PROTON MOTOR hydrogen fuel cells

Cleantech Competence

Stationary

HyShelter®

Emergency Power Supply · Autonomous Power Supply · **Power (& Heat) Generation**

Modular Fuel Cell Plant Solution for Power (& Heat) Generation

Advantages

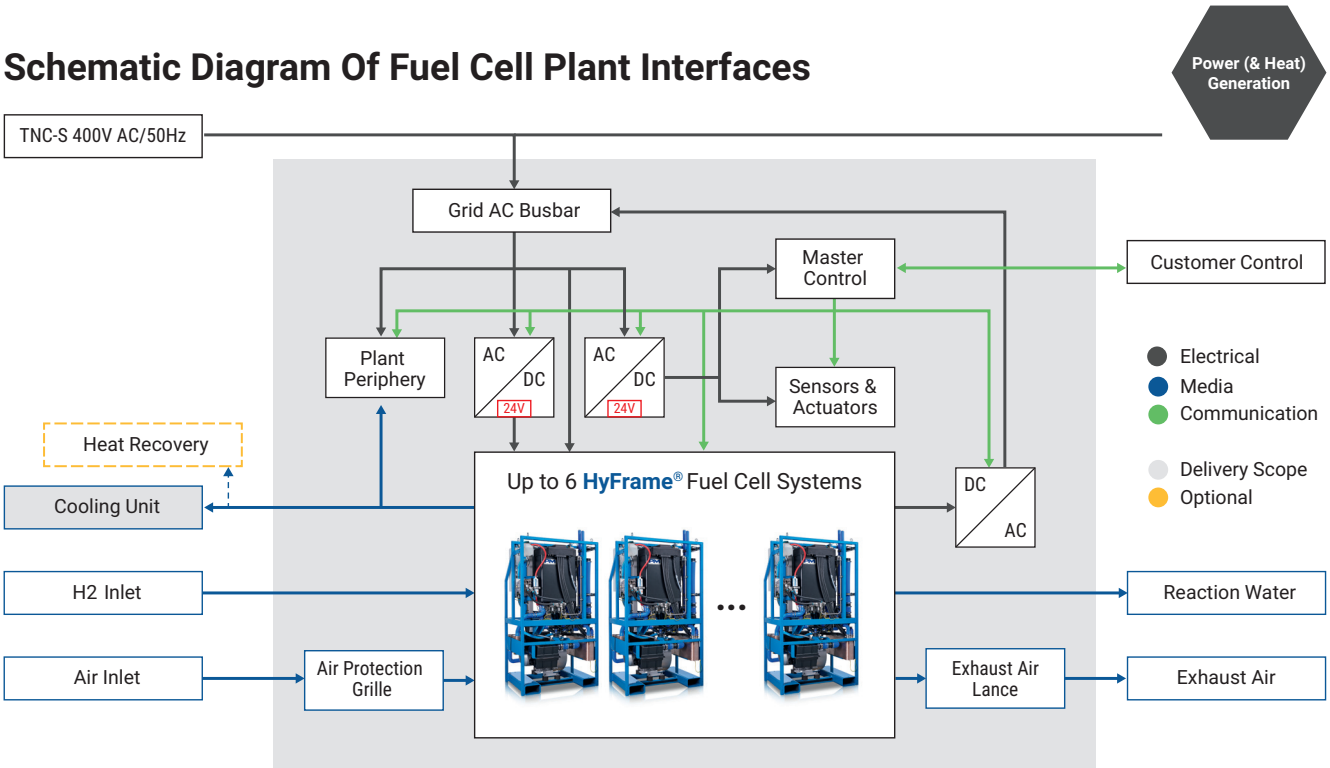
- Emission-free technology
- Modular turn-key solution for generating electrical and thermal energy
- Energy supply adjustable to specific power demand
- Redundant and scalable design
- Operational safety and reliability
- Maintenance-friendly
- „Designed & Made in Germany“ since 1998

Typical Application Areas

- Peak shaving & grid stabilization
- Re-electrification of green hydrogen
- Industrial & residential power supply

Power (& Heat) Generation

Schematic Diagram Of Fuel Cell Plant Interfaces



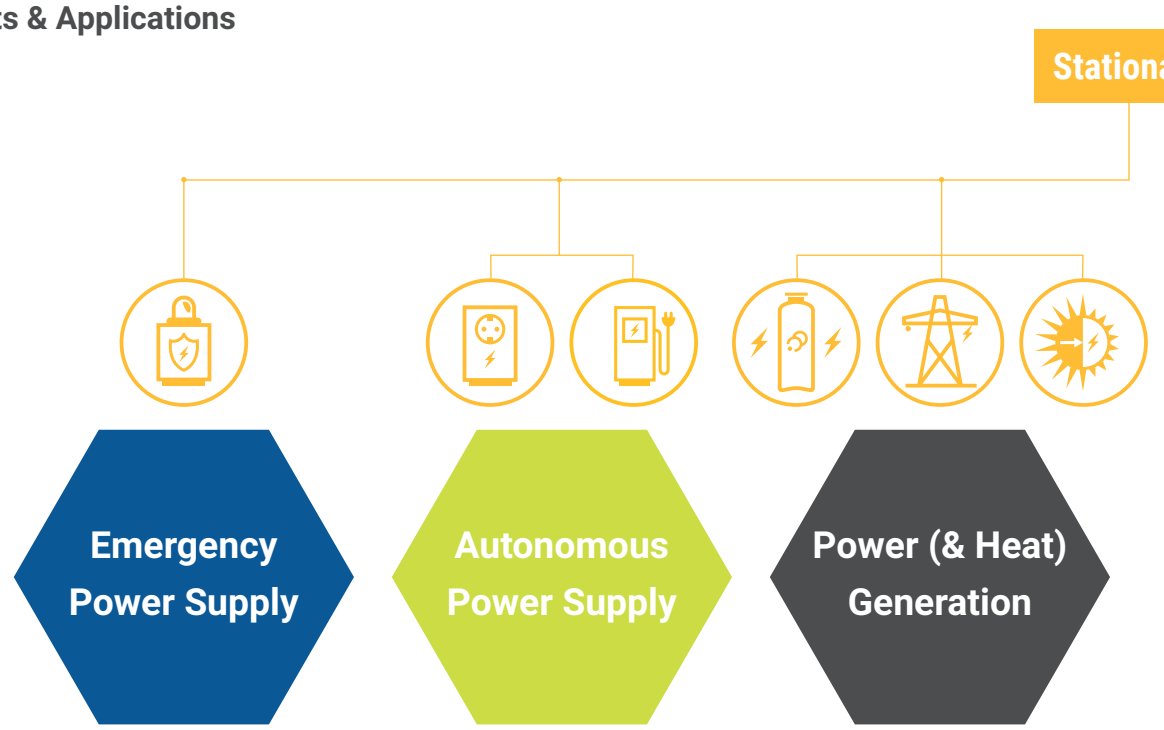
Exemplary Setups

Technical Specifications	HyShelter® 87	HyShelter® 215
Electrical Interface		
Output Voltage [VAC / Hz]	3~400 / 50	
Peak Power [kW / kVA] [1]	69.4 / 86.8	172.0 / 215.0
Nominal Continuous Power [kW / kVA] [1]	64.6 / 80.8	157.9 / 197.3
Supply Voltage [VAC / Hz]	3~400 / 50	
Hydrogen Interface		
Hydrogen Quality	ISO 14687-2 / SAE J2719 (Type I, Grade E, Category 3)	
Hydrogen Supply Pressure [bar_g]	6.0 – 7.5	
Hydrogen Consumption @ Peak Power [kg/h]	6.3	15.0
Cooling Interface		
Coolant Inlet Temperature [°C]	-30 to +45	
Coolant Outlet Temperature [°C]	<60	
Environmental Conditions		
Ambient Operating Temperature [°C]	-20 to +40	
Storage & Transportation Temperature [°C] [2]	-20 to +60	
Operating Altitude [m]	<1500	
IP Protection Class	IP44	
Dimensions Container		
L x W x H [m x m x m]	6.1 x 2.5 x 4.5 (incl. demountable exhaust lances)	
Tare weight w/o operating media [t]	10.7	12.6
Cooling Unit [3]		
L x W x H [m x m x m]	5.7 x 1.3 x 1.8	6.9 x 2.4 x 2.7
Tare weight w/o operating media [t]	3.4	3.4
Cooling capacity [kW]	150	360
Communication Interface	Modbus TCP	
Conformity	CE acc. to Machinery Directive	

[1] Begin of Life @ AC Busbar, power consumption of balance of plant and efficiency of power electronics considered, power factor cos φ = 0.8 considered
[2] Special procedure for range below 0°C necessary [3] Designed to cool the entire thermal energy of the system @ End of Life, no heat recovery considered

Discover More Turnkey Solutions For Stationary Applications

Markets & Applications



- Railway infrastructure
- Telecom / Radio stations
- Process industry
- Data centers
- Uninterruptible power supply (UPS)

- Mobile power supply
- Off-Grid power supply
- Off-Grid Charging stations

- Peak shaving & grid stabilization
- Re-electrification of green hydrogen
- Industrial & residential power supply

Modular Fuel Cell Plant Design For Indoor And Outdoor Solutions

Standard Components

HyModule®

HyFrame®

- FC Systems (parallelized up to 215 kVA)
- Control cabinet & BOP components
- General safety concept

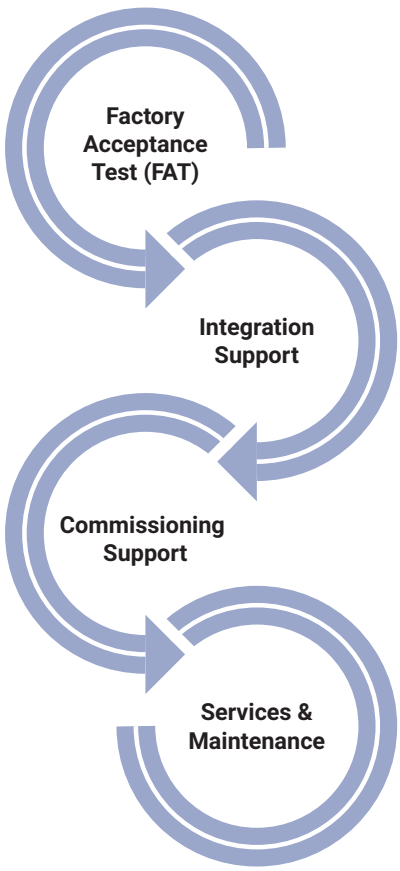
Optional Components
(incl. Customized Engineering)

- Energy storage (battery)
- Power output interface (AC or DC)
- Hydrogen Inlet Pressure
- Specific air filter for critical environment
- Heat recovery possible

TEAMWORKER

Let us be your partner.

Comprehensive Customer Service



- The factory acceptance test is carried out in our factory according to a standardized test procedure. The measured values and the result of the fuel cell performance are documented in a test report.

- Integration support for the installation of the system into the customer application with its specific interfaces

- Start up support during the commissioning of the system at the customer application
- Special parameters settings according to customer requirements

- Preventive Maintenance
- Remote Support
- Repair Center
- Training

About Proton Motor Fuel Cell GmbH

You, as a customer, are our focus. Benefit from our expertise and many years of experience in the development and production of hydrogen fuel cell systems. “Designed & Made in Germany” since 1998.

In addition to the stationary sector, we also offer solutions for the following markets: mobile, maritime and railway.

By purchasing fuel cell systems and integrable hybrid solutions from Proton Motor, you are making an important contribution to the energy transition.

For more information, please reach out to our sales team.

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Stationary
Heavy Duty
Maritime
Rail

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