

3000 Watt DC/DC Converter EVD Data Sheet



Description:

Green Watt/Powerland's 3kW DC/DC power supply for air conditioning and other EV systems is designed with extended protection functions, the next-generation semiconductor power devices, and thermal management. It is the industry's first design to cover full input voltage range of e-vehicle on-board air conditioning system DC/DC power supply, and feasible for a wide variety of electric vehicles.

Features:

- Full Input Voltage Coverage for E-Vehicle Air Conditioning System
- Input Voltage: 280~880Vdc
- High Power Density and High Maintainability
- Ultra High Efficiency: Up to 96%
- Advanced EMI Design
- Suitable for High Inrush Current Application
- Designed with Next-Generation Semiconductor Devices
- Natural Cooling
- Max. Case Temperature @ 100oC
- CAN Communication
- All-Around Protections: OVP, OCP, SCP, OTP
- Optimized for variable motor loads of EV air conditioning system: reliable DC output direct driving



Model Number	EVD-590-3000-28 [PLD3000-EVDYL02-27]	EVD-590-3000-28HS [PLD3000-EVDYL02-27HS] Heatsink Version	EVD-590-3000-48 [PLD3000-EVDYL02-48]
Output Voltage	27.5V	27.5V	48V
Output Current	110A	110A	62.5A
Max. Output Voltage	27.5V	27.5V	48V
Output Voltage @ Open Circuit	27.5V	27.5V	48V
Voltage Accuracy	±2%	±2%	±2%
Output Power	3000W	3000W	3000W
Input Voltage	280~900V	280~900V	280~900V
Max. Input Current	12A	12A	12A
Max. Input Power	3600W	3600W	3600W
Efficiency	96%	96%	96%
Communication	CAN	CAN	CAN
On/Off Control	Yes	Yes	Yes
Protections	OVP, OCP, SCP, OTP	OVP, OCP, SCP, OTP	OVP, OCP, SCP, OTP
Ingress Protection	IP67	IP67	IP67
Working Temperature	-40~85°C	-40~85°C	-40~85°C
Cooling	Natural Cooling (With System using cooling plate)	Air/fan cooling (for HS version)	Natural Cooling (With System using cooling plate)
EMI	CSPR 55025/GB18655 (With System)	CSPR 55025/GB18655 (With System)	CSPR 55025/GB18655 (With System)
Isolation	3500Vdc	3500Vdc	3500Vdc
Dimensions (LxWxH)	260x180x62mm	(260x180x110mm	260x180x62mm
Weight	3.5kg	5.5kg	3.5kg
Life Time at 40°C, 380Vdc Input, and Continuous Full Load Output	50,000 Hours	50,000 Hours	50,000 Hours

Part numbers in brackets are factory numbers