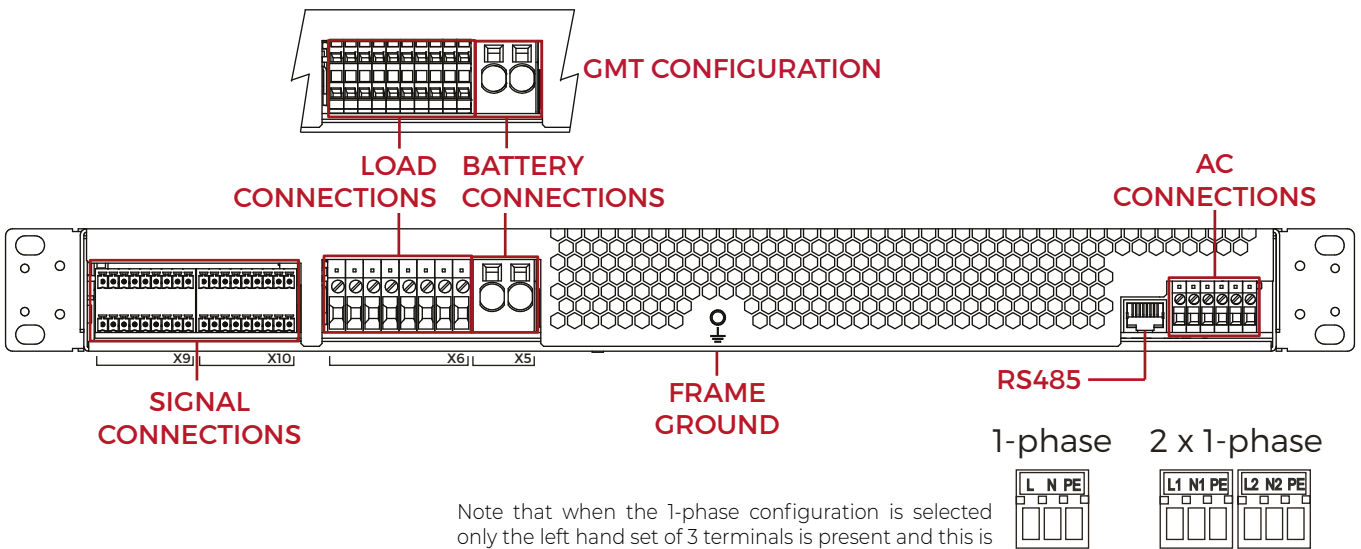
Notes:

1. When operating at 230VAC.
2. All models will operate over the full range, automatically limiting output current/power according to the actual input voltage range applied.
3. Input currents shown are expected maximums at 90VAC/180VAC as appropriate.
4. Figures quoted are at 110VAC input. See separate rectifier datasheets for details.
5. May required reduction in maximum charge current when batteries not fully charged.
6. The Low Power Version is configured with a 20A shunt to improve measurement resolution when using a small (~10Ah or less) battery.

### FRONT PANEL DESCRIPTION



### REAR PANEL DESCRIPTION



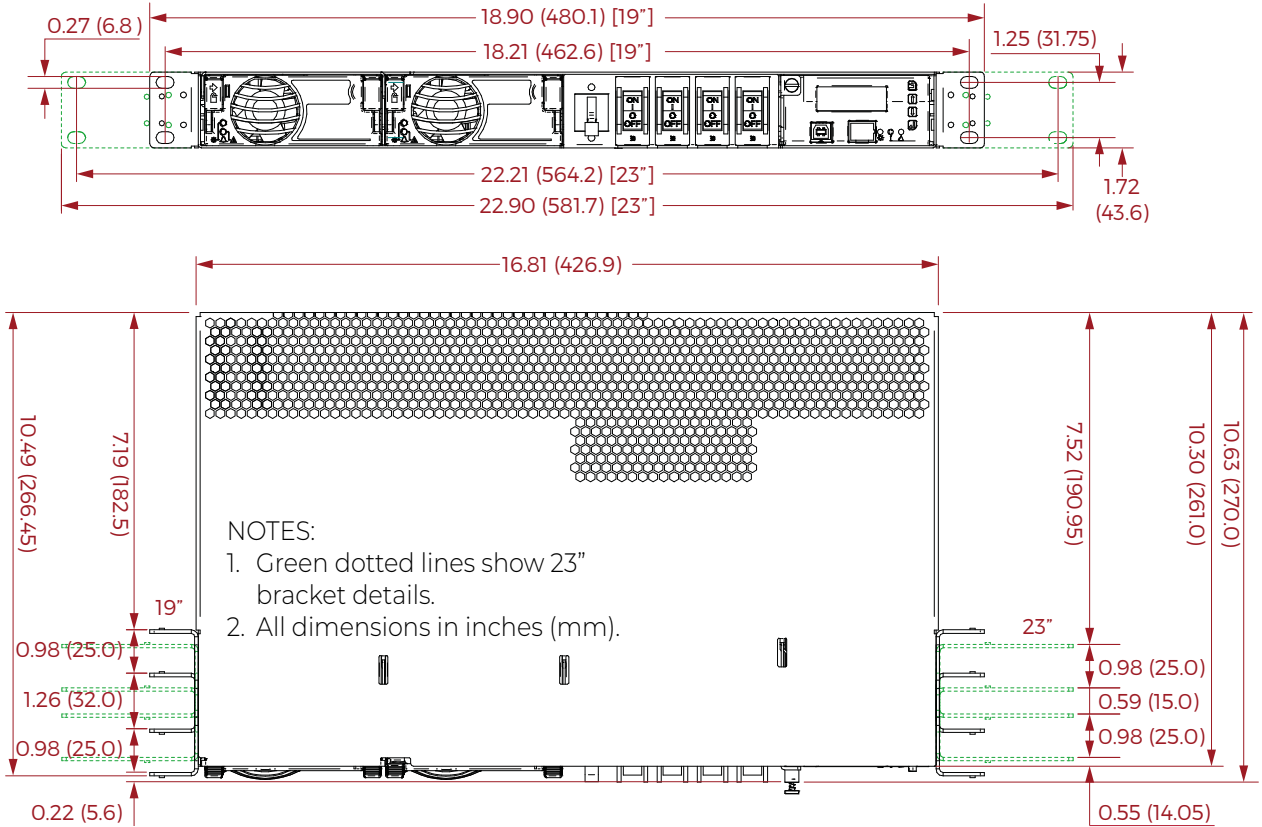
Note that when the 1-phase configuration is selected only the left hand set of 3 terminals is present and this is connect to both rectifier positions within the unit.

### WEIGHTS & DIMENSIONS

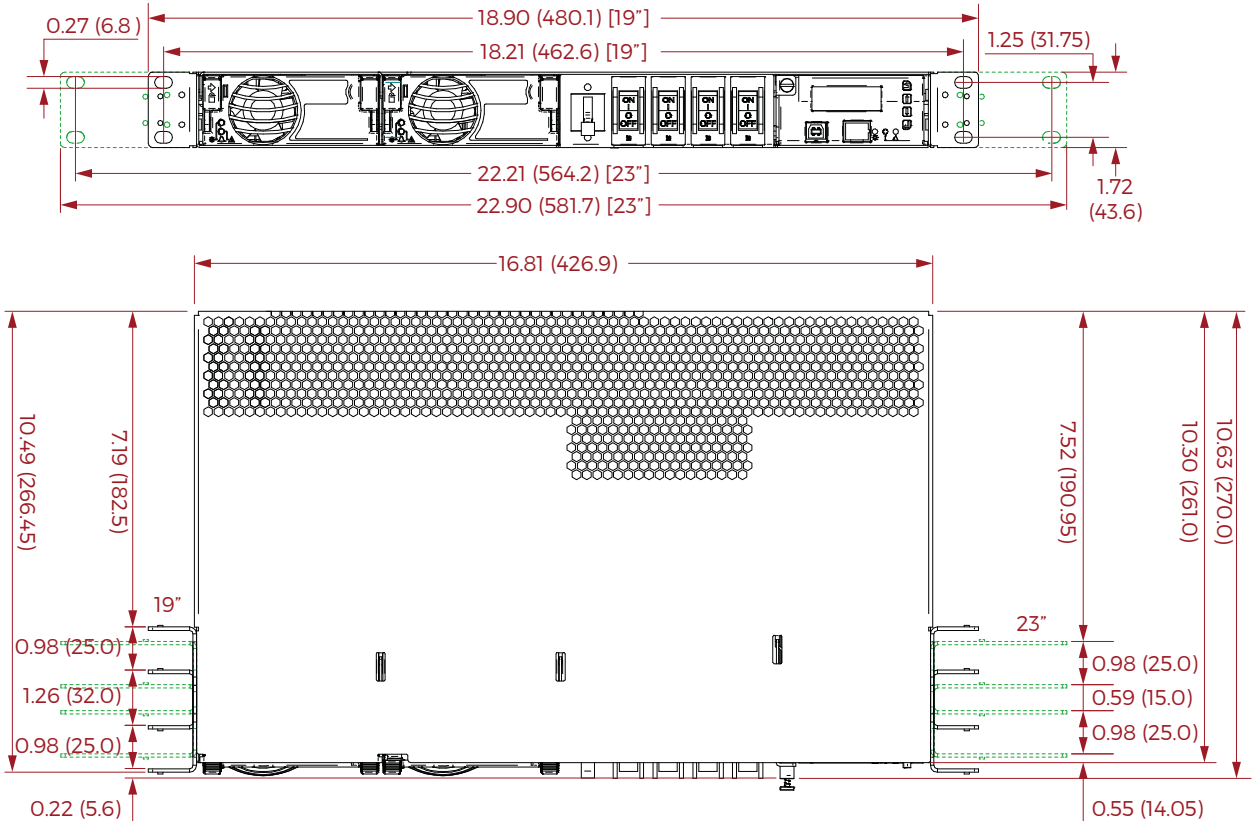
UNIT	UNIT				PACKAGED				
	Width	Height	Depth	Weight	Width	Height	Depth	Weight	# in box
System Unit (19" Mounting)	18.90 (480.1)	1.72 (43.6)	10.41 (264.5)	9.5 lbs (4.3 kg)	23.2 (589)	7.9 (200)	15.3 (387)	11 lbs (5 kg)	1
System Unit (ETSI Mounting)	21.10 (535.0)								
Rectifier Module	4.0 (102)	1.6 (41)	9.0 (229)	2.4 lbs (1.1 kg)	6.0 (152)	2.2 (55)	11.5 (291)	2.6 lbs (1.2 kg)	1

Dimensions in inches (mm)

DETAILED DIMENSIONS (19/23") - BREAKER CONFIGURATION SHOWN



DETAILED DIMENSIONS (ETSI/21") - BREAKER CONFIGURATION SHOWN



## CONFIGURATION GUIDE

PLEASE COMPLETE THE BELOW TABLE AND SUBMIT TO UNIPOWER FOR VERIFICATION AND CONF. NO. ALLOCATION (This form is fully interactive and may be completed electronically OR it can be printed and completed by hand)	
<b>STEP 1 - CUSTOMER DETAILS</b>	
Company: _____ Address: _____ _____ Zip Code: _____ Country: _____	Contact Name: _____ Email Address: _____ Telephone: _____ Quantity for quotation: _____
<b>STEP 2 - INPUT TYPE - Choose one version</b>	
1-Phase (120/240V) 2-Phase (120/240V) 1-phase Low Power Version with 20A shunt (120/240V) 2-phase Low Power Version with 20A shunt (120/240V)	1-phase OR 2-phase OR 1-phase LP OR 2-phase LP
<b>STEP 3 - RECTIFIER MODULES - Choose one type only and enter quantity 12 - dummies will be inserted into unused slots</b>	
XR08.48G - 800W / 18.2A - >90% Efficiency XPGe12.48G - 1200W / 22.6A - >95% Efficiency	Qty 1    OR Qty 2 OR Qty 1    OR Qty 2
<b>STEP 4 - BATTERY BREAKERS - Choose rating and quantity or NONE</b>	
No Breakers (Not recommended) OR 40A x1 OR 50A x1 OR 65A x1	None OR Qty 1 OR Qty 1 OR Qty 1
<b>STEP 5 - LOAD CONFIGURATION - Choose ONE only</b>	
4 x Breakers OR 10 x GMT Fuses	Breakers    OR Fuses
<b>STEP 6 - LOAD BREAKERS OR FUSES- Choose quantity for desired ratings. Maximum 4 for breakers, positions not filled will have a blank fitted. Total 10 for fuses. [Configuration will be checked by UNIPOWER]</b>	
<b>BREAKERS - 4 max. total</b> 1A single pole - quantity ____ 4A single pole - quantity ____ 5A single pole - quantity ____ 7.5A single pole - quantity ____ 10A single pole - quantity ____ 15A single pole - quantity ____ 20A single pole - quantity ____ 25A single pole - quantity ____ 30A single pole - quantity ____	<b>FUSES - 10 max. total</b> 0.25A - quantity ____ 0.5A - quantity ____ 1A - quantity ____ 2A - quantity ____ 3A - quantity ____ 5A - quantity ____ 7.5A - quantity ____ 10A - quantity ____ 15A - quantity ____
<b>STEP 7 - TEMPERATURE SENSOR - available for battery and ambient temperature measurement</b>	
Battery Temperature Sensor - 1.9m (~6ft) OR 3.0m (~10ft) Ambient Temperature Sensor - 1.9m (~6ft) OR 3.0m (~10ft)	NONE    OR 1.9m (~6ft)    OR 3m (~10ft) NONE    OR 1.9m (~6ft)    OR 3m (~10ft)
<b>STEP 8 - SYMMETRY CABLES</b>	
Symmetry Cable - 1.9m (~6ft) OR 3.0m (~10ft) - end measure	NONE    OR 1.9m (~6ft)    OR 3m (~10ft)
<b>STEP 9 - MOUNTING BRACKETS (Choose one type only - slide types allow front access)</b>	
19/23" (allows front or mid fixed position mounting) OR ETSI (allows front or mid fixed position mounting)	19/23" OR ETSI
<b>STEP 10 - OPTIONS &amp; ACCESSORIES (Select required items)</b>	
VDE w/Schuko 10A 3m	NONE    OR YES
<b>STEP 11 - SUBMIT COMPLETED FORM TO UNIPOWER FOR CHECKING AND ALLOCATION OF CONFIGURATION PART NUMBER</b>	
Configuration Part Number: 1-M00035_____ (leave blank for completion by UNIPOWER)	