MFC 200

PORTABLE INDUSTRIAL POWER

Horizon Fuel Cell Technologies

MFC 200 offers extremely long endurance power in the field compared to other alternatives. It is as quiet as a whisper and has minimal carbon emissions. Its integrated fuel cell uses an electrochemical process to generate electricity with few moving parts. The MFC 200 is fuelled by a safe and economical methanol-water blend.

The **MFC 200** fuel cell system can be configured to connect directly to your load to provide constant, prime power, or connect to your battery to continuously monitor and maintain its charge level.

If your battery voltage drops below a predetermined threshold, the unit automatically starts to carry the load and recharge the battery. This can prevent excessive deep discharge and recharge cycles, thus maintaining longer service life for your battery. After charging is complete, the MFC 200 reverts to standby mode automatically.

- **Uses low-volatility fuel**
- **Robust industrial construction and metal casing**
- **Near-silent operation, few moving parts**
- **Ensures batteries are always charged**
- **Perfect to support wind and/or solar power**
- **Remote monitoring and control functionality**
- **Environmentally friendly, extremely efficient**
- **Mobile, light and compact**

APPLICATIONS

- **Off-grid continuous power**
- **Extended duration backup**
- **Emergency Lighting**
- **Temporary Signage**
- **Emergency Response**
- **Monitoring-Surveillance**

HYBRID SOLAR MFC 200 CONFIGURATIONS

MFC 200 can be combined with a solar system to reduce fuel consumption and provide an even longer lasting power source. If the solar modules can produce adequate electricity, the solar system takes over and MFC 200 goes into standby mode.

MFC 200 RUN TIMES

MFC 200 fuel consumption is approximately 1.2 Liters per kWh of energy produced. A 25L jerry can of fuel mix would provide over 20kWh of electrical power, or a run time of over 4 days at an average 200W load. Need more run-time, just use a larger tank!

Contact: sales@horizonfuelcell.com

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SYSTEM SPECIFICATIONS	MFC 200
Nominal Continuous Power Output	0 to 200 W @ 20°C and 101.3 kPa
Nominal Voltage	10.5-14.4V DC / 21.0-28.8V DC
Nominal Current	16.6A @ 12V / 8.3A @ 24V
Dimensions (WxDxH)	470mm x 287mm x 352mm
Total Weight	18 kg
OPERATION	
Power Conditioning	DC/DC converter
Cold Start Time Required	Approximately 45 minutes from 20°C
Cold Start Power Requirements	12V DC / 24V DC , 300W for less than 45 minutes
Cold Standby Power Consumption	<2W
Cold Standby Start Time	Less than 45 minutes
Fuel Consumption (Methanol/Water mix)	1.2L/kWh @ 20°C and 150W *
EMISSIONS	
Reformer exhaust	CO_2/H_2 by-product, must be properly vented to outside atmosphere
Noise	<65 dBA@ 1m
NOx, SOx	None
FUEL CELL SYSTEM	
Type	PEM
Coolant	Air
Fuel Type & Specification	Methanol-Water mix at Ratio of 61.5% methanol, 38.5% deionized water by weight
Methanol Quality Requirements	99.85% purity, compliant with IMPCA Specifications
Water Quality Requirements	Deionized water (ASTM Type II)
Hydrogen Purity Delivered	99.99% pure hydrogen
Fuel Storage	External to System; Suggest plastic enclosures rated for Methanol
OPERATING ENVIRONMENT	
Operating Temperature Range	-25°C to +45°C (additional winter box need for -25°C to -5°C)
Relative Humidity	0 to 95 % non-condensing
Recommended Altitude	<3,000 meters, 9,840 ft
Shipping Freeze Exposure	Non-operating / shipping exposure limit: -25°C
Usage	Outdoors in suitable cabinet
CONTROLS & COMMUNICATION	
User Interface	Control Panel
Remote Monitoring & Control	Standard: RS485/232 Optional: TCP/IP, GPRS, SMS

* Actual consumption depends on operating conditions.
**Specifications are subject to change.

- **Quiet, low-emission power**
- **Lightweight & compact**
- **Hybrid solar compatible**
- **Outdoor enclosure options**

The **MFC 200** is a fuel cell system that uses safe liquid fuel, incorporating a highly efficient process for generating hydrogen on demand from an economical Methanol / Water blend.

You have access to electrical power from liquid fuel via the electro-chemical reaction in the fuel cell.

Like a Generator, But Better!

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