



Protecting Your Network Reliability

- **Powerful** – High density (31.4 W/in³) rectifiers with configurable configurations up to 29 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 from 10 kW up to 29 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 29 kW	-48 V 23.2 kW
Rectifier Types	Guardian FMP Series	
Converter Types	FMD15.24	

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	0.97	
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 ² (4 AWG)	
Load Breaker Connections	Negative termination directly from breakers. Common positive from busbar	
Alarm Connections	1.5 mm ² (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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