Fuel Cells · Power Systems

Proton Motor
Fuel Cell Stacks and Systems

Cleantech Competence

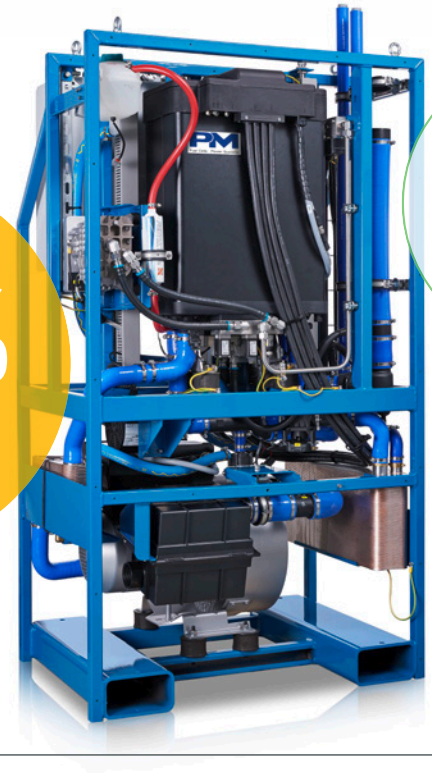
20 Years
Made in Germany

DATA SHEET

Stationary

PM Frame

Fuel Cell System ready for OEM integration



100 % Energy

Zero Emission

Typical application areas

- Emergency power supply
  - Railway infrastructure
  - Telecom / Radio Stations
  - Securing critical infrastructure
  - Industry and Data Centres
- Applications in combination with energy storage
  - Energy autonomous residential and industrial complexes
  - Re-electrification of hydrogen produced from renewables
- Off-grid power supply (Insular Solutions)
- Grid integrated solutions for emergency power or grid support

Main benefits

- Emissions-free solution for generating electrical and thermal energy from hydrogen
- Very high efficiency and reliability
- Long life span
- Easy installation and service
- Low maintenance / low maintenance costs
- Modularly scalable
- High operational safety
- Online monitoring
- Water cooling / use of process heat
- Simple hybridization with batteries

Optional scope of supply:

- Voltage Adaption
- Integration in Plug-and-Play System (Outdoor or Indoor) for different operation modes: Emergency power supply, Battery charging, Net parallel operation

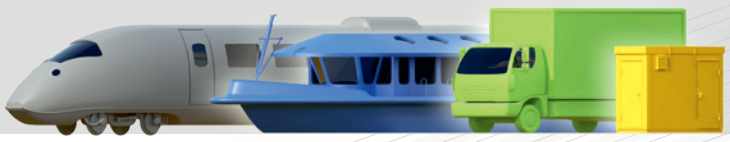
Integrated Stackmodul	S21	S28	S36	S43
Electrical Output				
Power Range* [kW]	3.1–21.3	4.1–28.4	5.1–35.5	6.2–42.6
Current Range [A]	0–500			
Voltage Range [V DC]	42–83	56–110	71–137	85–165
El. System Efficiency [%]	39–52			
Hydrogen Interface				
Hydrogen Quality	ISO 14687-2 / SAE J2719			
H2 Supply Pressure [bar_g]	3.0–7.0			
Hydrogen Consumption (max) [kg/h]	1.39	1.85	2.32	2.78
Environmental Conditions				
Ambient Temperature [°C] Operation	+5 to +45			
Temperature [°C] Storage & Transport	-20 to +60			
Operating Altitude** [m]	< 2,000			
Humidity *** [% r.H.]	< 95			
Dimensions / Others				
W x D x L [mm x mm x mm]	920 x 600 x 1650			
Volume [l]	910			
Tare weight [kg]	370	380	390	400
Conformity	CE, EN 62282-2			

* without peripherals
** main dimensions
*** non-condensing

Specifications are subject to change without notice. Specifications and descriptions in this document were in effect at the time of publication. Proton Motor Fuel Cell GmbH reserves the right to changes at any time.

PM Frame – the modular fuel cell system for customised integration

The heart of the Proton Motor technology is the stack module, which is adapted to the power range. It is specially developed and manufactured by Proton Motor. In addition to the stack module, the fuel cell system already contains supply units for hydrogen and reaction air and a primary cooling circuit. The fuel cell system PM Frame already comes with an integrated fuel cell module. It is adaptable to multiple integration purposes as well as reliable and predictable thanks to PM's all-round services. Individual customer applications and exclusive system requests can be fulfilled.



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