Bidirectional DC-DC Converter



Designed specifically for RV use, the bidirectional DC - DC converter is vibration-tested to ensure it can withstand the rigid road conditions with high performances retained.



It can achieve





Rugged design for mobile environments



Wide operating temperature range $-40^{\circ}F \sim 185^{\circ}F$ ($-40^{\circ}C \sim 85^{\circ}C$)

Technical Specifications

Model	XDC2500-12
48 V Voltage range	24 V - 36 / 48 / 54 V - 57 V
12 V Voltage range	8 V - 8.5 / 14 / 15.5 V - 16 V
Max. Rated Power	Buck: 2.5 kW (178 A @14 V), Boost: 2 kW (41 A @48 V) Buck mode: The derating factor is 15.5 V - 16 V , 8.5 V-8 V corresponding to 100% - 0 load Boost mode: The derating factor is $54 \text{ V} - 57 \text{ V}$, $36 \text{ V} - 24 \text{ V}$ corresponding to 100% - 0 load
Over-temperature protection range	248°F (120°C)
CAN communication	CAN communication
Wake-up type	KL15
Precharge time	Once pre-charge instruction is received, the 48 V side busbar capacitor voltage is expanded from 12 V to rated 48 V set by the controller in 150 ms.
Working temperature range	 At temperature below -40°F (-40°C), the output is turned off. At temperature between 104°F - 140°F (40°C - 60°C), full power output is reached. At temperature between 140°F - 185°F (60°C - 85°C), linear reduced output of 2,500 W - 0 W is provided. At temperature above 185°F (85°C), output is turned off.
Ingress protection rating	IP67
Weight	< 6.6 lbs (3 kg)
Dimension	9.4 x 6.9 x 3.0 inch (238 x 175 x 75 mm)

Note: All data are based on ROYPOW standard test procedures. Actual performance may vary according to local conditions.











