

# Solar Grid Inverter Family

## SMARTWATT Grid Series



Model	Grid 5K	Grid 7K	Grid 10K	Grid 15K	Grid 25K	Grid 30K	Grid 50K	Grid 60K
<b>DC input</b>								
max. Input capacity (kW)	5.8	8	11.5	18	30	36	60	72
Maximum DC input voltage (V)	600	600	600	1000	1000	1000	1100	1100
Starting voltage (V)	120	120	120	180	350	350	200	200
Voltage Range MPPT(V)	90-520	100-500	100-500	160-850	200-800	200-800	200-1000	200-1000
Maximum input current (A/B/C/D)	11A+11A	10A+10A+10A	10A+10A+10A	22A+22A	18A+18A+18A+18A	18A+18A+18A+18A	28.5A+28.5A+28.5A+28.5A	28.5A+28.5A+28.5A+28.5A
Maximum short circuit current for each MPPT	16A+16A	15.6A+15.6A+15.6A	15.6A+15.6A+15.6A	34.3A+34.3A	28A+28A+28A+28A	28A+28A+28A+28A	44.5A+44.5A+44.5A+44.5A	44.5A+44.5A+44.5A+44.5A
Number of MPPT/max. of parallels	2/A:1; B:1	3/A:1; B:1; C:1	3/A:1; B:1; C:1	2/A:2; B:2	4/A:2; B:2; C:2; D:2	4/A:2; B:2; C:2; D:2	4/A:3; B:3; C:3; D:3	4/A:3; B:3; C:3; D:3
Export control RU (EPM)	Built-in	Plug-in	Plug-in	Plug-in	Plug-in	Plug-in	Plug-in	Plug-in
<b>AC Output</b>								
Rated output capacity (kW)	5	7	10	15	25	30	50	60
Max. total output capacity (kVA)	5	7.7	10	16.5	27.5	33	55	66
Max. output capacity (kW)	5	7.7	10	16.5	27.5	33	55	66
Rated electric line voltage (V)	220/230	220/230	220/230	400	400	400	400	400
Rated frequency (Hz)	50/60							
Frequency band (Hz)	47-52 or 57-62							
Number of phases	One	One	One	Three	Three	Three	Three	Three
Rated output current (A)	22.7/21.7	31.8/30.4	45.5/43.5	21.7	36.1	43.3	72.2	86.6
max. Output current (A)	25	35		25.1	41.7	50	83.3	100
Coefficient capacity (at rated output power)	0.8 lead ... 0.8 lag ...							
Distortion coefficient (at rated output power)	<1,5%	<1,5%	<1,5%	<1,5%	<3%	<3%	<3%	<3%
Parallel connection	optional	optional	optional	up to 6	up to 6	up to 6	up to 6	up to 6
<b>Efficiency</b>								
max. Efficiency factor	98.1%	98.1%	98.1%	98.7%	98.6%	98.6%	98.8%	99.0%
EU efficiency	97.3%	97.6%	97.6%	98.1%	98.3%	98.3%	98.4%	98.5%
Efficiency factor of MPPT	>99.5%	>99.5%	>99.5%	>99.5%	>99.9%	>99.9%	>99.9%	>99.9%
<b>Protection</b>								
DC Inverse-polarity protection	Yes							
Short circuit protection	Yes							
Overload output protection	Yes							
Output overvoltage protection	Yes							
Insulation resistance control	Yes							
Residual currents detection	Yes							
Voltage variation protection	Yes							
Network monitoring	Yes							
Loss of mains (Islanding protection)	Yes							
Overheat protection	Yes							
Built-in DC switch	Yes							
<b>Basic parameters</b>								
Dimensions Width, Height, Depth (mm)	310x543x160	333x573x249	333x573x249	310x563x219	530x700x356.5	530x700x356.5	630x700x357	630x700x357
Weight (kg)	11.5	18	18	18.9	58.2	58.2	63	63
Implementation	Transformerless							
Self-consumption (overnight)	<1W							
Operating temperature range	-25~60°C							
Relative humidity	0~100%							
Degree of enclosure protection	IP65							
Noise level during operation	<30 dBA	<30 dBA	<30 dBA	<30 dBA	<30 dBA	<30 dBA	<60 dBA	<60 dBA
Cooling	Radiator cooling	Radiator cooling	Radiator cooling	Intelligent fan control	Radiator cooling	Radiator cooling	Radiator cooling + redundant fan	Radiator cooling + redundant fan
Max alt	4000 m							
Service life	>20 years							
<b>Features</b>								
DC connection	MC4							
AC connection	IP67 plug	IP67 plug	IP67 plug	Terminal connectors	Terminal connectors	Terminal connectors	OT Terminal connectors	OT Terminal connectors
Display	LCD, 2x20 symbols	LCD, 2x20 symbols	LCD, 2x20 symbols	LCD, 2x20 symbols	LCD color display 7»	LCD color display 7»	LCD, 2x20 symbols.	LCD, 2x20 symbols.
Communication Ports	4 pins RS485 connector	4 pins RS485 connector	4 pins RS485 connector	4 pins RS485 connector	4 pins RS485 connector, 2 RJ45 connector	4 pins RS485 connector, 2 RJ45 connector	4 pins RS485 connector, 2 RJ45 connector, 2 terminal groups	4 pins RS485 connector, 2 RJ45 connector, 2 terminal groups
Remote monitoring	WiFi or GPRS							
Warranty	5 years standard (Extension to 20 years)							

# Parallel connection of solar grid inverters

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