

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 battery pack installed external to the system or inside 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 different global and local suppliers. The integration of fuel cell and reformer enables a highly energy efficient system due to reuse of waste heat from fuel cell in 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
Modules	H3 5000 ¹	H3 5000 ¹ H3 5000
Power output, electrical [kW]	5	10
Runtime (50% load) [hours]	110	50
IP-rating	54	

Operational characteristics

Fuel mix	60 vol % methanol / 40% vol deionized water		
Load	50%	75%	100%
Fuel consumption [L/kWh]	0,7	0,72	0,8
Voltage output [V _{DC}]	42 - 48 - 58		
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]	278

Mechanical characteristics

Material	PC GI	PC Aluminum
Dimensions - W x D x H [mm]	810 x 1140 x 1530 (800 x 960 x 1530) ³	
Footprint - W x D [mm]	800 x 960	
Weight - operation [kg]	480-545	420-485
Volume [L]	1113	
Air filter type	Z-line - M5 (593 x 481 x 96 mm)	

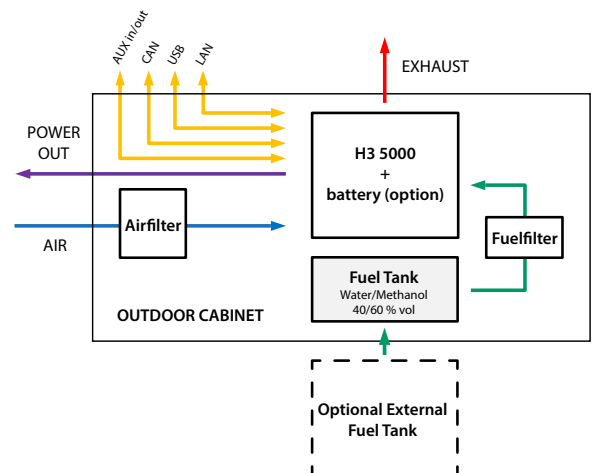
¹ H3 2500 module is also an option. Please contact us for data.

² Consumption values are per H3 5000 in operation.

³ Excl. lifting eyes and front/rear canopy.

Outdoor Cabinet Duo 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.

Write to us at sales@serenergy.com for more information, pricing and availability.



System diagram



Front view



Rear view

Serenergy A/S reserves the right to change specifications and descriptions without notice.