GE VERNOVA

DATA SHEET

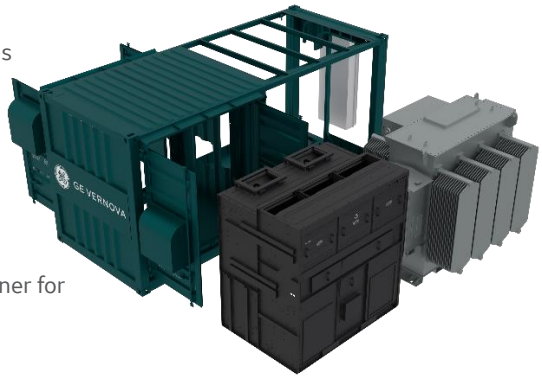
FLEXINVERTER 1.5kV Solar Power Station

The **FLEX**INVERTER Solar Power Station combines the technology of GE Vernova's 1500 Vdc solar **FLEX**INVERTER, with a medium voltage power transformer, optional medium voltage switchgear and multiple selectable options for a reliable, plug & play, factory integrated power conversion solution for utility-scale solar installations.

The **FLEX**INVERTER is one of the industry's leading 1500 Vdc inverter developments and is GE Vernova's latest evolution in renewable power electronics. GE Vernova has a renewable energy inverter installed base of more than 28 GW globally.

FLEXINVERTER **Solar Power Station:**

- UL and IEC compliant configurations
- 3.7 – 4.7 MVA output power
- High efficiency power conversion
- Air-cooled system
- Plug & Play
- Direct outdoor installation
- Standard 20ft ISO high cube container for optimized logistics and installation
- Fiber-optic SCADA interface
- DC-coupling option



SPECIFICATIONS	UNITS	1560	1563	1566	1569
INPUT DATA					
MPPT Range [1]	Vdc	853 - 1150	895 - 1200	938 - 1300	980 - 1300
Max Permissible DC Voltage	Vdc	Standard 1500, Option 1550			
Max DC Current (up to 35°C / at 50°C)	Adc	5000 / 4500			
Number of MPPT		1			
Number of DC Inputs & cables		24 standard, up to 36 inputs; 2 x 600 kcmil / 300 mm² or 1 x 800 kcmil / 400 mm² 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		Δ (Delta) / Y (Wye)			
Medium Voltage Short Circuit Rating	kA	Standard 25, Optional 40			
Rated Output Power (at 55°C & 0.92 PF)	MVA	3.36	3.52	3.69	3.86
Multi-tap Transformer Configuration (UL / NAM only)		Range covered by a single MV transformer for project flexibility			Not Applicable
AC Output Power (up to 35°C / at 50°C) [2]	MW	4.11 / 3.70	4.31 / 3.89	4.52 / 4.07	4.73 / 4.26
AC Output Voltage (+10% / -10%) [3]	kVac	22 / 33 / 34.5			
Max AC Current (up to 35°C)	Aac	108 / 72 / 69	113 / 75 / 72	119 / 79 / 76	124 / 83 / 79
Max AC Current (at 50°C)	Aac	97 / 65 / 62	102 / 68 / 65	107 / 71 / 68	112 / 74 / 71
Grid Frequency ±5%	Hz	50 / 60			
Power Factor (PF) Range [3]		0-1 leading & lagging			
Current Harmonic Distortion (TDD)	%	<3			
Medium Voltage Cable		Up to 1x 630 mm² (IEC) 630Aac / 1x 1500 kcmil (UL) 600 Aac, 900 Aac optional Separable connectors possible			
EFFICIENCY & AUXILIARY POWER					
Power Station Efficiency at 40°C (Max / EU / CEC) [4]	%	98.4 / 97.6 / 97.9			
Inverter Efficiency at 40°C (Max / EU / CEC) [5]	%	99.1 / 98.7 / 98.7			
Power Station Nighttime Aux Power [6]	W	≤700, Excludes MV Transformer No-Load Losses			
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 / Piles			
Array Configurations Supported		Negative Pole Grounded or Floating			
Ground Fault Monitoring		Standard for Grounded Arrays, Option for Floating Arrays			
Night-time VAR Function		Option			
Insulation Monitoring		Option			
Container Color Code		RAL 6036 (Dark Teal)			

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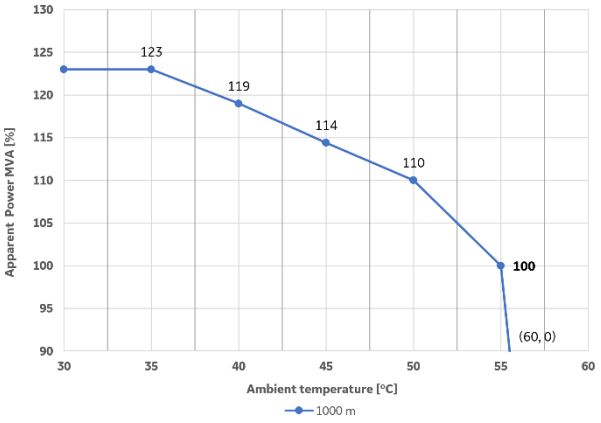
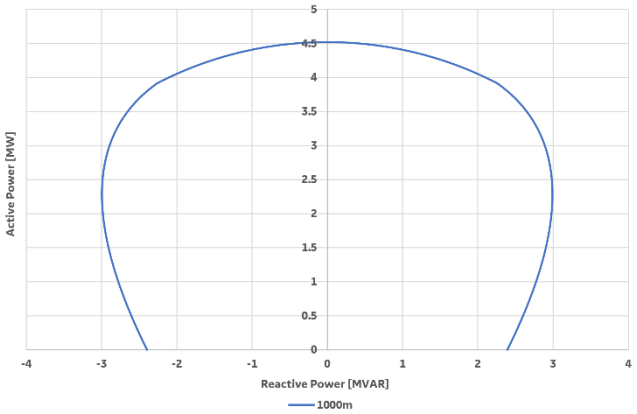
Disconnect Low Voltage AC Side		Motorized AC Circuit Breaker			
Disconnect DC Side		Motorized No-Load DC Switch			
Overvoltage Protection, DC and AC		Included – IEC 61643-1 Class II / UL 1449			
Main Power Transformer Oil Type		Mineral - ONAN (Standard) / Biodegradable - KNAN (Option)			
Oil Spill Management		Option 1: Collection & drainage | Option 2: Full oil containment up to 120% oil-volume			
Customer Aux Power Loads [7]	kVA	Standard 6, Option 40			
Revenue Grade Metering		Option			
GPS Enabled Fault Timestamping		Option (compliant to MISO App G and CAISO App H)			
Altitude [3]	m / ft	No derating ≤ 1000 / 3281, up to 4000 / 13124			
Noise at 1m [8]	dBA	≤79			
Weight	kg / lbs	approximately 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			
Cold Weather Option [9]	°C / °F	Down to -35 / -31			
Storage Temperature Range	°C / °F	-40 to +65 / -40 to +149			
Humidity	%	5-100 (rated for outdoor installation)			
Maximum Altitude without Derating [10]	m / ft	1000 / 3281			
Seismic		IBC 2018 / ASCE 7-10 Ss=2g for 0.2 Sec			
Maximum Wind Speed [11]	kph / mph	250 / 155			
Snow Load		ASCE 7			
NEMA Rating / IP Class		NEMA3 / IP54 (Inverter & RMU) NEMA3R / IP23 (Transformer)			
STANDARDS & CERTIFICATIONS					
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, please refer to PQ curves for detailed MPPT voltage & temperature profiles*
2. *AC Power is valid for grid voltage ≥ nominal voltage. Self-consumption (max ~16 kVA) and customer auxiliary loads not included*
3. *Derating will apply according to PQ curves*
4. *Preliminary measurements at 40°C for 660Vac, includes auxiliary power losses, EU Reg. No. 584/2014 available as option. 99.1% rated efficiency option available for IEEE transformer*
5. *Preliminary measurements at 40°C for 660Vac, includes self-consumption for CEC & Max efficiencies and excludes self-consumption for EU efficiency*
6. *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*
7. *Customer Aux Power demand reduces total AC output power, customer to specify circuit breaker configurations*
8. *At 1m in front of enclosure and 1.5m up from the ground. Please respect the restricted areas described in the manual*
9. *Cold weather option on request*
10. *Higher altitudes (with derating) on request*
11. *Maximum wind speed without derating 81 kph / 50 mph*

Power / Temperature Derating Curve [12] & Sample PQ Diagram [13]





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

*13. Sample PQ diagram for **FLEX**INVERTER 1566 at nominal grid voltage, 1215 Vdc and 35°C ambient*

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English
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