DATA SHEET

FLEXINVERTER Solar Power Station

The **FLEX**INVERTER Solar Power Station combines GE's **FLEX**INVERTER 1500V solar inverter, with medium voltage power transformer, optional MV switchgear, and various options for a reliable, plug & play, factory integrated power conversion solution for utility-scale solar installations.

The **FLEX**INVERTER Solar Inverter is one of the is one of the industry's leading 1500V developments and is GE's latest evolution in renewable power electronics. Building on expertise in the renewables industry, GE now offers its latest power conversion technology for efficient, cost effective and dispatchable solar power.

FLEXINVERTER Solar Power Station Features:

- UL or IEC compliant configurations
- 3.0 - 3.9 MVA output power
- High efficiency
- Air-cooled system
- Plug & Play
- Nighttime disconnect option
- Direct outdoor installation
- Standard 20ft ISO high cube container for optimized logistics and reduced on site installation and commissioning Fiber-optic SCADA interface
- DC-coupling option

SPECIFICATIONS	UNITS	1560	1563	1566	1569
INPUT DATA					
MPPT Range [1]	Vdc	853 - 1300	895 - 1300	938 - 1300	980 - 1300
Max Permissible DC Voltage	Vdc	1500			
Max DC Current (up to 40°C / at 50°C)	Adc	4200 / 3700			
Max DC Short Circuit Interrupt Rating	Adc	12000 [2]			
Number of MPPT		1			
Number of DC Inputs & cables		Up to 24 inputs; Cables: 2 x 350 kcmil (185 mm^2) or 1 x 700 kcmil (350 mm^2) per DC input			
DC-coupling with battery energy storage systems		Option – compatible with or without PV optimizers including separate BESS input			
OUTPUT DATA - MEDIUM VOLTAGE					
Transformer HV / LV Connection		△ (Delta) / Y (Wye)			
Rated Output Power (at 52°C & 0.92 PF)	MVA	2.74	2.87	3.01	3.15
AC Output Power (up to 40°C / at 50°C) [3]	MVA	3.36 / 2.98	3.53 / 3.12	3.70 / 3.27	3.87 / 3.42
AC Output Voltage (+10% / -10%) [4]	kVac	22 / 33 / 34.5			
Max AC Current (up to 40°C)	Aac	88 / 59 / 56	92 / 61 / 59	97 / 64 / 62	101 / 67 / 64
Max AC Current (at 50°C)	Aac	78 / 52 / 50	82 / 54 / 52	86 / 57 / 55	89 / 60 / 57
Grid Frequency ±5%	Hz	50 / 60			
Power Factor (PF) Range		0-1 leading & lagging [4]			
Current Harmonic Distortion (TDD)	%	<3			
Medium Voltage Cable		Designed for 630 mm^2 / 1250 MCM max			
EFFICIENCY & AUXILIARY POWER					
System Efficiency (Max / EU / CEC) [5]	%	97.8 / 97.6 / 97.7			
Inverter Efficiency (Max / EU / CEC) [6]	%	98.9 / 98.6 / 98.7			
System Nighttime Aux Power [7] (excl. transformer no-load losses)	W	≤700			
INTERFACES					
Plant Control Interface / PLC		Modbus TCP, EGD			
Programming / Diagnostic Interface		Modbus TCP			
Extra Analog and Digital I/O		Option			
Power Station Connections		Internal: CAT7 <30m / External: Fiber Optic			
FEATURES AND OPTIONS					
Cooling		Air Cooled			
Local Shut Down Button		Included			
Mounting Options		Piers / Pad / Gravel			
Array Configurations Supported		Negative Pole Grounded or Floating			
Ground Fault Monitoring		Standard for Grounded Arrays, Option for Floating Arrays			
Nighttime Transformer Disconnect		Option			
Nighttime VAR Function		Option			
Insulation Monitoring		Option			
Container Color Code		RAL 9003 (Signal White)			

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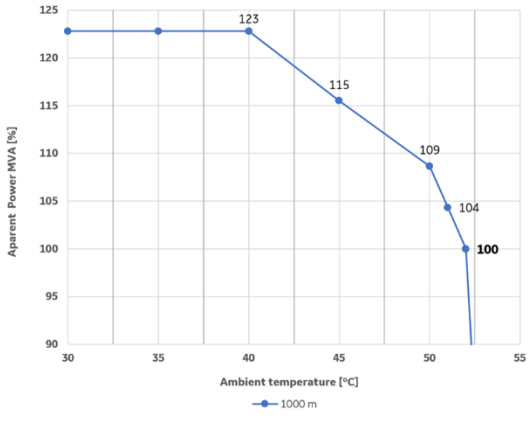
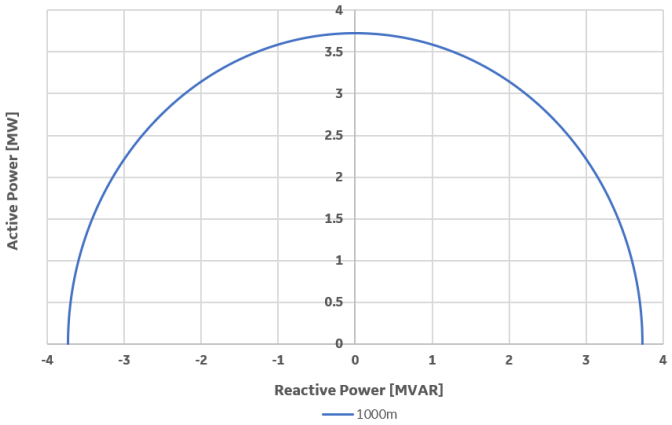
Power Disconnect AC Side		Motorized AC Circuit Breaker			
Switch-Disconnect DC Side		Motorized DC Switch			
Overvoltage Protection, DC and AC		Included – IEC 61643-1 Class II / UL 1449			
Main Power Transformer Oil Type		Mineral / Biodegradable (Option)			
Oil Collection & Drainage		Option			
Customer Aux Power Loads [8]		Option (up to 45 kVA)			
Door Interlocking System		Option			
Weather Station		Option			
Noise (at 1m / 10m) [9]	dBA	≤85 / ≤75			
Weight	kg / lbs	approx. 17000 / 37480			
Dimensions (L x W x H)	m / ft	6.1 x 2.4 x 2.9 / 20.0 x 8.0 x 9.5			
PROTECTION RATING AND AMBIENT CONDITIONS					
Operating Temperature Range	°C / °F	Standard -10 to +55 / +14 to +131 Option -25 to +55 / -13 to +131			
Storage Temperature Range	°C / °F	-40 to +65 / -40 to +149			
Cold Weather Option [10]	°C / °F	Down to -35 / -31			
Humidity	%	5-100 (rated for outdoor installation)			
Maximum Altitude without Derating [11]	m / ft	1000 / 3281			
Seismic		Zone 2B ASCE 7 / IBC			
Maximum Wind Speed [12]	kph / mph	250 / 155			
Snow Load		ASCE 7			
NEMA Rating / IP Class		NEMA3 / IP54 (Inverter & RMU) NEMA3R / IP23 (Transformer)			
STANDARDS					
Electromagnetic Compatibility (EMC)		EN 61000-6-2, 62920 / CISPR 11			
Certifications		IEC, CE, UL 1741 SA, CSA			

1. *At nominal grid voltage and PF=1, derating above 1300 Vdc according to PQ curves*
2. *Up to 5 times per lifetime*
3. *AC power is valid for grid voltage ≥ nominal voltage*
4. *Derating will apply according to PQ curves*
5. *Preliminary, includes auxiliary power losses, EU Reg. No. 584/2014 available as option. 99.1% rated efficiency available for IEEE transformer type*
6. *Preliminary, excludes auxiliary power losses*
7. *No heating, no cooling, without environmental controls enabled, DC link de-energized and without transformer no load losses, no customer loads, for inverter only auxiliary needs*
8. *Customer Aux Power demand reduces total AC output power*
9. *At 1m / 10m in front of enclosure and 1m up from the ground*
10. *Cold weather option on request*
11. *Higher altitudes (with derating) on request*
12. *Maximum wind speed without derating 81 kph / 50 mph*

Power / Temperature Derating Curve[13] & Sample PQ Diagram[14]





13. Applicable for grid voltage ≥ nominal voltage, altitudes >1000m on request

*14. Sample PQ diagram for **FLEX**INVERTER 1566 at nominal grid voltage, 1300 Vdc and 40°C ambient*

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English
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