

BALLARD™

FCgen®-H2PM

FCgen®-H2PM 5.0kW



The FCgen®-H2PM 5.0kW is an electric power generator that uses hydrogen as fuel and fuel cell technology to provide up to 5kW of reliable backup DC power on demand. The intended application of this system is backup power for critical power applications. The FCgen®-H2PM System continuously monitors the DC bus voltage in a standby mode and operates during power outages when the DC bus voltage drops to a customer defined set point.

The FCgen®-H2PM 5.0kW is designed for a 19" rack installation. The system can be delivered in two configurations: either as a standard solution with an ultracap module add-on for battery free backup, or with customer supplied batteries. Multiple FCgen®-H2PM 5.0kW Systems can be coupled in parallel for higher loads than 5.0kW (maximum 12 systems in parallel for up to 60kW output).

Features

- 12 yearly self test features integrated
- Instant backup in case of power outage – no delay
- Compact and modular solution
- Backup duration dependent on how much hydrogen is available
- Hydrogen storage divided in three strings emptying one at the time
- Light weight
- Very low noise
- No toxic waste
- Zero emissions

Configurations

- 19" rack mount
- Exhaust air must be directed to outside
- Can be configured in parallel with other modules to get higher capacity
- Can be installed in outdoor cabinets, shelters or similar solutions

Product Specifications

Specification	Value
Power Rating	5.0kW
Nominal Voltage	48 Vdc
Voltage Adjustable	48 to 55 Vdc or -48 to -55 Vdc
Voltage ripple	< 100mVpp @ 30MHz
Overall Size (WxDxH)	500 x 567 x 617 mm (19.69" x 22.32" x 24.17")
Product Weight	75 kg (165 lbs.)
Fuel Storage	External hydrogen cylinders
Fuel Connection	Valve Block with 3 inlet strings
Fuel inlet pressure	5 bar(g) (Ballard supplied pressure regulator)
Fuel Specification	Hydrogen (Grade 3.5 or higher)
Fuel Consumption	13.4 NLPM of hydrogen per kW
Fuel monitoring	Dry contact alarm when a fuel string is empty
Enclosure Material	Alu-Zink Coated Sheet Metal and Aluminum
Indoor Installation Environment	Pollution degree 2
Sound Level	50 dBA at 1 meter at 5kW
Temperature Range	-20°C to +46°C (-4°F to +115°F) Ambient Temperature (Process Air) 5°C to +46°C (41°F to +115°F) Room/Indoor Temperature
Relative Humidity	5%-95% Non-Condensing
Alarms	Dry Contacts
Parallel Operation	Up to 12 FCgen®-H2PM Systems can be operated in parallel for up to 60kW of power output
Start-Up Time	System provides seamless response to grid loss with DC bus battery or UltraCap Unit add-on
Standby Power	32W (DC) and 61W (AC & DC) including UltraCap option 0W to 200W (AC heater) Freeze Protection
AC Power Input	110/230 VAC (90-264 VAC) 50/60Hz
Certifications	CE
Alarms	Dry Contacts / SNMP via Eltek Smartpack S
Fuel Consumption	53.6 NLPM of hydrogen @ 4.0kW power output

Includes	Description
4001700	FC Unit, FCgen®-H2PM 5.0kW/48V
4001750	Controller, FCgen®-H2PM 5.0kW/48V
4000870	Valve Block, FCgen®-H2PM 5.0kW/48V