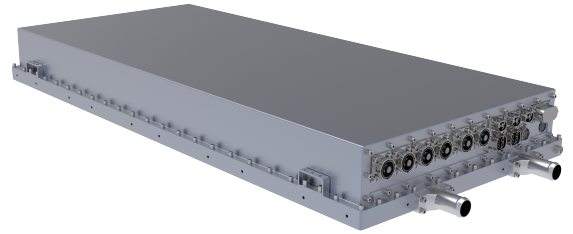


# POLARIS® FUEL CELL POWER CONVERTER GD FAMILY



## Introduction

Domestic Power DC/DC converter GD family is specially designed for high-power fuel cell power generation systems. In addition to boosting the power output from the fuel cell to the high voltage bus, this converter can also directly provide the required stable operating voltage for the BOP auxiliary engine, which enables higher efficiency of the whole fuel cell power generation system and easier selection of system components.

## Smart Features

- Flexible configuration, applicable for various fuel cell specifications and applications, including stationary power generation, rail transport, ships, and road traffic, among others;
- Custom development, with tailored solutions for different fuel cell power and voltage;
- Small size and light weight.

## Protection & Performance

### • Galvanically isolated input and output

All power converters adopt high-frequency isolation technology. The insulation of the fuel cell system side and the high-voltage power battery side are independent of each other and do not affect each other, which can significantly protect the fuel cell as well as the power battery of the whole vehicle.

### • Resonant soft switching technology

Rated efficiency: 97–98.5%, depending on various inputs and outputs;  
Power device switching frequency up to 80kHz, low soft-switching loss, excellent EMC performance.

### • Auxiliary engine is powered by fuel cell directly

The internally integrated fuel cell BOP power supply module directly converts the electric energy output from the fuel cell into BOP power supply, reducing the energy transfer links and being more efficient.



# Specifications

TYPE	Isolated	
MODEL	GDIA270	GDIA300
<b>HIGH VOLTAGE INPUT</b>		
Nominal Input Operating Voltage and Current	540V×500A	333V×900A
Input Voltage Range	400-900V	250-550V
Rated Input Current	500A	900A
Rated Input Power	270KW	300KW
<b>MAIN HIGH VOLTAGE OUTPUT</b>		
Output Voltage Range	750V±15% / 870V±15% / 1000V±15%	750V±15% / 870V±15% / 1000V±15%
Efficiency	98%	97.5%
<b>AUXILIARY HIGH VOLTAGE OUTPUT</b>		
Rated Output Voltage	600VDC	600VDC
Rated Output Power	50KW-70KW	50KW-70KW
Number of Outputs	8	8
<b>AUXILIARY LOW VOLTAGE INPUT</b>		
Input Voltage Range	27V (19-36VDC) / 110V (77-137.5VDC)	27V (19-36VDC) / 110V (77-137.5VDC)
Operating Power	≤ 150W	≤ 150W
<b>SYSTEM</b>		
IP Level	IP67	
Operating Temperature Range	-40°C ~ 85°C	
Altitude	9800ft (above sea level)	
Cooling Method	Liquid cooling	
Communication	CAN2.0B	
Design Standards	IEC/EN 62477-1, EN 50121-3-2: 2016, ECE-R10, ISO 6469-3, ISO 16750-1	
Protection	Input undervoltage protection, input overvoltage protection, input overcurrent protection, output undervoltage protection, output overvoltage protection, output overcurrent protection, communication fault protection, over temperature protection, output short circuit protection.	
<b>DIMENSIONS &amp; WEIGHT</b>		
Dimensions (W*D*H, inch)	21.7*47.2*5.1	21.7*47.2*5.1
Weight	242.5±1lb	242.5±1lb

