

H2 SecurePower

HYDROGEN - BACKUP - POWER

Reliable emergency power supply for your critical infrastructures



H2 SecurePower is your solution for an uninterrupted energy supply when it matters. Ideal for use in system critical infrastructures and demanding applications, this modular, water-cooled, fully automatic fuel cell backup system provides a secure and efficient power supply—even under extreme conditions.

Typical applications of the H2 SecurePower include:

- Emergency power supply for system critical infrastructures and applications
- Integration into DC intermediate circuits for stable electrical energy provision
- Use in combination with battery storage and inverters for an uninterruptible power supply (UPS)
- Power and heat provision for off-grid or mini-grid applications
- Connection to external heating circuits for efficient use of waste heat
- Flexible hydrogen-based energy storage solutions

Product features and benefits:

The H2 SecurePower uses advanced polymer electrolyte membrane (PEM) fuel cell technology, which offers high flexibility and reliability. Through the electrochemical reaction of hydrogen and oxygen, not only electrical energy is produced but also usable waste heat - an ideal solution for applications requiring high efficiency and autonomy.

The system is designed for operation in both DC and AC circuits and can be seamlessly integrated into existing infrastructures. It includes fuel cell modules, DC/DC converters, control units, load distribution, safety mechanisms, as well as systems for cooling, ventilation, and exhaust gas removal.

Flexibility and customisation:

Through external communication interfaces, the H2 SecurePower can be flexibly controlled and can additionally take over control functions for your customer systems to maximize efficiency and control.

The H2 SecurePower offers extensive integration possibilities. Upon request, we deliver the system as a customised total solution for your specific requirements.

Rely on the H2 SecurePower to take your energy supply to the next level - reliable, efficient, and future-proof.



Datenblatt - H2 SecurePower

General

- Nominal electrical output power: 7.6 - 15.4 kW
- Peak electrical output power: 8 - 16 kW
- Nominal thermal output power: 9 - 20 kW
- DC output voltage range: 115 - 800 VDC
- DC output current range: 0 - 140 A
- Power supply voltage: 400 VAC
- Supply current: 3 A

Hydrogen

- Hydrogen consumption (peak): 0.57 - 1.14 kg/h or 6.34 - 12.68 m³/h
- Purity: ISO 14687-2 / SAE J2719
(Type I, Grade E, Category 3)
- Operating pressure: 1.5 - 7.0 bar

General Specifications

- Weight: < 1.5 t*
- Dimensions (L x W x H): (1.8 x 0.8 x 2.2) m*
- Ambient temperature: 5 - 40° C
- Fresh air requirement: < 120 m³/h

Cooling*

- Cooling medium: Fresh or cooling water with up to 40% Glykol content
- Flow rate: 0.6 - 3 m³/h
- Inlet temperature: 5 - 40° C
- Outlet temperature: 8 - 50° C

Communication**:

Modbus TCP, Ethernet, relay contacts, HMI

* Die genaue Auslegung basiert auf der jeweils spezifischen Kundenintegration

** Communication connections may vary depending on project conditions.

