

METHANOL FUEL CELL MODULE

H⁵⁰⁰⁰₃



- Low noise and no harmful emission
- Compact and light footprint
- High efficiency and lower fuel costs
- Flexible installation in- and outdoor
- Reduction of CO₂ footprint
- Elimination of fuel and equipment theft



CLEAN ENERGY



SUSTAINABILITY



PROFITABILITY



SIMPLICITY



RELIABILITY



KNOW-HOW

Clean, simple and sustainable power

The H3 5000 fuel cell systems offer a simple and reliable solution for on-demand power generation for communication networks. Wherever there is a need for backup, whether being commercial telecom networks, security networks etc. H35000 does the job. Not only does it deliver critical and reliable power it also does it in an environmentally friendly way by reducing CO₂ and operating in a silent way which has never been experienced before. On top of that, it is uniquely designed in a way where methanol is reformed on site to hydrogen. This means that the fuel for SerEnergy systems is liquid and is not only easily distributed but also available all around the world. The system produces up to 5kW and as the system is modular, multiple systems can be interconnected.

The system delivers DC power directly, meaning that it is a highly efficient solution. There is no need for additional converters that have high power losses as a result. This reduces complexity and fuel consumption on site.

The system has built-in energy management system to combine with hybrid systems such as wind or solar power for sites which are off grid and where there is a need for a secondary power source whenever there is limited wind or sunlight, during the day or at night.

As a low maintenance power solution, the system is ideal for critical backup power, temporary or continuous 24/7. This means that the system can work in off-grid applications as well as backup power in grid applications.

The system uses HT-PEM technology which is unique and offers many advantages.

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PERFORMANCE	
Max power output ¹ [kW]	5
Nominal output [kW]	3.75
48 [Vdc]	42 - 57
Turn down [%]	0 - 100
IP rating	IP-20

1. Max power at beginning of life

OPERATIONS	
Fuel mix	60% vol methanol, 40% vol deionized water
Fuel consumption ² [l/kWh]	0,897
Net electric efficiency ² [%]	41
Ambient temperature ³ [°C]	-20°C and up to 50°C
Interfaces	AUX, HTTP/SNMP/Ethernet IP, CAN open, Remote monitoring and USB

2. At beginning of life and rated load
3. Options for lower temperatures

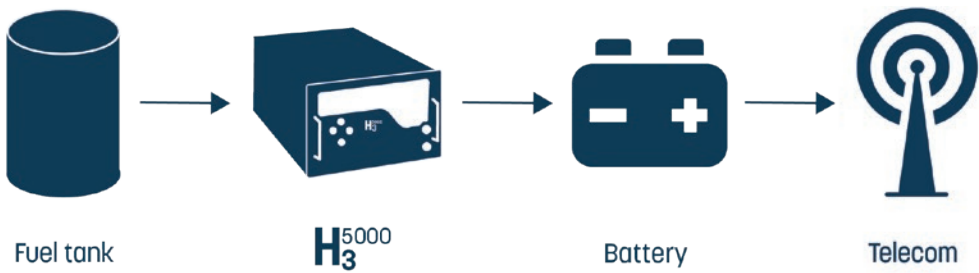
WEIGHT & DIMENSIONS	
Hight [mm] / Rack units [U]	267 / 6
Width [mm] / Rack size [in]	430 / 19
Length ⁴ [mm]	702
Weigth [kg]	65
Volume [l]	80,6

4. Length excluding handles, connectors on front and exhaust pipes on rear

All numbers related to kW or kWh is electrical power / Energy delivered at module terminals (kWe / kWhe)

Contact SerEnergy for other voltage variants.

TYPICAL SET-UP



DIMENSIONS

