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SUNON®

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Thermal Solution
Renewable Energy
ESS / PV Inverter

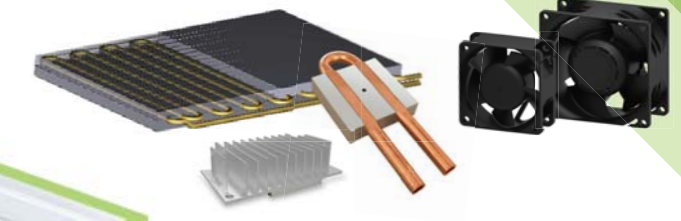
*All products are RoHS compliant.

Thermal Solution Renewable Energy ESS / PV Inverter

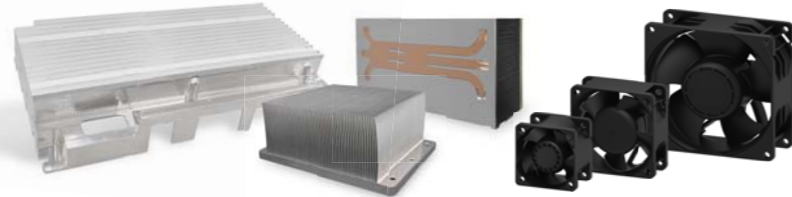
BMS
(Battery Management System)
Axial fan : 80x38/92x38/120x38 mm
Customized Cooling Module



EMS
(Energy management system)
Axial fan : 40x10/60x25/70x25/80x25 mm
Customized Cooling Module



PV INVERTER
Axial Fan : 40x28/80x38/92x38/120x38 mm
Customized Cooling Module



Temperature Control System
Axial fan : 120x38 mm



PCS
(Power Conversion System)
Axial fan : 40x20/60x25/70x25/80x38/92x38/120x25 mm
Customized Cooling Module



Sunon Offers Optimum Thermal Solution Integrated Heat Dissipation Technology and Services

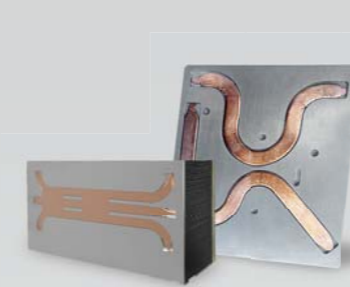
With over 40 years solid thermal management experience, SUNON has been committed to delivering the latest technical expertise in motor and cooling technology by investing our research and development operations. We are an original brand cooling product manufacturer, offering one-stop service ranged from design, development, to manufacture such as fan, vapor chamber and heat pipes. SUNON with scientific stimulation analysis capability is not only equipped to provide a total thermal solution by integrating heat conductive material and components, but also offers a series of heat dissipation services, such as customizing product function, structures and costing, to suit our clients' thermal requirements.

- High performance cooling module, possesses high capability of dissipating heat energy.
- Most economic total thermal solution, increases the customer's product profitability.
- Strong thermal experience and technology, provide optimized customized module.
- IP21~IP68 protection design, adaptable to a variety of environments.



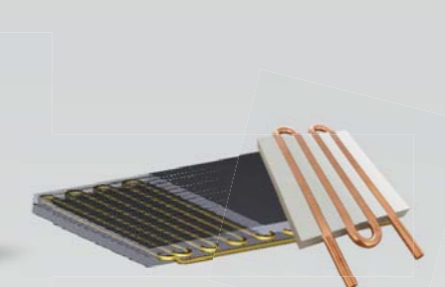
Heat Sink Series

- Economic design solution
- Multiple type product
 - Extrusion
 - Skived fin
 - Stacked fin



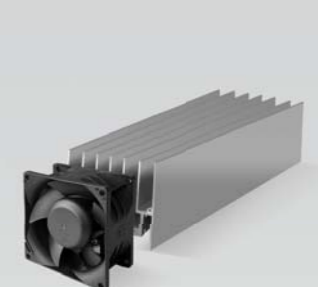
Heat Pipe Module

- Two-phase heat transfer device
- Flexible design feasibility
- High thermal conductivity



Cold Plate

- High Power Density
- Large Power
- Effectively reduce the module size



Air Cooling Module

- Integrated Solution
- High Thermal Efficiency
- Custom Design Heat Dissipation

SUNON®

Cooling Fan

Renewable Energy

ESS / PV Inverter

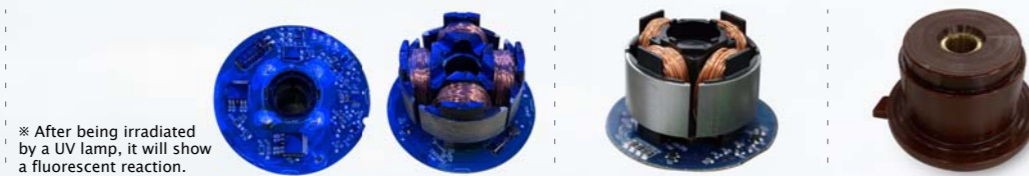


Axial Fan for Energy Storage system (ESS)

size (mm)	Model	Voltage (V)	Power (W)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H2O)	Noise (dB(A))	Temperature (°C)	Lifetime (hours)	IP Range	Anti-surge Circuit
40x40x10	EF40102BX-1Q03	24	1.44	9,000	9.8	0.28	34.1	-10°C~70°C	70,000hrs@40°C	IP55	★
40x40x20	PF40202B1-Q01	24	2.64	14,600	15.1	0.94	48.0	-10°C~70°C	70,000hrs@40°C	IP55	★
60x60x25	PF60251BX-Q19	12	9.86	13,100	54.1	1.44	62.9	-10°C~70°C	70,000hrs@40°C	IP21	★
70x70x25	PF70252BX-Q01	24	6.36	6,400	55.6	0.57	50.8	-10°C~70°C	70,000hrs@40°C	IP55	★
80x80x25	PF80252B1-1000	24	3.72	4,800	60.0	0.41	45.5	-10°C~70°C	70,000hrs@40°C		★
80x80x38	GF80381B1-Q01	12	24.00	11,200	110.0	2.11	67.4	-10°C~70°C	70,000hrs@40°C	IP68	▲ ●
80x80x38	PF80382BX-Q01	24	33.60	12,900	134.7	2.79	68.3	-10°C~70°C	70,000hrs@40°C		★
80x80x38	PF80382B2-Q081	24	7.20	7,350	70.4	1.46	54.7	-10°C~70°C	70,000hrs@40°C	IP68	★
92x92x38	GF92382B1-Q02	24	20.40	9,500	130.7	2.10	66.8	-10°C~70°C	70,000hrs@40°C	IP68	▲ ●
92x92x38	PF92382B1-Q03	24	14.40	9,000	125.6	1.76	65.1	-10°C~70°C	70,000hrs@40°C	IP21	★
92x92x38	PF92382B2-Q02	24	19.20	10,000	139.3	2.13	67.2	-10°C~95°C	70,000hrs@40°C	IP52	★
120x120x25	PFC0252B1-E05	24	10.80	4,400	152.2	0.55	54.5	-10°C~70°C	70,000hrs@40°C	IP55	★
120x120x38	PFC0382BX-1Q02	24	31.20	6,000	233.0	1.16	63.0	-10°C~70°C	100,000hrs@60°C	IP52	★
120x120x38	XGC0384BX-1000	48	115.92	11,600	301.7	5.58	75.0	-10°C~70°C	70,000hrs@40°C		★ ●

Note 1 : "★" and "▲" marked in IP Ratings column indicate request for custom design IP21 to IP68 and GR487 respectively are available.
 Note 2 : If you need special specification. Please contact SUNON sales.
 Note 3 : Specifications in this catalog are for reference, please contact SUNON sales for further information such as quotation and lead time.
 Note 4 : There is no notice in advance about any changes in specifications in this catalog, please refer to datasheet provided by SUNON sales.

Ingress Protection for Environmental Applications

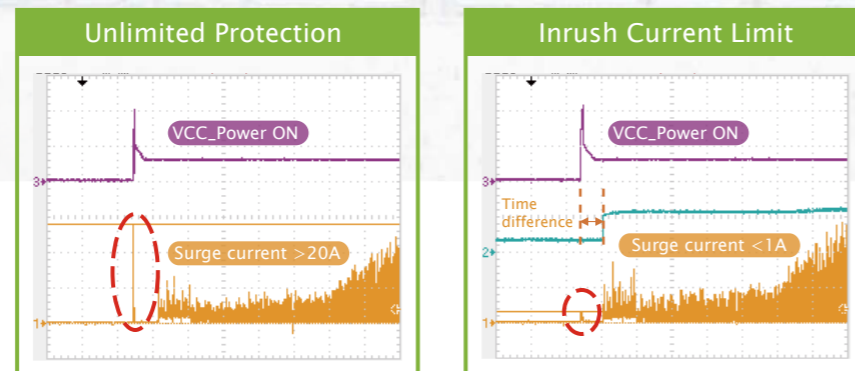


※ After being irradiated by a UV lamp, it will show a fluorescent reaction.

Ingress Protection	IP21-IP51	IP52-IP66	IP67-IP68	GR487
Technics	Conformal Coating	Conformal Coating	Parylene Coating	Potting
Available	Sleeve/Vapo/Ball	Ball	Ball	Ball
Cost	low → High			

Anti-Surge Circuit

SUNON's fan with the customized protection is designed to minimize damage caused by inrush current to the fan after a startup of system. By applying the solution, the amount of input current into the fan is managed within 10 times limit to the input steady-state current that ensures the best operation of heat dissipation to maintain the effectiveness of the system.



Axial Fan for PV Inverter

Size (mm)	Model	Voltage (V)	Power (W)	Speed (RPM)	Air Flow (CFM)	Static Pressure (Inch-H2O)	Noise (dB(A))	Temperature (°C)	Lifetime (hours)	IP Range	Anti-surge Circuit
40x40x28	PF40282B2-Q021	24	2.88	13,500	19.2	1.15	52.9	-10°C~70°C	70,000hrs@40°C		★
80x80x38	GF80381B1-Q01	12	24.00	11,200	110.0	2.11	66.2	-10°C~70°C	70,000hrs@40°C	IP68	▲ ●
80x80x38	PF80382BX-Q03	24	26.40	12,200	125.5	2.95	67.9	-10°C~70°C	70,000hrs@40°C	IP52	★
80x80x38	PF80382B2-Q081	24	7.20	7,350	70.4	1.46	54.7	-10°C~70°C	70,000hrs@40°C	IP68	★
92x92x38	GF92382B1-Q02	24	20.40	9,500	130.7	2.10	66.8	-10°C~70°C	70,000hrs@40°C	IP68	▲ ●
92x92x38	PF92382B1-Q03	24	14.40	9,000	125.6	1.76	65.1	-10°C~70°C	70,000hrs@40°C	IP21	★
92x92x38	PF92382B2-Q02	24	19.20	10,000	139.3	2.13	67.2	-10°C~95°C	70,000hrs@40°C	IP21	★
120x120x38	PFC0382BX-1Q02	24	31.20	6,000	233.0	1.16	63.0	-10°C~70°C	100,000hrs@60°C	IP21	★

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