

40~60kW Mercury Series Bidirectional DCDC/MPPT Module



+ Advantages

High Efficiency and Intelligence

- Efficient harmonic suppression algorithm
- Intelligent multi-level fan speed control
- Three-level topology with up to 98.9% conversion efficiency

Flexible Application

- Support 8 sets of modules co-DC
- Support 32 sets of modules co-AC
- 5U standard modular design
- Support UPS, DVR, and SVG
- Support 100% imbalance load in off-grid mode

Grid-Friendly

- Support high and low voltage ride-through
- Stable operation in weak grid conditions
- Grid-forming on-grid technology

Specifications	(DCDC)Mercury-**			(MPPT)Mercury-**-PV		
	40kW	50kW	60kW	40kW	50kW	60kW
DC low voltage side						
Power rating	40kW	50kW	60kW	4*10kW	4*12.5kW	4*15kW
Rated current	120A	150A	180A	4*30A	4*37.5A	4*45A
Rated voltage	350V					
Max. voltage	1000V					
Voltage range	150~1000V					
Minimum voltage at full power	340V					
Buck mode low voltage side voltage requirements	150V≤Low-voltage voltage ≤High-voltage voltage					
Low voltage side starting voltage	150V					
Voltage stability/current stability	1%					
DC high voltage side						
Power rating	40kW	50kW	60kW			
Rated current	60A	75A	90A			
Rated voltage	700V					
Max. voltage	1000V					
Voltage range	350~1000V					
Full power voltage range	680~950V					
Boost mode high voltage side voltage requirements	Low-voltage voltage ≤High-voltage voltage ≤1000V					
High voltage side starting voltage	350V					
Voltage stability/current stability	1%					
Protection and function						
Reverse protection	Yes					
Fuse protection	Yes					
Overcurrent protection	Yes					
Over/ under voltage protection	Yes					
Overheat protection	Yes					
Low voltage side short circuit protection	Yes					
Insulation impedance detection	Yes					
Overvoltage rating	Type II					
Surge protection rating	Type II					
Circuit operation mode	DCDC: constant power, constant current, constant voltage; MPPT: MPPT					
Forward and reverse switching time	Full load switching time 30ms					
System parameter						
Topology	Non-Isolated					
IP level	IP 20					
Operating temperature range	-30~60°C (>45°C derating operation)					
Relative humidity	<95%no condensation					
Max. working altitude	4000m(>3000m derating operation)					
Max. efficiency	99%					
Cooling method	Intelligent air cooled					
Communication method	Ethernet/RS485/CAN					
Display	LED					
Maximum number of parallel operations	8					
Mechanical parameters						
Weight	25 kg					
Size (W * H * D)	444mm*130mm*550mm(without terminals)					
Installation method	Cabinet type fixed installation (left and right ears)					
Compliant with standards						
Safety regulations	IEC62477-1, IEC62109-1					
EMC	IEC61000-6-2, IEC61000-6-3					