

## INDUSTRIES & APPLICATIONS



Telecom



Cable



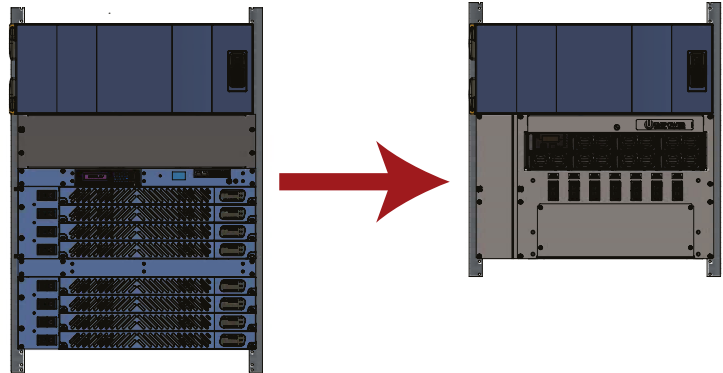
Utilities



Government



Industrial



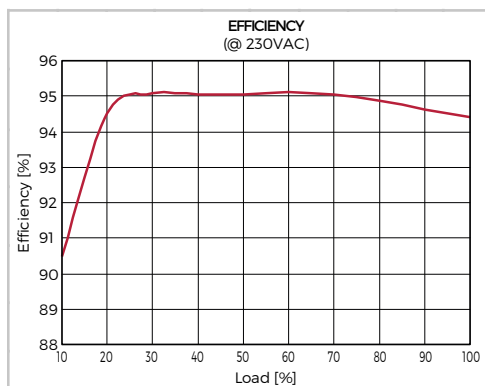
## KEY FEATURES

- ◆ Replaces Power Section for Legacy SPMD & SPM Systems
- ◆ >96% Efficiency Rectifiers
- ◆ 375A N+1 Capacity
- ◆ Remote Monitoring & Control
- ◆ Field Replaceable Controller
- ◆ Ethernet Comm. with SNMPv3
- ◆ 3 LED Alarm/Status Indicators
- ◆ 10 Form-C Relay Alarms
- ◆ LCD Display/Touchpad
- ◆ Easy Installation

## SAFETY COMPLIANCE

CAN/CSA C22.2 No 62368-1:2014  
UL 62368-1:2014  
EN 62368-1:2014/A11:2017

## THREE YEAR WARRANTY



## DESCRIPTION

The Guardian SPMD/SPM Retrofit Kits replace the legacy power section in existing SPMD & SPM systems.

The module is 8RU high and contains two rectifier/controller power shelves incorporating up to 7 Guardian family high efficiency hot-swap rectifier modules along with an ACX Advanced system controller plus an alarm module. A maximum total current of 375A N+1 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 ACX Advanced controller monitors system parameters, controls rectifier output, and provides alarms for system failures. The controller is hot-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 ten form-C relay outputs provide the alarms for remote use. Two digital inputs and outputs are also provided as well as an SD card with sufficient capacity 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 RFK-1 Retrofit Kit 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	385.6300.RFK3 RETROFIT KIT
OUTPUT	
System Voltage	-48VDC nominal   53.5VDC float (factory default, user adjustable via controller)
Maximum Load Capacity	375A N+1
No. Rectifier Slots	7
DC CONNECTIONS	
Bus Bars & Lugs	Kit includes hardware to connect to existing Sageon installation
INPUT	
Voltage (rectifier module)	1-phase 180-275VAC
AC Supply Configurations	1-phase 230/240VAC (L-N-PE) 2-phase 240VAC (L1-L2-PE) 3-phase (3-wire Wye) - 190/200/216/208/220/240VAC (L1-L2-PE / L2-L3-PE / L3-L1-PE) 3-phase (4-wire Delta) - 200/210/220/230/240VAC (L1-N-PE / L2-N-PE / L3-N-PE)
Frequency	47-63Hz
Maximum Input Current	see rectifier module capacity table below
Rectifier Power Factor	>0.98 (typical)
Protection	Individual circuit breaker for each rectifier
AC CONNECTIONS	
Terminals Blocks	L/N or L1/L2 per rectifier position - accepting wire gauge 24-10AWG
MONITORING & CONTROL (ACX Advanced Controller)	
Alarm Relays	10
Local Interface	4 x 20 LCD, 4-key menu, USB / RS232, microSD card slot 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)
BATTERY MANAGEMENT	
Symmetry Inputs	6 or 12 (can be redefined as analog inputs up to 100VDC)
Temperature Compensated Charging	Optional: Programmable via system controller
COMPLIANCE	
EMC	EN 300 386; EN61000-6-3 (Emission); EN61000-6-2 (Immunity)
Safety	CAN/CSA C22.2 No 62368-1:2014; UL 62368-1:2014; EN 62368-1:2014/A11:2017
ENVIRONMENTAL	
Operating Temperature	-40°C to +65°C, derated above +55°C (see manual and rectifier datasheets)
Storage Temperature	-40°C to +85°C

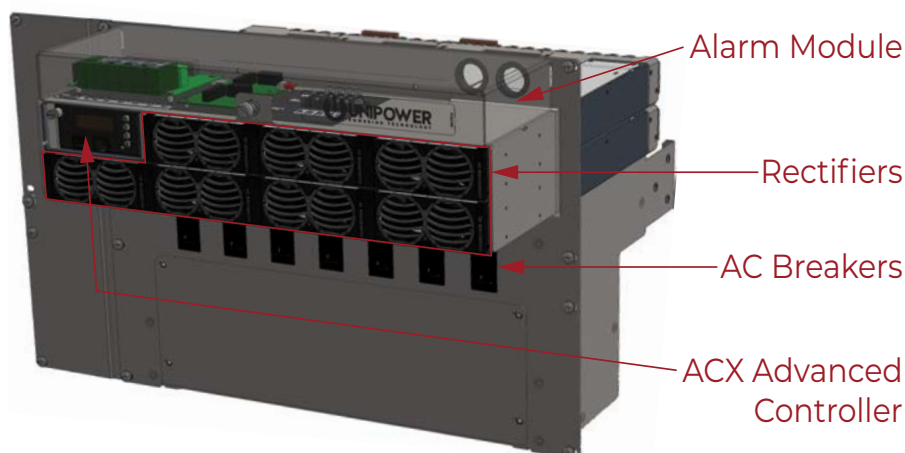
## RECTIFIER MODULE CAPACITIES

RECTIFIER MODULES						
MODEL NUMBER	EFFICIENCY <sup>1</sup>	INPUT VOLTAGE <sup>2</sup>	INPUT CURRENT <sup>2</sup>	OUTPUT POWER	OUTPUT CURRENT	
					Vnom	Vfloat <sup>3</sup>
<a href="#">FMPe30.48J</a>	96.2% peak	180-275VAC	17.5A	3000W	62.5A	56.1A

Notes:

1. When operating at 230VAC.
2. Input currents shown are expected maximums at 180VAC.
3. Factory set to 53.5V. Adjustable via system controller.

## KIT COMPONENTS



### Note:

1. The alarm module cover is shown transparent in the above image so as to show the alarm board and connection detail within.
2. Each kit is supplied with all the necessary hardware to install the system and make electrical connections.
3. Sufficient existing hardware will need to be removed to create the 8RU rack space required by each kit to be installed.

## ORDERING GUIDE

To order, determine the capacity of the system that is to be upgraded and select kits and modules as appropriate.

MODEL	SHELF CURRENT FMPe30.48G   FMPe30.48J	TOTAL CURRENT FMPe30.48G   FMPe30.48J	MAX. # RECTIFIERS	KIT PART NUMBER
RFK3	362A N+1   375A N+1	362A   375A N+1	7	385.6300.RFK3

MODULE POWER	RECTIFIER MODEL #	QUANTITY (one rectifier only)
3000W	FMPe30.48J	
BLANK	XGB-01-G	