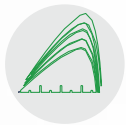


# Smart Energy Controller

SUN2000-100KTL-M2



10 MPP Trackers



98.6% Max. Efficiency



String-level Management



DC Surge protection Type I + Type II



MBUS Supported



Support AFCI & Smart String Level Disconnecter



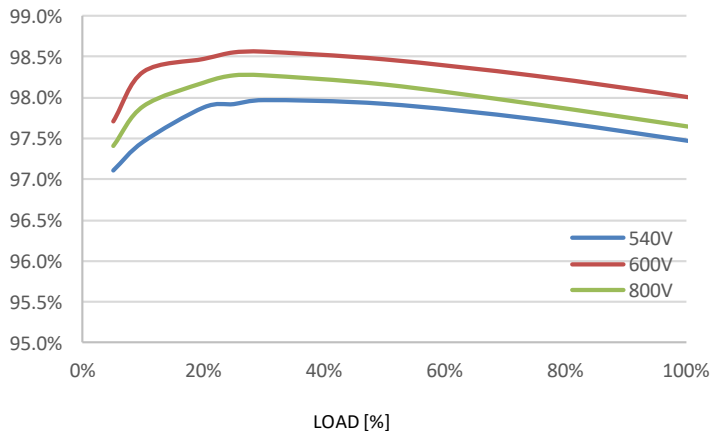
Surge Arresters for DC & AC



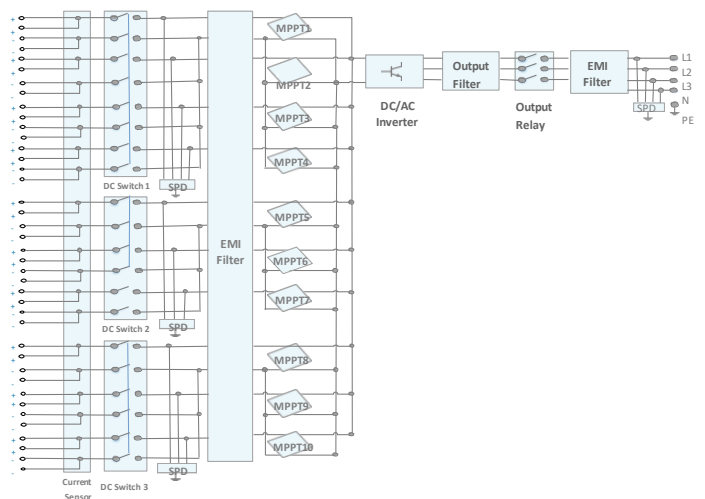
IP66 Protection

## Efficiency Curve

SUN2000-100KTL-M2 @400V



## Circuit Diagram



# SUN2000-100KTL-M2

## Technical Specification

SUN2000	-100KTL-M2
	<b>Efficiency</b>
Max. efficiency	98.6% @ 400 V
European efficiency	98.4% @ 400 V
	<b>Input</b>
Max. Input Voltage <sup>1</sup>	1100 V
Max. Current per MPPT	30 A
Max. Current per Input <sup>3</sup>	20 A
Max. Short Circuit Current per MPPT	40 A
Start Voltage	200 V
MPPT Operating Voltage Range <sup>2</sup>	200 V - 1000 V
Nominal Input Voltage	600 V @ 400 Vac
Number of MPP trackers	10
Max. input number per MPP tracker	2
	<b>Output</b>
Nominal AC Active Power	100000 W
Max. AC Apparent Power	110000 VA
Max. AC Active Power (cosφ=1)	110000 W
Nominal Output Voltage	400 V, 3W+(N)+PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	144.4 A @ 400 V
Max. Output Current	160.4 A @ 400 V
Adjustable Power Factor Range	0.8 leading... 0.8 lagging
Max. Total Harmonic Distortion	< 3%
	<b>Protection</b>
Input-side Disconnection Device	Yes
Anti-islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Reverse-polarity Protection	Yes
PV-array String Fault Monitoring	Yes
AC Surge Arrester	Type II
DC Insulation Resistance Detection	Yes
Residual Current Monitoring Unit	Yes
Arc Fault Protection	Yes
Smart String Level Disconnecter	Yes
DC Surge protection <sup>4</sup>	Type I + II
	<b>Communication</b>
Display	LED indicators; WLAN adaptor + FusionSolar APP
RS485	Yes
USB	Yes
Smart Dongle-4G	Smart Dongle – 4G / WLAN (Optional)
Monitoring BUS (MBUS)	Yes (isolation transformer required)
	<b>General Data</b>
Dimensions (W x H x D)	1035 x 700 x 365 mm
Weight (with mounting plate)	93 kg
Operating Temperature Range	-25°C to +60°C
Cooling Method	Smart Air Cooling
Max. Operating Altitude	4000 m
Relative Humidity	0 - 100%
DC Connector	Amphenol Helios H4
AC Connector	Waterproof Connector + OT/DT Terminal
Protection Degree	IP66
Topology	Transformerless
Nighttime Power Consumption	< 3.5 W
	<b>Standard Compliance (more available upon request)</b>
Certificate	EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 61727, IEC 60068, IEC 61683
Grid Connection Standards	VDE-AR-N4105, EN 50549-1, EN 50549-2, RD 661, RD 1699, C10/11

\*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. Single-string access.

\*4. SPD Type I+II for inverters with a manufacturing date after 09/01/2024, see self-declaration for more details