Power-one
Micro Systems Pvt. Ltd.

SPECIFICATION OF POWERONE MICROSYSTEMS SOLAR GRID TIE STRING INVERTER 1 – 5 kW

Model - POM SGTI	1 kW SGTU-101	1.5 kW SGTU-115	2 kW SGTU-102	3 kW SGTU-103-SM	5KW SGTU-105
Input (DC)					
Max. DC power	1200 W	1800W	2400W	3300W	5500W
Max. DC voltage	500 V	500V	500V	500V	600V
MPPT voltage range	150V-450V	150V-450V	150V-450V	150V-450V	150V-500V
Nominal DC voltage	360V	360V	360V	360V	360V
Min. / start DC voltage	120V/150V	120V/150V	120V/150V	120V/150V	120V/150V
Number of MPPT/s	1	1	1	1	2
Strings per MPPT	1	1	1	1	2
Max. DC power per MPPT	1200W	1800W	2400W	3300W	3000W
Max. input current per MPPT	8A	9A	11A	17A	15A/15A
Output (AC)					
Nominal AC output Power	1000W	1500W	2000W	3000W	5000 W
Nominal AC voltage	230 V	230 V	230V	230V	230 V
AC voltage range	155 V – 270 V	155 V – 270 V	155 V – 270 V	155 V – 270 V	155 V – 270 V
Nominal AC grid frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
AC grid frequency range	± 5 Hz	± 5 Hz	± 5 Hz	± 5 Hz	± 5 Hz
Max. output current	6A	9A	11A	15A	24A
Rated. output current					
THD	<3%	<3%	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase	Single phase	Single phase
Topology	Transformer less	Transformer less	Transformer less	Transformer less	Transformer less
Efficiency					
Efficiency	98.0%	98.0%	98.16%	98.25%	98.18%
Consumption: standby / night	<5W / < 0.2 W	<5W / < 0.2 W	<5W / < 0.2 W	<5W / < 0.2 W	<7W / < 0.2 W
Mechanical Data					
Dimensions (W / L / D) in mm	353/605/182	353/605/182	353/605/182	353/520/182	353/520/182
Weight	12KG	12KG	12KG	18KG	23KG
Environment Data					
Operating temperature range	–20 °C ... +55 °C	–20 °C ... +55 °C	–20 °C ... +55 °C	–20 °C ... +55 °C	–20 °C ... +55 °C
Noise Level	≤ 35 dB	≤ 35 dB	≤ 35 dB	≤ 35dB	≤ 35dB
Cooling	Natural air cooled	Natural air cooled	Natural air cooled	Natural air cooled	Natural air cooled
Installation: Indoors / Outdoors	yes / yes	yes / yes	yes / yes	yes / yes	yes / yes
Protection rating	IP65	IP65	IP65	IP65	IP65
Features					
LCD display	yes	yes	yes	yes	yes
Communication Interface	RS485	RS485	RS485	RS485	RS485

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SPECIFICATION OF POWERONE MICROSYSTEMS SOLAR GRID TIE (STRING) INVERTER 10-20kW

Model Specifications – POM SGTU	10 kW SGTU-103	12.5 kW SGTU-1253	15 kW SGTU-153	17 kW SGTU-173	20 kW SGTU-203
Input(DC)					
Max. DC power	12KW	13.5 KW	17KW	18K	22KW
Max. DC voltage	900V	900V	900V	900V	900V
MPPT voltage range	250V-850V	250V-850V	250V-850V	250V-850V	250V-850V
Normal DC voltage	580V	580V	580V	580V	580V
Min. / start DC voltage	200V/250V	200V/250V	200V/250V	200V/250V	200V/250V
Number of MPP trackers	3	3	3	3	3
Strings per MPP tracker	2	2	2	2	2
Max. DC power per MPP tracker	4 KW	4.5KW	5KW	6KW	7.5KW
Max. input current per MPP tracker	12A/12A/12A	12A/12A/12A	17A/17A/17A	17A/17A/17A	17A/17A/17A
Output (AC)					
Normal AC output Power	10KW	12.5KW	15KW	17KW	20KW
Max. AC output Power	10.5KW	13KW	15.5KW	17.5KW	20.5KW
Normal AC voltage	400 V	400 V	400 V	400 V	400 V
AC voltage range	280 V – 480 V	280 V – 480 V	280 V – 480 V	280 V – 480 V	280 V – 480 V
Normal AC grid frequency	50	50	50	50	50
AC grid frequency range	± 5 Hz	± 5 Hz	± 5 Hz	± 5 Hz	± 5 Hz
Max. output current	17A	20A	24A	27A	30A
Phase shift (cos ϕ)	0.9leading-0.9lagging	0.9leading-0.9lagging	0.9leading-0.9lagging	0.9leading-0.9lagging	0.9leading-0.9lagging
THD	<3%	<3%	<3%	<3%	<3%
AC connection	Three phase	Three phase	Three phase	Three phase	Three phase
Topology	Transformer less	Transformer less	Transformer less	Transformer less	Transformer less
Efficiency					
Max. efficiency	98 %	98 %	98 %	98 %	98 %
Consumption: standby / night	<10W / < 2 W	<10W / < 2 W	<15W / < 2 W	<15W / < 2W	<15W / < 2W
Mechanical Data					
Dimensions (W / L / D) in mm	500/670/210	500/670/210	500/700/210	500/700/210	500/700/210
Weight	44KG	44KG	50KG	50KG	50KG
Environment Data					
Operating temperature range	–20 °C ... +60 °C	–20 °C ... +60 °C	–20 °C ... +60 °C	–20 °C ... +60 °C	–20 °C ... +60 °C
Noise emission (typical)	≤ 50dB	≤ 50dB	≤60 dB	≤60 dB	≤60 dB
Cooling	fans	fans	fans	fans	fans
Location	Indoor / Outdoor	Indoor / Outdoor	Indoor / Outdoor	Indoor / Outdoor	Indoor / Outdoor
Protection rating	IP65	IP65	IP65	IP65	IP65
Features					
LCD display	yes	yes	yes	yes	yes
Interfaces	RS485	RS485	RS485	RS485	RS485

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SPECIFICATION OF POWERONE MICROSYSTEMS SOLAR GRID TIE (STRING) INVERTER 30kW &50 kW

Model Specifications – POM SGTU	**30 kW**	**50 kW**
Input(DC)		
Max. DC power	33K	55KW
Max. DC voltage	1000V	1000V
MPPT voltage range	250V-850V	250V-850V
Normal DC voltage	580V	580V
Min. / start DC voltage	200V/250V	200V/250V
Number of MPP trackers	3	3
Strings per MPP tracker	3	3
Max. DC power per MPP tracker	11KW	18KW
Max. input current per MPP tracker	26A/26A/26A	38A/38A/38A
Output (AC)		
Normal AC output Power	30KW	50KW
Max. AC output Power	30.5KW	50.5KW
Normal AC voltage	400 V	400 V
AC voltage range	280 V – 480 V	280 V – 480 V
Normal AC grid frequency	50	50
AC grid frequency range	± 5 Hz	± 5 Hz
Max. output current	48A	74A
Phase shift (cos ϕ)	0.9leading- 0.9lagging	0.9leading- 0.9lagging
THD	<3%	<3%
AC connection	Three phase	Three phase
Topology	Transformer less	Transformer less
Efficiency		
Max. efficiency	98 %	98 %
Consumption: standby / night	<15W / < 2W	<15W / < 2W
Mechanical Data		
Dimensions (W / L / D) in mm	600/800/250	700/800/250
Weight	65KG	80KG
Environment Data		
Operating temperature range	–20 °C ... +60 °C	–20 °C ... +60 °C
Noise emission (typical)	≤60 dB	≤60 dB
Cooling	fans	fans
Location	Indoor / Outdoor	Indoor / Outdoor
Protection rating	IP65	IP65
Features		
LCD display	yes	yes
Interfaces	RS485	RS485

Sl. No	**IEC Standards**	**IEC Type**
1	60068-2(1.2.14.30)	Environment Testing
2	61683:1999	Efficiency Measurement
3	IEC - 62109-1 (2010/4) IEC - 62109-2 (2011/6)	Product safety standard
4	IEC 61727 IEEE 1547 IEEE 1547.1	Grid Connectivity standard and test procedure for islanding prevention measures for utility/interconnected PV inverters
5	IEC 61000-6-3>16 Amps IEC 61000-6-4<16 Amps	Electromagnetic compatibility & Electro Magnetic Interference
6	IP 65 (for outdoor)/ IP 21 (for indoor) As per IEC 529	Ingress protection

*As per MNRE Beyond 10KW self certification by the manufactures is acceptable.