



FusionSolar® Commercial Smart PV Solution

SOLAR.HUAWEI.COM/EU/



About Huawei

Huawei is a leading global provider of information and communications technology (ICT) infrastructure and smart devices. With integrated solutions across four key domains – telecom networks, IT, smart devices, and cloud services – we are committed to bringing digital to every person, home and organization for a fully connected, intelligent world. Huawei's end-to-end portfolio of products, solutions and services are both competitive and secure. Through open collaboration with ecosystem partners, we create lasting value for our customers, working to empower people, enrich home life, and inspire innovation in organizations of all shapes and sizes. At Huawei, innovation focuses on customer needs. We invest heavily in basic research, concentrating on technological breakthroughs that drive the world forward.



Employees
194,000+



Interbrand's Top 100
Best Global Brands
74



R&D Personnel
96,000+



Fortune Global 500
61



Countries
170+



Research institutes
/labs/centers
14



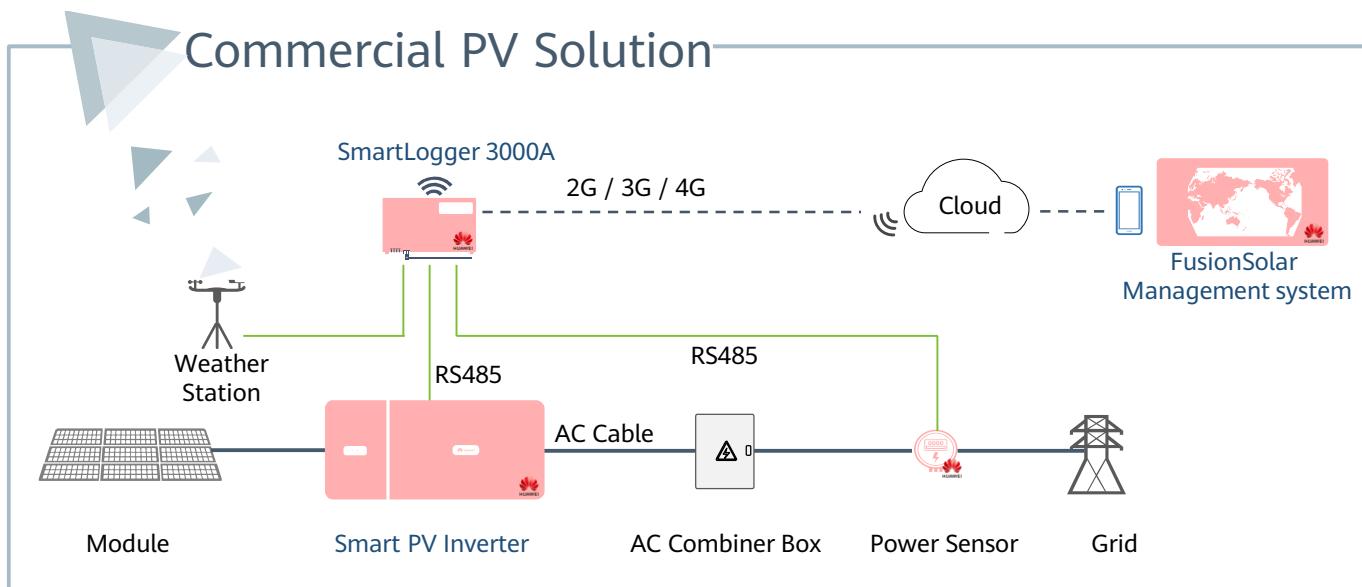
No.1

In global shipment 2015-2019



118GW+

Accumulated global shipment at the end of 2019



Safe & Reliable

Fuse-free design for superior safety
Natural cooling fully sealed design for better reliability

Higher Yields

Multi-MPPT to reduce string mismatch
Euro. Efficiency 98.7% for higher yields

Smart O&M

String-level monitoring for fast trouble-shooting
One click I-V curve diagnosis making unhealthy modules visible



Smart String Inverter



SUN2000-12-20KTL-M0/M2



Active Safety

AI Powered Arcing Protection



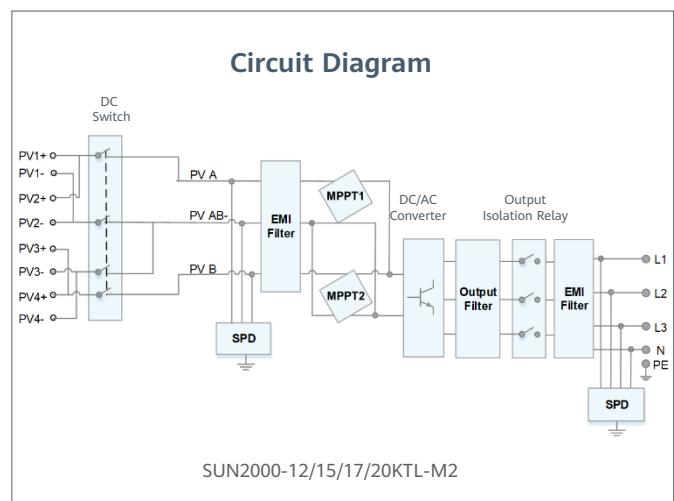
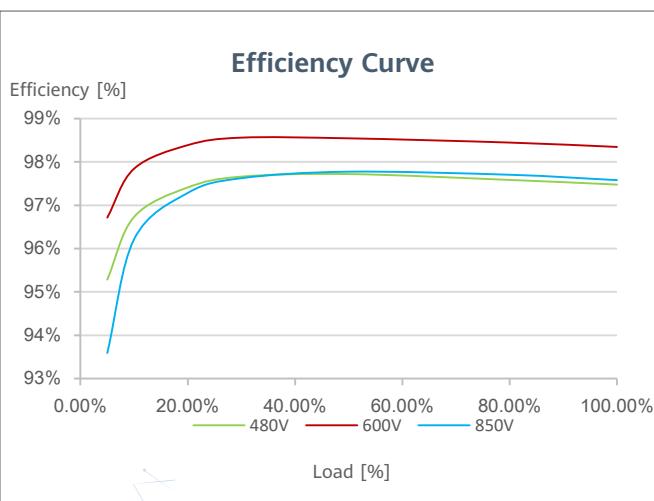
Higher Yields

Up to 30% More Energy with Optimizer



Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported

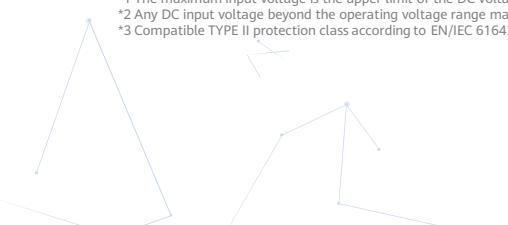


Technical Specification	SUN2000-12KTL-M0	SUN2000-15KTL-M0	SUN2000-17KTL-M0	SUN2000-20KTL-M0
Efficiency				
Max. efficiency	98.50%	98.65%	98.65%	98.65%
European weighted efficiency	98.00%	98.30%	98.30%	98.30%
Input				
Recommended max. PV power	24,000 Wp	29,760 Wp	29,760 Wp	29,760 Wp
Max. input voltage ¹		1,080 V		
Operating voltage range ²		160 V ~ 950 V		
Start voltage		200 V		
Rated input voltage		600 V		
Max. input current per MPPT		22 A		
Max. short-circuit current		30 A		
Number of MPP trackers		2		
Max. number of inputs		4		
Output				
Grid connection		Three phase		
Rated output power	12,000 W	15,000 W	17,000 W	20,000 W
Max. apparent power	13,200 VA	16,500 VA	18,700 VA	22,000 VA
Rated output voltage		220 Vac / 380 Vac, 230 Vac / 400 Vac, 3W + N+PE		
Rated AC grid frequency		50 Hz / 60 Hz		
Max. output current	20 A	25.2 A	28.5 A	33.5 A
Adjustable power factor		0.8 leading ... 0.8 lagging		
Max. total harmonic distortion		≤ 3 %		
Features & Protections				
Input-side disconnection device		Yes		
Anti-islanding protection		Yes		
AC over-current protection		Yes		
AC short-circuit protection		Yes		
AC over-voltage protection		Yes		
DC reverse-polarity protection		Yes		
DC surge protection ³		Yes		
AC surge protection ³		Yes		
Residual current monitoring unit		Yes		
Arc fault protection		Yes		
Ripple receiver control		Yes		
General Data				
Operation temperature range		-25 ~ + 60 °C (-13 °F ~ 140 °F) (Derating above 45 °C @ Rated output power)		
Relative humidity		0 % RH ~ 100% RH		
Max. operating altitude		0 - 4,000 m (13,123 ft.) (Derating above 2000 m)		
Cooling		Natural Convection		
Display		LED Indicators		
Communication		RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE (Optional) 4G / 3G / 2G via Smart Dongle-4G (Optional)		
Weight (with mounting plate)		25 kg		
Dimensions (W x H x D) (incl. mounting plate)		525 x 470 x 262 mm (20.7 x 18.5 x 10.3 inch)		
Degree of protection		IP65		
Nighttime Power Consumption		< 1 W		
Standard Compliance (more available upon request)				
Safety		EN/IEC 62109-1, EN/IEC 62109-2		
Grid connection standards		G98, G99, EN 50438, CEI 0-21, VDE-AR-N-4105, VDE-AR-N-4110, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, NRS 097-2-1, IEC61727, IEC62116, DEWA 2.0		

*1 The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would damage inverter.

*2 Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

*3 Compatible TYPE II protection class according to EN/IEC 61643-11



Technical Specification	SUN2000-12KTL-M2	SUN2000-15KTL-M2	SUN2000-17KTL-M2	SUN2000-20KTL-M2
Efficiency				
Max. efficiency	98.50%	98.65%	98.65%	98.65%
European weighted efficiency	98.00%	98.30%	98.30%	98.30%
Input				
Recommended max. PV power ¹	18,000 Wp	22,500 Wp	25,500 Wp	30,000 Wp
Max. input voltage ²		1,080 V		
Operating voltage range ³		160 V ~ 950 V		
Start-up voltage		200 V		
Rated input voltage		600 V		
Max. input current per MPPT		22 A		
Max. short-circuit current		30 A		
Number of MPP trackers		2		
Max. number of inputs		4		
Output				
Three phase				
Grid connection	12,000 W	15,000 W	17,000 W	20,000 W
Rated output power	13,200 VA	16,500 VA	18,700 VA	22,000 VA
Max. apparent power				
Rated output voltage	220 Vac / 380 Vac, 230 Vac / 400 Vac, 3W + N + PE			
Rated AC grid frequency	50 Hz / 60 Hz			
Max. output current	20 A	25.2 A	28.5 A	33.5 A
Adjustable power factor	0.8 leading ... 0.8 lagging			
Max. total harmonic distortion	≤ 3 %			
Features & Protections				
Input-side disconnection device	Yes			
Anti-islanding protection	Yes			
AC over-current protection	Yes			
AC short-circuit protection	Yes			
AC over-voltage protection	Yes			
DC reverse-polarity protection	Yes			
DC surge protection	Yes			
AC surge protection	TYPE II			
Residual current monitoring unit	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11			
Arc fault protection	Yes			
Ripple receiver control	Yes			
Integrated PID recovery ⁴	Yes			
General Data				
Operation temperature range	-25 ~ +60 °C (-13 °F ~ 140 °F)			
Relative humidity	0 % RH ~ 100% RH			
Max. operating altitude	0 ~ 4,000 m (13,123 ft.) (Derating above 2000 m)			
Cooling	Natural Convection			
Display	LED Indicators; Integrated WLAN + FusionSolar App			
Communication	RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE (Optional) 4G / 3G / 2G via Smart Dongle-4G (Optional)			
Weight (with mounting plate)	25 kg			
Dimensions (W x H x D) (incl. mounting plate)	525 x 470 x 262 mm (20.7 x 18.5 x 10.3 inch)			
Degree of protection	IP65			
Optimizer Compatibility				
DC MBUS compatible optimizer	SUN2000-450W-P			
Standard Compliance (more available upon request)				
Safety	EN/IEC 62109-1, EN/IEC 62109-2			
Grid connection standards	G98, G99, EN 50549, CEI 0-21, CEI 0-16, VDE-AR-N-4105, VDE-AR-N-4110, AS 4777.2, C10/11, ABNT, VFR 2019, RD 1699, RD 661, PO 12.3, TOR D4, IEC61727, IEC62116, DEWA			

¹1 Inverter max input PV power is 40,000 Wp when long strings are designed and fully connected with SUN2000-450W-P power optimizers.

²2 The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

³3 Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

⁴4 SUN2000-12-20KTL-M2 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)

Smart String Inverter



SUN2000-50/60KTL-M0



Smart



Efficient



Safe



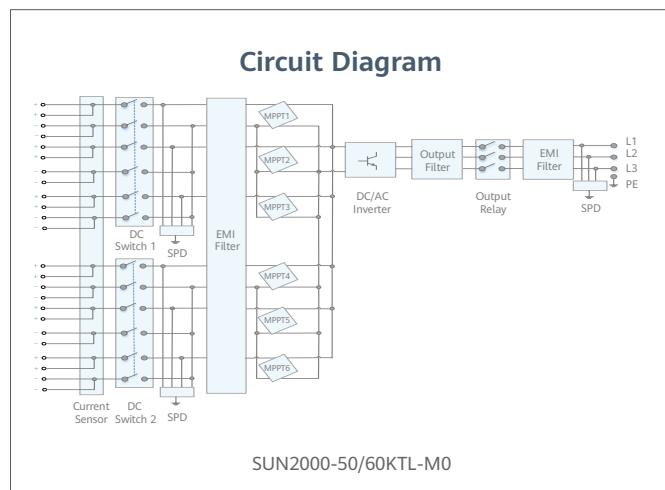
Reliable

12 strings intelligent monitoring

Max. efficiency 98.7%

Fuse free design

Type II surge arresters for DC & AC



Technical Specification

Technical Specification	SUN2000-50KTL-M0	SUN2000-60KTL-M0
Efficiency		
Max. Efficiency	98.7%	98.9% @480 V; 98.7% @380 V / 400 V
European Efficiency	98.5%	98.7% @480 V; 98.5% @380 V / 400 V
Input		
Recommended max. PV power	75,000 Wp	90,000Wp
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	600 V @380 Vac / 400 Vac; 720 V @480 Vac
Number of Inputs	12	
Number of MPP Trackers	6	
Output		
Rated AC Active Power	50,000 W	60,000 W
Max. AC Apparent Power	55,000 VA	66,000 VA
Max. AC Active Power ($\cos\phi=1$)	55,000 W	66,000 W
Rated Output Voltage	220 V / 380 V, 230 V / 400 V, default 3W + N + PE; 3W + 220 V / 380 V, 230 V / 400 V, default 3W + N + PE; 3W + PE optional in settings	PE optional in settings; 277 V / 480 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz	
Rated Output Current	76 A @380 V / 72.2 A @400 V	91.2 A @380 V, 86.7 A @400 V, 72.2 A @480 V
Max. Output Current	83.6 A @380 V / 79.4 A @400 V	100 A @380 V, 95.3 A @400 V, 79.4 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, Bluetooth + APP	
RS485	Yes	
USB	Yes	
Monitoring BUS (MBUS)	Yes	
General Data		
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)	74 kg (163.1 lb.)	
Operating Temperature Range	-25°C ~ 60°C (-13°F ~ 140°F)	
Cooling Method	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 Degree	IP65	
Topology	Transformerless	
Nighttime Power Consumption	< 2 W	
Standard Compliance (more available upon request)		
Certificate	EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 62910, IEC 60068, IEC 61683, IRR-DCC-MV, G99	
Grid Code	IEC 61727, G59/3, DEWA, NRS 097-2-1, IEEE 1547, SASO, DEWA	

Smart String Inverter



SUN2000-100KTL-M1



Smart



Efficient



Safe



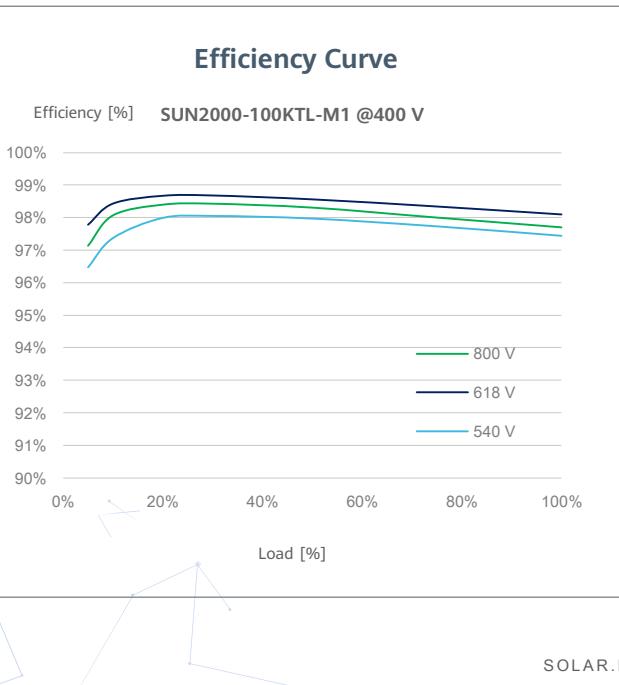
Reliable

Smart I-V Curve Diagnosis supported

Max. efficiency 98.8%

Fuse free design

Type II surge arresters for DC & AC



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	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 ²	200 V ~ 1,000 V
Nominal Input Voltage	720 V @480 Vac, 600 V @400 Vac, 570 V @380 Vac
Number of MPP trackers	10
Max. number of inputs	20

Output

Nominal AC Active Power	100,000 W
Max. AC Apparent Power	110,000 VA
Max. AC Active Power ($\cos\phi=1$)	110,000 W
Nominal Output Voltage	480 V/ 400 V/ 380 V, 3W+(N)+PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	120.3 A @480 V, 144.4 A @400 V, 152.0 A @380 V
Max. Output Current	133.7 A @480 V, 160.4 A @400 V, 168.8 A @380 V
Adjustable Power Factor Range	0.8 leading... 0.8 lagging
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; WLAN adaptor + FusionSolar APP
RS485	Yes
USB	Yes
Monitoring BUS (MBUS)	Yes (isolation transformer required)

General Data

Dimensions (W x H x D)	1,035 x 700 x 365 mm
Weight (with mounting plate)	90 kg
Operating Temperature Range	-25°C ~ 60°C
Cooling Method	Smart Air Cooling
Max. Operating Altitude without Derating	4,000 m
Relative Humidity	0 ~ 100%
DC Connector	Staubli MC4
AC Connector	Waterproof Connector + OT/DT Terminal
Protection Degree	IP66
Topology	Transformerless
Nighttime Power Consumption	< 3.5 W

Standard Compliance (more available upon request)

EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 61727, IEC 60068, IEC 61683
VDE-AR-N4105, EN 50549-1, EN 50549-2, RD 661, RD 1699, C10/11, 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.

Smart Dongle-WLAN-FE



SDongleA-05



Smart

WLAN & Fast Ethernet (FE) communication
Support 3rd-party monitoring system¹



Simple

Plug & Play
Support max. 10 devices



Reliable

IP65
Support auto reconnection

Technical Specification

SDongleA-05

General Data

Max. Devices Supported	10
Max. Inverters Supported	10
Connection interface	USB
Ethernet Interface	10/100M Ethernet
Installation	Plug-and-play
Indicator	LED Indicator
Dimensions (W * H * D)	146 x 48 x 33 mm (5.1 x 1.9 x 1.3 inch)
Weight	90 g (0.2 lb.)
Degree of protection	IP65
Power consumption (typical)	2.5 W
Operation Mode	STA
Encryption Algorithm	Encryption Mechanism: WPA/WPA2 Encryption: TKIP/CCMP/AES

Wireless Parameter

Supported standards & frequencies	802.11b/g/n (2.412G—2.484G)
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Environment

Operating temperature range	-30 °C to +65 °C (-22 °F to 149 °F)
Relative humidity range	5 - 95% RH
Storage temperature range	-40 °C to +70 °C (-40 °F to 158 °F)
Max. operating altitude	4,000 m (13,123 ft.)

Standard Compliance (more available upon request)

Certificate	SRRC, CE, RCM
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Inverter Compatibility

Supported Master Inverter Model	SUN2000-3/4/5/6/8/10KTL-M0 SUN2000-12/15/17/20KTL-M0
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Standard Compliance (more available upon request)

CE DOC

1: 3rd-party management system shall match the communication protocol with Huawei Smart Dongle.

Version No.: 03-(20190619)

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Smart Dongle-4G



SDongleA-03-EU



Smart

2G, 3G, 4G communication ¹
Support 3rd-party monitoring system ²



Simple

Plug & Play
Support max. 10 devices



Reliable

IP65
Support auto reconnection

Technical Specification

SDongleA-03-EU

General Data

Max. Devices Supported	10
Max. Inverters Supported	10
Connection interface	USB
Installation	Plug-and-play
Indicator	LED Indicator
Dimensions (W * H * D)	130 x 48 x 33 mm (5.1 x 1.9 x 1.3 inch)
Weight	90 g (0.2 lb.)
Degree of protection	IP65
Power consumption (typical)	3.5 W

Wireless Parameter

Sim card type	mini-sim (15 mm*25 mm)
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Supported standards & frequencies	4G: FDD-LTE / TDD-LTE 3G: WCDMA / HSDPA / HSUPA / HSPA+ 2G: GSM / GPRS / EDGE ³
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Environment

Operating temperature range	-30 °C to +65 °C (-22 °F to 149 °F)
Relative humidity range	5 - 95% RH
Storage temperature range	-40 °C to +70 °C (-40 °F to 158 °F)
Max. operating altitude	4,000 m (13,123 ft.)

Standard Compliance (more available upon request)

Certificate	CE, MIC
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Inverter Compatibility

SUN2000-3/4/5/6/8/10KTL-M0
SUN2000-12/15/17/20KTL-M0
SUN2000-50/60KTL-M0
SUN2000-100KTL-M1

Standard Compliance (more available upon request)

CE DOC

1: To ensure stable data transmission, Huawei suggests 4G dongle to be installed in areas with stable mobile signal (2G signal ≥4 bars, 3G/4G signal ≥3 bars).
2: 3rd-party management system shall match the communication protocol with Huawei Smart Dongle.
3: For recommended carriers list and details on supported frequencies, please contact local distributors.

SmartLogger3000A



SmartLogger3000A00GL



Smart

Smart zero export control design



Simple

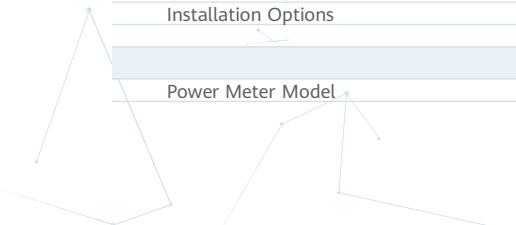
Easy to install on site



Reliable

Safety by lightning protection module

Technical Specification		SmartLogger3000A00GL
Device Management		
Max. Number of Manageable Devices		80
Communication Interface		
WAN		WAN x 1, 10 / 100 / 1000 Mbps
LAN		LAN x 1, 10 / 100 / 1000 Mbps
RS485		COM x 3, 1200 / 2400 / 4800 / 9600 / 19200 / 115200 bps, 1000 m
Digital / Analog Input / Output		DI x 4, DO x 2, AI x 4
Active DO		12V, 100mA (connection with relay, sensor)
Communication Protocol		
Ethernet		Modbus-TCP, IEC 60870-5-104
RS485		Modbus-RTU, IEC 60870-5-103 (standard), DL / T645
Interaction		
LED		LED Indicator x 3 – RUN, ALM, 4G
WEB		Embedded Web
USB		USB 2.0 x 1
APP		Communication by WLAN for Commissioning
Environment		
Operating Temperature Range		-40°C ~ 60°C (-40°F ~ 140°F)
Storage Temperature		-40°C ~ 70°C (-40°F ~ 158°F)
Relative Humidity (Non-condensing)		5% ~ 95%
Max. Operating Altitude		4,000 m (13,123 ft.)
Electrical		
AC Power Supply		100 V ~ 240 V, 50 Hz / 60 Hz
DC Power Supply		12V / 24 V
Power Consumption		Typical 8 W, Max. 15 W
Mechanical		
Dimensions (W x H x D)		225 x 160 x 44 mm (8.9 x 6.3 x 1.7 inch, without mounting ears and antenna)
Weight		2 kg (4.4 lb.)
Protection Degree		IP20
Installation Options		Wall Mounting, DIN Rail Mounting, Tabletop Mounting
Power Meter Compatibility		
Power Meter Model		DTSU666-H 250A/50mA



SmartLogger3000A



SmartLogger3000A01EU



Smart

Smart zero export control design



Simple

Easy to install on site



Reliable

Safety by lightning protection module

Technical Specification		SmartLogger3000A01EU
Device Management		
Max. Number of Manageable Devices		80
Communication Interface		
WAN		WAN x 1, 10 / 100 / 1000 Mbps
LAN		LAN x 1, 10 / 100 / 1000 Mbps
RS485		COM x 3, 1200 / 2400 / 4800 / 9600 / 19200 / 115200 bps, 1000 m
2G / 3G / 4G ¹		LTE(FDD) : B1,B2,B3,B4,B5,B7,B8,B20 DC-HSPA+/HSPA+/HSPA/UMTS : 850/900/1900/2100 MHz GSM/GPRS/EDGE: 850/900/1800/1900 MHz ²
Digital / Analog Input / Output		DI x 4, DO x 2, AI x 4
Active DO		12V, 100mA (connection with relay, sensor)
Communication Protocol		
Ethernet		Modbus-TCP, IEC 60870-5-104
RS485		Modbus-RTU, IEC 60870-5-103 (standard), DL / T645
Interaction		
LED		LED Indicator x 3 – RUN, ALM, 4G
WEB		Embedded Web
USB		USB 2.0 x 1
APP		Communication by WLAN for Commissioning
Environment		
Operating Temperature Range		-40°C ~ 60°C (-40°F ~ 140°F)
Storage Temperature		-40°C ~ 70°C (-40°F ~ 158°F)
Relative Humidity (Non-condensing)		5% ~ 95%
Max. Operating Altitude		4,000 m (13,123 ft.)
Electrical		
AC Power Supply		100 V ~ 240 V, 50 Hz / 60 Hz
DC Power Supply		12V / 24 V
Power Consumption		Typical 8 W, Max. 15 W
Mechanical		
Dimensions (W x H x D)		225 x 160 x 44 mm (8.9 x 6.3 x 1.7 inch, without mounting ears and antenna)
Weight		2 kg (4.4 lb.)
Protection Degree		IP20
Installation Options		Wall Mounting, DIN Rail Mounting, Tabletop Mounting
Power Meter Compatibility		
Power Meter Model		DTSU666-H 250A/50mA

¹: When putting inside metal box, extended antenna will be needed.

²: For recommended carriers list and details on supported frequencies, please contact local distributors.

Smart Power Sensor



DDSU666-H DTSU666-H 250A/50mA



Accurate

Class 1 measurement accuracy



Simple & Easy

LCD display, easy to set and check



Energy Efficient

Overall power consumption ≤ 1 W

Technical Specification	DDSU666-H	DTSU666-H 250A/50mA
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General Data		
Dimension (H x W x D)	100 x 36 x 65.5 mm (3.9 x 1.4 x 2.6 inch)	100 x 72 x 65.5 mm (3.9 x 2.8 x 2.6 inch)
Mounting type		DIN35 Rail
Weight (including cables)	1.2 kg (2.6 lb)	1.5 kg (3.3 lb)

Power Supply		
Power grid type	1P2W	3P4W
Input voltage (phase voltage)		176 Vac ~ 288 Vac
Power consumption	≤ 0.8 W	≤ 1 W

Measurement Range		
Line voltage	/	304 Vac ~ 499 Vac
Phase voltage		176 Vac ~ 288 Vac
Current	0 ~ 100 A	0 ~ 250 A

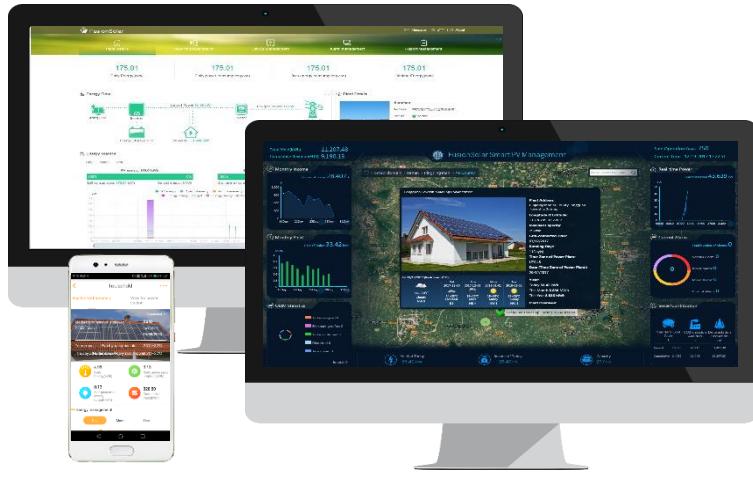
Measurement Accuracy		
Voltage	±0.5 %	
Current / Power / Energy	±1 %	
Frequency	±0.01 Hz	

Communication		
Interface	RS485	
Baud rate	9,600 bps	
Communication protocol	Modbus-RTU	

Environment		
Operating temperature range	-25 °C ~ 60 °C	
Storage temperature range	-40 °C ~ 70 °C	
Operating humidity	5 %RH ~ 95 %RH (non-condensing)	

Others		
Accessories	1 CT 100 A/40 mA (5 m/16.4 ft.)	3 CT 250 A/50 mA (5 m/16.4 ft.)

FusionSolar Smart PV Management System



Simple & Swift

- Simple commissioning by APP
- Auto-detection of system equipment
- Registering your plant by scanning any device



Convenient & Reliable

- Energy flow illustration
- Real-time data at anytime from anywhere
- Performance data back-up



Improved O&M Experience

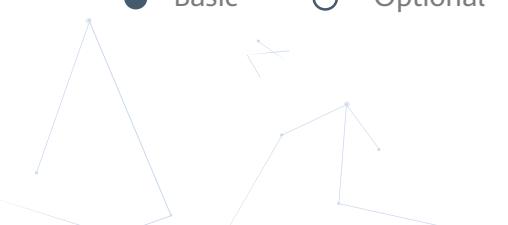
- Physical & logical module layout
- Module-level performance management*
- Smart I-V Diagnosis

*Full optimizer solution with Smart PV Safety Box required

	Feature List	WEB	APP
Basic Feature	Swift Installation & Registration	●	●
	Data Collection	●	
	Dashboard	●	●
	Energy Flow	●	●
	Energy Generation & Consumption	●	●
	Device Management	●	●
	Report Management	●	●
	Alarm Management	●	●
Advanced Feature	System Configuration	●	
	Intelligent O&M	○	
	Mobile O&M	○	○
	Proactive Diagnosis	○	○
	Smart I-V Curve Diagnosis	○	○

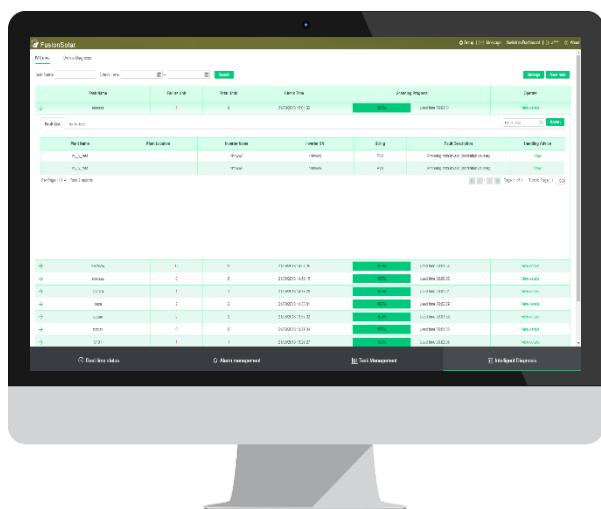
● Basic

○ Optional



Smart I-V Curve Diagnosis

Smart I-V Curve Diagnosis is able to carry out online I-V curve analysis on entire strings with advanced diagnosis algorithm. The scanning would help to find out and identify the strings with low performance or faults, which would help to achieve proactive maintenance, higher O&M efficiency and lower operation cost.



Smart

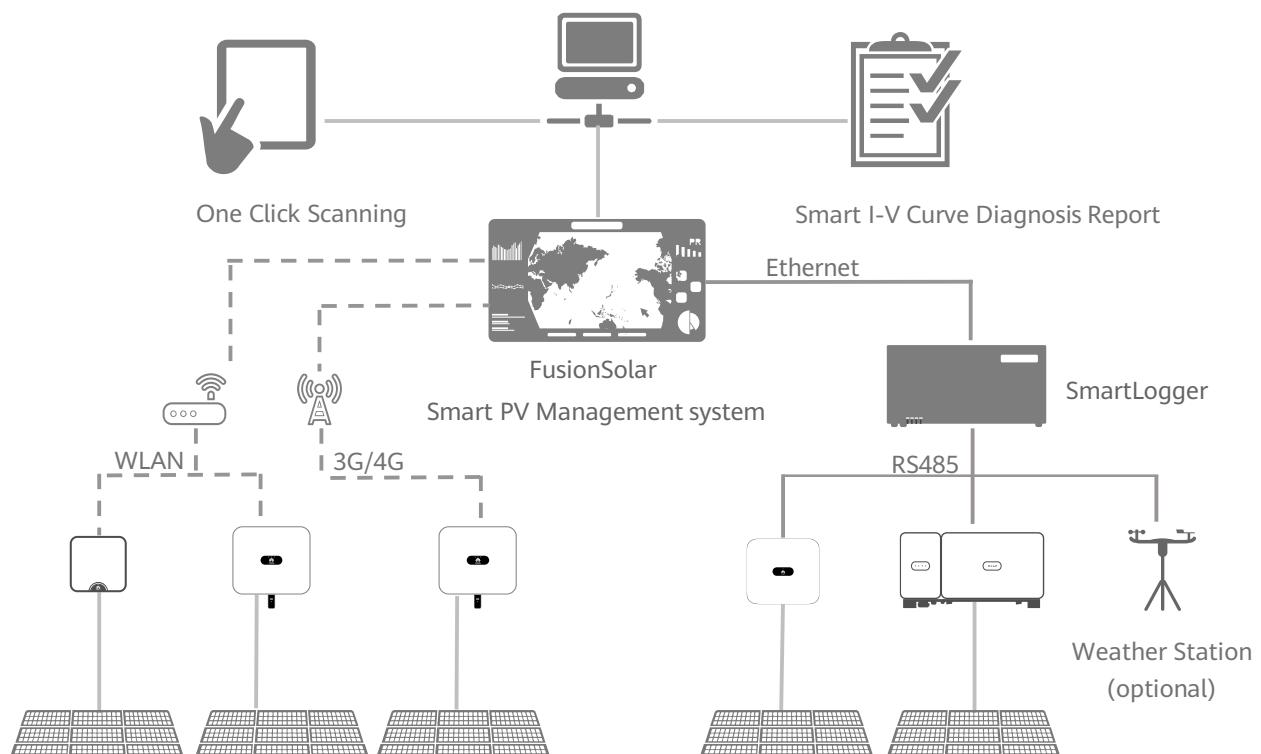
- Support plant-level, array-level and inverter-level analysis and diagnosis
- Automatically identify different failure types and provide recovery suggestion



Efficient

- One-click scanning without onsite experts or equipment
- Online I-V curve scanning on entire strings of 5 MW plant within 5min
- Automatic report generation of 5 MW plant within 15min

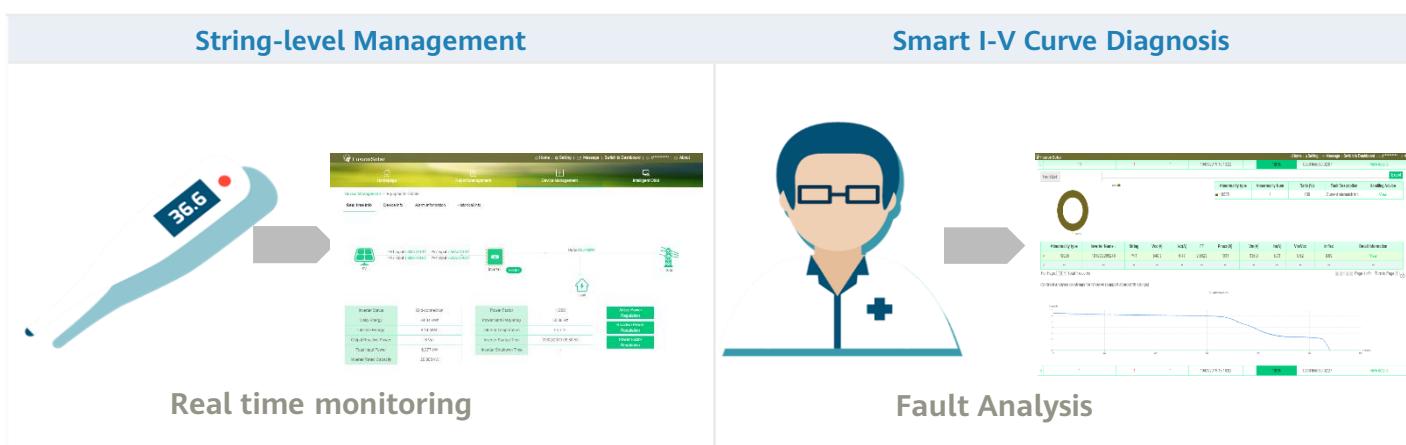
Network



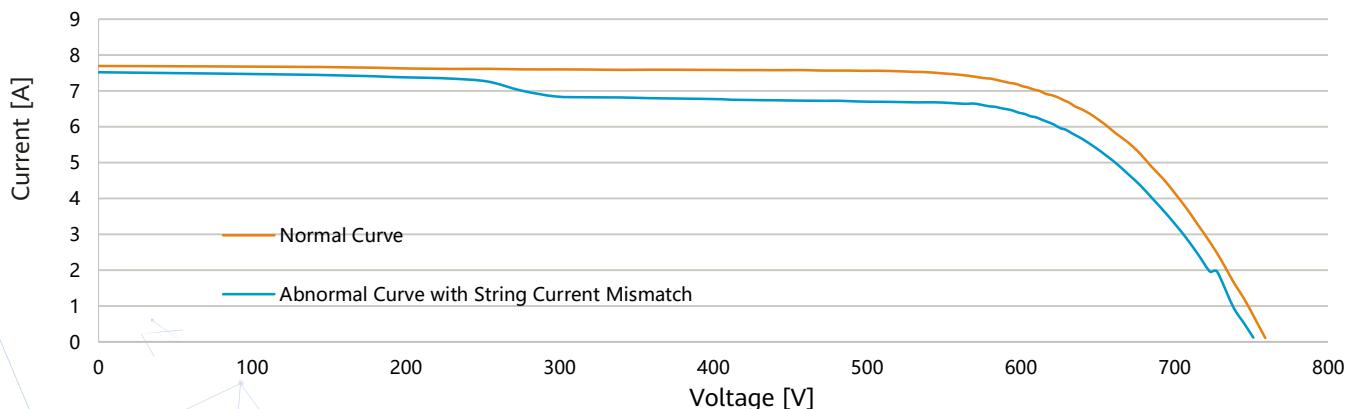
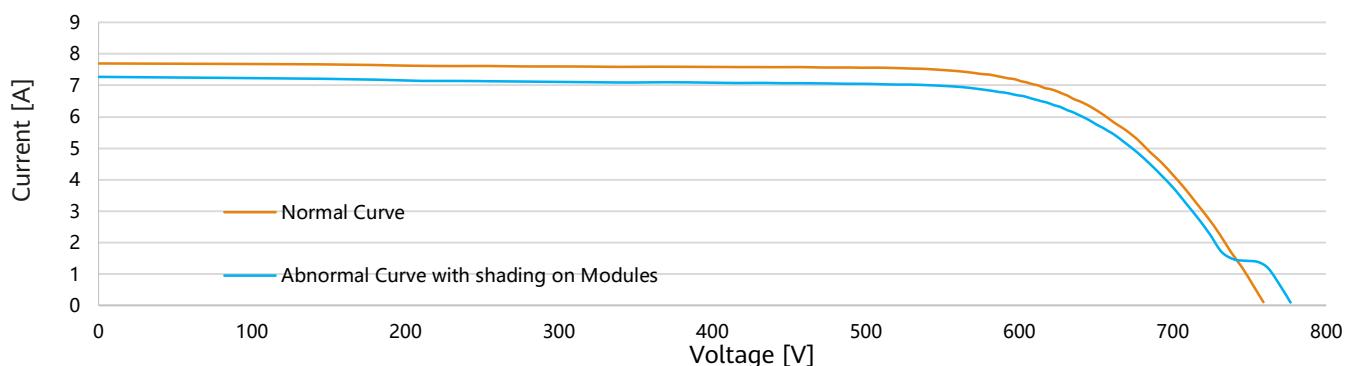
Smart I-V Curve Diagnosis

Technical Specifications	Smart I-V Curve Diagnosis
Smart PV Inverter*	SUN2000L-2/3/4/5KTL, SUN2000-3/4/5/6/8/10KTL-M0, SUN2000-12/15/17/20KTL-M0, SUN2000-36KTL, SUN2000-50/60KTL-M0
Communication	SmartLogger2000, SmartLogger1000A, SmartLogger3000A, Smart Dongle
Management System	FusionSolar Smart PV Management System, NetEco1000s
Scanning Time	< 1s (1 string)
Sampling Points per I-V Curve	128
Certification	 TÜV Rheinland®  TUV

* I-V curve diagnosis is not supported when inverter is connected with power optimizer.



String I-V Curve Comparison



Case Reference



25.8MWP

Distributed PV Systems in Dubai

System Configuration

- SUN2000-(8-36)KTL

COD
Jul, 2017



8.2MWP

Distributed PV System by Philadelphia Solar, Jordan

System Configuration

- SUN2000-42KTL

COD
Aug, 2019

Case Reference



1.03MW_p

Distributed PV System for Pepsi in Choueifat, Lebanon

COD
2019

System Configuration

- SUN2000-36 / 60KTL



1MW_p

Distributed PV System in World Trade Center, Dubai

COD
Mar, 2018

System Configuration

- SUN2000-36KTL

Case Reference



616KWP

Distributed PV System in Multan, Pakistan

System Configuration

- SUN2000-36 KTL
- SUN2000-60 KTL

COD
Oct, 2019



1.25MWp

Distributed PV System in South Africa

System Configuration

- SUN2000-60KTL

COD
Sep, 2019



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HUAWEI TECHNOLOGIES (U.A.E), FZLLC

PO box: 500327- Dubai Huawei Gloria Building,
Al Falak Street, Dubai internet City, Dubai UAE
Tel: 00971-4-3688118
Fax: 00971-4-3688170
Inverter@huawei.com

HUAWEI TECHNOLOGIES CO., LTD.

Huawei Industrial Base, Bantian Longgang
Shenzhen 5018129, P.R. China
Tel: 400-800-9999
solar.huawei.com