

# OHM-BSZ

## FUEL CELL SYSTEM

### SYSTEM DESCRIPTION

Our fuel cell provides an independent power supply, free from the grid and unaffected by sun or wind, for small loads – and can be scaled up if required. All of this is exceptionally environmentally friendly.

The energy source is methanol, which in a fuel cell based on Direct Methanol Fuel Cell (DMFC) technology converts chemical energy into electrical energy.

### APPLICATION AREAS

- ☑ Mobile measurement stations
- ☑ Defense and disaster protection
- ☑ Backup for telecommunication systems
- ☑ Leisure sector

### FUNCTION DESCRIPTION

- ☑ A battery storage system (e.g., LiFePO<sub>4</sub>) generally supplies energy to your consumers
- ☑ If the battery is empty, it is recharged by the fuel cell.
- ☑ In combination with a photovoltaic system, methanol consumption can be minimized.
- ☑ When combined with PV, the fuel cell is only needed during prolonged bad weather (no sun).



## EXAMPLE OF A POSSIBLE CONFIGURATION

⊕ Power demand (consumers)	18W
⊕ Annual energy requirement	160kWh
⊕ Combined with PV panel	370Wp
⊕ Battery storage	5,12kWh LiFePO4
⊕ Fuel cell output	110W
⊕ Methanol consumption	31 liters/year
⊕ Space for methanol tank	2x28 liters
⊕ Total system size	1.800x760x760mm

To supply your consumers off-grid for 365 days, you need approx. 31 liters of methanol.

Consumption is based on Central European temperatures.

In colder regions or high altitudes, methanol consumption increases because the fuel cell automatically starts at low temperatures to prevent freezing.

## YOUR MOBILE POWER SUPPLY

The above example is for illustration and can be adapted to your specific application. The fuel cell is the heart of the system and can be expanded with components such as remote monitoring, PLC control, etc.

Ohmega Energy supports you in configuring your mobile off-grid power supply. After defining your requirements, we select the necessary components, plan individually for you, and manufacture the system. Installation at your site and staff training are also available.



ISO 9001:2015  
ISO 45001:2018  
ISO 14001:2015

NR. 14041/0  
NR. 00015/0  
NR. 03322/0

