



Wild Grains Solar Project

Exhibit B

Manufacturer's Equipment Specification

Case No. 21-0823-EL-BGN



HEM

UTILITY SCALE MV CENTRAL STRING INVERTER



FIELD REPLACEABLE UNITS



OUTDOOR DURABILITY



BUS PLUS SOLAR + STORAGE



NEMA 3R



iCOOL 3



ACTIVE HEATING



3 LEVEL TOPOLOGY



ECON MODE

THE INNOVATIVE MEDIUM VOLTAGE CENTRAL STRING INVERTER

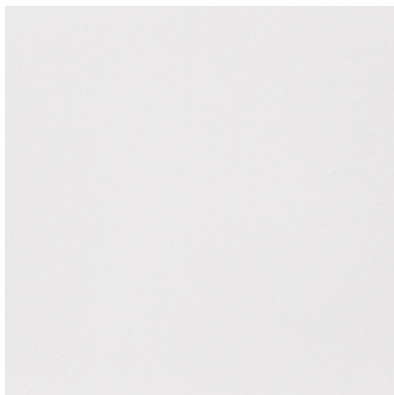
The Power Electronics HEM medium voltage inverter is designed for utility scale solar applications, that require the advantages of a central inverter solution but also the modularity of a string architecture. The HEM can reach up to a nominal power of 3.6 MVA, and offers a wide MPPT window. It also has the added advantage of having an integrated medium voltage transformer and switchgear.

The Bus Plus ready feature allows the connection of up to six Freemaq DC/DC converters. It is the most cost competitive solution for solar-plus-storage retrofits.

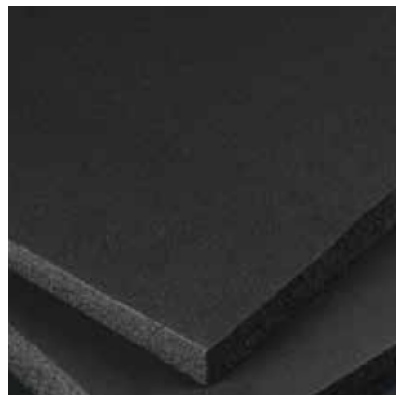
Its architecture, composed of six field replaceable units (FRU), is designed to provide the highest availability and optimize yield production. Its use in Utility Scale PV plants provides considerable savings in CAPEX, since having an integrated MV transformer and switchgear reduces the need of additional connections between the LV and MV sides.

Thanks to the Power Electronics iCOOL3 cooling system, the HEM is able to provide NEMA 3R degree of protection with an air cooling system, and as a result reducing OPEX costs. This product has been designed to be the lowest LCOE solution in the market for solar applications.

ROBUST DESIGN



Polymeric Painting



Closed-Cell Insulation



Galvanized Steel | Stainless Steel (Optional)

HEM inverter modules have a design life of greater than 30 years of operation in harsh environments and extreme weather conditions. HEM units are tested and ready to withstand conditions from the frozen Siberian tundra to the Californian Death Valley, featuring:

Totally sealed electronics cabinet protects electronics against dust and moisture.

Conformal coating on electronic boards shields PCBs from harsh atmospheres.

Temperature and humidity controlled active heating prevents internal water condensation.

C4 degree of protection according to ISO 12944.
Up to C5-M optional.

Closed-Cell insulation panel isolates the cabinet from solar heat gains.

Roof cover designed to dissipate solar radiation, reduce heat build-up and avoid water leakages.

The solid HEM structure avoids the need of additional external structures.

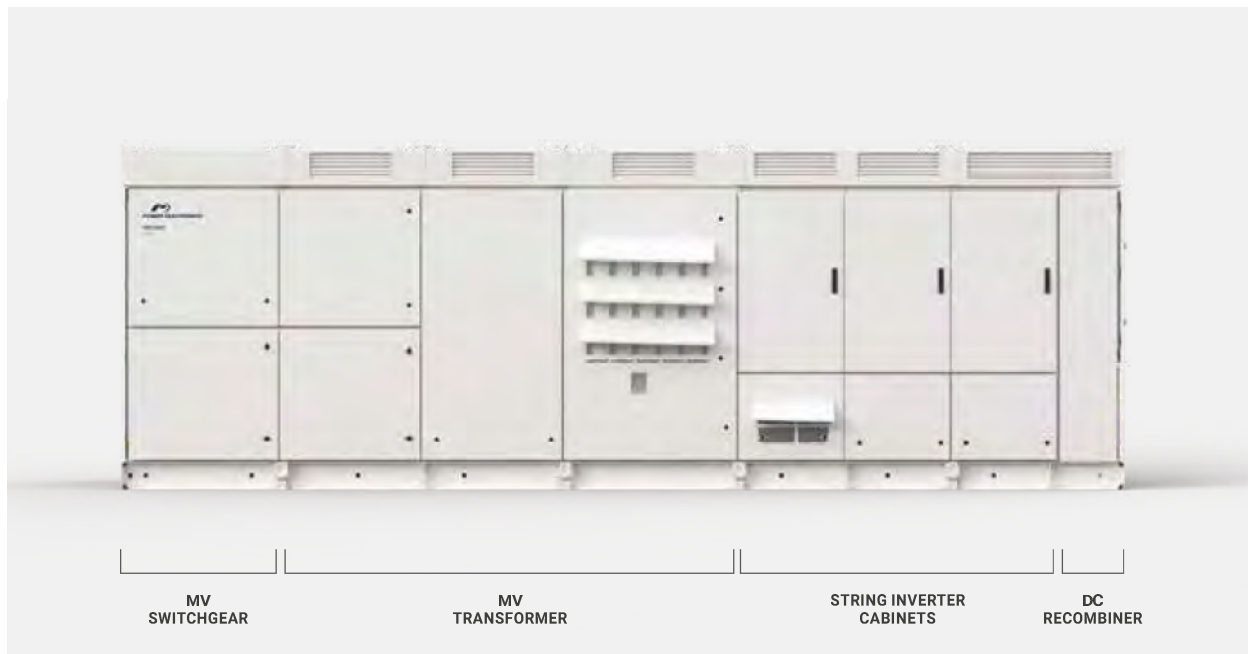
Random units selected to pass a Factory Water Tightness Test ensuring product quality.

NEMA 3R.

REAL TURN-KEY SOLUTION - EASY TO SERVICE

With the HEM, Power Electronics offers a real turn-key solution, including the MV transformer and switchgear fully assembled and tested at the factory. The HEM is a compact turn-key solution that will reduce site design, installation and connection costs, and therefore will minimize the LCOE.

By providing full front access the HEM series simplifies the maintenance tasks, reducing the MTTR (and achieving a lower OPEX). The total access allows a fast swap of the FRUs without the need of qualified technical personnel.



STRING CONCEPT POWER STAGES

The HEM combines the advantages of a central inverter with the modularity of the string inverters. Its power stages are designed to be easily replaceable on the field without the need of advanced technical service personnel, providing a safe, reliable and fast Plug&Play assembly system.

Following the modular philosophy of the Freesun series, the HEM is composed of 6 FRUs (field replaceable units), where all the power stages are physically joined in the DC side and therefore, in the event of a fault, the faulty module is taken off-line and its power is distributed evenly among the remaining functioning FRUs.



INNOVATIVE COOLING SYSTEM

Based on more than 3 years of experience with our MV Variable Speed Drive, the iCOOL3 system allows to get NEMA 3R degree of protection in an outdoor solar inverter. iCOOL3 delivers a constant stream of clean air to the FRUs and the MV transformer, being the most effective way of reaching up to NEMA 3R degree of protection, without

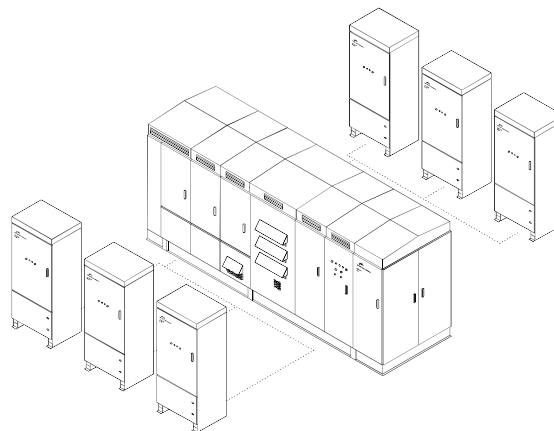
having to maintain cumbersome dust filters or having to use liquid-cooling systems, avoiding the commonly known inconveniences of it (complex maintenance, risk of leaks, higher number of components...), therefore resulting in an OPEX cost reduction and a LCOE improvement.



BUS PLUS READY - SOLAR + STORAGE

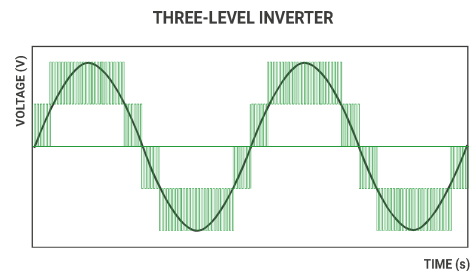
The Bus Plus feature allows the connection of up to six Freemaq DC/DC converters. It is the most cost competitive solution for solar-plus-storage retrofits. It prevents from additional connections out of the inverter between the DC/DC converters and the PV field. This solution provides considerable savings in CAPEX.

Power Electronics Freemaq DC/DC is a modular outdoor solution available from 500 kW to 3000 kW, fully compatible with different battery technologies and manufacturers. Freemaq DC/DC converter allows clipping energy recovery that will boost customer revenues and avoids the installation of additional station with a dedicated MV transformer.



MULTILEVEL TOPOLOGY

The multilevel IGBT topology is the most efficient approach to manage high DC link voltages and makes the difference in the 1,500 Vdc design. Power Electronics has many years of power design in both inverters and MV drives and the HEM design is the result of our experience with 3 level topologies. The 3 level IGBT topology reduces stage losses, increases inverter efficiency and minimizes total harmonic distortion. High efficiency to deliver the lowest LCOE.



VAR AT NIGHT

At night, in case of solar applications, the HEM inverter can shift to reactive power compensation mode. The inverter can respond to an external dynamic signal, a Power Plant Controller command or pre-set reactive power level (kVAR).

ACTIVE HEATING

At night, when the unit is not actively exporting power, the inverter can import a small amount of power to keep the inverter internal ambient temperature above -20°C, without using external resistors. This autonomous heating system is the most efficient and homogeneous way to prevent condensation, increasing the inverters availability and reducing maintenance. **PATENTED**

ECON MODE

This innovative control mode allows increasing the efficiency of the MV transformer up to 25%, reducing the power consumption of the plant and therefore providing considerable

savings. Available as an optional kit, this feature has a pay-back time of less than a few years, therefore resulting in the increase of the plant lifetime overall revenue.

EASY TO MONITOR

The Freesun app is the easiest way to monitor the status of our inverters. All our inverters come with built-in wifi, allowing remote connectivity to any smart device for detailed updates

and information without the need to open cabinet doors.

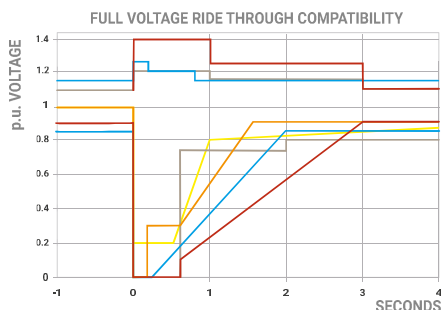
The app user-friendly interface allows quick and easy access to critical information (energy registers, production and events).

AVAILABLE INFORMATION	Grid and PV field data, inverter and power module data (voltages, currents, power, temperatures, I/O status...), weather conditions, alarms and warnings events, energy registers. Others.
FEATURES	Easy Wireless connection. Comprehensive interface. Real time data. Save and copy settings.
LANGUAGE	English, Spanish.
SYSTEM REQUIREMENTS	iOS or Android devices.
SETTINGS CONTROL	Yes.

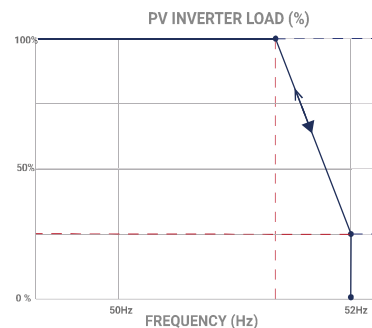


DYNAMIC GRID SUPPORT

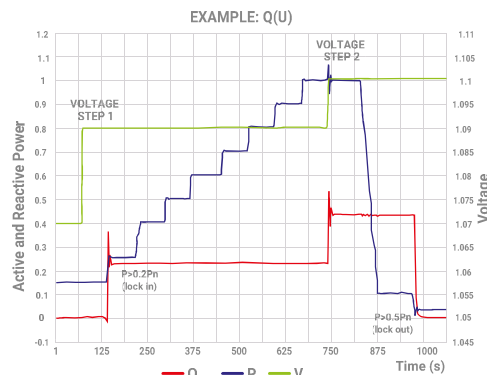
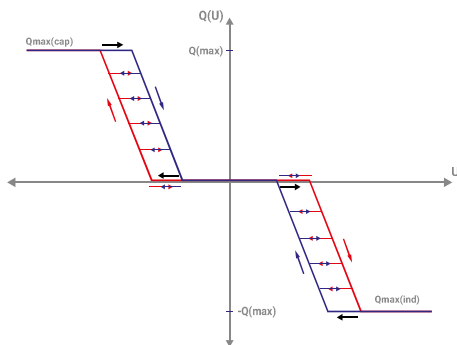
HEM firmware includes the latest utility interactive features (LVRT, OVRT, FRS, FRT, Anti-islanding, active and reactive power curtailment...), and can be configured to meet specific utility requirements.



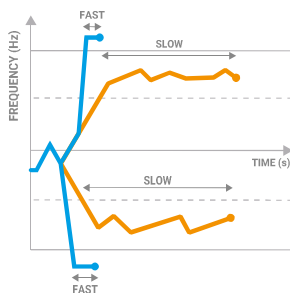
Low Voltage Ride Through (LVRT or ZVRT). Inverters can withstand any voltage dip or profile required by the local utility. In this situation, the inverter can inject current up to the nominal value.



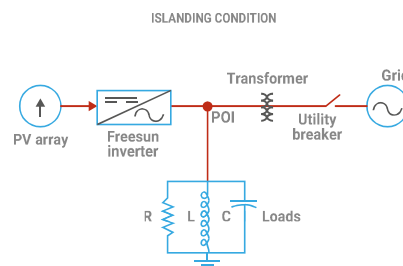
Frequency Regulation System (FRS). Frequency droop algorithm curtails the active power along a preset characteristic curve supporting grid stabilization.



Q(V) curve. It is a dynamic voltage control function which provides reactive power in order to maintain the voltage as close as possible to its nominal value.



Frequency Ride Through (FRT). Freesun solar inverters have flexible frequency protection settings and can be easily adjusted to comply with future requirements.



Anti-islanding. This protection combines passive and active detection methods that eliminate nuisance tripping and allow to comply with the IEC 62116 and IEEE 1547 standards.

FRONT VIEW



BACK VIEW



TECHNICAL CHARACTERISTICS

HEM

REFERENCE	FS3510M	
OUTPUT	AC Output Power (kVA/kW) @50°C ^[1]	3510
	AC Output Power (kVA/kW) @40°C ^[1]	3630
	Operating Grid Voltage (VAC)	34.5kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (cosine phi) ^[3]	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night
INPUT	MPPT @full power (VDC)	934V-1310V
	Maximum DC voltage	1500V
	Number of PV inputs ^[2]	Up to 36
	Number of Freemaq DC/DC inputs ^[4]	Up to 6
	Max. DC continuous current (A) ^[4]	3970
	Max. DC short circuit current (A) ^[4]	6000
EFFICIENCY & AUXILIARY SUPPLY	Efficiency (Max) (η)	97.80% including MV transformer
	CEC (η)	97.51% including MV transformer
	Max. Power Consumption (KVA)	20
CABINET	Dimensions [WxDxH] (ft)	21.7 x 7 x 7
	Dimensions [WxDxH] (m)	6.6 x 2.2 x 2.2
	Weight (lb)	30865
	Weight (kg)	14000
	Type of ventilation	Forced air cooling
ENVIRONMENT	Degree of protection	NEMA 3R
	Permissible Ambient Temperature	-35°C to +60°C / >50°C Active Power derating
	Relative Humidity	4% to 100% non condensing
	Max. Altitude (above sea level) ^[5]	2000m
CONTROL INTERFACE	Noise level ^[6]	< 79 dBA
	Communication protocol	Modbus TCP
	Plant Controller Communication	Optional
	Keyed ON/OFF switch	Standard
PROTECTIONS	Ground Fault Protection	GFDI and Isolation monitoring device
	General AC Protection	MV Switchgear (configurable)
	General DC Protection	Fuses
	Overvoltage Protection	AC, DC Inverter and auxiliary supply type 2
CERTIFICATIONS	Safety	UL 1741, CSA 22.2 No.107.1-16
	Compliance	NEC 2017
	Utility interconnect	IEEE 1547.1-2005 / UL 1741 SA-Feb. 2018

[1] Values at 1.00•Vac nom and cos Φ= 1. Consult Power Electronics for derating curves.

[2] Consult Power Electronics for other configurations.

[3] Consult P-Q charts available: $Q(kVar) = \sqrt{(S(kVA))^2 - P(kW)^2}$.

[4] Consult Power Electronics for Freemaq DC/DC connection configurations.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Readings taken 1 meter from the back of the unit.

TECHNICAL CHARACTERISTICS

HEM

REFERENCE	FS3430M
OUTPUT	AC Output Power (kVA/kW) @50°C ^[1]
	3430
	AC Output Power (kVA/kW) @40°C ^[1]
	3550
	Operating Grid Voltage (VAC)
	34.5kV ±10%
INPUT	Operating Grid Frequency (Hz)
	60Hz
	Current Harmonic Distortion (THDi)
	< 3% per IEEE519
	Power Factor (cosine phi) ^[3]
	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night
EFFICIENCY & AUXILIARY SUPPLY	MPPt @full power (VDC)
	913V-1310V
	Maximum DC voltage
	1500V
	Number of PV inputs ^[2]
	Up to 36
CABINET	Number of Freemaq DC/DC inputs ^[4]
	Up to 6
	Max. DC continuous current (A) ^[4]
	3970
	Max. DC short circuit current (A) ^[4]
	6000
ENVIRONMENT	Efficiency (Max) (η)
	97.76% including MV transformer
	CEC (η)
	97.50% including MV transformer
	Max. Power Consumption (KVA)
	20
CONTROL INTERFACE	Dimensions [WxDxH] (ft)
	21.7 x 7 x 7
	Dimensions [WxDxH] (m)
	6.6 x 2.2 x 2.2
	Weight (lb)
	30865
PROTECTIONS	Weight (kg)
	14000
	Type of ventilation
	Forced air cooling
	Degree of protection
	NEMA 3R
CERTIFICATIONS	Permissible Ambient Temperature
	-35°C to +60°C / >50°C Active Power derating
	Relative Humidity
	4% to 100% non condensing
	Max. Altitude (above sea level) ^[5]
	2000m
PROTECTIONS	Noise level ^[6]
	< 79 dBA
	Communication protocol
	Modbus TCP
	Plant Controller Communication
	Optional
PROTECTIONS	Keyed ON/OFF switch
	Standard
	Ground Fault Protection
	GFDI and Isolation monitoring device
	General AC Protection
	MV Switchgear (configurable)
CERTIFICATIONS	General DC Protection
	Fuses
	Overvoltage Protection
	AC, DC Inverter and auxiliary supply type 2
	Safety
	UL 1741, CSA 22.2 No.107.1-16
CERTIFICATIONS	Compliance
	NEC 2017
	Utility interconnect
	IEEE 1547.1-2005 / UL 1741 SA-Feb. 2018

[1] Values at 1.00·Vac nom and cos Φ= 1. Consult Power Electronics for derating curves.

[2] Consult Power Electronics for other configurations.

[3] Consult P-Q charts available: $Q(kVar) = \sqrt{(S(kVA))^2 - P(kW)^2}$.

[4] Consult Power Electronics for Freemaq DC/DC connection configurations.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Readings taken 1 meter from the back of the unit.

TECHNICAL CHARACTERISTICS

HEM

REFERENCE	FS3350M
OUTPUT	AC Output Power (kVA/kW) @50°C ^[1]
	3350
	AC Output Power (kVA/kW) @40°C ^[1]
	3465
	Operating Grid Voltage (VAC)
	34.5kV ±10%
INPUT	Operating Grid Frequency (Hz)
	60Hz
	Current Harmonic Distortion (THDi)
	< 3% per IEEE519
	Power Factor (cosine phi) ^[3]
	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night
EFFICIENCY & AUXILIARY SUPPLY	MPPT @full power (VDC)
	891V-1310V
	Maximum DC voltage
	1500V
	Number of PV inputs ^[2]
	Up to 36
CABINET	Number of Freemaq DC/DC inputs ^[4]
	Up to 6
	Max. DC continuous current (A) ^[4]
	3970
	Max. DC short circuit current (A) ^[4]
	6000
ENVIRONMENT	Efficiency (Max) (η)
	97.75% including MV transformer
	CEC (η)
	97.48% including MV transformer
	Max. Power Consumption (KVA)
	20
CONTROL INTERFACE	Dimensions [WxDxH] (ft)
	21.7 x 7 x 7
	Dimensions [WxDxH] (m)
	6.6 x 2.2 x 2.2
	Weight (lb)
	30865
PROTECTIONS	Weight (kg)
	14000
	Type of ventilation
	Forced air cooling
	Degree of protection
	NEMA 3R
CERTIFICATIONS	Permissible Ambient Temperature
	-35°C to +60°C / >50°C Active Power derating
	Relative Humidity
	4% to 100% non condensing
	Max. Altitude (above sea level) ^[5]
	2000m
PROTECTIONS	Noise level ^[6]
	< 79 dBA
	Communication protocol
	Modbus TCP
	Plant Controller Communication
	Optional
PROTECTIONS	Keyed ON/OFF switch
	Standard
	Ground Fault Protection
	GFDI and Isolation monitoring device
	General AC Protection
	MV Switchgear (configurable)
PROTECTIONS	General DC Protection
	Fuses
	Overvoltage Protection
	AC, DC Inverter and auxiliary supply type 2
	Safety
	UL 1741, CSA 22.2 No.107.1-16
PROTECTIONS	Compliance
	NEC 2017
	Utility interconnect
	IEEE 1547.1-2005 / UL 1741 SA-Feb. 2018

[1] Values at 1.00•Vac nom and cos Φ= 1. Consult Power Electronics for derating curves.

[2] Consult Power Electronics for other configurations.

[3] Consult P-Q charts available: $Q(kVar)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

[4] Consult Power Electronics for Freemaq DC/DC connection configurations.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Readings taken 1 meter from the back of the unit.

TECHNICAL CHARACTERISTICS

HEM

REFERENCE	FS3270M	
OUTPUT	AC Output Power (kVA/kW) @50°C ^[1]	3270
	AC Output Power (kVA/kW) @40°C ^[1]	3380
	Operating Grid Voltage (VAC)	34.5kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (cosine phi) ^[3]	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night
INPUT	MPPt @full power (VDC)	870V-1310V
	Maximum DC voltage	1500V
	Number of PV inputs ^[2]	Up to 36
	Number of Freemaq DC/DC inputs ^[4]	Up to 6
	Max. DC continuous current (A) ^[4]	3970
	Max. DC short circuit current (A) ^[4]	6000
EFFICIENCY & AUXILIARY SUPPLY	Efficiency (Max) (η)	97.71% including MV transformer
	CEC (η)	97.47% including MV transformer
	Max. Power Consumption (KVA)	20
CABINET	Dimensions [WxDxH] (ft)	21.7 x 7 x 7
	Dimensions [WxDxH] (m)	6.6 x 2.2 x 2.2
	Weight (lb)	30865
	Weight (kg)	14000
	Type of ventilation	Forced air cooling
ENVIRONMENT	Degree of protection	NEMA 3R
	Permissible Ambient Temperature	-35°C to +60°C / >50°C Active Power derating
	Relative Humidity	4% to 100% non condensing
	Max. Altitude (above sea level) ^[5]	2000m
	Noise level ^[6]	< 79 dBA
CONTROL INTERFACE	Communication protocol	Modbus TCP
	Plant Controller Communication	Optional
	Keyed ON/OFF switch	Standard
PROTECTIONS	Ground Fault Protection	GFDI and Isolation monitoring device
	General AC Protection	MV Switchgear (configurable)
	General DC Protection	Fuses
	Overvoltage Protection	AC, DC Inverter and auxiliary supply type 2
CERTIFICATIONS	Safety	UL 1741, CSA 22.2 No.107.1-16
	Compliance	NEC 2017
	Utility interconnect	IEEE 1547.1-2005 / UL 1741 SA-Feb. 2018

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[2] Consult Power Electronics for other configurations.

[3] Consult P-Q charts available: $Q(kVar) = \sqrt{(S(kVA))^2 - P(kW)^2}$.

[4] Consult Power Electronics for Freemaq DC/DC connection configurations.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Readings taken 1 meter from the back of the unit.

TECHNICAL CHARACTERISTICS

HEM

REFERENCE	FS3190M
OUTPUT	AC Output Power (kVA/kW) @50°C ^[1]
	3190
	AC Output Power (kVA/kW) @40°C ^[1]
	3300
	Operating Grid Voltage (VAC)
	34.5kV ±10%
INPUT	Operating Grid Frequency (Hz)
	60Hz
	Current Harmonic Distortion (THDi)
	< 3% per IEEE519
	Power Factor (cosine phi) ^[3]
	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night
EFFICIENCY & AUXILIARY SUPPLY	MPPT @full power (VDC)
	849V-1310V
	Maximum DC voltage
	1500V
	Number of PV inputs ^[2]
	Up to 36
CABINET	Number of Freemaq DC/DC inputs ^[4]
	Up to 6
	Max. DC continuous current (A) ^[4]
	3970
	Max. DC short circuit current (A) ^[4]
	6000
ENVIRONMENT	Efficiency (Max) (η)
	97.68% including MV transformer
	CEC (η)
	97.47% including MV transformer
	Max. Power Consumption (KVA)
	20
CONTROL INTERFACE	Dimensions [WxDxH] (ft)
	21.7 x 7 x 7
	Dimensions [WxDxH] (m)
	6.6 x 2.2 x 2.2
	Weight (lb)
	30865
PROTECTIONS	Weight (kg)
	14000
	Type of ventilation
	Forced air cooling
	Degree of protection
	NEMA 3R
CERTIFICATIONS	Permissible Ambient Temperature
	-35°C to +60°C / >50°C Active Power derating
	Relative Humidity
	4% to 100% non condensing
	Max. Altitude (above sea level) ^[5]
	2000m
PROTECTIONS	Noise level ^[6]
	< 79 dBA
	Communication protocol
	Modbus TCP
	Plant Controller Communication
	Optional
PROTECTIONS	Keyed ON/OFF switch
	Standard
	Ground Fault Protection
	GFDI and Isolation monitoring device
	General AC Protection
	MV Switchgear (configurable)
PROTECTIONS	General DC Protection
	Fuses
	Overvoltage Protection
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PROTECTIONS	Compliance
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[2] Consult Power Electronics for other configurations.

[3] Consult P-Q charts available: $Q(kVar)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

[4] Consult Power Electronics for Freemaq DC/DC connection configurations.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Readings taken 1 meter from the back of the unit.

Hi-MO 5

LR5-72HBD 520~545M

- Based on M10-182mm wafer, best choice for ultra-large power plants
- Advanced module technology delivers superior module efficiency
 - M10 Gallium-doped Wafer • Smart Soldering • 9-busbar Half-cut Cell
- Globally validated bifacial energy yield
- High module quality ensures long-term reliability

12

12-year Warranty for
Materials and Processing

30

30-year Warranty for Extra
Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO 9001:2008: ISO Quality Management System

ISO 14001: 2004: ISO Environment Management System

TS62941: Guideline for module design qualification and type approval

OHSAS 18001: 2007 Occupational Health and Safety

LONGi



21.3%
MAX MODULE
EFFICIENCY

0~+5W
POWER
TOLERANCE

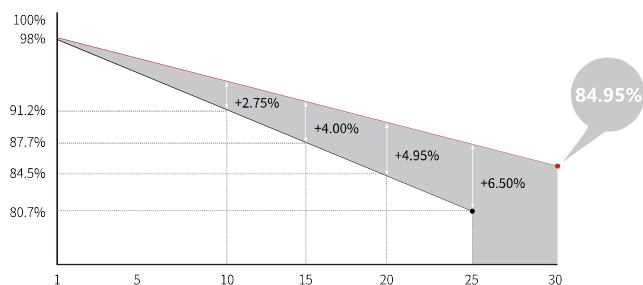
<2%
FIRST YEAR
POWER DEGRADATION

0.45%
YEAR 2-30
POWER DEGRADATION

HALF-CELL
Lower operating temperature

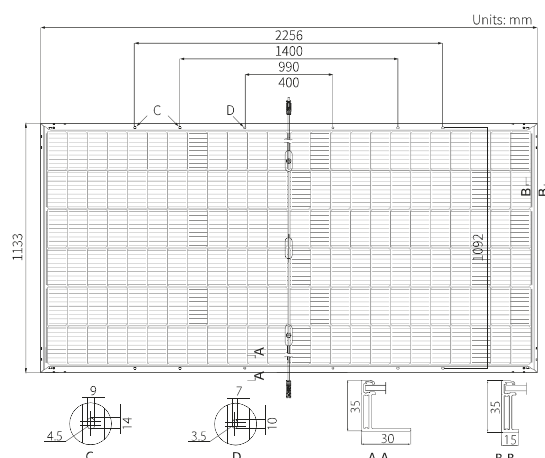
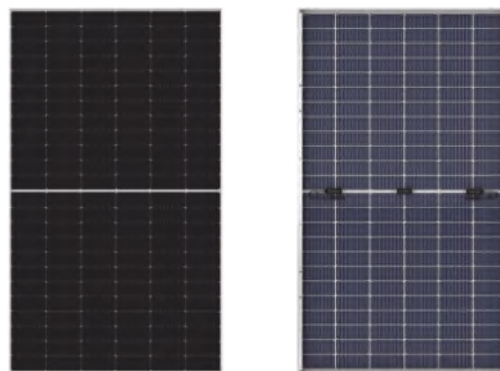
Additional Value

30-Year Power Warranty



Mechanical Parameters

Cell Orientation	144 (6×24)
Junction Box	IP68, three diodes
Output Cable	4mm ² , positive 400 / negative 200mm length can be customized
Glass	Dual glass, 2.0mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight	32.3kg
Dimension	2256×1133×35mm
Packaging	31pcs per pallet / 155pcs per 20' GP / 620pcs per 40' HC



Electrical Characteristics

STC: AM1.5 1000W/m² 25°C

Test uncertainty for Pmax: ±3%

	520	525	530	535	540	545
Power Class	520	525	530	535	540	545
Maximum Power (Pmax/W)	520	525	530	535	540	545
Open Circuit Voltage (Voc/V)	48.90	49.05	49.20	49.35	49.50	49.65
Short Circuit Current (Isc/A)	13.57	13.65	13.71	13.78	13.85	13.92
Voltage at Maximum Power (Vmp/V)	41.05	41.20	41.35	41.50	41.65	41.80
Current at Maximum Power (Imp/A)	12.67	12.75	12.82	12.90	12.97	13.04
Module Efficiency(%)	20.3	20.5	20.7	20.9	21.1	21.3

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ +5 W
Voc and Isc Tolerance	± 3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	UL type 29
Bifaciality	70±5%

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.284%/°C
Temperature Coefficient of Pmax	-0.350%/°C

STI-H1250™

Centralized Single-Axis Tracker

Technical data



Land
adaptability



Wind
load



Snow
load



Earthquake
load



Lubrication free



Wind tunnel
test



Dynamic test



10
years
Warranty



Patented

Design

- Irreversible electromechanical rotative drive, with high performance geared motor with only 250 W.
- Wide range of motion: $110^\circ (\pm 55^\circ)$.
- Minimum number of drives (<4 units) for every MWp installed.
- Minimum energy consumption (<5 kWh/day/MWp).
- Over 99.9% availability.
- Compatible with different foundation solutions: ramming, micropiles, concrete pads, predrilling, screw pile.
- Compatible with all PV modules (framed, glass-glass, thin-film, bifacial).

Operation and Maintenance

- Minimum O&M work due to the reduced amount of components, simplicity and robustness.
- Minimum maintenance.
- Lubrication free rotation elements.

Control System

- High operation reliability.
- Alarm management fully configurable by customer.
- Backtracking Algorithm customized for every STI-H1250™ tracker, avoiding shadows and increasing production.
- Easy integration into the plant's communications system and SCADA thanks to Modbus TCP / IP standard.
- Wireless communication system with Zigbee®.
- Remote monitoring and predictive maintenance (avoid stops and increases availability).
- Quick commissioning & backtracking tools.
- Tested under accelerated life cycle (IEC 62817).

Installation

- Preassembled joints and components.
- Minimum installation time, fast & simple.
- High tolerances to foundation positioning error, in the three axes (X, Y, Z) and to rotation in Y and Z axes.
- 100% bolted connections. No drilling, cutting, or welding on-site.
- DC wiring optimization: 2 strings per tracker row.



Technical Specifications

IEC
62817

ETL listed
conform to
UL 2703 and
3703



SYSTEM DESCRIPTION

Tracker type	Centralized horizontal single-axis tracker
Ground Coverage Ratio	Configurable. Standard: 33%
PV module area per tracker	Up to 1,500 m ² /16,145 sq ft

DIMENSIONS (for a 72 cel. PV and 1/GCR=3 Tracker)*	1000V	1500V
PV modules per row	40	60
Number of rows	18	14
Peak power (350 Wp PV module)	252 kWp	294 kWp
Number of piles per tracker	144	140
PV module height. Tracker in 0° horizontal position	1.5 m/4.92 ft	
PV module height. Tracker in 55° horizontal position	Max: 2.2 m/7.2 ft Min: 0.4 m/1.3 ft	

ROTATION DRIVE

Drive transmission	Rotative electromechanical actuator
Drive set power consumption	<0.5 kWh/day
Motor power	250 W/24 DC

MECHANICAL SPECIFICATIONS

Range of motion	110° (+/-55°)
Max. wind speed (in horizontal position)	Configurable. Standard: 150 kmh/93 mph
Structure Materials	HDG Steel S235, S275, S355, S350GD, ZM310 or equivalent
Compliance	Grounding bonding UL2703/Structural Design ASCE7-10 or EUROCODE
Site topography flexibility	5% N-S/5% E-W (higher values to be validated)

CONTROL SYSTEM

Tracking control system	NREL SOLPOS astronomical algorithm running at PLC (Accuracy ±0.001°)
Shadow management	Customized backtracking algorithm
Wind management	Stow position configurable by user
Communications protocol	Modbus RS485 or Modbus Wireless option (Zigbee®)

MAINTENANCE

Maintenance	Annual inspection
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WARRANTY

Structure	10 years
Drive gear & control system	5 years

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Commission of Ohio Docketing Information System on**

11/16/2021 11:32:59 AM

in

Case No(s). 21-0823-EL-BGN

Summary: Application Exhibit B - Manufacturer's Equipment Specifications
electronically filed by Teresa Orahod on behalf of Herrnstein, Kara