

Huawei is a leading global information and communications technology (ICT) solutions provider. Driven by a commitment to sound operations, ongoing innovation, and open collaboration, we have established a competitive ICT portfolio of end-to-end solutions in telecom and enterprise networks, devices, and cloud technology and services. Our ICT solutions, products, and services are used in more than 170 countries and regions, serving over one-third of the world's population. With 180,000 employees, Huawei is committed to enabling the future information society, and building a Better Connected World. Continuously innovating based on customer needs, we are committed to enhancing customer experiences and creating maximum value. The annual revenue of 92.5 billion USD in 2017 represents an increase of 15% year-on-year.



Smart String Inverter

SUN2000-8/12KTL



Smart

- 4 strings intelligent monitoring and fast trouble-shooting
- RS485 and USB ports for connectivity and data management
- Local graphic LCD display and remote monitoring

Efficient

- Max. efficiency 98.5%, European efficiency 98.0%
- 2 MPPTs for versatile adaptations to different layouts

Safe

- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

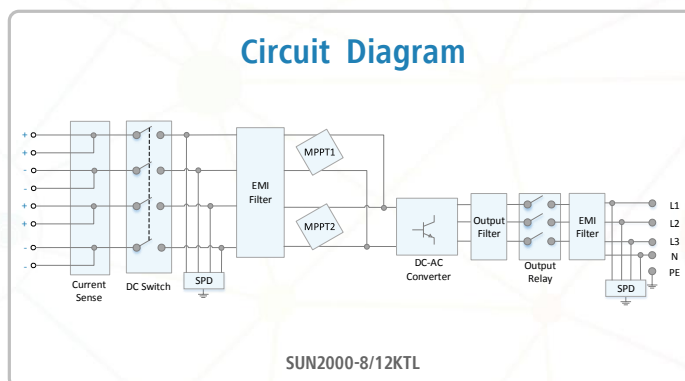
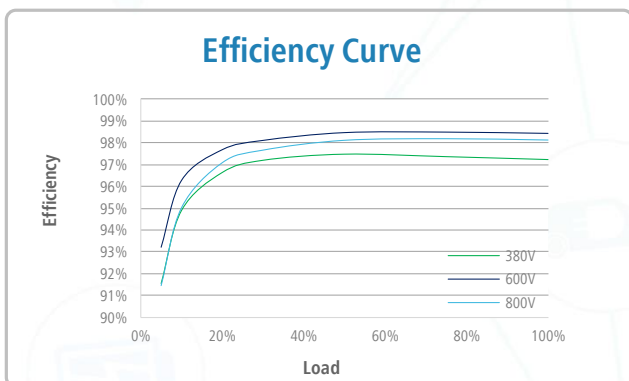
Reliable

- Natural cooling technology
- Protection rating of IP65

Smart String Inverter (SUN2000-8/12KTL)



Technical Specifications	SUN2000-8KTL	SUN2000-12KTL
Efficiency		
Max. Efficiency	98.5%	98.5%
European Efficiency	98.0%	98.0%
Input		
Max. Input Voltage	1,000 V	1,000 V
Max. Current per MPPT	18 A	18 A
Max. Short Circuit Current per MPPT	25 A	25 A
Start Voltage	250 V	250 V
MPPT Operating Voltage Range	200 V ~ 950 V	200 V ~ 950 V
Rated Input Voltage	620 V	620 V
Max. Number of Inputs	4	4
Number of MPP Trackers	2	2
Output		
Rated AC Active Power	8,000 W	12,000 W
Max. AC Apparent Power	8,800 VA	13,200 VA
Max. AC Active Power (cosφ=1)	8,800 W	13,200 W
Rated Output Voltage	220 V / 380 V, 230 V / 400 V, 3W+N+PE	220 V / 380 V, 230 V / 400 V, 3W+N+PE
Rated AC Grid Frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Rated Output Current	12.2 A @ 380 V / 11.6 A @ 400 V	18.3 A @ 380 V / 17.4 @ 400 V
Max. Output Current	13.4 A	20 A
Adjustable Power Factor	0.8 LG ... 0.8 LD	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%	< 3%
Protection		
Input-side Disconnection Device	Yes	Yes
Anti-islanding Protection	Yes	Yes
AC Overcurrent Protection	Yes	Yes
DC Reverse-polarity Protection	Yes	Yes
PV-array String Fault Monitoring	Yes	Yes
DC Surge Arrester	Type II	Type II
AC Surge Arrester	Type II	Type II
Insulation Detection	Yes	Yes
Residual Current Monitoring Unit	Yes	Yes
Communication		
Display	Graphic LCD	Graphic LCD
RS485	Yes	Yes
USB	Yes	Yes
General		
Dimensions(W x H x D)	520 x 610 x 266 mm (20.5 x 24.0 x 10.5 inches)	520 x 610 x 266 mm (20.5 x 24.0 x 10.5 inches)
Weight (with mounting plate)	42 kg (92.6 lb.)	42 kg (92.6 lb.)
Operation Temperature Range	-25 °C ~ 60 °C (-13 °F ~ 140 °F)	-25 °C ~ 60 °C (-13 °F ~ 140 °F)
Cooling	Natural Convection	Natural Convection
Max. Operating Altitude	3,000 m (9,842 ft.)	3,000 m (9,842 ft.)
Relative Humidity	0 ~ 100%	0 ~ 100%
DC Connector	Amphenol Helios H4	Amphenol Helios H4
AC Connector	Amphenol C16/3	Amphenol C16/3
Protection Rating	IP65	IP65
Topology	Transformerless	Transformerless
Standards Compliance		
Safety	EN/IEC 62109-1, EN/IEC 62109-2	
Grid Code	IEC 61727, IEC 62116, NB/T 32004-2013, VDE-AR-N-4105, VDE 0126-1-1, BDEW, G83/2 (Only 8KTL), G59/3 (Only 12KTL), UTE C 15-712-1, CEI 0-16, CEI 0-21, C10/11, EN 50438-Ireland, EN 50438-Turkey, AS 4777, PEA (Only 12KTL), MEA (Only 12KTL), NRS 097-2-1	



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Smart String Inverter

SUN2000-17/20KTL



Smart

- 6 strings intelligent monitoring and fast trouble-shooting
- RS485 and USB ports for connectivity and data management
- Local graphic LCD display and remote monitoring

Efficient

- Max. efficiency 98.6%, European efficiency 98.3%
- 3 MPPTs for versatile adaptations to different layouts

Safe

- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

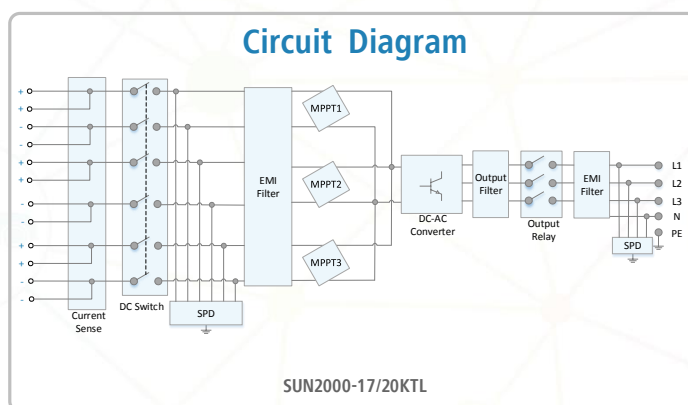
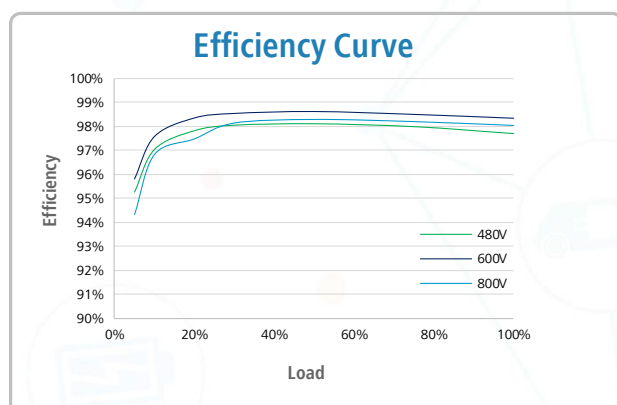
Reliable

- Natural cooling technology
- Protection rating of IP65

Smart String Inverter (SUN2000-17/20KTL)



Technical Specifications	SUN2000-17KTL	SUN2000-20KTL
Efficiency		
Max. Efficiency	98.6%	98.6%
European Efficiency	98.3%	98.3%
Input		
Max. Input Voltage	1,000 V	1,000 V
Max. Current per MPPT	18 A	18 A
Max. Short Circuit Current per MPPT	25 A	25 A
Start Voltage	250 V	250 V
MPPT Operating Voltage Range	200 V ~ 950 V	200 V ~ 950 V
Max. Number of Inputs	6	6
Number of MPP Trackers	3	3
Output		
Rated AC Active Power	17,000 W	20,000 W
Max. AC Apparent Power	18,700 VA	22,000 VA
Max. AC Active Power (cosφ=1)	18,700 W	22,000 W
Rated Output Voltage	220 V / 380 V, 230 V / 400 V, 3W+N+PE	220 V / 380 V, 230 V / 400 V, 3W+N+PE
Rated AC Grid Frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Rated Output Current	25.8 A @ 380 V / 24.7 A @ 400 V	30.4 A @ 380 V / 29 A @ 400 V
Max. Output Current	28.5 A	33.5 A
Adjustable Power Factor	0.8 LG ... 0.8 LD	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%	< 3%
Protection		
Input-side Disconnection Device	Yes	Yes
Anti-islanding Protection	Yes	Yes
AC Overcurrent Protection	Yes	Yes
DC Reverse-polarity Protection	Yes	Yes
PV-array String Fault Monitoring	Yes	Yes
DC Surge Arrester	Type II	Type II
AC Surge Arrester	Type II	Type II
Insulation Monitoring	Yes	Yes
Residual Current Monitoring Unit	Yes	Yes
Communication		
Display	Graphic LCD	Graphic LCD
RS485	Yes	Yes
USB	Yes	Yes
General		
Dimensions (W x H x D, with mounting bracket)	520 x 610 x 266 mm (20.5 x 24.0 x 10.5 inches)	520 x 610 x 266 mm (20.5 x 24.0 x 10.5 inches)
Weight (with mounting plate)	50 kg (110.2 lb.)	50 kg (110.2 lb.)
Operation Temperature Range	-25 °C ~ 60 °C (-13 °F ~ 140 °F)	-25 °C ~ 60 °C (-13 °F ~ 140 °F)
Cooling	Natural Convection	Natural Convection
Max. Operating Altitude	3,000 m (9,842 ft.)	3,000 m (9,842 ft.)
Relative Humidity	0 ~ 100%	0 ~ 100%
DC Connector	Amphenol Helios H4	Amphenol Helios H4
AC Connector	Amphenol C16/3	Amphenol C16/3
Protection Rating	IP65	IP65
Topology	Transformerless	Transformerless
Standards Compliance		
Safety	EN/IEC 62109-1, EN/IEC 62109-2	
Grid Code	IEC 61727, IEC 62116, NB/T 32004-2013, VDE-AR-N-4105, VDE 0126-1-1, BDEW, G59/3, UTE C 15-712-1, CEI 0-16, CEI 0-21, C10/11, EN 50438-Ireland, EN 50438-Turkey, AS 4777, PEA (Only 20KTL), MEA (Only 20KTL), NRS 097-2-1	



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Smart String Inverter

SUN2000-36KTL



Smart

- 8 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart I-V Curve Diagnosis supported

Efficient

- Max. efficiency 98.6% (@380 Vac / 400 Vac), European efficiency 98.4% (@380 Vac / 400 Vac)
- 4 MPPTs for versatile adaptations to different layouts

Safe

- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

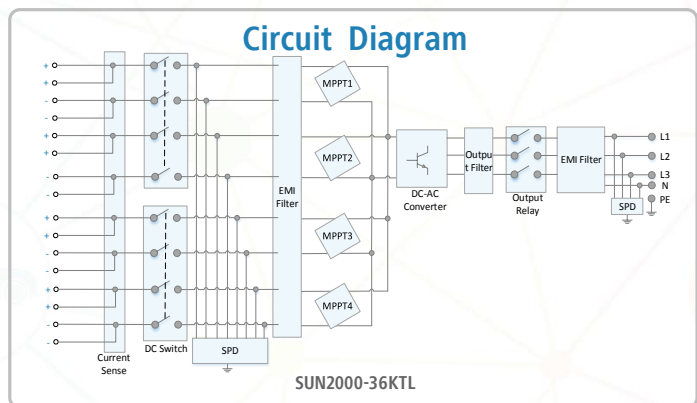
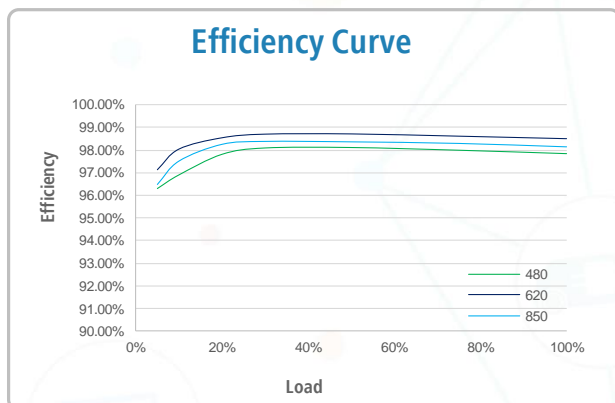
Reliable

- Natural cooling technology
- Protection rating of IP65

Smart String Inverter (SUN2000-36KTL)



Technical Specifications	SUN2000-36KTL
	Efficiency
Max. Efficiency	98.6% @ 380 Vac / 400 Vac
European Efficiency	98.4% @ 380 Vac / 400 Vac
	Input
Max. Input Voltage	1,100 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Start Voltage	250 V
MPPT Operating Voltage Range	200 V ~ 1000 V
Rated Input Voltage	620 V @ 380 Vac / 400 Vac
Max. Number of Inputs	8
Number of MPP Trackers	4
	Output
Rated AC Active Power	36,000 W
Max. AC Apparent Power	40,000 VA
Max. AC Active Power (cosφ=1)	Default 40,000 W; 36,000 W optional in settings
Rated Output Voltage	220 V / 380 V, 230 V / 400 V, default 3W+N+PE; 3W+PE optional in settings
Rated Output Current	54.6 A @ 380 Vac / 52.2 A @ 400 Vac
Rated AC Grid Frequency	50 Hz / 60 Hz
Max. Output Current(@380 V / 400 V)	60.8 A (380 V) / 57.8 A (400 V)
Adjustable Power Factor	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
Insulation Detection	Yes
Residual Current Monitoring Unit	Yes
	Communication
Display	LED Indicators, Bluetooth +APP
USB	Yes
RS485	Yes
PLC	Yes
	General
Dimensions(W x H x D)	930 x 550 x 283 mm (36.6 x 21.7 x 11.1 inches)
Weight (with mounting plate)	62 kg (136.7 lb.)
Operation Temperature Range	-25 °C ~ 60 °C (-13 °F ~ 140 °F)
Cooling	Natural Convection
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0~100%
DC Connector	Amphenol Helios H4
AC Connector	Waterproof PG Terminal + OT Connector
Protection Rating	IP65
Topology	Transformerless
	Standards Compliance
Safety	EN/IEC 62109-1, EN/IEC 62109-2
Grid Code	IEC 61727, IEC62116, VDE-AR-N4105, VDE 0126-1-1, BDEW 2008, G59/3, UTE C 15-712-1, CEI 0-16, CEI 0-21, RD661/2007, RD 1699/2011, RD 413/2014, PO 12.3, EN-50438-Turkey, EN-50438-Ireland, PEA, MEA, Resolution No.7, NRS 097-2-1



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Smart String Inverter

SUN2000-42KTL



Smart

- 8 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart I-V Curve Diagnosis supported

Efficient

- Max. efficiency 98.8%, European efficiency 98.6%
- 4 MPPTs for versatile adaptations to different layouts

Safe

- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

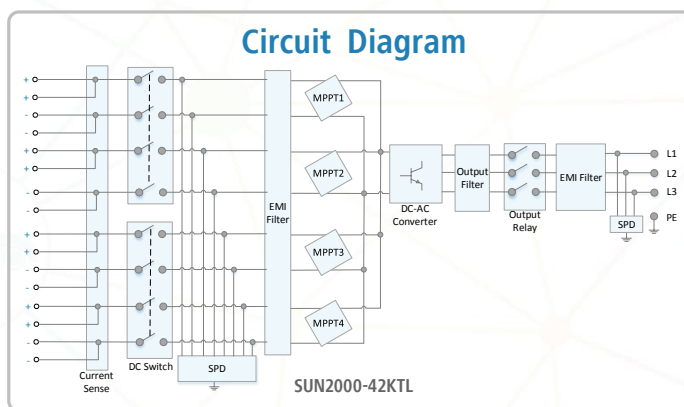
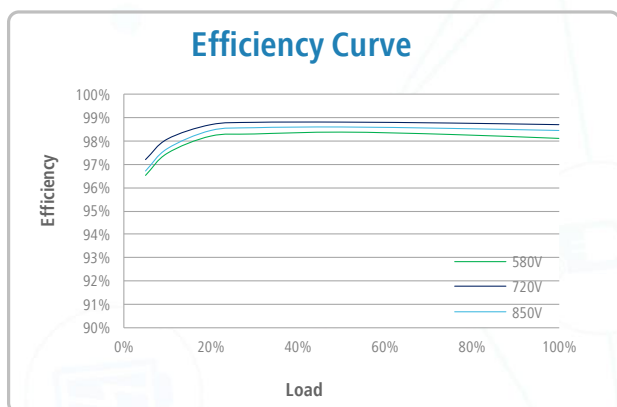
Reliable

- Natural cooling technology
- Protection rating of IP65

Smart String Inverter (SUN2000-42KTL)



Technical Specifications	SUN2000-42KTL
	Efficiency
Max. Efficiency	98.8%
European Efficiency	98.6%
	Input
Max. Input Voltage	1,100 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Start Voltage	250 V
MPPT Operating Voltage Range	200 V ~ 1000 V
Rated Input Voltage	720 V
Max. Number of Inputs	8
Number of MPP Trackers	4
	Output
Rated AC Active Power	42,000 W
Max. AC Apparent Power	47,000 VA
Max. AC Active Power (cosφ=1)	Default 47,000 W; 42,000 W optional in settings
Rated Output Voltage	277 V / 480 V, 3W+PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Rated Output Current	50.6 A
Max. Output Current	56.6 A
Adjustable Power Factor	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
Insulation Detection	Yes
Residual Current Monitoring Unit	Yes
	Communication
Display	LED Indicators, Bluetooth +APP
USB	Yes
RS485	Yes
PLC	Yes
	General
Dimensions(W x H x D)	930 x 550 x 283 mm (36.6 x 21.7 x 11.1 inches)
Weight (with mounting plate)	62 kg (136.7 lb.)
Operation Temperature Range	-25 °C ~ 60 °C (-13 °F ~ 140 °F)
Cooling	Natural Convection
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Amphenol Helios H4
AC Connector	Waterproof PG Terminal + OT Connector
Protection Rating	IP65
Topology	Transformerless
	Standards Compliance
Safety	EN/IEC 62109-1, EN/IEC 62109-2
Grid Code	IEC 61727, IEC62116, G59/3, UTE C 15-712-1, CEI 0-16, CEI 0-21, RD661/2007, RD 1699/2011, RD 413/2014, PO 12.3, EN-50438-Turkey, EN-50438-Ireland, PEA, Resolution No.7, NRS 097-2-1



Smart String Inverter

SUN2000-60KTL-HV-D1-001



Smart

- 8 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart I-V Curve Diagnosis supported

Efficient

- Max. efficiency 99.0%, European efficiency 98.8%
- 4 MPPTs for versatile adaptations to different layouts

Safe

- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

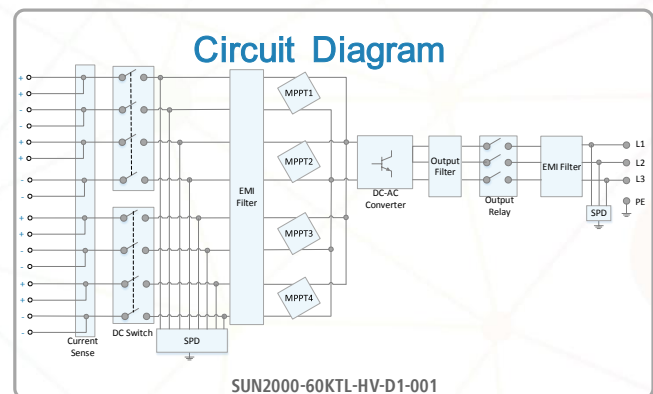
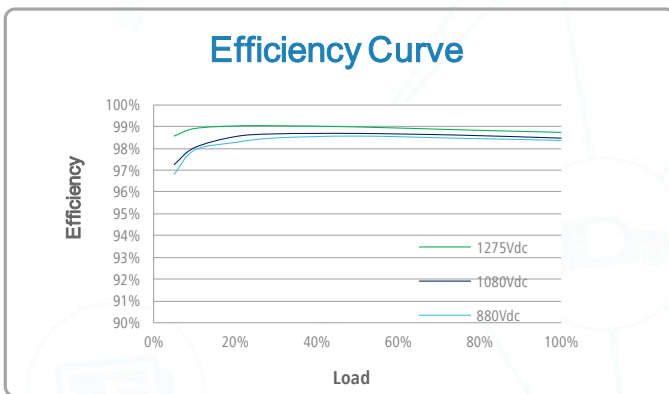
Reliable

- Natural cooling technology
- Protection rating of IP65

Smart String Inverter(SUN2000-60KTL-HV-D1-001)



Technical Specifications	SUN2000-60KTL-HV-001
	Efficiency
Max. Efficiency	99.0%
European Efficiency	98.8%
	Input
Max. Input Voltage	1,500 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Start Input Voltage	650 V
MPPT Operating Voltage Range	600 V ~ 1,450 V
Rated Input Voltage	1,080 V
Max. Number of Inputs	8
Number of MPP Trackers	4
	Output
Rated AC Active Power	60,000 W
Max. AC Apparent Power	66,000 VA
Max. AC Active Power (cosφ=1)	66,000 W
Rated Output Voltage	800 Vac, 3W+PE
Rated Output Current	43.3 A
Rated AC Grid Frequency	50 Hz / 60 Hz
Max. Output Current	48 A
Adjustable Power Factor	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 Detection	Yes
Residual Current Monitoring Unit	Yes
	Communication
Display	LED Indicators, Bluetooth +APP
USB	Yes
RS485	Yes
PLC	Yes
	General
Dimensions (W x H x D)	930 x 600 x 270 mm (36.6 x 23.6 x 10.2 inches)
Weight (with mounting plate)	62 kg (136.7 lb.)
Operation Temperature Range	-25 °C ~ 60 °C (-13 °F ~ +140 °F)
Cooling	Natural Convection
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Amphenol UTX
AC Connector	Waterproof PG Terminal + OT Connector
Protection Rating	IP65
Topology	Transformerless
Safety / EMC	IEC/IEC62109-1, EN/IEC62109-2
Grid Code	IEC61727, IEC62116 , G59/3 , UTE C15-712-1:2013 , EN-50438-Turkey, EN-50438-Ireland, CEI 0-16,AS/NZS, DEWA , ABNT NBR 16149 : 2013 ABNT NBR 16150 : 2013 ABNT NBR IEC 62116 : 2012 , PEA, Philippine Grid Code Resolution No. 07



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Smart String Inverter

SUN2000-60KTL-M0



Smart

- 12 strings intelligent management and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart I-V Curve Diagnosis supported

Efficient

- Max. efficiency 98.7%, European efficiency 98.5%
- 6 MPPTs for versatile adaptations to different layouts

Safe

- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

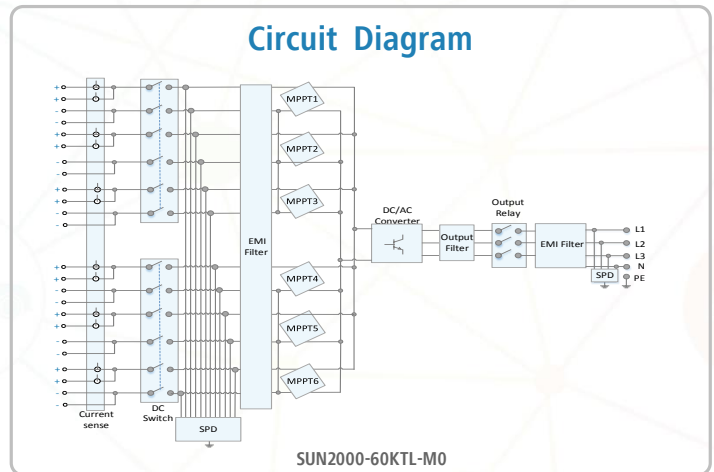
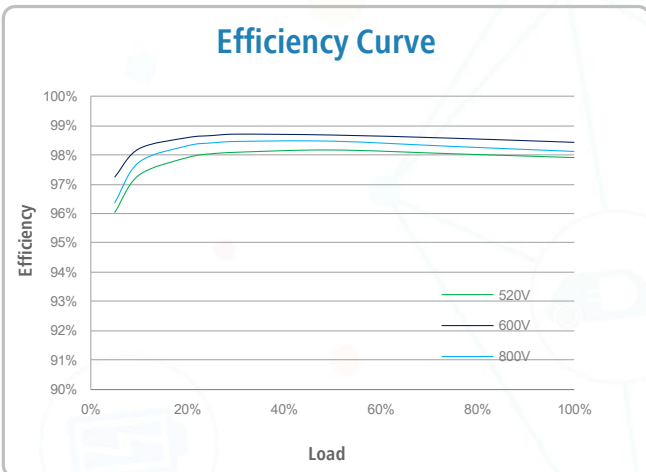
Reliable

- Natural cooling technology
- Protection rating of IP65

Smart String Inverter (SUN2000-60KTL-M0)



Technical Specifications	SUN2000-60KTL-M0
	Efficiency
Max. Efficiency	98.7%
European Efficiency	98.5%
	Input
Max. Input Voltage	1,100 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Start Voltage	200 V
MPPT Operating Voltage Range	200 V~1,000 V
Rated Input Voltage	600 V
Max. Number of Inputs	12
Number of MPP Trackers	6
	Output
Rated AC Active Power	60,000 W
Max. AC Apparent Power	66,000 VA
Max. AC Active Power (cosφ=1)	66,000 W
Rated Output Voltage	220V / 230V default 3W+N+PE; 380V / 400V, 3W+PE
Rated Output Current	91.2 A @380Vac, 86.7 A @400Vac
Rated AC Grid Frequency	50 Hz / 60 Hz
Max. Output Current	100 A @380Vac, 95.3 A @400Vac
Adjustable Power Factor	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%
	Protection
Input-side Disconnection Device	Yes
Anti-Islanding Protection	Yes
DC Reverse-Polarity Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
Insulation Detection	Yes
Residual Current Monitoring Unit	Yes
	Communication
Display	LED Indicators, Bluetooth + APP
RS485	Yes
USB	Yes
PLC	Yes
	General
Dimensions (W x H x D)	1,075 x 555 x 300 mm (42.3 x 21.9 x 11.8 inches)
Weight (with mounting plate)	74 kg (163 lb.)
Operation Temperature Range	-25°C ~ 60°C (-13°F ~ 140°F)
Cooling	Natural Convection
Max. Operating Altitude	4,000 m
Relative Humidity	0~100%
DC Connector	Amphenol Helios H4
AC Connector	Waterproof PG Terminal + OT Connector
Protection Rating	IP65
Topology	Transformerless
	Standards Compliance (more available upon request)
Certificate	IEC / EN 62109-1/-2; EN 50530; IEC 62116; IEC 62910; IEC 60068; IEC 61683
Grid Code	IEC 61727; BDEW; VDE 4105/ 4120 / 0126; MEA / PEA Cert



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Smart String Inverter

SUN2000-65KTL-M0



Smart

- 12 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart I-V Curve Diagnosis supported

Efficient

- Max. efficiency 98.9%, European efficiency 98.7%
- 6 MPPTs for versatile adaptations to different layouts

Safe

- DC disconnect integrated, safe and convenient for maintenance
- Residual Current Monitoring Unit (RCMU) integrated inside
- Fuse free design

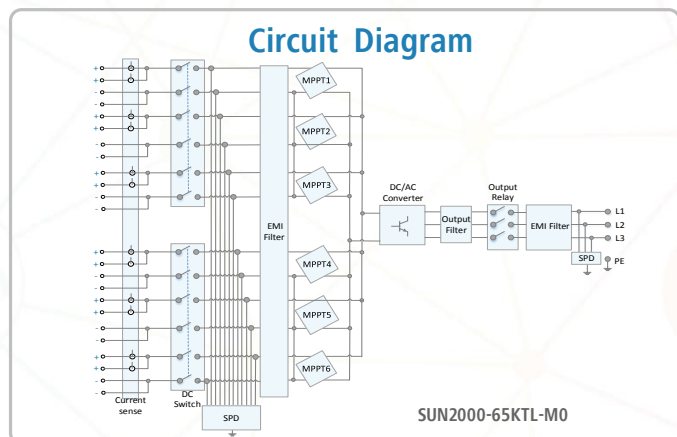
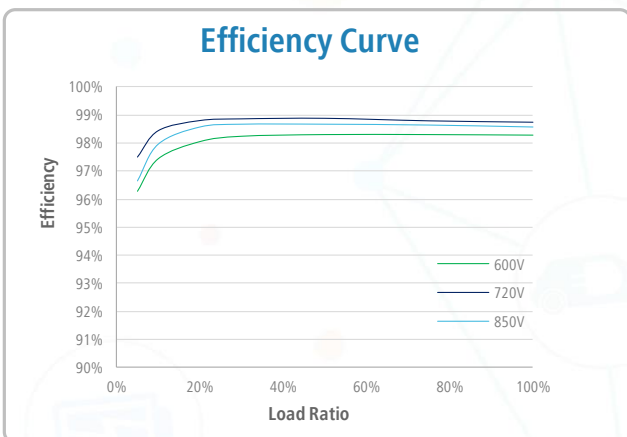
Reliable

- Natural cooling technology
- Protection rating of IP65
- Type II surge arresters for both DC and AC

Smart String Inverter (SUN2000-65KTL-M0)



Technical Specifications	SUN2000-65KTL-M0
Efficiency	
Max. Efficiency	98.9%
European Efficiency	98.7%
Input	
Max. Input Voltage	1,100 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Start Voltage	200 V
MPPT Operating Voltage Range	200 V ~ 1,000 V
Rated Input Voltage	720 V
Max. Number of Inputs	12
Number of MPP Trackers	6
Output	
Rated AC Active Power	65,000 W @50°C, 70,000 W @45°C, 72,000 W @40°C
Max. AC Apparent Power	72,000 VA
Max. AC Active Power (cosφ=1)	72,000 W
Rated Output Voltage	277 V / 480 V, 3W+PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Rated Output Current	78.2 A
Max. Output Current	86.7 A
Adjustable Power Factor	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%
Protection	
Input-side Disconnection Device	Yes
Anti-Islanding Protection	Yes
DC Reverse-Polarity Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
Insulation Detection	Yes
Residual Current Monitoring Unit	Yes
Communication	
Display	LED Indicators, Bluetooth + APP
RS485	Yes
USB	Yes
Power Line Communication (PLC)	Yes
General	
Dimensions (W x H x D)	1,075 x 555 x 300 mm (42.3 x 21.9 x 11.8 inch)
Weight (with mounting plate)	72 kg (158.7 lb.)
Operation Temperature Range	-25°C ~ 60°C (-13°F ~ 140°F)
Cooling	Natural Convection
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Amphenol Helios H4
AC Connector	Waterproof PG Terminal + OT Connector
Protection Rating	IP65
Topology	Transformerless
Standards Compliance	
Safety	EN/IEC 62109-1, EN/IEC 62109-2
Grid Code	IEC 61727, IEC62116, IEC60068, IEC 61683, IEC 62910, EN50530, G59/3



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SmartLogger1000



Smart

- Modbus-TCP for connections to Huawei NetEco
- IEC60870-5-104 for connections to third-party monitoring systems
- USB and embedded web for data reading and software upgrade
- Automatically detecting facilities and mapping RS485 addresses
- Remote control of active & reactive power
- I-V Curve Diagnosis supported

Simple

- Up to 80 inverters per SmartLogger1000
- Up to 30 devices per RS485 bus
- Easy to install on walls, tabletops and rails

Reliable

- Max. reliable communication range of 1,000m

Technical Specifications	SmartLogger1000
	Device Management
Max. Number of Manageable Devices	80
Max. Number of Manageable Smart Inverters	80
	Communication Interface
Electrical Ethernet	ETH x 1, 10 / 100 Mbps
RS485	COM x 3, 2400 / 4800 / 9600 / 19200 / 115200 bps
Digital / Analog Input / Output	DI x 4, DO x 3, AI x 2
	Communication Protocol
Ethernet	Modbus-TCP, IEC 60870-5-104
RS485	Modbus-RTU, IEC 60870-5-103 (standard), DL / T645
	Interaction
LCD	3.5 inches Graphic LCD
LED	LED Indicator x 3
WEB	Embedded WEB
USB	USB2.0 x 1
	Environment
Operating Temperature	-20 °C ~ 60 °C (-4 °F ~ 140 °F)
Relative Humidity	5% ~ 95%
Max. Operating Altitude (Non-condensing)	4,000 m (13,123 ft.)
	Mechanical
Power Supply	100 Vac ~ 240 Vac, 50 Hz / 60 Hz
Power Consumption	Typical 3 W, Max. 7 W
Dimensions (W x H x D)	225 x 140 x 50 mm (8.9 x 5.5 x 2.0 inches)
Weight	0.5 kg (1.1 lb.)
Protection Rating	IP20
Installation Option	Wall Mounting, Rail Mounting, Tabletop Mounting

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SmartLogger2000



Smart

- Functioning as communication manager, data logger, PLC master and Ethernet switch
- Multiple communication interfaces including PLC, RS485, Fast Ethernet, and SFP ports, flexible applications
- STP and RSTP supported for fiber ring network and ring protection
- Bluetooth, embedded WEB and USB supported, user-friendly
- Fast and reliable active and reactive power compensation control
- I-V Curve Diagnosis supported

Simple

- Up to 200 devices supported, including up to 150 inverters
- An integration of data collection, protocol conversion and Ethernet switch

Reliable

- Industrial application and high reliability

Technical Specifications	SmartLogger2000
	Device Management
Max. Number of Manageable Devices	200
Max. Number of Manageable Smart Inverters	150
	Communication Interface
Electrical Ethernet	ETH x 2, 10 / 100 Mbps
Optical Ethernet (optional)	SFP x 2, 100 Mbps
RS485	COM x 6, 2400 / 4800 / 9600 / 19200 / 115200 bps
PLC	PLC x 1, 115.2 kbps
Digital / Analog Input / Output	DI x 8, DO x3, AI x 7, AO x 4, PT100 / PT1000 x 2
	Communication Protocol
Ethernet	Modbus-TCP, IEC 60870-5-104
RS485	Modbus-RTU, IEC 60870-5-103 (standard), DL / T645
	Interaction
LED	LED Indicator x 4
WEB	Embedded WEB
Bluetooth	SUN2000 App
USB	USB2.0 x 1
	Environment
Operating Temperature	-40 °C ~ 60 °C (-40 °F ~ 140 °F)
Storage Temperature	-40 °C ~ 70 °C (-40 °F ~ 158 °F)
Relative Humidity	5% ~ 95%
Max. Operating Altitude (Non-condensing)	4,000m (13,123 ft.)
	Mechanical
Power Supply	100 Vac ~ 240 Vac , 50 Hz / 60 Hz
Power Consumption	Typical 8 W, Max. 15 W
Dimensions (W x H x D)	411 x 170 x 58.6 mm (16.2 x 6.7 x 2.3 inches), with mounting ears
Weight	2.5 kg (5.5 lb.)
Protection Rating	IP20
Installation Option	Wall Mounting, Rail Mounting, Integrated Inside Huawei Smart Array Controller

SmartACU2000B



With PID



Without PID

SmartACU2000B (Smart Array Controller) is a powerful integration of PV array communication and other smart functions. What's more, it supports 1000V/1100V/1500V DC system perfectly.

Smart

- SmartLogger2000 built-in
- Smart Anti-PID2000 module built-in (optional)
- Multiple communication interfaces including PLCC, RS485, Fast Ethernet, and SFP ports, flexible applications

Simple

- Integrated communication unit with multiple functions built-in
- Easy installation with SmartLogger2000 & anti-PID module pre-assembled inside the cabinet

Reliable

- Industrial application and high reliability

Specifications	SmartACU2000B-D-PLC	SmartACU2000B-D-2PLC	SmartACU2000B-D-PID/PLC	SmartACU2000B-D-2PID/2PLC
	Configuration			
SmartLogger	SmartLogger2000			
RS485	Yes			
Number of PLC Module	1	2	1	2
Number of Smart Anti-PID2000 Module	0	0	1	2
	Environment			
Operating Temperature	-40 °C ~ +60 °C (-40 °F ~ +140 °F)			
Relative Humidity	4% ~ 100%			
Max. Operating Altitude	4,000 m (13,123 ft.)			
	Electrical			
Input AC Voltage for Cabinet	100 V ~ 240 V, L / N (L)+ PE			
Input AC Voltage for PID	380 V ~ 800 V ; 3Ph+FE (Functional Earth)			
Input AC Voltage for PLC	380 V ~ 800 V ; 3Ph			
Input AC Frequency	50 / 60 Hz			
	Mechanical			
Cable Entries	Bottom in & out			
Maintenance	Front			
Dimensions (W / H / D)	640 x 770 x 315 mm (25.2 x 30.3 x 12.4 inches)		880 x 770 x 369 mm (34.6 x 30.3 x 14.5 inches)	
Weight	29 kg (63.9 lb.)	32 kg (70.5 lb.)	49 kg (108.0 lb.)	61 kg (134.5 lb.)
Protection Grade	IP65; Type 3R (with Anti-PID) / TYPE 4X (without Anti-PID)			
Installation Options	Wall Mounting, Rack Mounting, Pole Mounting			

Anti-PID2000 Module Inside Smart Array Controller



The **Smart Anti-PID2000 Module** is installed in the SmartACU2000B cabinet to reduce the negative effect of the Potential Induced Degradation (PID), and support 1000V/1100V/1500V DC System.

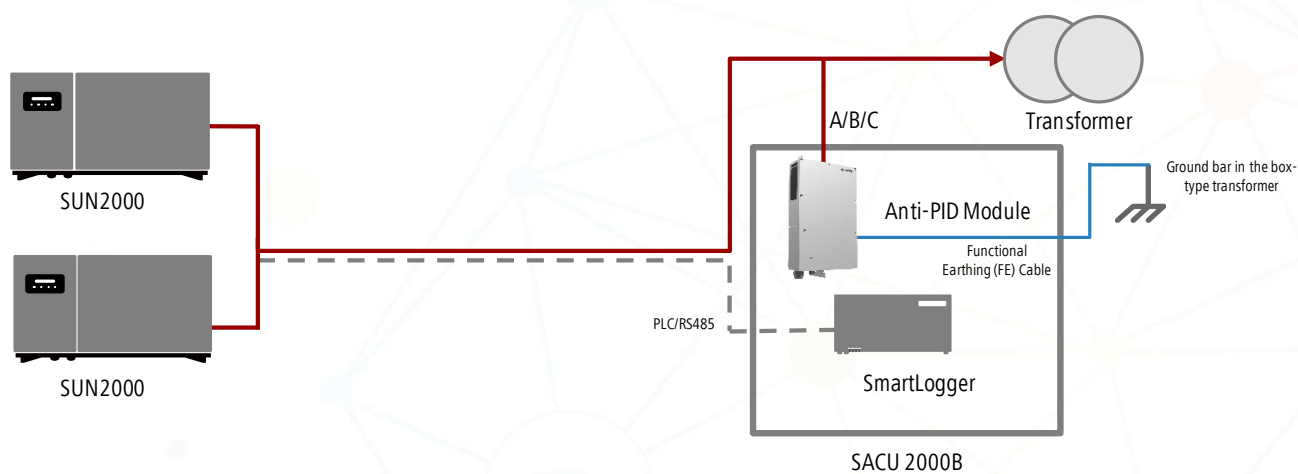
Smart

- Data read and software upgrade through USB disk or the embedded Web
- Support 1000V/1100V/1500V DC system and one module can support a 5MW subarray
- Set and display the PID module operating parameters by mobile phone APP and Bluetooth connection

Reliable

- Protection rating of IP65

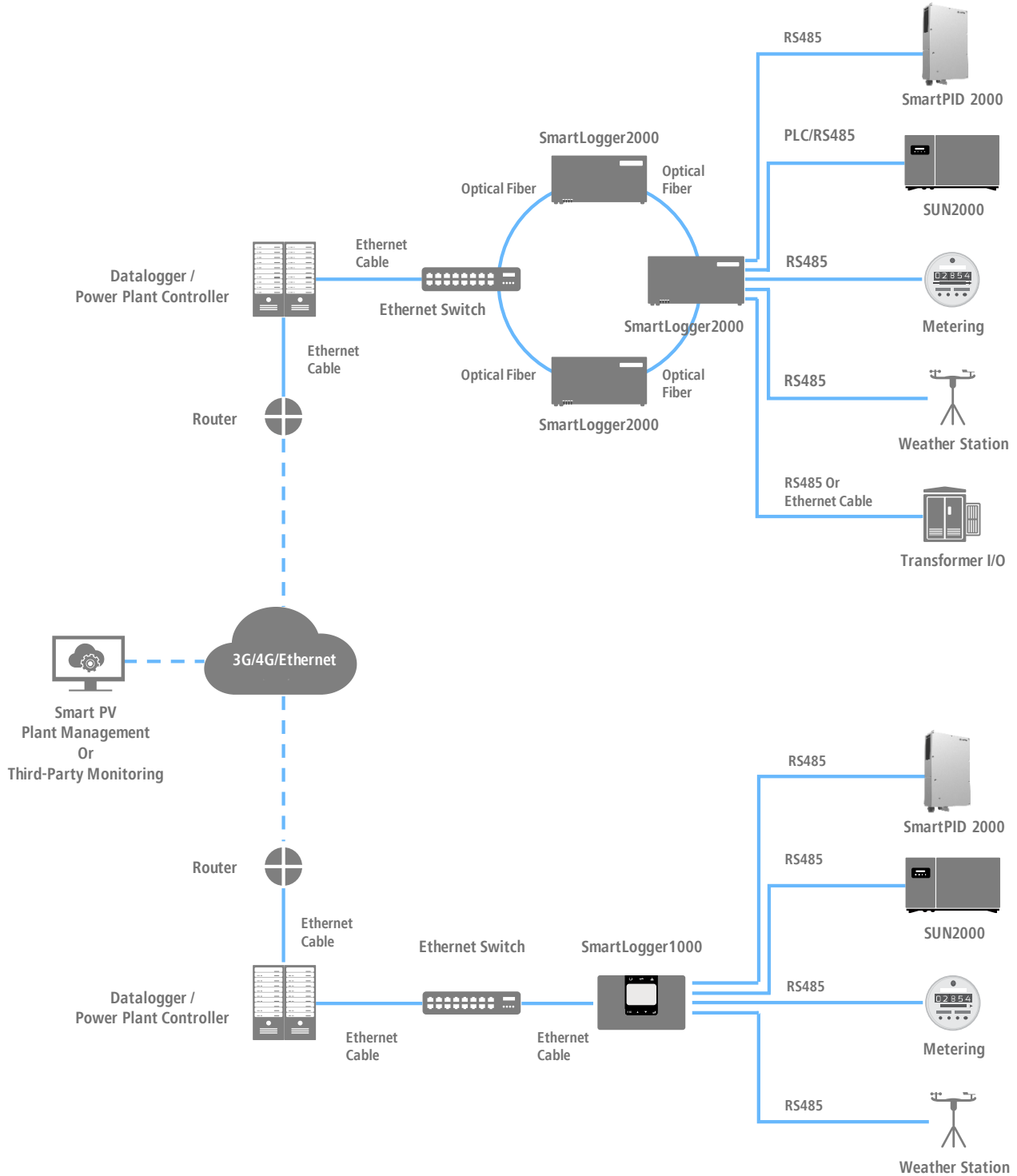
SmartPID 2000 Solution Network



Note:

1. The Anti-PID solution could ONLY be deployed in utility installations which are normally connected to the medium voltage (MV) grid running WITHOUT neutral line.
2. The Anti-PID module must work with Huawei SmartLoggers and Huawei inverters.

I Optical Fiber Ring Network + PLC



II Star Ethernet Network + RS485

NetEco1000S



Smart

- Easy data accesses on mobile devices
- Proactive reports of yields and alarms
- Smart String I-V Diagnosis supported

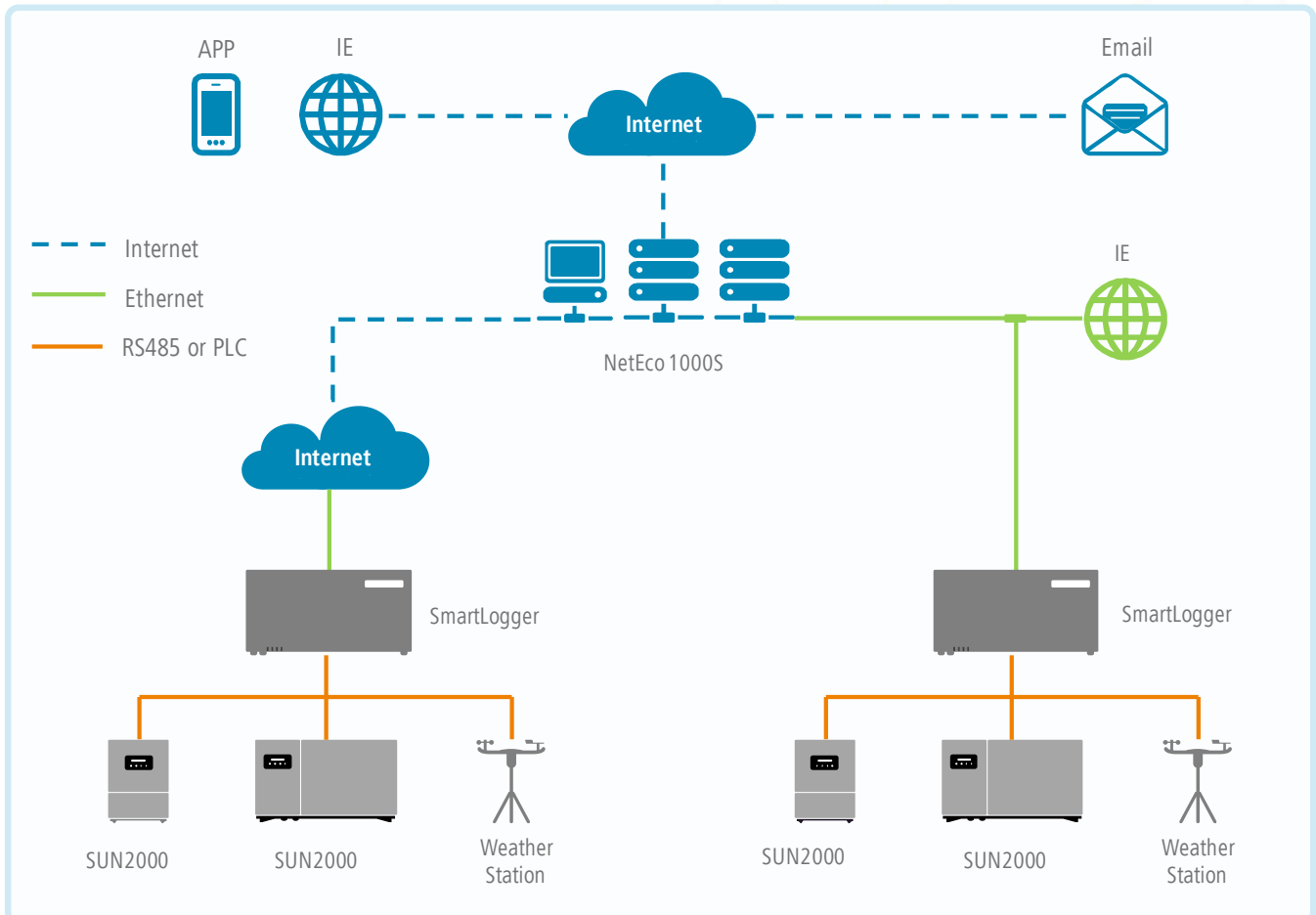
Simple

- One-click installation on PC
- Fault alarms via SMS and E-mail

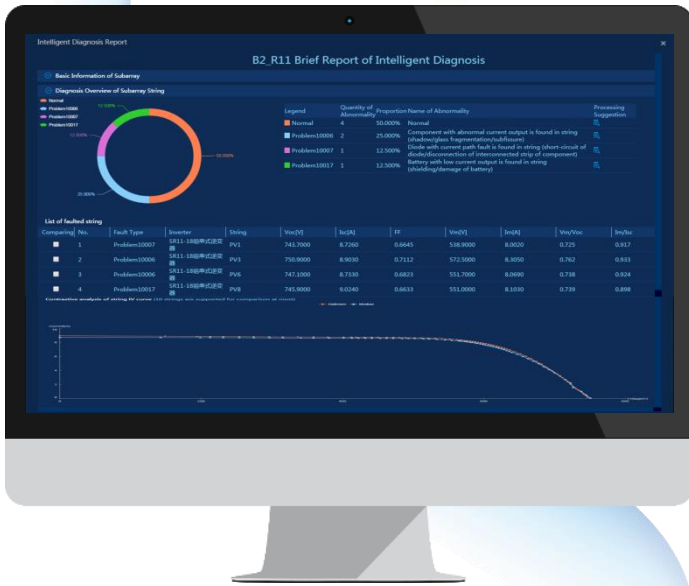
Reliable

- Hierarchical management
- Up to 25 years data storage in CSV file format

Network Structure



Smart IV Curve Diagnosis



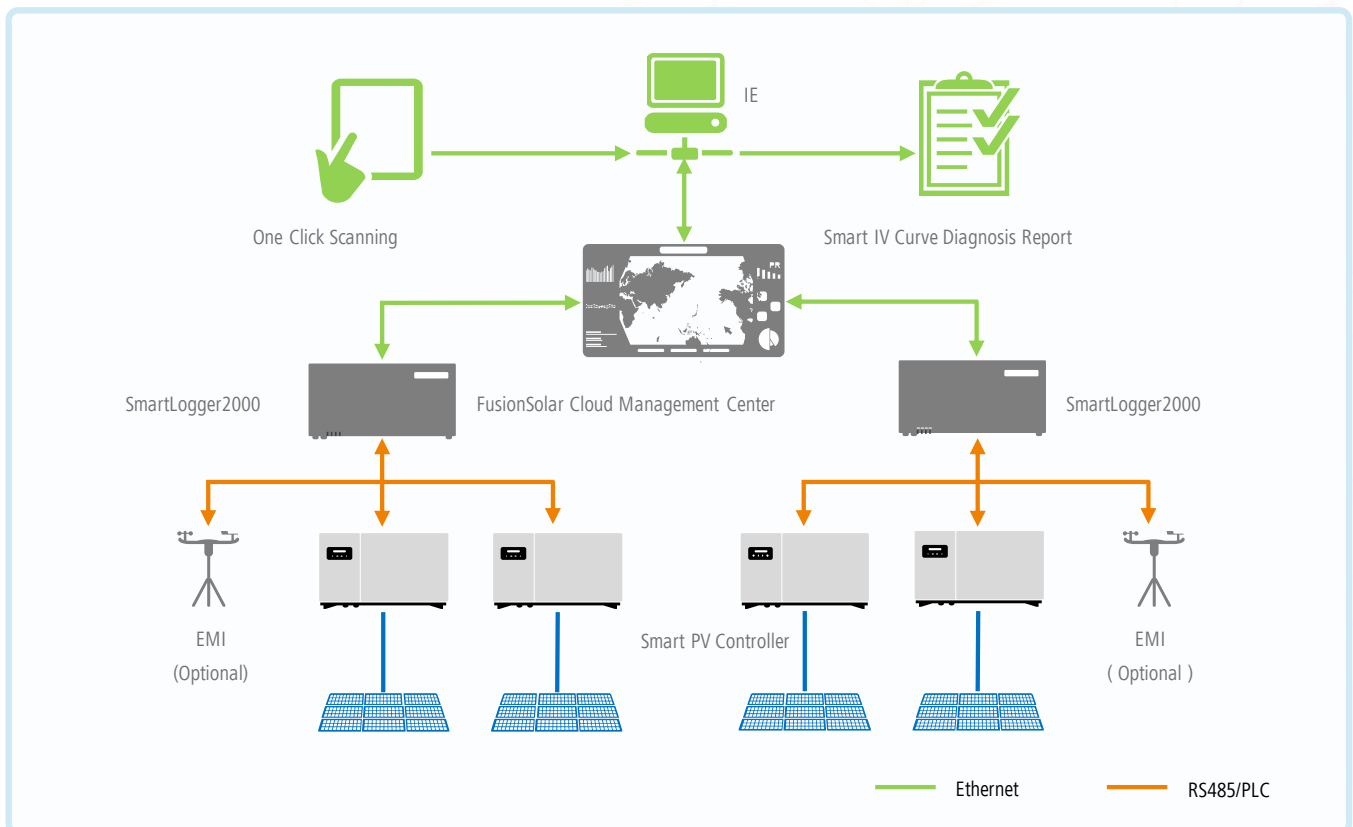
Smart IV Curve Diagnosis is based on string IV curve pattern analysis with advanced diagnosis algorithm, conducting PV plant complete string IV curve analysis. The online scanning and analysis can help in achieving higher O&M efficiency, proactive maintenance and lower operation cost.

Smart

- Supports plant-level, array-level or inverter-level IV curve analysis and Diagnosis
- Identifies different module faults with automatic report generation

Efficient

- One click scanning without onsite experts or equipment
- Online IV curve scanning on entire strings
- Automatic report generation within 10~15min

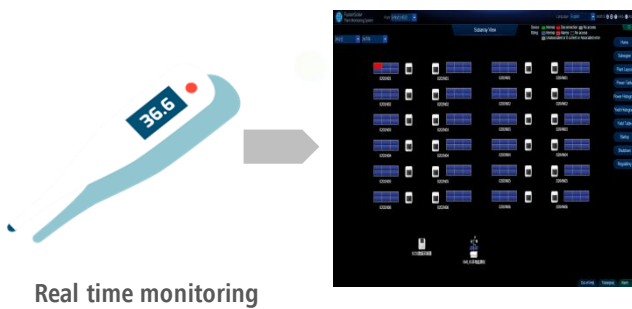


	Technical Specification	Smart I-V Curve Diagnosis
Configuration	Smart PV Inverter	SUN2000-36KT / 42KTL / 55-HV-D1 / 60KTL-HV-D1-001 / 48KTL / 55KTL / 60KTL / 65KTL
	Data Logger	SmartLogger2000, SmartLogger1000
	Management System	NetEco1000s
Performance	Scanning Time	< 1s
	Sampling Points per I-V Curve	128
	Voltage Accuracy	0.5%rdg. + 1dgt. (rdg.>5, dgt.=0.3)
	Current Accuracy	0.5%rdg. + 2dgt. (rdg.>0.3, dgt.=0.006)

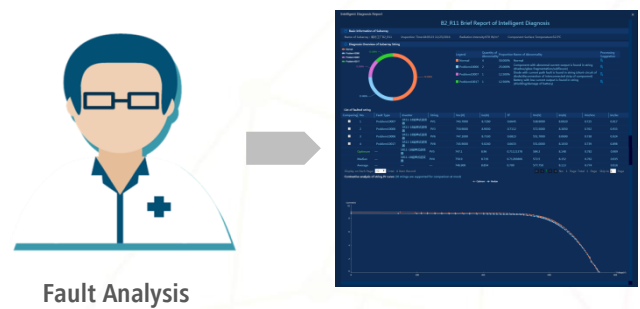


Smart I-V Curve Diagnosis is TÜV-Verified

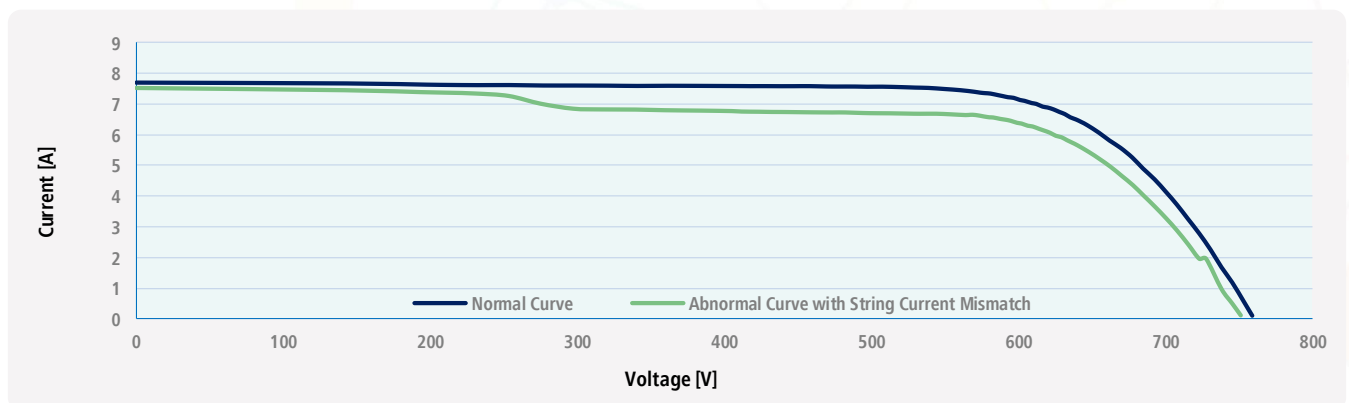
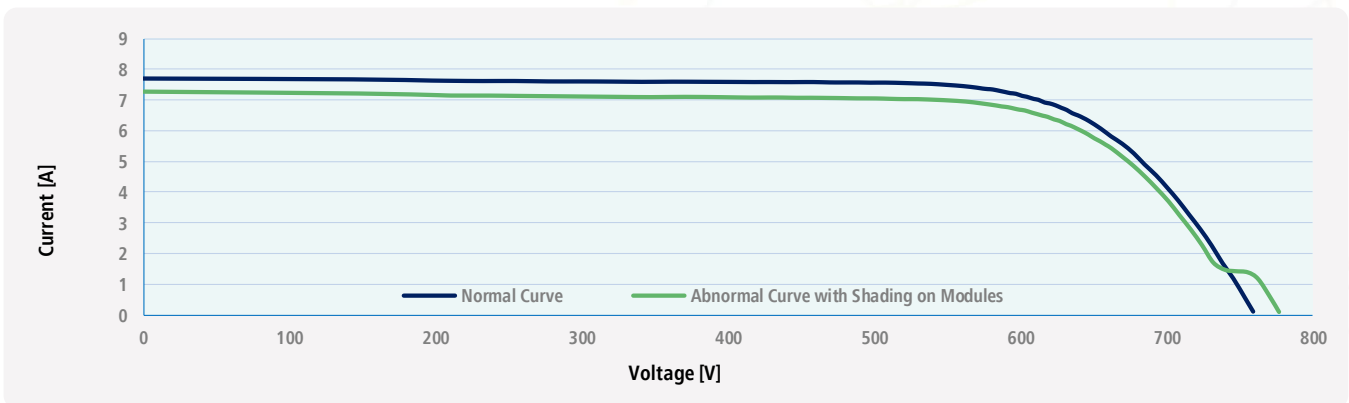
String-level Management



Smart I-V Curve Diagnosis



String I-V Curve Comparison



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FusionSolar Smart PV Solution Reference

1 GW

Largest Single Site Worldwide, 1 GW, Yanchi, Ningxia, China



700 MW

Largest Tracking System PV Plant Worldwide, 700 MW, Hongdunzi, Ningxia, China



300 MW

Largest Rooftop-Mounted PV Plant Worldwide, 300 MW, Haining, Zhejiang, China



FusionSolar Smart PV Solution Reference



590 MW

Ground-Mounted Smart PV Plant, 590 MW, Golmud, Qinghai, China



100 MW

Mountain-Mounted Smart PV Plant, 100 MW, Datong, Shanxi, China



50 MW

Highest (4,300 m) Ground-Mounted PV Plant Worldwide, 50 MW, Luhuo, Sichuan, China



FusionSolar Smart PV Solution Reference



40 MW

Ground-Mounted Smart PV Plant, 40 MW, Cowdown, UK



20 MW

Ground-Mounted Smart PV Plant, 20 MW, Trowbridge, Wiltshire, UK



10 MW

Ground-Mounted Smart PV Plant, 10 MW, Krempendorf, Germany







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