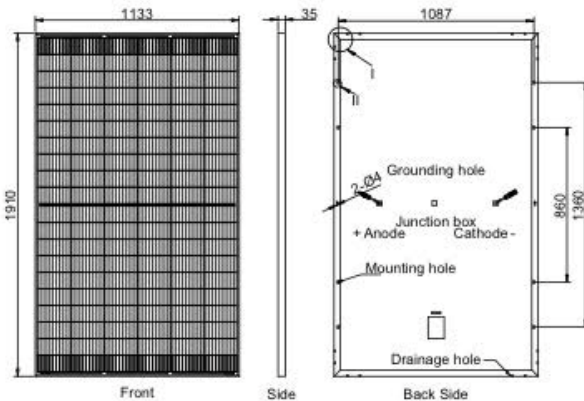


AE MD-120 Series 440W-460W

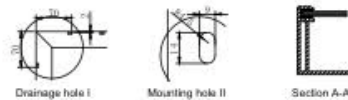
Mechanical and design specification

Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 182 mm
No. of cells	120
Glass	3.2 mm, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	White backsheet
Junction box	IP 68 rated
Frame	35 mm anodized Aluminium alloy
Cable	1 x 4 mm ² , 350 mm length or customized
Connectors	MC 4
Dimension	1910 mm x 1133 mm x 35 mm
Weight	24 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa/ 244 kg/ m ²
Mechanical load	5400 Pa/ 550 kg/ m ²
Fire Rating	Class C (according to UL 790)



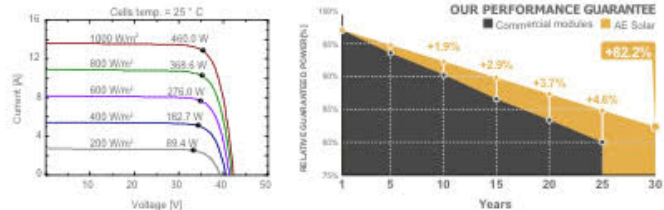
Packaging information

Packaging configuration	62 pcs / double pallet
Loading capacity	744 pcs / 40 HQ
Size / Pallet	1945 mm x 1140 mm x 2490 mm
Weight	1598 kg / double pallets



Temperature ratings

Operating temperature	(°C)	-40 to +85
Temp.coefficient of P_{max}	(%/°C)	-0.35
Temp.coefficient of V_{oc}	(%/°C)	-0.275
Temp.coefficient of I_{sc}	(%/°C)	0.045
Nom. operating temp. NOCT	(°C)	45 ± 2



Electrical specifications (STC*):	AE440MD-120	AE445MD-120	AE450MD-120	AE455MD-120	AE460MD-120	
Nominal Max. Power	P_{max} (Wp)	440	445	450	455	460
Maximum operating voltage	V_{MPP} (V)	34.62	34.87	35.13	35.38	35.60
Maximum operating current	I_{MPP} (A)	12.71	12.76	12.81	12.86	12.92
Open-circuit voltage	V_{oc} (V)	41.35	41.66	41.98	42.29	42.60
Short-circuit current	I_{sc} (A)	13.47	13.52	13.57	13.62	13.67
Module efficiency	η (%)	20.33	20.56	20.79	21.03	21.26
Power tolerance	(W)	0+5				
Maximum system Voltage	(V)	1500				
Maximum series fuse rating	(A)	25				

*STC: Standard test conditions (Irradiance 1000 W/m², Cell temperature 25°C and air mass of AM1.5)

Electrical specifications (NMOT*):	AE440MD-120	AE445MD-120	AE450MD-120	AE455MD-120	AE460MD-120	
Nominal Max. Power	P_{max} (Wp)	331	335	338	342	345
Maximum operating voltage	V_{MPP} (V)	32.60	32.80	33.00	33.20	33.40
Maximum operating current	I_{MPP} (A)	10.17	10.21	10.25	10.29	10.34
Open-circuit voltage	V_{oc} (V)	38.80	39.00	39.20	39.40	39.60
Short-circuit current	I_{sc} (A)	10.78	10.82	10.86	10.90	10.94

*NMOT: Normal Module Operating Temperature (Irradiance 800 W/m², Ambient temperature 20°C, air mass of AM1.5 and wind speed of 1 m/s)

Country of Manufacture: China

The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices.

Technical Specification	SUN2000-100KTL-M1
Efficiency	
Max. Efficiency	98.8% @480 V; 98.6% @380 V/400 V
European Efficiency	98.6% @480 V; 98.4% @380 V/400 V
Input	
Max. Input Voltage	1,100 V
Max. Current per MPPT	26 A
Max. Short Circuit Current per MPPT	40 A
Start Voltage	200 V
MPPT Operating Voltage Range	200 V – 1,000 V
Rated Input Voltage	570 V @380 V; 600 V @400 V; 720 V @480 V
Number of Inputs	20
Number of MPP Trackers	10
Output	
Rated AC Active Power	100,000 W (380 V / 400 V / 480 V @40°C)
Max. AC Apparent Power	110,000 VA
Max. AC Active Power (cosφ=1)	110,000 W
Rated Output Voltage	220 V / 230 V, default 3W + N + PE; 380 V / 400 V / 480 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Rated Output Current	152.0 A @380 V; 144.4 A @400 V; 120.3 A @480 V
Max. Output Current	168.8 A @380 V; 160.4 A @400 V; 133.7 A @480 V
Adjustable Power Factor Range	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	<3%
Protection	
Input-side Disconnection Device	Yes
Anti-Islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Reverse-polarity Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
DC Insulation Resistance Detection	Yes
Residual Current Monitoring Unit	Yes
Communication	
Display	LED Indicators, APP
RS485	Yes
USB	Yes
MBUS	Yes (Isolation transformer required)
General Data	
Dimensions (W x H x D)	1,035 x 700 x 365mm (40.7 x 27.6x 14.4 inch)
Weight (with mounting plate)	90 kg (187.4 lb.)
Operating Temperature Range	-25°C – 60°C (-13°F – 140°F)
Cooling Method	Smart Air Cooling
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0 – 100%
DC Connector	Staubli MC4
AC Connector	Waterproof Connector + OT/DT Terminal
Protection Degree	IP66
Topology	Transformerless
Night Time Power Consumption	≤ 3.5 W
Standard Compliance (more available upon request)	
Safety	EN 62109-1/-2, IEC 62109-1/-2, IEC 62116
Grid Connection Standards	EN 50530, IEC 61727, IEC 60068, IEC 61683

