

INDUSTRIES & APPLICATIONS



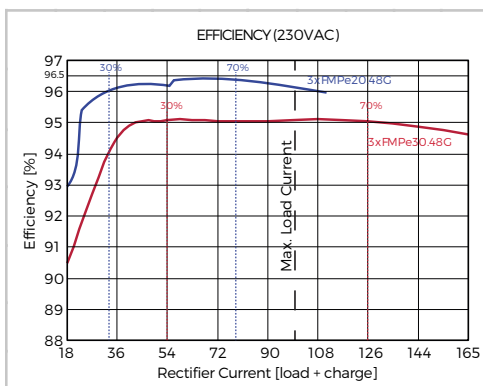
KEY FEATURES

- ◆ >96% Efficiency Rectifiers
- ◆ 180A / 8.7kW Load Capacity
- ◆ Remote Monitoring & Control
- ◆ Field Replaceable Controller
- ◆ Ethernet Comm. with SNMPv3
- ◆ 3 LED Alarm/Status Indicators
- ◆ 4 or 10 Form-C Relay Alarms
- ◆ Up to 5 Load Breakers
- ◆ 1 or 2 Battery Breakers
- ◆ LCD Display/Touchpad
- ◆ Easy Installation

SAFETY COMPLIANCE

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

THREE YEAR WARRANTY



DESCRIPTION

Guardian Access 2U is a 2RU high 19" rack-mounted, integrated DC power system providing an output of -48VDC. These systems can accommodate up to 3 Guardian family high efficiency hot-swap rectifiers. A total load current of 100A / 5.4kW is available with battery charge current up to 65A in addition. The rectifiers are internally fan cooled with speed control which is a function of load and temperature, keeping acoustic noise to a minimum.

The DC output circuits can provide up to 5 loads which utilize circuit breakers rated from 4A to 150A. 2 additional 80A, 100A or 125A breakers provide battery protection. A programmable 125A low voltage battery disconnect (LVBD) is available; while a partial load disconnect (PLD), also rated at 125A and programmable, can provide non-critical load shedding when operating on batteries.

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. An additional 6 can be included as an option. 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 Guardian Access 2U 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	GUARDIAN ACCESS 2U - MS0028C	
OUTPUT		
System Voltage	-48VDC nominal 53.5VDC float	
Maximum Capacity @ 120VAC nominal	Load	70A
	Battery	70A discharge 35A charge (s/w controlled)
Maximum Capacity @ 230/400VAC nominal	Load	100A
	Battery	100A discharge 65A charge (s/w controlled)
No. Rectifier Slots	3	
DC DISTRIBUTION		
Loads Circuits	1 to 5 (4A to 150A - see configuration guide on page 5)	
Battery Circuits	2 x (80A, 100A or 125A)	
INPUT		
Voltage (nominal)	1-phase 100-120/200-240VAC (L + N + PE) 3-phase 230/400VAC (L1 L2 L3 + N + PE)	
Frequency	47-63Hz	
Maximum Input Current	50A @ 100-120VAC 39A @ 200-240VAC 13A per phase @ 400/230VAC	
Rectifier Power Factor	>0.98 (typical)	
Surge Protection	Optional (see configuration guide on page 5)	
MONITORING & CONTROL (ACX Advanced Controller)		
Alarm Relays	4 standard, option for 10	
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 (TTL Level)	
BATTERY MANAGEMENT		
Symmetry Inputs	6 or 12 (can be redefined as analog inputs up to 100VDC)	
Low Voltage Battery Disconnect (LVD)	1 x 125A Programmable	
Partial Load Disconnect (PLD)	1 x 125A Programmable (Optional)	
Temperature Compensated Charging	Programmable	
COMPLIANCE		
EMC	EN 300 386 ; EN61000-6-3 (Emission) ; EN61000-6-2 (Immunity)	
Safety	IEC60950-1:2005 2 Ed. +A1:2009	
ENVIRONMENTAL		
Operating Temperature	-40°C to +55°C	
Storage Temperature	-40°C to +85°C	

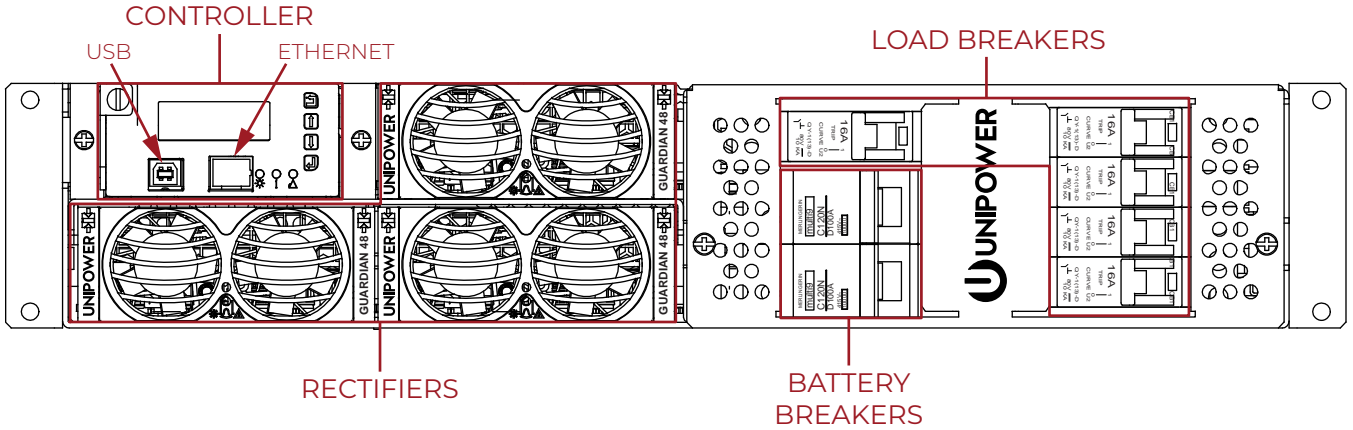
RECTIFIER MODULES vs. SYSTEM CAPACITIES

RECTIFIER MODULES						SYSTEM CAPACITY @ FLOAT		
MODEL NUMBER	EFFICIENCY ¹	INPUT VOLTAGE ²	INPUT CURRENT ³	OUTPUT POWER	OUTPUT CURRENT 48V / 53.5V	MAX. CHARGE CURRENT	MAX. LOAD CURRENT ⁵	
							TOTAL	2+1
FMPe20.48G	>96.0%	85-180VAC	9.6A	1100W ⁴	22.9A / 20.6A ⁴	35A ⁴	62A ⁴	41A ⁴
		180-275VAC	11.6A	2000W	41.7A / 37.4A	65A	100A	75A
FMP25.48G	>92.5%	85-180VAC	14.4A	1400W ⁴	29.2A / 26.2A ⁴	35A ⁴	79A ⁴	52A ⁴
		180-275VAC	16.8A	2500W	52.1A / 46.7A	65A	100A	100A
FMPe30.48G	>95.0%	85-180VAC	15.7A	1700W ⁴	35.4A / 31.8A ⁴	35A ⁴	70A ⁴	75A ⁴
		180-275VAC	17.0A	2900W	60.0A / 54.2A	65A	100A	100A

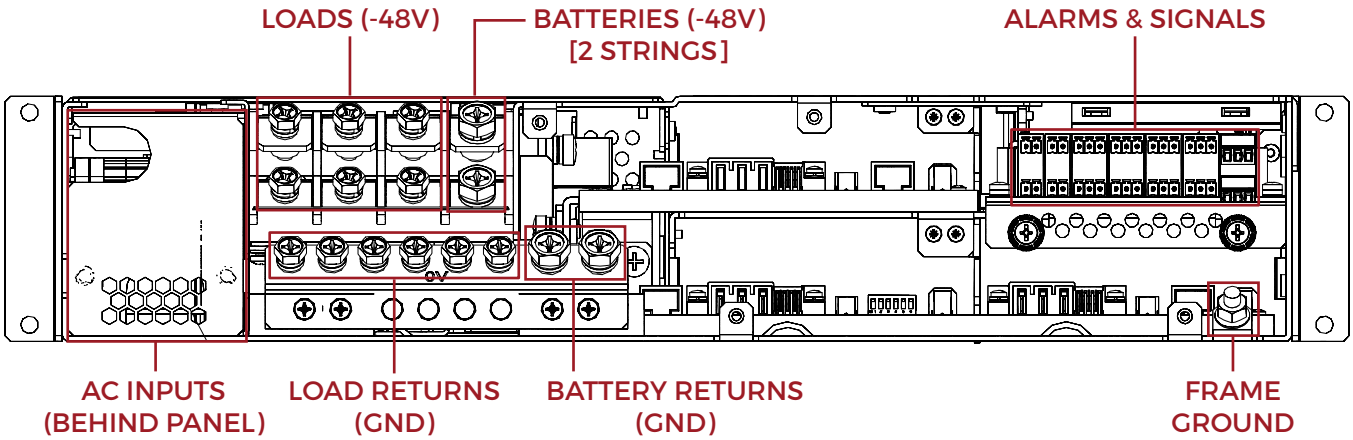
Notes:

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 85VAC/180VAC as appropriate
4. Figures quoted are at 110VAC input. Derating is linear from 180VAC to 85VAC. See separate rectifier datasheets for details
5. May require reduction in maximum charge current when batteries not fully charged.

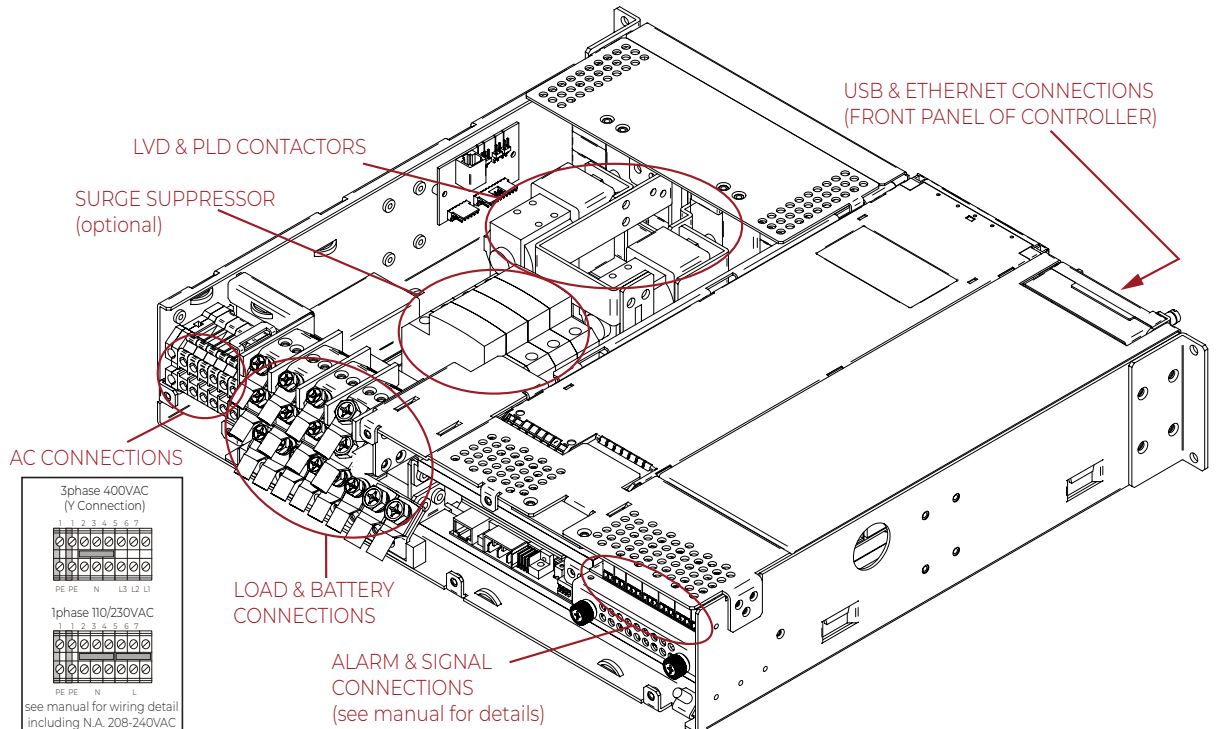
FRONT PANEL DESCRIPTION



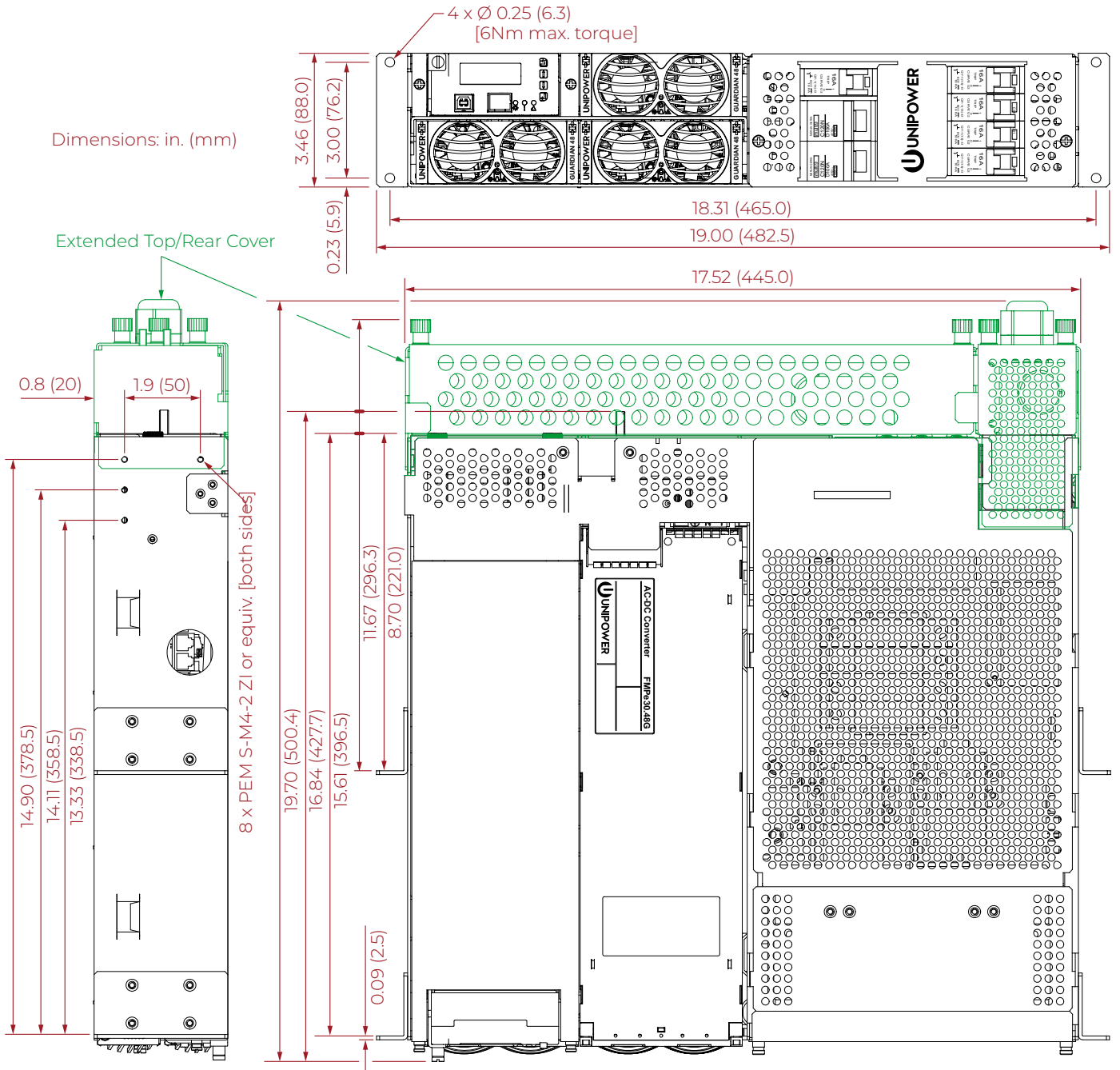
REAR PANEL DESCRIPTION



PERSPECTIVE REAR VIEW



DETAILED DIMENSIONS



REAR VIEWS

showing standard top/rear covers used on Standard Input Units

showing extended top/rear covers used on Individual Input Units



WEIGHTS & DIMENSIONS

UNIT TYPE	UNIT				PACKAGED				
	Width	Height	Depth	Weight	Width	Height	Depth	Weight	# in box
System Unit (Standard)	19.00 (482.5)	3.46 (88.0)	16.84 (427.7)	32 lbs (14.5 kg)	22.5 (570)	8.3 (210)	19.3 (490)	35 lbs (16 kg)	1
System Unit (Extended Top)			19.70 (500.4)	33 lbs (15.0 kg)	22.5 (570)	8.3 (210)	22.5 (570)	37 lbs (17 kg)	1
Rectifier Module	4.2 (107)	1.6 (41)	14.0 (355)	4.6 lbs (2.1 kg)	15.5 (394)	2.3 (58)	8.2 (208)	4.8 lbs (2.2 kg)	1

Dimensions in inches (mm)

PRE-CONFIGURED STOCK MODELS

(normally held in stock for immediate delivery)

ORDER CODE	DESCRIPTION
MS0028G*900010	Standard Input Shelf ACX Controller 4 alarm relays 100A Battery Breaker (x2) Load Breakers: 63A/25A/25A/16A/16A 3m Temp. Sensor Cable (x1) [Rectifiers must be ordered separately.]
MS0028G*900037	Standard Input Shelf ACX Controller 4 alarm relays 100A Battery Breaker (x2) Load Breakers: 40A/40A/20A/20A/10A 3m Temp. Sensor Cable (x1) 3m Symmetry Cable (x2) [Rectifiers must be ordered separately.]
FMPe20.48G	Rectifier module - 42 Amp [IMPORTANT - install only the same type and rating rectifiers in each systems.]
FMP25.48G	Rectifier module - 52 Amp [IMPORTANT - install only the same type and rating rectifiers in each systems.]
FMPe30.48G	Rectifier module - 60 Amp [IMPORTANT - install only the same type and rating rectifiers in each systems.]
XGB-01-G	Rectifier dummy module [Must be ordered to fill unused rectifier positions.]

For configurations when the pre-configured stock models do not suit the requirement please complete the "non-stock configuration guide" on the next page and email to customer.services@unipowerco.com for verification and quotation.

