

SereneU-5 G4

- 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, SIMPLE AND SUSTAINABLE POWER

SereneU-5 G4 by Advent offers a simple and reliable solution for on-demand power. Wherever there is a need for back-up, whether being commercial telecom networks, security networks, serene 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 Advent 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.

Serene Fuel cells by Advent can deliver DC power directly, without power loss from additional converters, providing a highly efficient energy supply. Different type of battery charging algorithms are integrated in the power electronics so that it can be supported and configured for different battery types, or hybrid electrical systems. Another advantage of integrated electronics is a closer integration with the fuel cell system itself and control of this which provides some additional options for optimization of operation, reliability, maintenance and diagnostics/state-of-health monitoring. All in all, this makes handling easy and reduces fuel consumption on site. As a low maintenance power technology, the unit is equally ideal for critical backup power, temporary or continuous 24/7. It works both in off-grid applications and as back-up for in grid applications.

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

Methanol fuel cell unit

PERFORMANCE	
Max power output ¹ [kW]	5
Nominal output [kW]	3.75
Output Voltage ² [Vdc]	42 - 58
Power turndown [%]	0 - 100
IP rating	IP-20

1. Max power at beginning of life

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

2. Contact Advent for other voltage variants.

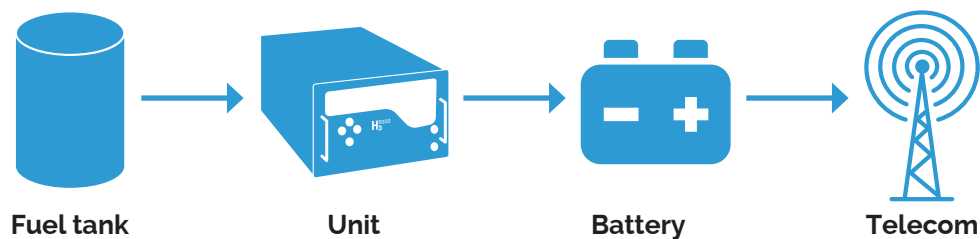
OPERATIONS	
Fuel mix	60% vol methanol, 40% vol deionized water
Fuel consumption ³ [L/kWh]	0.9
Net electric efficiency ³ [%]	41
Ambient temperature [oC]	-20°C and up to 50°C
Interfaces	GPIO, HTTP/SNMP/Ethernet IP, CANopen, USB

3. At beginning of life and nominal load

WEIGHT & DIMENSIONS	
Height [mm]	300
Width [mm]	495
Length ⁴ [mm]	852
Weight [kg]	77
Volume [l]	126.5

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

Typical set-up



Dimensions

