

# SG3K-D/SG4K-D/SG5K-D/SG6K-D

Residential String Inverter



### High Yield

- Higher yield with max. efficiency 98.4 %, European efficiency 98.0 %
- Flexible PV string configurations, DC/AC ratio up to 1.3



### Smart Management

- Easy local and online monitoring via App or Web
- Export power control with Sungrow energy meter



### Safe and Durable

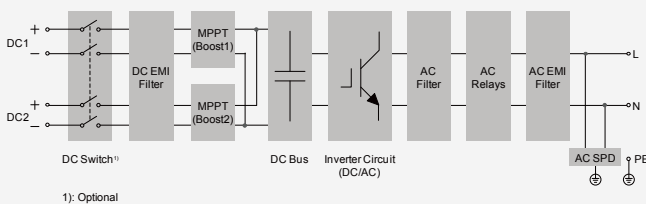
- Built-in surge arresters and residual current protection
- High anti-corrosion with aluminum alloy die casting



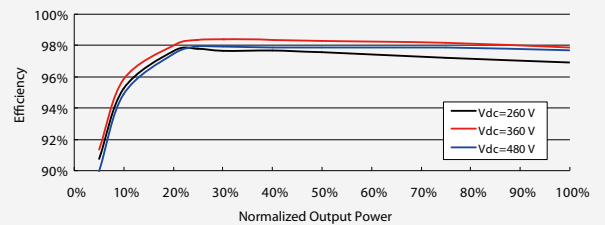
### Easy and User Friendly

- 11.5 kg compact design, plug and play installation
- Fast commissioning via LCD

## Circuit Diagram



## Efficiency Curve



Input (DC)	SG3K-D	SG4K-D	SG5K-D	SG6K-D
Max. PV input voltage	600 V			
Min. PV input voltage / Startup input voltage	90 V / 120 V			
Nominal input voltage	360 V			
MPP voltage range	90 V–560 V			
MPP voltage range for nominal power	160 V–480 V	210 V–480 V	260 V–480 V	315 V–480 V
No. of independent MPP inputs	2			
Max. number of PV strings per MPPT	1			
Max. PV input current	20 A (10 A / 10 A)			
Max. current for input connector	24 A (12 A / 12 A)			
Max. PV short-circuit current	24 A (12 A / 12 A)			

### Output (AC)

AC output power	3000 VA	4000 VA	4990 VA <sup>2)</sup> / 5000 VA	6000 VA
Max. AC output current	13.7 A	18.2 A	21.7 A <sup>2)</sup> / 22.7 A	27.3 A
Nominal AC voltage	220 Vac / 230 Vac			
AC voltage range	176 Vac–276 Vac (this may vary with grid standards)			
Nominal grid frequency	50 Hz / 60 Hz			
Grid frequency range	45 Hz–55 Hz / 55 Hz–65 Hz (this may vary with grid standards)			
Total Harmonic Distortion (THD)	< 3 % (of nominal power)			
DC current injection	< 0.5 % (of nominal current)			
Power factor	> 0.99 at default value at nominal power (adj. 0.8 leading to 0.8 lagging)			
Feed-in phases / Connection phases	1 / 1			

### Efficiency

Max. efficiency	98.4 %			
Euro. efficiency	97.7 %	98.0 %	98.0 %	98.0 %

### Protection

PV reverse connection protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
PV string current monitoring	Yes
DC switch	Optional
Overvoltage protection	AC Type II

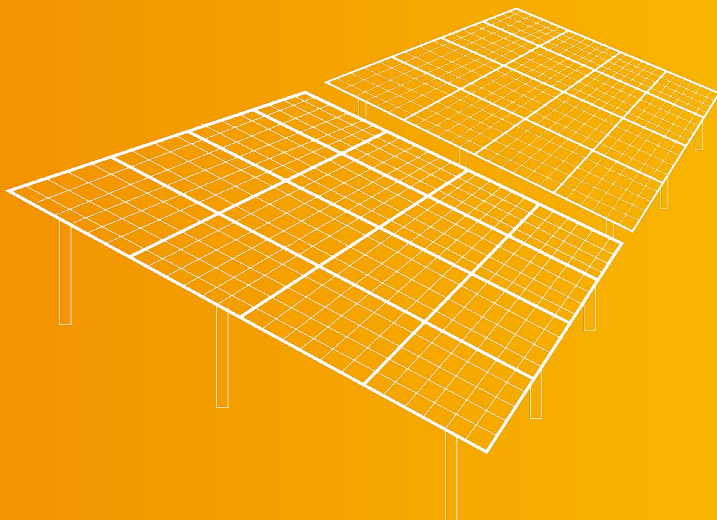
### General Data

Dimensions (W*H*D)	360*390*133 mm			
Weight	11.5 kg			
Isolation method	Transformerless			
Degree of protection	IP65			
Power loss in night mode	< 1 W			
Operating ambient temperature range	-25 °C to 60 °C			
Allowable relative humidity range (non-condensing)	0–100 %			
Cooling method	Natural cooling			
Max. operating altitude	4000 m (> 2000 m derating)			
Display / Communication	LCD / Wi-Fi			
PV connection type	MC4 (max. 6 mm <sup>2</sup> )			
AC connection type	Plug and play connector (max. 6 mm <sup>2</sup> )			
Certification	IEC 61000-6-2, IEC 61000-6-3, AS 4777.2, IEC 62109-1, IEC 62109-2, EN50438, ABNT NBR 16149:2013, ABNT NBR 16150:2013			
Grid support	Active & reactive power control, power ramp rate control			
Type designation	SG3K-D-10	SG4K-D-10	SG5K-D-10	SG6K-D-10

2): When the country of SG5K-D is chosen to Australia



# Accessory & Monitoring



Sunbox

iSolarCloud

Smart Communication Box

Logger3000

E-Net

WiFi

# SUNBOX PVS-8MH-DB/PVS-12MH-DB/PVS-16MH-DB

PV combiner box for 1500 Vdc system



### Efficient and Safe

- 1500V-Specific PV fuse, both positive and negative terminal
- 1500V-Specific PV SPD with fault alarm
- Specialized 2 in 1 fuse with favorable heat dissipation performance and compact size
- String current and voltage monitoring
- Main load switch state monitoring (optional)



### Flexible

- IP65 protection, meet the outdoor installation and usage requirements
- Self-powered power supply with lightning protection
- Output cable sectional area 120 – 400 mm<sup>2</sup> (max. 400 mm<sup>2</sup> Al cable)
- MC4 connector



### Reliable

- Highly optimize the system wiring
- Modular design for easy and quick maintenance
- CE

Parameters	PVS-8MH-DB	PVS-12MH-DB	PVS-16MH-DB
Max. PV string voltage	1500 V		
Max. PV string parallel inputs	8 * 2	12 * 2	16 * 2
Rated fuse current for each string (replaceable)	30 A		
Switch disconnector	250 A	400 A	400 A
SPD	Type II		
Input terminal type	6 mm <sup>2</sup> (MC4)		
Output terminal type	120 – 300 mm <sup>2</sup>	120 – 300 mm <sup>2</sup>	120 – 400 mm <sup>2</sup>
Protection class	IP65		
Environment temperature	-40 °C to 60 °C		
Environment humidity	0 – 95 %		
Dimensions (W*H*D)	730*580*260 mm	730*580*260 mm	930*730*260 mm
Weight	28 kg	30 kg	40 kg
Material	SMC Plastic		

#### Standard Accessories

DC main output load switch	Yes
PV specific application SPD	Yes
PV SPD failure monitoring	Yes
PV self power supply for internal loads	Yes
Communication port	Yes
Current and voltage monitoring for each string	Yes

#### Optional Accessories

Negative grounding	Optional
Monitoring for load switch state	Optional



# SUNBOX™ PVS-16M-DB

PV combiner box for 1000 Vdc system



## Efficient and Safe

- PV specific application fuses, both positive and negative polarity
- PV specific application SPD with failure alarm function
- PV string current and voltage abnormal alarm
- Specific application combiner busbar parts with shield
- Main load breaker switch state monitoring (need optional accessory)



## Flexible

- IP65 protection
- Self supplied power with SPD
- Output cable sectional area range 120 - 400 mm<sup>2</sup> (max. 400 mm<sup>2</sup> Al cable)



## Reliable

- Highly optimize the system wiring
- Modular design for easy and quick maintenance
- CE



Parameters	PVS-16M-DB
Max. PV string voltage	1000 V
Max. PV string parallel inputs	16 * 2
Rated fuse current for each string (replaceable)	30 A
Input terminal type	6 mm <sup>2</sup>
Output terminal type	120 – 400 mm <sup>2</sup>
Protection class	IP65
Environment temperature	-40 °C to 60 °C
Environment humidity (non-condensing)	0 – 95 %
Dimensions (W*H*D)	720*680*180 mm
Weight	41 kg
Material of enclosure	Steel

## Standard Accessories

DC main output load switch	Yes
PV specific application SPD	Yes
PV SPD failure monitoring	Yes
PV self power supply for internal loads	Yes
Communication port	Yes
Current and voltage monitoring for each string	Yes

## Optional Accessories

Monitoring for load break switch state	Optional
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# iSolarCloud

Remote Monitoring and O&M Platform



### Flexible and Friendly

- Centralized PV plant management, low O&M cost
- User-defined performance views, full plant supervision via multi-dimensional analysis
- Flexible data access, Web portal&APP



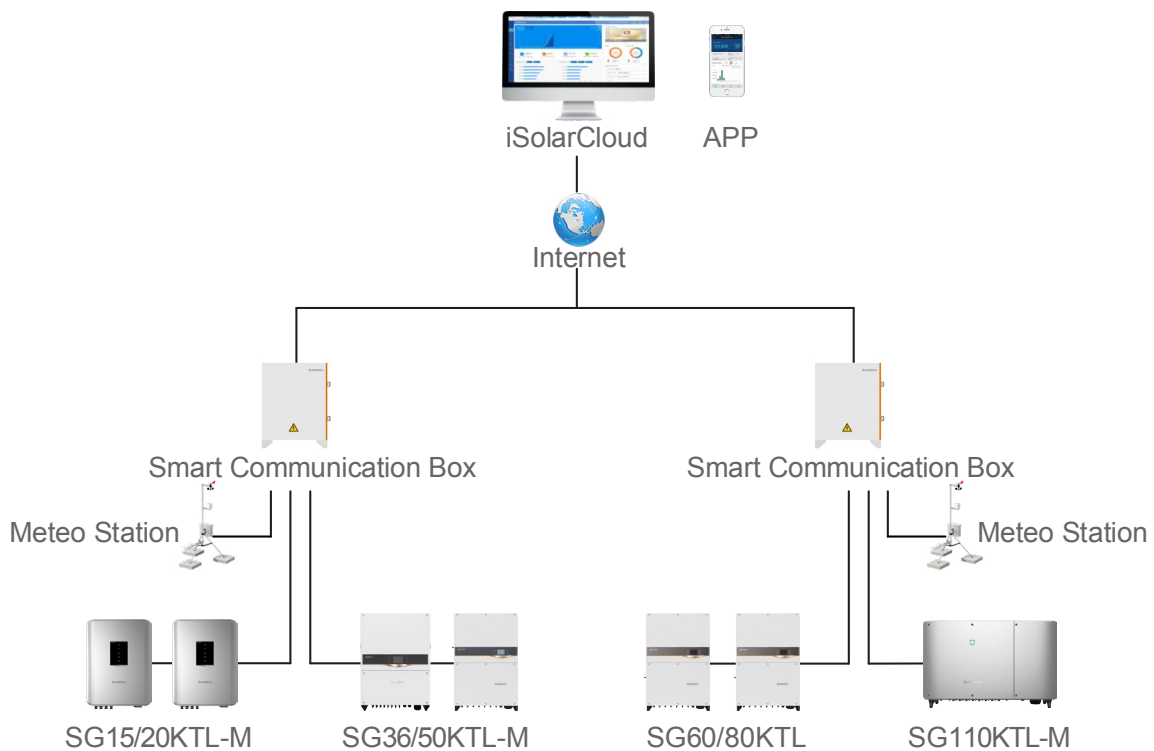
### Simple and Efficient

- Simple Network infrastructure, fast platform deployment
- Real time fault analysis and report, quick trouble shooting



### Safe and Reliable

- Hierarchical access management
- Redundant data storage over the lifecycle of your plants



## iSolarCloud APP

For group management users

- Applicable to Android or Apple IOS system
- Remote monitoring, Guide operation and maintenance
- Report analysis, group KPI index management
- For group management users, centralized management of scattered PV station



## iSolarHome APP

For residential end-users

- Applicable to Android or Apple IOS system
- Quickly view real-time and historical alarm information
- For residential end-users, real-time display of power generation and Revenue
- Wi-Fi configuration, one time configuration between internet router and inverter

