

8YS FUEL CELL

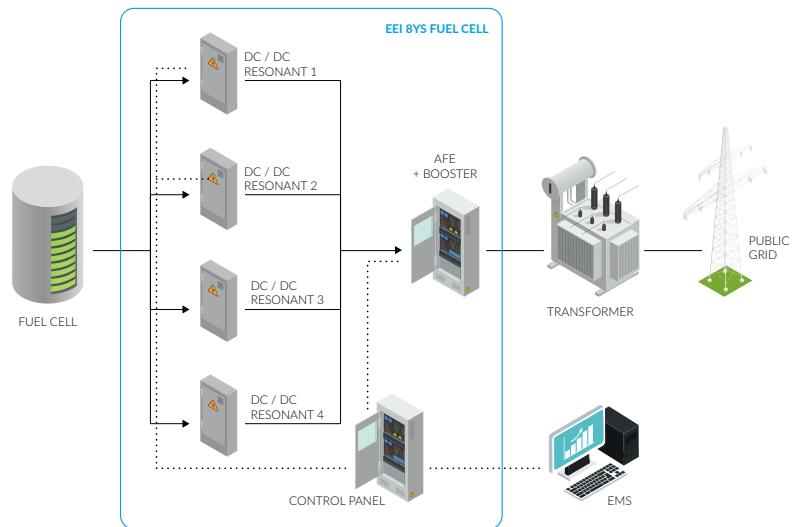
The Fuel Cell power converter series is designed to help fuel cells which generally have low DC output voltage to deliver the power to the grid. Typical fuel cell voltage can be ranged from 60VDC, 120VDC, and 240VDC. The grid voltage of 400VAC can not be easily converted using typical one stage converter. A two stage approach has proven successful for allow the fuel cell power to be sent to be grid with high flexibility and efficiency and safety.

From the AC input line to the DC line are found in sequence:

- The DC / AC AFE converter;
- The intermediate DC line (DC - LINK);
- Multiple resonant DC / DC converters that exchange energy between the fuel cell input (s) and the DC-LINK.

EEI's resonant DC / DC converter provided great solution to boost the fuel cell voltage to > 300VDC range for DC-Link and provide galvanic isolation between the fuel cell and the DC-link for safety and control reasons. The isolated DC / DC converter is modular design and can be customizable according to different fuel cell power level and input / output voltage ratio.

One example of system is 30kW fuel cell power converter using four DC / DC isolated converter (at 7.5kW each) and one DC / AC AFE inverter to continue boost the fuel cell output at 120VDC to AC grid at 400VAC.





MODEL

EEI 8YC FUEL CELL

AC OUTPUT PARAMETER

Rated Power	30kW / 31kVA
Rated Voltage	400 V +15/-15%
Rated Frequency	50 Hz +1,5/-5%
Nominal current	45 A
Power Factor	-0,9...1...+0,9
Breaking power	15 kA

DC INPUT

Min. Voltage	60 V
Max. Voltage	120 V
Min. Current	15 A
Max. Current	500 A

AC AUX

Nominal Voltage	24 V
Nominal Current	20 A

GENERAL DATA

Dimension (W / H / D) mm	600 / 2210 / 600	
Weight (kg)	342	
Min. Voltage	Storage	-5 °C to 55 °C
	Operating	0 °C to 40 °C
Min. Current	Storage	≤ 10000 m
	Operating	≤ 1000 m
Environmental category	Indoor	
Degree of pollution	PD3	
Max humidity	95% @ 20 °C non-condensing	
Protection degree	IP20	
Overvoltage categories	<ul style="list-style-type: none"> • Output AC power line: OVC III • Input DC power line: OVC II • 3-Ph AC auxiliary line: OVC III • 1-Ph AC auxiliary line: OVC II 	

PROTECTIONS

Input protection	Fuse on both positive and negative
Output protection	SPD