COMUNE DI MONTENERO DI BISACCIA	COMUNE DI MAFALDA
PROVINCIA DI CAMPOBASSO	REGIONE MOLISE

REALIZZAZIONE DI UN IMPIANTO AGROVOLTAICO CONNESSO ALLA R.T.N. DELLA POTENZA DI PICCO PARI A 51.081,94 kW E POTENZA MASSIMA IN IMMISSIONE PARI A 44.000,00 kW

Denominazione Impianto:

MONTENERO 1

Ubicazione:

Comune di Montenero di Bisaccia (CB) e Comune di Mafalda (CB)

ELABORATO

021100_IMP

Cod. Doc.: MTM21_021100_IMP_R

DATA SHEET

EG FREE ENERGY

Project - Commissioning – Consulting
Viale Regina Margherita 176
00198 Roma (RM)
ITALY
P.IVA 02010470439

Scala: --

PROGETTO

Data: **07/01/2021**

PRELIMINARE	DEFINITIVO	AS BUILT
☐	☒	☐

Richiedente:

NEW SOLAR 2 S.r.l.
Via Italo Svevo, 67
63822 Porto San Giorgio (FM)
ITALY
P.IVA 02426130445

Tecnici e Professionisti:

Ing. Luca Ferracuti Pompa:
Iscritto al n.A344 dell'Albo degli Ingegneri della Provincia di Fermo

Revisione	*Data*	*Descrizione*	*Redatto*	*Approvato*	*Autorizzato*
01	*07/01/2021*	*Progetto Definitivo*	*F.P.L.*	*F.P.L.*	*F.P.L.*
02	*15/03/2022*	*Revisione*	*F.P.L.*	*F.P.L.*	*F.P.L.*
03					
04					

Il Tecnico:
Dott. Ing. Luca Ferracuti Pompa

ORDINE degli INGEGNERI - PROVINCIA di FERMO
Luca FERRACUTI POMPA
Ingegnere
a - civile ambientale
b - industriale
c - dell'informazione
A344

.....

Il Richiedente:
NEW SOLAR 2 S.r.l.

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1. OGGETTO

Il presente documento è redatto quale allegato alla documentazione relativa all'istanza per il procedimento di Valutazione di Impatto Ambientale ministeriale, ai sensi dell'Art. 23 del D. Lgs. 152/06, del progetto per la realizzazione in conformità alle vigenti disposizioni di legge di un impianto solare fotovoltaico per la produzione di energia elettrica, di potenza di picco pari a **51.081,94 kW**, da realizzare nei territori comunali di **Montenero di Bisaccia (CB)** e di **Mafalda (CB)**.

L'impianto sarà del tipo grid connected e l'energia elettrica prodotta sarà riversata completamente nella R.T.N.

Il produttore e soggetto responsabile è la società **NEW SOLAR 2 S.r.l.**, la quale dispone dell'autorizzazione all'utilizzo dell'area su cui sorgerà l'impianto in oggetto. La denominazione dell'impianto è "**MONTENERO 1**".

Allegati:

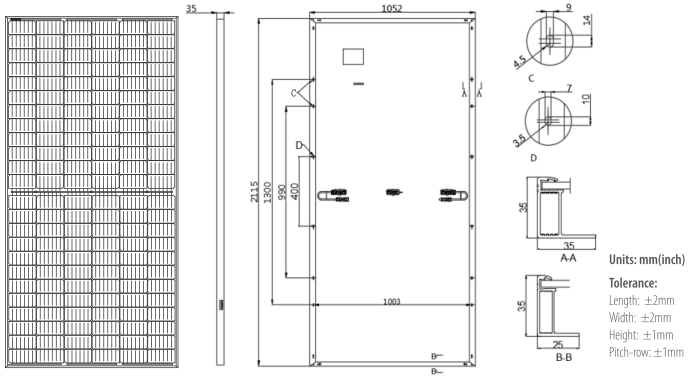
Componenti Principali – DATA SHEET

Roma, 15/03/2022

In Fede
Il Tecnico
(Dott. Ing. Luca Ferracuti Pompa)

LR4-72HPH 435~455M

Design （mm）



Mechanical Parameters

Cell Orientation: 144 （6×24）

Junction Box: IP68, three diodes

Output Cable: 4mm², 300mm in length, length can be customized

Glass: Single glass
3.2mm coated tempered glass

Frame: Anodized aluminum alloy frame

Weight: 24 kg

Dimension: 2115×1052×35mm

Packaging: 30pcs per pallet
150pcs per 20'GP
660pcs per 40'HC

Operating Parameters

Operational Temperature: -40℃~+85℃

Power Output Tolerance: 0~+5 W

Voc and Isc Tolerance: ±3%

Maximum System Voltage: DC1500V (IEC/UL)

Maximum Series Fuse Rating: 20A

Nominal Operating Cell Temperature: 45±2℃

Safety Class: Class II

Fire Rating: UL type 1 or type 2

Electrical Characteristics

Test uncertainty for Pmax: ±3%

Model Number	LR4-72HPH-435M		LR4-72HPH-440M		LR4-72HPH-445M		LR4-72HPH-450M		LR4-72HPH-455M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	435	322.2	440	326.0	445	329.7	450	333.4	455	337.1
Open Circuit Voltage (Voc/V)	49.4	46.1	49.6	46.3	49.8	46.5	50.0	46.7	50.2	46.9
Short Circuit Current (Isc/A)	11.26	9.08	11.33	9.13	11.4	9.19	11.46	9.24	11.52	9.29
Voltage at Maximum Power (Vmp/V)	40.8	37.7	41.0	37.9	41.2	38.1	41.4	38.2	41.6	38.4
Current at Maximum Power (Imp/A)	10.67	8.56	10.74	8.61	10.81	8.67	10.87	8.72	10.94	8.77
Module Efficiency(%)	19.6		19.8		20.0		20.2		20.4	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25℃, Spectra at AM1.5

NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20℃, Spectra at AM1.5, Wind at 1m/S

Temperature Ratings（STC）

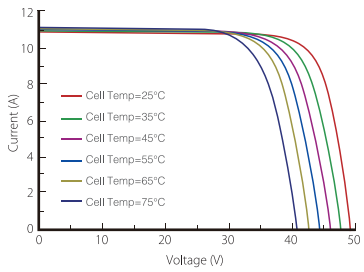
Temperature Coefficient of Isc	+0.057%/℃
Temperature Coefficient of Voc	-0.286%/℃
Temperature Coefficient of Pmax	-0.370%/℃

Mechanical Loading

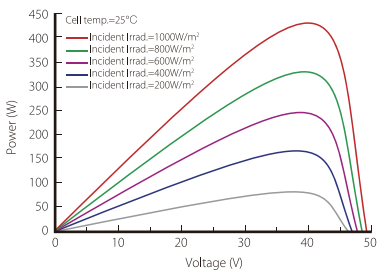
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

I-V Curve

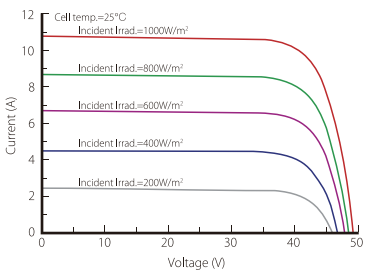
Current-Voltage Curve (LR4-72HPH-435M)



Power-Voltage Curve (LR4-72HPH-435M)



Current-Voltage Curve (LR4-72HPH-435M)



LONGi

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20190916Draft

SUN2000-185KTL-H1
Smart String Inverter

9
MPP Trackers

>99.0%
Max. Efficiency

String-level
Management

Smart I-V Curve
Diagnosis Supported

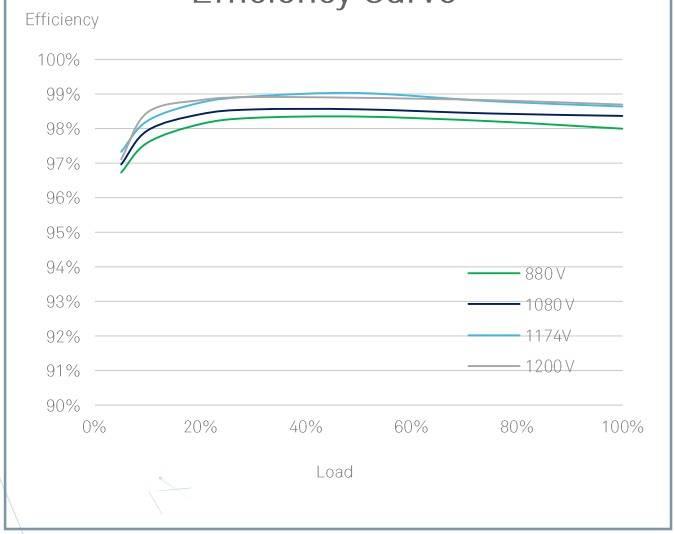
MBUS
Supported

Fuse Free
Design

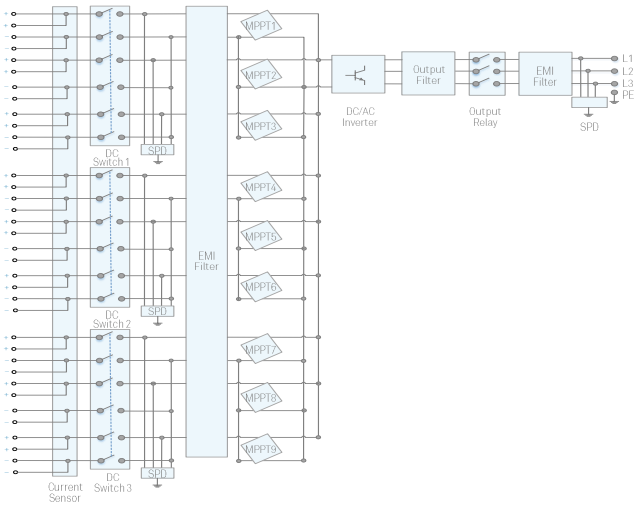
Surge Arresters for
DC & AC

IP66
Protection

Efficiency Curve



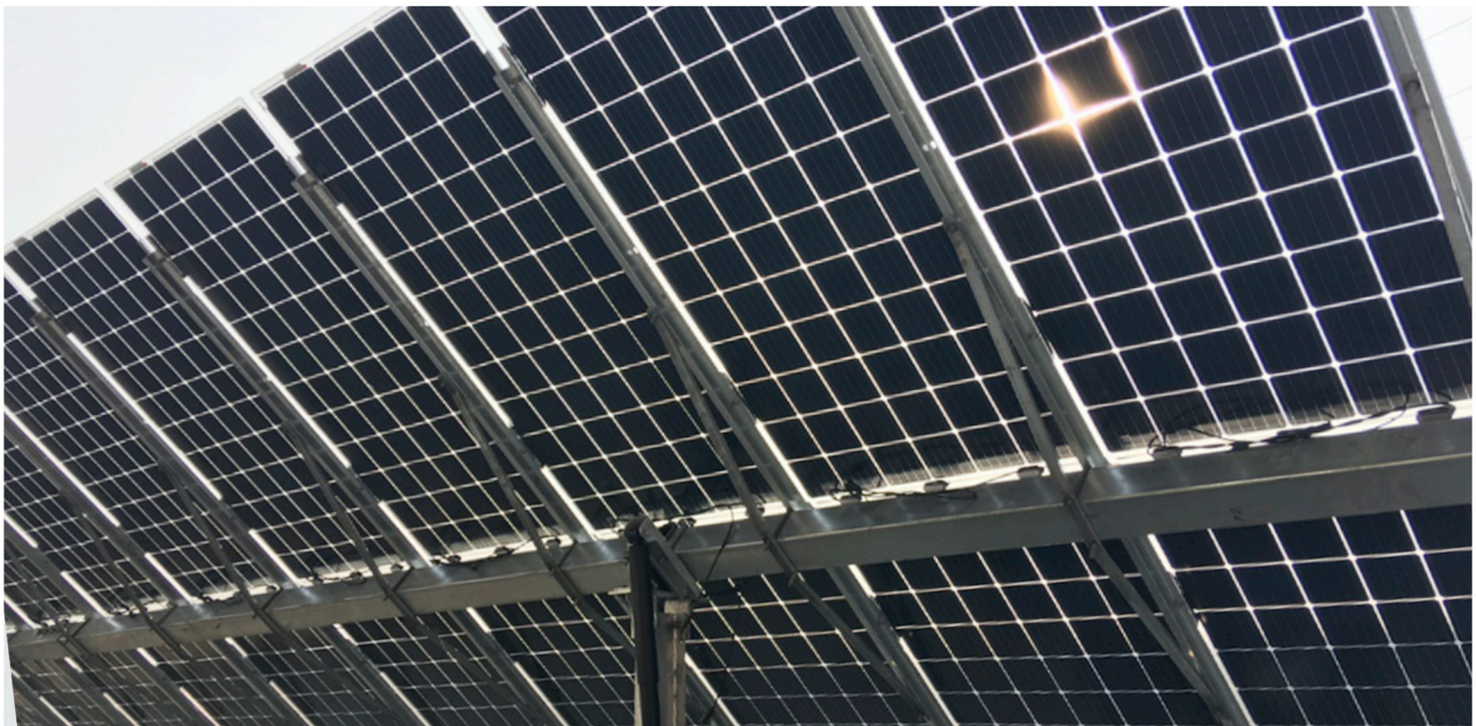
Circuit Diagram



Technical Specifications

Efficiency	
Max. Efficiency	99.03%
European Efficiency	98.69%
Input	
Max. Input Voltage	1,500 V
Max. Current per MPPT	26 A
Max. Short Circuit Current per MPPT	40 A
Start Voltage	550 V
MPPT Operating Voltage Range	500 V ~ 1,500 V
Nominal Input Voltage	1,080 V
Number of Inputs	18
Number of MPP Trackers	9
Output	
Nominal AC Active Power	175,000 W @40°C, 168,000 W @45°C, 150,000 W @50°C
Max. AC Apparent Power	185,000 VA
Max. AC Active Power (cosϕ=1)	185,000 W
Nominal Output Voltage	800 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	126.3 A @40°C, 121.3 A @45°C, 108.3 A @50°C
Max. Output Current	134.9 A
Adjustable Power Factor Range	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%
Protection	
Input-side Disconnection Device	Yes
Anti-islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Reverse-polarity Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
DC Insulation Resistance Detection	Yes
Residual Current Monitoring Unit	Yes
Communication	
Display	LED Indicators, Bluetooth/WLAN + APP
USB	Yes
MBUS	Yes
RS485	Yes
General	
Dimensions (W x H x D)	1,035 x 700 x 365 mm (40.7 x 27.6 x 14.4 inch)
Weight (with mounting plate)	84 kg (185.2 lb.)
Operating Temperature Range	-25°C ~ 60°C (-13°F ~ 140°F)
Cooling Method	Smart Air Cooling
Max. Operating Altitude without Derating	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Staubli MC4 EVO2
AC Connector	Waterproof Connector + OT/DT Terminal
Protection Degree	IP66
Topology	Transformerless
Standard Compliance (more available upon request)	
Certificate	EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 60068, IEC 61683
Grid Code	IEC 61727, P.O. 12.3, RD 1699, RD 661, RD 413, RD 1565, RD 1663, UNE 206007-1, UNE 206006

Arctech Solar



SkySmart

Single Row Double Performance

SkySmart Product Features

1

The industrial N-S slope record **20%**

2

Only **200** foundations/MW

3

Apply to

- ✔ bifacial module
- ✔ regular module

4

Self-powered system with Li-ion battery as a backup

5

1st tracker supplier to apply LoRa-wireless communication technology

6

Double pitch risk-free drive-through module cleaning

Arctech Solar

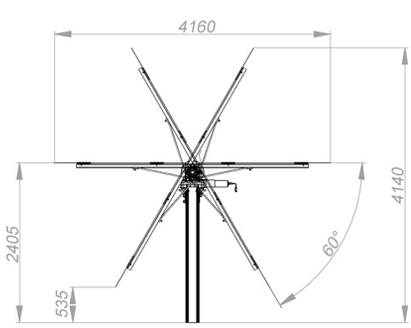
SKYSMART TRACKER SPECIFICATIONS

Tracking Type	Independent Horizontal Single Axis Tracker
Tracking Range	Up to 120°(±60°)
Driving System	One Slewing Gear, 24VDC Motor
Modules per Tracker	Up to 90 modules per tracker
System Voltage	1,000 Volt or 1,500 Volt
Ground Coverage Ratio	Fully configurable by customer, typical range 33%-55%
Foundation Options	Ramming/Pre-drilling/Concrete Piles/Screw Pile
Terrain Adaption	Up to 20% N-S Slope
Structure Material	Hot Dipped Galvanized/Pre-Galvanized Steel
Power Supply	Self-powered PV series
Daily Energy Consumption	Typical 0.08kWh
Standard Wind Design	105mph(47m/s) per ASCE7-10, higher wind load available
Wind Protection	Stow when wind speed > 18m/s
Module Supported	Most commercially available
Operation Temperature	-30℃ to 60℃

ELECTRONIC CONTROLLER SPECIFICATIONS

Control System	1 Controller per 3 Trackers
Control Algorithm	Astronomical Algorithms + Tilt Sensor Close Loop
Tracking Accuracy	≤ ±2°
Backtracking	Yes
Communication	RS 485 cable/ LoRa wireless
Night Position	Yes

SkySmart Side View



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