

H₃ Duo



- Methanol fuel cell solution
 - From 2,5 to 10 kW
- No preventive maintenance
 - 200 L fuel capacity
- Climate independent operation
- Simple installation and refueling

H3 Outdoor cabinet - Duo. The cabinet offers a complete power supply solution incorporating a rack mount of up to two of the H3-series of reformed methanol fuel cell (RMFC) systems and auxiliaries such as fuel tank and power distribution.

Methanol hybrid systems. The RMFC system works in parallel with an onsite external battery pack existing on site or installed with the system. The embedded charge controller enables regulated DC power for all applications and battery types. The RMFC features catalytic startup enabling fast startup and minimum power consumption in standby and during the startup process.

Methanol fueled. High temperature PEM with an integrated methanol reformer for on-site hydrogen generation enables high power density and high fuel energy density. The fuel is a methanol and water mix available through several global and local suppliers. The integration of fuel cell and reformer enables a highly energy efficient system due to reuse of fuel cell waste heat for the reformation process.

Multiple applications. The Outdoor Cabinet Duo has multiple applications both off- or on-grid including critical backup power, supplemental power or continuous power. The rugged IP-54 cabinet design is suitable for transport to remote sites and deployment under tough climatic conditions.

Specifications

Performance characteristics

Parameter	Config 1	Config 2	Config 3
Modules	H3 2500	H3 5000	H3 5000 H3 5000
Power output, electrical [kW]	5	5	10
Runtime (100% load)	4 days	2 days	1 days
IP-rating	54		

Operational characteristics

Fuel mix	60% vol methanol /40% vol deionized water		
Load	50%	75%	100%
Fuel consumption [L/kWh]	0,8	0,85	0,9
Voltage output [V _{DC}]	48		
Ambient temperature [°C]	-20 to 50		
Communications	AUX in/out, UDP/LAN, HTML, SNMP		
Optional	Remote wireless access, H3 User Display Kit		

Fuel characteristics

Fuel tank capacity [L]	200
Fuel mix	60% vol methanol /40% vol deionized water
Fuel energy capacity [kWh]	235

Mechanical characteristics

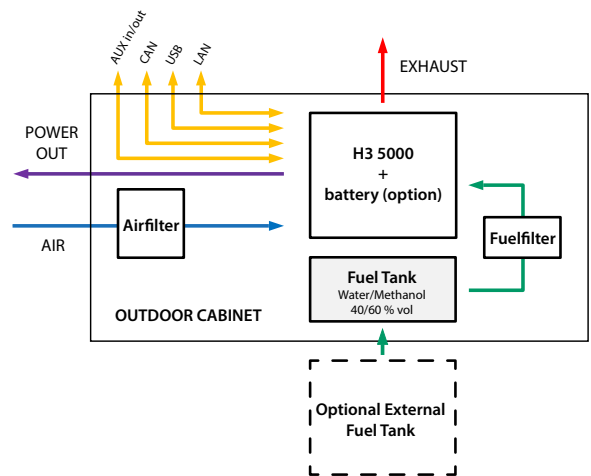
Material	Powder coated steel
Dimensions - W x D x H [mm]	810 x 1140 x 1530 (800 x 960 x 1530) ¹
Footprint - W x D [mm]	800 x 960
Weight - shipped ² /operation [kg]	225 / 515-590
Volume [L]	1113
Filter type	Z-line - M5 (593 x 481 x 96 mm)

¹ Excl. lifting eyes and front/rear canopy

² Excl. fuel, FC modules (shipped separately)

The Outdoor Cabinet design is available in custom configurations including: Fuel cell system, battery system, optional external fuel tank, rectifier plant and DC distribution. Serenergy also offers support in form of solution engineering and methanol fuel supply.

Please contact us at sales@serenergy.com for more information, pricing and availability. Serenergy A/S reserves the right to change specifications and descriptions without notice.



System diagram



Front view



Rear view