

DATA SHEET

FLEXINVERTER Energy Storage Power Station

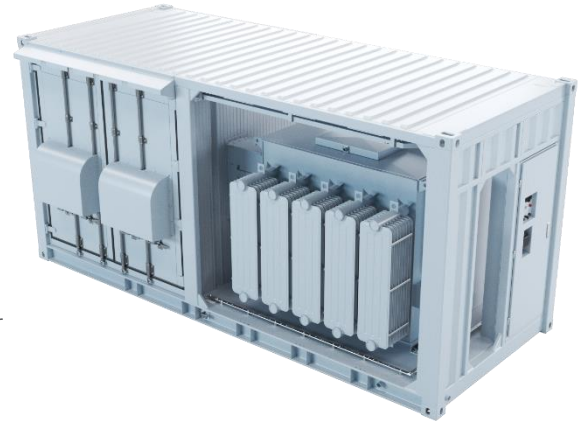


GE's **FLEXINVERTER** Energy Storage Power Station combines GE Renewable Energy's **FLEXINVERTER**, with medium voltage power transformer, optional MV Ring Main Unit for a reliable, plug & play, factory integrated energy storage power conversion solution.

The **FLEXINVERTER** Energy Storage Power Station is GE's latest evolution in power electronics. Building on expertise in the renewables industry, GE now offers its latest power conversion technology for efficient, cost effective and dispatchable power.

FLEXINVERTER Energy Storage Power Station Features:

- UL or IEC compliant configurations
- 3.0 - 3.9 MVA output power
- High efficiency
- Air-cooled system
- Plug & play
- Idle-time disconnect option
- Direct outdoor installation
- Standard 20ft high cube container for optimized logistics and installation
- Fiber-optic SCADA interface
- Digital ready

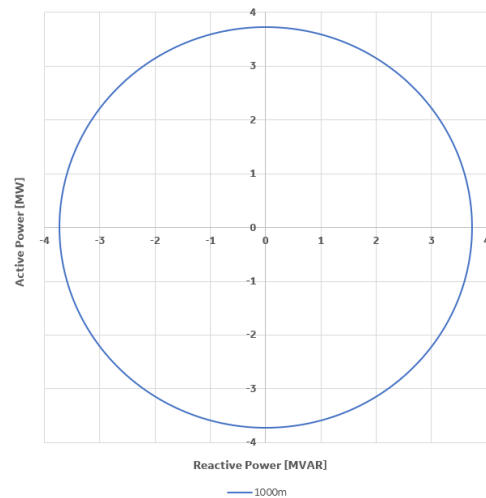
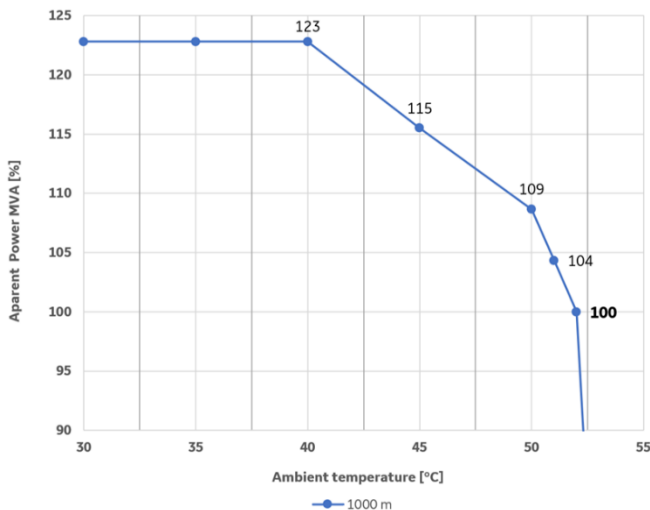


SPECIFICATIONS	UNITS	1560	1563	1566	1569
INPUT DATA					
DC Voltage Range ¹	Vdc	853 - 1300	895 - 1350	938 - 1350	980 - 1350
Max Continuous DC Current (at 40°C / 50°C)	Adc	4200 / 3700			
Max DC Short Circuit Withstand Rating	Adc	250 kA for 30 ms			
Number of DC Inputs		48 conductors per pole for bottom entry, side entry option. Direct busbar connection as option			
OUTPUT DATA - MEDIUM VOLTAGE					
Transformer HV / LV Connection		Δ (Delta) / Y (Wye)			
Rated Output Power (at 52°C & 0.92 PF) ²	MVA	2.74	2.87	3.01	3.15
AC Output Power (up to 40°C / at 50°C)	MVA	3.36 / 2.98	3.53 / 3.12	3.70 / 3.27	3.87 / 3.42
AC Output Voltage (+10% / -10%) ³	kVac	22 / 33 / 34.5			
Rated Current HV Winding (up to 40°C)	Aac	88 / 59 / 56	92 / 61 / 59	97 / 64 / 62	101 / 67 / 64
Rated Current HV Winding (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 to 1 leading & lagging for charging and discharging modes ³			
Current Harmonic Distortion (TDD)	%	<3			
Medium Voltage Cable		Designed for 630mm ² / 1250 MCM max			
EFFICIENCY & AUXILIARY POWER					
System Efficiency Discharging (Max / EU / CEC) ⁴	%	97.8 / 97.6 / 97.7			
Inverter Efficiency Discharging (Max / EU / CEC) ⁵	%	98.9 / 98.6 / 98.7			
System Idle-Time Aux Power ⁶	W	≤700			
INTERFACES					
Plant Control Interface / PLC		Modbus TCP, EGD			
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			
DC Configurations Supported		Floating			
Idle-time Transformer Disconnect		Option			
Insulation Monitoring		Option			
Power Disconnect AC Side		Motorized AC Circuit Breaker			
Container Color Code		RAL 9003 (Signal White)			

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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 - ONAN (Standard) / Biodegradable - KNAN (Option)	
Oil Collection & Drainage				Option	
Aux Power / Customer Loads				Option (up to 45 kVA)	
Door Interlocking System				Option	
Weather Station				Option	
Noise (at 1m / 10m) ⁷	dB(A)			<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 x 8 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 ⁸	°C / °F			Down to -35 / -31	
Humidity	%			5-100 (rated for outdoor installation)	
Maximum Altitude without Derating ⁹	m / ft			1000 / 3281	
Seismic				Zone 2B ASCE 7 / IBC	
Maximum Wind Speed ¹⁰	kph / mph			250 / 155	
Snow Load				ASCE 7	
NEMA Rating / IP Class				NEMA 3 / IP54 (Inverter & RMU) NEMA 3R / IP23 (Transformer)	
STANDARDS					
Electromagnetic Compatibility (EMC)				EN 61000-6-2, 62920 / CISPR 11	
Certifications				IEC, CE, UL 1741 SA, CSA	

- At nominal AC voltage. Additional active power limitations in case of line overvoltage apply (reactive power injection to control AC voltage).
- Active power is valid for the cited PF range up to 40°C and grid voltage ≥ nominal voltage
- Derating will apply according to PQ curves
- Preliminary, includes auxiliary power losses
- Preliminary, excludes auxiliary power losses
- No heating, no cooling, without environmental controls enabled, DC link de-energized and without transformer no load losses
- At 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 Curve¹¹ & Sample PQ Diagram¹²



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

12. PQ diagram for LV5+ 1566 at nominal grid voltage, 1150 Vdc and 40°C ambient

