

RELIABLE POWER ANYTIME, ANYWHERE

Compact, rugged, reliable and proven fuel cell power system

Altergy, the leading producer of fuel cells for telecom backup power, is pleased to introduce the new Freedom Power™ Nacelle, a lightweight and compact packaging of its rugged, reliable and proven fuel cell power system.

Nacelle dramatically decreases the footprint, volume, weight and price of fuel cells while providing numerous mounting options. Nacelle can be cabinet mounted, shelter mounted, wall mounted, door mounted or pole mounted.

Altergy's clean and green Freedom Power™ System eliminates costly batteries, battery maintenance, battery replacements, generators and environmental issues.

The Freedom Power™ Nacelle shares Altergy's rich history of telecom reliability, performance and durability with more than 8.3 million watts deployed and more than 32 million operating hours.

Altergy's Freedom Power fuel cells provide freedom from:



Altergy's Freedom Power System – Nacelle

2 Bottle Fuel Solution

- Low initial capital costs
- Low maintenance and operating costs
- Lowest Total Cost of Ownership
- Long runtime solution and convertible to unlimited runtime with Altergy Freedom Fuel™ service
- Smallest footprint, highest power density
- Light weight – enabling rooftop applications
- Long product life
- Supports remote monitoring and reporting*
- Mounts anywhere
- Provides low noise signature

* May require optional equipment

Altergy Freedom Power System – Nacelle

Altergy Freedom Power System – Nacelle				
Model Number		FPS - 148N	FPS - 2.5 48N	FPS - 548N
Output ¹	Rated Standby Power (kW) ¹	1 kW	2.5 kW	5 kW
	Nominal Current (A)	21	52	105
Voltage	Rated (VDC)	48	48	48
Physical	Dimensions (W x D x H in.)	16" x 47" x 17"		21" x 47" x 17"
	Weight (lbs)	240 lbs	280 lbs	420 lbs
Fuel	Type and Grade	Gaseous hydrogen, industrial grade 99.95% pure (CGA-G-5.3 Type I, Grade B)		
	Supply Pressure	40 to 100 psig / 2.75 to 6.89 bar		
	Runtime	Various, Unlimited with Altergy Freedom Fuel service		
Operational ¹	Ambient Temperatures ²	-40°C to +50°C		
	Relative Humidity	5% to 95% non-condensing		
	Location	Indoors with suitable air management or outdoors with suitable enclosure		
	Altitude	10,000 ft		
Control Electronics	Supervisory Control	32-Bit Digital Signal Controller w/on-board, real time diagnostics, communications, thermal & systems management. Sensor less brushless direct current motor control		
	Power Conditioning	Fully digital, multi-phase, interleaved DC/DC converter		
	Monitoring Software	Real time control communicates with GUI to provide system and site status and allow user input of operating parameters. Field upgrades through communication port		
	I/O Interfaces ³	Ethernet supported. Four user-defined dry contacts. Optional wireless monitoring. Optional RS-232, RS-485 and additional user defined contacts		
	Sensors	Fuel pressure, leak detection, ambient temperature & humidity, stack & electronics temperatures, fan & filter conditions, stack & output currents and voltages, tampering		
Environmental	Clean	California Air Resources Board (CARB) certified as a zero emission electrical power generator. By-product is water		
	Green	Recycles residual heat to increase fuel and system efficiency. Can use "Green" hydrogen fuel (generated from biomass, hydroelectric, solar or wind powered electrolysis)		
	Noise	<60dBA @ 3 meters		
Safety/Certification/Compliance ⁴		Designed and tested to NEBS Level 3 criteria and certified under CSA FC-1, 2012		

1. FPS Engines can be combined to achieve up to 100 kW of output.

2. 10 °C (50 °F) and below requires low temperature configuration, 40 °C (104 °F) or higher requires high temperature configuration.

3. I/O Options vary by model number

4. Some certifications pending.

Specifications subject to change without notice

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