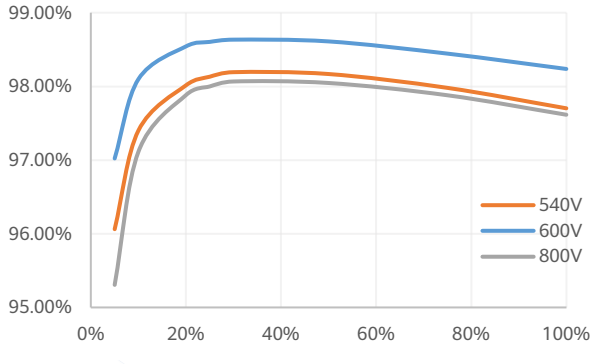
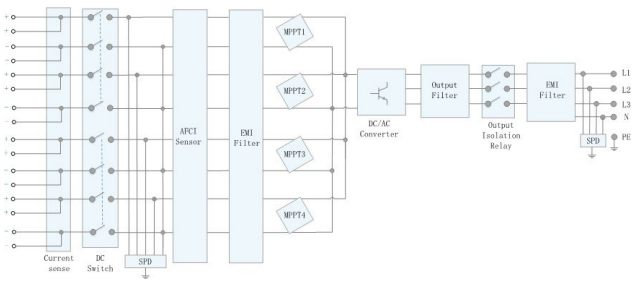
SUN2000-30/40K-MC0
Smart PV Controller

Smart **Efficient** **Safe** **Reliable**

Efficiency Curve



Circuit Diagram



Technical Specification

Technical Specification	SUN2000-30K-MC0	SUN2000-40K-MC0
Efficiency		
Max. Efficiency	98.6% @400V, 98.7% @480V	
European Efficiency	98.4%	
Input		
Max. Input Voltage [1]	1,100 V	
Max. Current per MPPT	27 A (per MPPT) / 23 A (per Input)	
Max. Short Circuit Current per MPPT	40 A	
Start Voltage	180 V	
MPPT Operating Voltage Range [2]	180 V ~ 1000 V	
Rated Input Voltage	600 V	
Number of Inputs	8	
Number of MPP Trackers	4	
Output		
Rated AC Active Power	30,000 W	40,000 W
Max. AC Apparent Power	33,000 VA	44,000 VA
Rated Output Voltage	380 Vac / 400 Vac / 480 Vac, 3W/N+PE	
Rated AC Grid Frequency	50 Hz / 60 Hz	
Rated Output Current	45.6A@380V, 43.3 A@400V, 36.1A@480V	60.8A@380V, 57.7 A@400V, 48.1A@480V
Max. Output Current	50.4A@380V, 47.9 A@400V, 39.9A@480V	67.2A@380V, 63.8 A@400V, 53.2A@480V
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 I + II [3]	
AC Surge Arrester	Type II	
DC Insulation Resistance Detection	Yes	
Residual Current Monitoring Unit	Yes	
Arc Fault Protection	Yes	
Ripple Receiver Control	Yes	
Integrated PID Recovery [4]	Yes	
Communication		
Display	LED Indicators, Integrated WLAN + FusionSolar APP	
RS485	Yes	
Smart Dongle	WLAN/Ethernet via Smart Dongle-WLAN-FE(Optional) 4G / 3G / 2G via Smart Dongle-4G (Optional)	
General Data		
Dimensions (W x H x D)	640 x 530 x 270 mm (25.2 x 20.9 x 10.6 inch)	
Weight (with mounting plate)	45 kg	
Operating Temperature Range	-25 ~ + 60 °C (-13 °F ~ 140 °F)	
Cooling Method	Natural Convection	
Max. Operating Altitude	4,000 m (13,123 ft.) (Derating above 2000 m)	
Relative Humidity	0% RH ~ 100% RH	
DC Connector	Amphenol Helios H4	
AC Connector	Waterproof Connector + OT/DT Terminal	
Protection Degree	IP 66	
Topology	Transformerless	
Optimizer Compatibility		
DC MBUS Compatible Optimizer	MERC-1100W/1300W-P	
Standard Compliance (more available upon request)		
Safety	EN 62109-1/-2, IEC 62109-1/-2, IEC 62116, IEC 60068, IEC 61683	
Grid Connection Standards	IEC 61727, VDE-AR-N4105, VDE 0124-1-1, UTE C 15-712-1, CEI 0-16, CEI 0-21, EN-50549, C10/11, MEA, PEA, DEWA, G99	

1. The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.
2. Any DC input voltage beyond the operating voltage range may result in inverter improper operating.
3. SPD devices comply with IEC/EN 61643-11 and IEC/EN 61643-31 standards.
4. SUN2000-30~40KTL-Mc0 raises potential between PV- and ground to above zero through integrated PID recovery function to recover module degradation from PID. Supported module types include: P-type (mono, poly), N-type (nPERT, HIT)