



HYDROGEN
FOR A GREEN PLANET

Fuel Cell Power Generators

300W to 3kW / 12 to 48V/DC / 110 or 230Volt AC

Environmental Friendly & Noiseless Generators



TB - Series FC Systems

TROPICAL S.A. presents its all new TB Series hydrogen fuel cell power systems, with nominal electric power ranging from 300W to 3kW using the Proton Exchange Membrane (PEM) technology. The membrane on the fuel cell stack is converting hydrogen into electric power and the only "pollutant" is clean water. These power generators produce stabilized 12V, 24V or 48V DC (using a high quality dc/dc converter) or 12V, 24V or 48V DC as battery chargers and moreover, an inverter can be used to produce 110V or 230V AC. Mostly designed to be used as battery charger, Uninterruptable Power System (UPS), back-up power system, stand alone power generator providing electricity to our homes, solar hybrid solution, several military applications and for remote applications. Its main advantages are: quite in operation, small in size & light weight, produces zero-emissions, minimal maintenance, reliable, stable & quick start operation.

USER FRIENDLY INTERFACE FOR EASY OPERATION & DATA ACQUISITION



All TB - Series hydrogen fuel cell power systems are being controlled by an intelligent controller which is operated by a 16-colored touch screen monitor. The management of these systems is easily done through the touch screen monitor and the system is fully automated. Moreover, data acquisition of the parameters can be saved on an excel file (on a SD memory card or on your own memory stick).



MEASUREMENTS APPEAR ON THE TOUCH SCREEN

- STACK POWER (Watt)
- STACK VOLTAGE (Volt)
- STACK CURRENT (Ampere)
- BATTERY VOLTAGE (Volts)
- CONVERTER VOLTAGE (Volts)
- CONVERTER CURRENT (Ampere)
- CHARGER VOLTAGE (Volts)
- CHARGER CURRENT (Ampere)
- AIR STACK TEMPERATURE (C°)
- FAN AIR FLOW RATE (%)
- HYDROGEN PRESSURE (Bar)
- HYDROGEN CONSUMPTION (lt/hr)
- TIME / DATE
- HYDROGEN LEAK SENSOR
- HYDROGEN INLET VALVE (on/off)
- HYDROGEN PURGE VALVE (on/off)
- SYSTEM TOTAL OPERATING TIME
- SYSTEM SERVICE TIME
- STACK LIFETIME

TECHNICAL SPECIFICATIONS

FUEL CELL SYSTEM CODE : TB Series
 TYPE : PEM (Proton Exchange Membrane)
 POWER OUTPUT : 500W to 3kW
 AC OUTPUT (Inverter) : 110 or 230 V/AC
 DC OUTPUT (Converter) : 12V, 24V or 48V/DC
 DC OUTPUT (Charger) : 12V, 24V or 48V/DC
 HYDROGEN PURITY : 99.95%
 OXIDANT : Ambient Air
 COOLING SYSTEM : Air
 WEIGHT : 15kg (300Watt) to 50Kg (3kW)
 DIMENSIONS (mm) : L:450 x W:250 x H:450 to 750

MAIN APPLICATIONS

- Battery Charger for laptops, i-pod, mobile phones, PDA's, etc
- Military applications, Robotics, Automation, Modeling, Emergency power, etc
- Mobile applications with alternating points of use as Outdoor events, Mobile Traffic Signals
- Stationary appliances in remote regions / Remote applications, Solar/air/fuel cells hybrid systems
- Signal gathering and transmission, environmental data logging, security appliances & cameras
- Recreational Vehicles, Caravans, Motor Yachts & Boats, etc
- Emergency UPS power / back-up power for Telecommunication, Shops, Buildings, etc
- Seismographs & Meteo Stations, Security, Oil, Gas, etc
- Demonstration & Research projects



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