



### **Protecting Your Network Reliability**

- **Powerful** – High density (31.4 W/in<sup>3</sup>) rectifiers with configurable configurations up to 26 kW and 720 Ah battery backup per cabinet.
- **Connected** – State-of-the-art system controller with self-guided operation. SNMP and web compatible.
- **Intelligent** – Sophisticated management features extend the battery life and monitor critical site equipment such as HVAC and generators.
- **Rugged** – Design caters for poor grid quality supply.
- **Hybrid Compatible** – Deployable and upgradable for use in Hybrid Power applications.



### **Description**

Guardian modular DC cabinet and rack-mount systems are designed to meet rigid telecom applications with very high reliability and flexibility for future expansion.

Rectifier and battery combination cabinets are configurable to allow an installed capacity up to 26 kW of rectifiers together with DC distribution, controller, and battery backup in a single footprint.

Options include battery and load disconnects; AC surge protection; and various DC and AC distributions.

Ideal for radio base stations, broadband nodes, and core sites.

Hybrid Power Solution compatible allows for connection of renewable energy sources and integration of Hybrid system controller.

**Mechanical Data**

	Cabinet Systems	19 inch integrated
Dimensions	600 × 600 × 1400/1800/2000 mm (WxDxH)	19" mounting × 445 mm × 310 (WxDxH)

**Output**

Voltage	-48 VDC	
Maximum Power	-48 V 26.1 kW	-48 V 20.3 kW
Rectifier Types	Guardian FMP Series	

**DC Distribution**

Battery Breakers	1-6 off (max 125 A) 1-3 off (max 250 A)	
Load Breakers	26 × breakers (2 - 63 A) maximum	21 × breakers (2 - 63 A) maximum
Battery Capacity	Up to 720 Ah using 4 × 180 Ah strings	

**AC Input**

Voltage	1 or 2 × 230 VAC phase TN (Δ) 1 or 2 × 400 VAC phase IT (Y)
Frequency	47 – 63 Hz
Input Current	<18 A per rectifier (FMPE30.48/FMP25.48)
Power Factor	>0.99 (typical)
Surge Protection	Optional

**Monitoring and Control**

Controller	PCC / ACC
Alarm Relays	4 standard, option for up to 10
Local Interface	4 × 20 LCD, 4 key menu, USB/RS232
Remote Interface	Ethernet/Modem using PowCom™ software package
Visual Indication	Green LED – System ON Yellow LED – Message(s) Red LED – Alarm(s)
External I/O	2 × inputs, 2 × outputs (open collector)

**Battery Management**

Symmetry Inputs	Up to 12	
Programmable LVD	1 × 300 A or 500 A	1 × 300 A or 400 A
Programmable PLD	Maximum 2 × 125 A, 200 A or 400 A	

**Connections**

Battery Connections	Battery Cable, M8 lugs
AC Connection	16 mm <sup>2</sup> (4 AWG)
Load Breaker Connections	Negative termination directly from breakers. Common positive from busbar
Alarm Connections	1.5 mm <sup>2</sup> (14 AWG)

**Compliance**

EMC	EN 300 386 EN 61000-6-3 (Emission) EN 96000-6-2 (Immunity)
Safety	EN 60950

**Environmental**

Operating Temperature	-40 °C to +75 °C, derating over 55 °C
Storage Temperature	-40 °C to +85 °C

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