

Mercury Series DCDC Module

Mercury-40K / Mercury-50K / Mercury-60K

Features

-  Interleaved parallel design reduces ripple current, prolonging battery life
-  Supports multi-scenario battery charging and discharging applications
-  Designed with a standard 3U module for ease of maintenance and scalability
-  SiC-MOS for higher efficiency — up to 99% peak conversion rate



Mercury-40K		Mercury-50K		Mercury-60K	
Low-Voltage DC Side					
Rated power	40kW	50kW	60kW		
Rated current	120A	150A	180A		
Rated voltage	350V	350V	350V		
Maximum voltage	1,000 V	1,000 V	1,000 V		
Voltage range	150-1000 V	150-1000 V	150-1000 V		
Minimum voltage at full power	340V	340V	340V		
Voltage requirements for low-voltage	150V ≤ LV ≤ (HV - 30V), maximum 1000V				
Low-voltage side start-up voltage	150V	150V	150V		
High-Voltage DC Side					
Rated power	40kW	50kW	60kW		
Rated current	67A	83A	100A		
Rated voltage	600V	600V	600V		
Maximum voltage	1,000 V	1,000 V	1,000 V		
Voltage range	350-1000 V	350-1000 V	350-1000 V		
Full power voltage range	600-950 V	600-950 V	600-950 V		
Voltage requirements for high-voltage	(LV+30V) ≤ HV ≤ 1000V, minimum 350V				
High-voltage side start-up voltage	350V	350V	350V		
Protection Features					
Reverse connection protection	Yes				
Fuse protection	Yes				
Overcurrent protection	Yes				
Overvoltage/undervoltage protection	Yes				
Overheat protection	Yes				
Low-voltage side short-circuit protection	Yes				
Over-voltage level	Type II				
Basic operating modes	Bi-directional constant power, bi-directional constant current, bi-directional constant voltage				
Forward and reverse switching time	Full-load switching time 30ms				
System Parameters					
Topology structure	Non-isolated				
Protection level	IP20				
Operating temperature	-30°C to +60°C (>45°C derated)				
Humidity	<95% (non-condensing)				
Maximum operating altitude	4,000m (derating when > 3,000m)				
Maximum efficiency	>99%				
Cooling method	Intelligent air cooling				
Communication mode	RS485/CAN/Ethernet				
Display	LED				
Maximum parallel operation number	8				
Mechanical Parameters					
Weight	25kg				
Dimensions (H*W*D)	444mm*130mm*550mm (excluding terminals)				
Installation method	Cabinet-style fixed installation (left and right mounting ears)				
Standards					
IEC62477-1, IEC 61000-6-2, IEC 61000-6-4					