

DATA SHEET

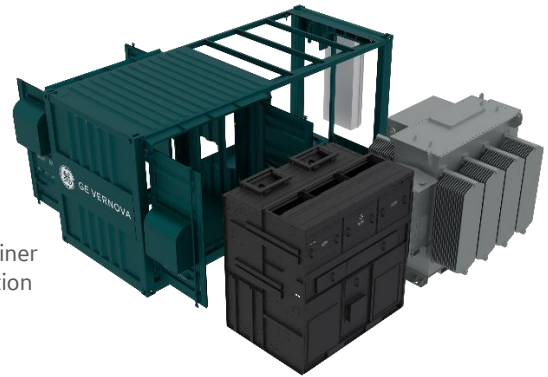
FLEXINVERTER 2.0kV Solar Power Station

The GE Vernova **FLEXINVERTER** 2000 Vdc Solar Power Station is the latest utility scale power station product offering for the renewable energy market. The **FLEXINVERTER** power station combines an inverter, medium voltage transformer, in addition to various configurable options, for a reliable, plug & play, factory integrated power conversion solution for utility-scale solar installations.

As one of the industry's first 2000 Vdc inverter platforms, it benefits from more than 28 GW of global 1500 Vdc inverter project experience. Building on expertise in the renewables industry, GE Vernova now offers its latest power conversion technology for efficient, cost effective and dispatchable solar power.

FLEXINVERTER Solar Power Station:

- Up to 6.0 MVA output power
- High efficiency power conversion
- Air-cooled system
- Plug & Play on-site installation
- Direct outdoor installation
- Standard 20 ft ISO high cube container for optimized logistics and installation
- Fiber-optic SCADA interface
- DC-coupling option

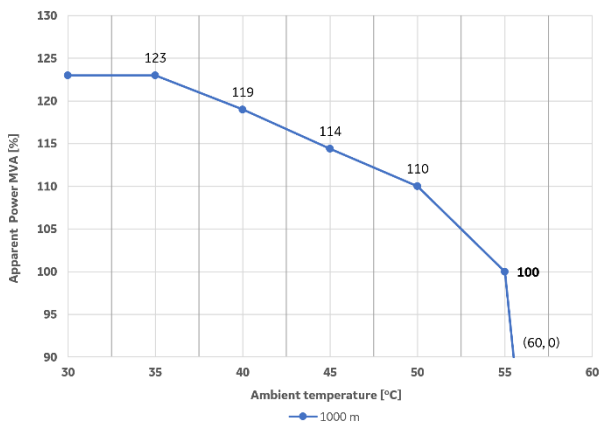


SPECIFICATIONS	UNITS	2090
INPUT DATA		
MPPT Range ¹	Vdc	1277 - 1600
Max Permissible DC Voltage	Vdc	2000
Max DC Current Capability (up to 35°C / at 50°C)	Adc	4805 / 4327
Number of MPPT		1
Number of DC Inputs & cables		24 standard, up to 36 inputs; 2 x 500 kcmil / 300 mm ² or 1 x 800 kcmil / 400 mm ² per 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		Δ (Delta) / Y (Wye)
Short Circuit Capability	kA	Standard 25, Optional 40
Rated Output Power (at 55°C & 0.92 PF)	MVA	4.94
AC Output Power (up to 35°C / at 50°C) ²	MW	6.00 / 5.40
AC Output Voltage (+10% / -10%) ³	kVac	34.5
Max AC Current (up to 35°C)	Aac	100.4
Max AC Current (at 50°C)	Aac	90.4
Grid Frequency ±5%	Hz	60
Power Factor (PF) Range ³		0-1 leading & lagging
Current Harmonic Distortion (TDD)	%	<3
Medium Voltage Cable		Up to 1x 1500 kcmil / 600 Aac standard, 900 Aac option, 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)

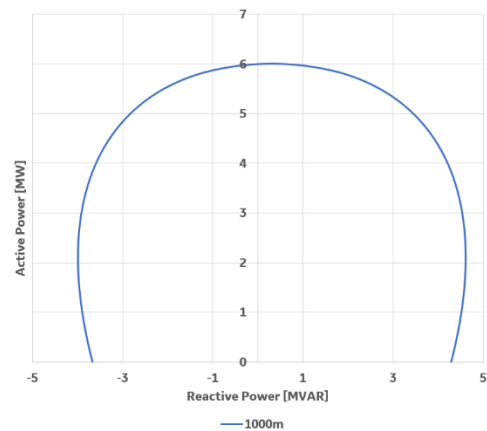
SPECIFICATIONS	UNITS	2090
FEATURES AND OPTIONS		
Disconnect Low Voltage AC Side		Motorized AC Circuit Breaker
Disconnect DC Side		Motorized No-Load DC Switch
Overvoltage Protection, DC and AC		Included – IEC 61643-1 Class II / UL 1449
Main Power Transformer Oil Type		Mineral - ONAF (Standard) / Biodegradable - KNAF (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
Altitude ³	m / ft	No derating ≤ 1000 / 3281, up to 4000 / 13124
Noise at 1m ⁸	dba	≤79
Weight	kg / lbs	approximately 19700 / 38400
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) NEMA3R / IP23 (Transformer)
STANDARDS & CERTIFICATIONS		
Electromagnetic Compatibility (EMC)		EN 61000-6-2, 62920 / CISPR 11
Certifications		UL 1741 SA pending

- At nominal grid voltage and PF=1, please refer to PQ curves for detailed MPPT voltage & temperature profiles
- AC Power is valid for grid voltage ≥ nominal voltage. Self-consumption (max ~15 kVA) and customer auxiliary loads not included
- Derating will apply according to PQ curves
- Preliminary measurements at 40°C for 900 Vac, includes auxiliary power losses, EU Reg. No. 584/2014 available as option. 99.1% rated efficiency option available for IEEE transformer
- Preliminary measurements at 40°C for 900 Vac, includes self-consumption for CEC & Max efficiencies and excludes self-consumption for EU efficiency
- 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
- Customer Aux Power demand reduces total AC output power
- At 1m / 10m in front of enclosure and 1m up from the ground
- Cold weather option on request
- Higher altitudes (with derating) on request
- 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 FLEXINVERTER 2090 at nominal grid voltage, 1400 Vdc and 35°C ambient

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