

### DESCRIPTION

The XPGe12.48G rectifier raises the bar for efficiency in medium-size rectifiers. Incorporating resonant technology to reduce component stresses also provides increased system reliability. The rectifier features a wide input operating voltage range to maximize power availability within demanding utility power environments.

This compact rectifier supports up to 4.8kW in a 1RU/19" shelf making it ideal for a wide range of communications applications that demand efficiency, reliability and adaptability, including wireless base stations, remote switches and broadband access.

The XPGe12.48G is one of three rectifier types that can be installed in the Aspiro Series DC power systems, see additional information on the [UNIPOWER web site](#).

### FEATURES

- ◆ >95% typical efficiency
- ◆ Leading power density of up to 21.8W/in<sup>3</sup>
- ◆ Rugged input voltage range
- ◆ Thermal protection
- ◆ Hot-swappable
- ◆ International standards compliance

### THREE YEAR WARRANTY

### SAFETY CERTIFICATIONS

UL60950-1 2<sup>nd</sup> Edition  
 CSA22.2, No. 60950-1 2<sup>nd</sup> Edition  
 EN60950-1 2<sup>nd</sup> Edition

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### RECTIFIER MODULE ORDERING GUIDE

MAX. POWER	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT VOLTAGE <sup>2</sup>	INPUT CURRENT <sup>4</sup>	MODEL NO.
1200W	48.0VDC 53.5VDC <sup>1</sup>	25.0A 22.4A	90-275VAC	5.8A/5.5A	XPGe12.48G

#### Notes:

1. Default factory setting.
2. Units will operate over the full range from 90VAC to 275VAC, automatically limiting output current according to the actual input voltage range applied.
3. Input currents shown are nominal values at 110VAC/230VAC as appropriate.



### 4-BAY 19" SHELF ORDERING GUIDE

MAX. POWER	DESCRIPTION	PART NUMBER
4800W	Single Phase Input	XS1948-E1R0R0R0R0C
4800W	Three Phase Input	XS1948-E4R0R0R0R0C

### ACCESSORIES

DESCRIPTION	PART NUMBER
Shelf Paralleling Kit	YGA.01611

### INDUSTRIES & APPLICATIONS



Telecom



Cable



Utilities



Government



Industrial

### Specifications

INPUT	
Voltage	Nominal: 90-275VAC
	Permitted variation: 90-300VAC (L-PE and N-PE <250VAC)
Current	<5.5A @ 230VAC <5.8A @ 110VAC
Frequency	47-63Hz
Power Factor	>0.99 typical
Fuse	Two 12.5A fast blow (L & N)
OUTPUT	
Voltage Range	46-57VDC
Power	1200W at 180-264VAC 600W at 90-180VAC
Current	@ 48V 25.0A at 180-275VAC 12.5A at 90-180VAC
	@ 53.5V 22.4A at 180-275VAC 11.2A at 90-180VAC
Efficiency	<p>EFFICIENCY (@ 230VAC)</p>
Tolerance	Vout ± 1.0%
Transient Response	±3% at load variation 10-90% or 90-10% recovery time 20ms
Load Sharing	<5% of nominal current
Ripple	<100mV p-p (BW 500 MHz)
Psophometric	<2mV, according to CCITT norms
STANDARDS	
Inrush Current	ETSI ETS 300 132-1
Harmonics	EN61000-3-2
EMC	ETSI EN300 386 V.1.3.2 EN61000-5-5, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4 EN55024 performance criterion A EN55022 Class B FCC Part 15 Class B
Safety	IEC60950-1, EN60950-1 CAN/CSA-C22.2 No.60950-1-3
Environmental	Storage: ETSI EN300 019-2-1 Transport: ETSI EN300 019-2-2 Operation: ETSI EN300 019-2-3 Damp Heat: IEC60068-2-78 MIL-STD-810D section 507.2 Earthquake: GR 63 Core Zone 4

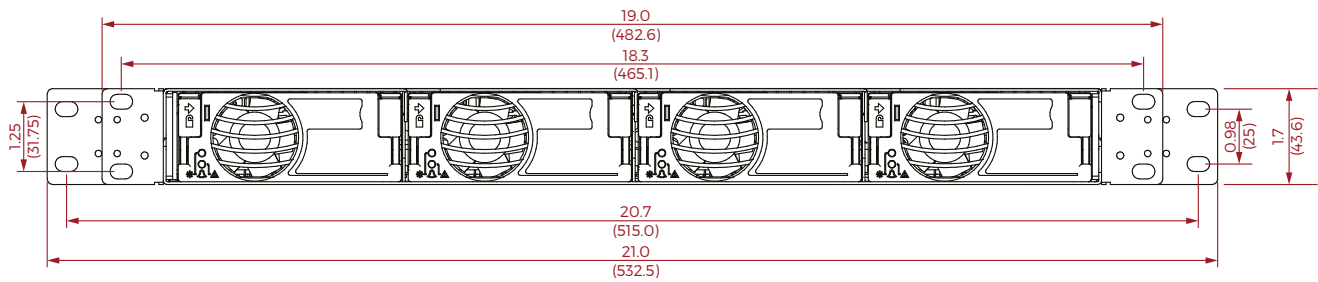
MECHANICAL	
Dimensions, inches (mm)	4.0 W x 9.1 D x 1.6 H (102 W x 230 D x 41 H)
Weight	2.4lbs. (1.1kg)
Cooling	Fan-cooled, speed controlled
Insulation	4.25kVDC primary-secondary 2.12kVDC primary-ground 0.5kVDC secondary-ground
Enclosure	IP20
Mounting	19in/23in x 1U subrack up to 4 modules
GENERAL	
Protection	Short circuit protection, automatic current/power limiting, input/output overvoltage protection, thermal protection.
Alarms	Fan failure Fan pre-warning Temperature shutdown High temperature pre-warning Output power derating Low output voltage Current share error Internal communication failure Output overvoltage
LED Indicators	Green: AC normal operation Yellow steady: power derating Yellow flashing: Comms. failure Red: Module alarm
Audible Noise (nominal input)	<45dBA @ ≤25°C <55dBA @ >45°C
Operating Temperature	-40°C to +75°C up to 2000m. Reduced spec -40°C to -20°C.
	<p>TEMPERATURE DERATING</p>
	For 3000m altitude derate by 5°C.
Storage Temperature	-60°C to +85°C

## TRU Power shelf Specifications

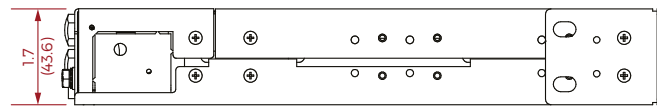
INTERFACE / SIGNALING	
Addressing	For controller supervision each module position is addressed via DIP switches. Each switch can set 4-bit binary address, which means up to 16 Power Shelves (with up to 64 modules) can be supervised. Addressing is performed by setting the four bits to ON or OFF (ON=1, OFF=0).
Communication	Internal Communication bus RS485
DESIGN STANDARDS	
EMC	IEC/EN61000-4-6; GR-1089; IEC/EN61000-4-3; EN55022/CISPR 22 Class B; FCC E222CFR
Safety	UL60950-1 CSA60950-1 EN60950-1 (UL approval only for input voltage levels 120 VAC / 250 VAC) IEC60950-1 CB report CE-mark for LVD/EMI
GENERAL	
Environmental Immunity	IEC/EN60068-2-64 - 1993-05-28; IEC/EN60068-2-27 - 1987-06-15; IEC/EN60068-2-27 - 1987-06-15; IEC/EN60068-2-29 - 1987-03-30
Storage	ETSI EN 300 019-2-1
Transport	ETSI EN 300 019-2-2
Operation	ETSI EN 300 019-2-3
Damp Heat	IEC60068-2-78
Operating Temperature and Altitude	according to installed rectifiers, see individual datasheets.
Extended Temperature and Altitude	according to installed rectifiers, see individual datasheets.
Cooling	Designed for fan cooled, speed controlled modules (front to rear airflow)
Module Configuration	Hot-swappable modules (N+1)
Insulation	Basic: from input to chassis Reinforced: from input to output
Enclosure	IP21
Dimensions, inches (mm)	16.8 (427) W x 1.72 (43.6) H x 9.5 (241) D
Weight (no modules)	7.7lb   3.5kg
Mounting	19" or ETSI (using appropriate brackets)

1RU Power shelf Mechanical

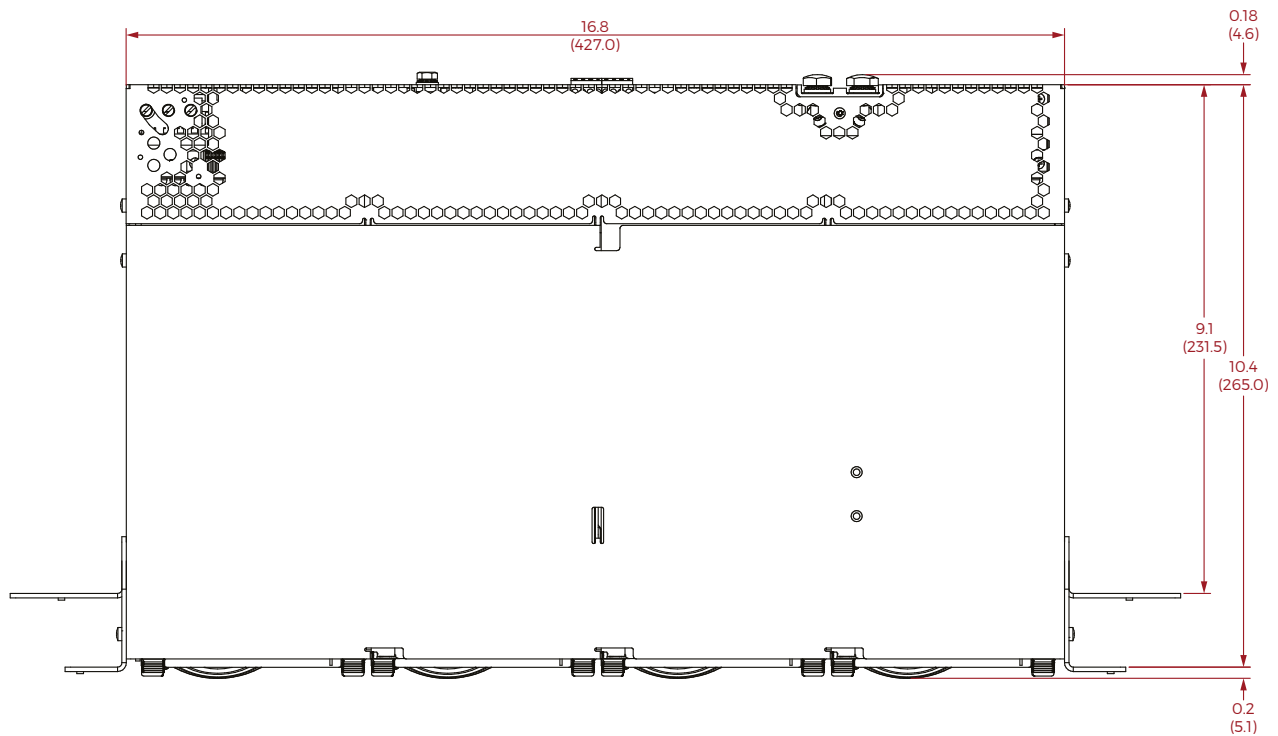
FRONT VIEW



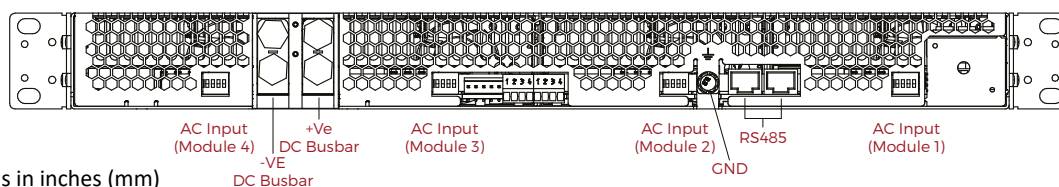
SIDE VIEW



TOP VIEW



REAR VIEW



Dimensions in inches (mm)