

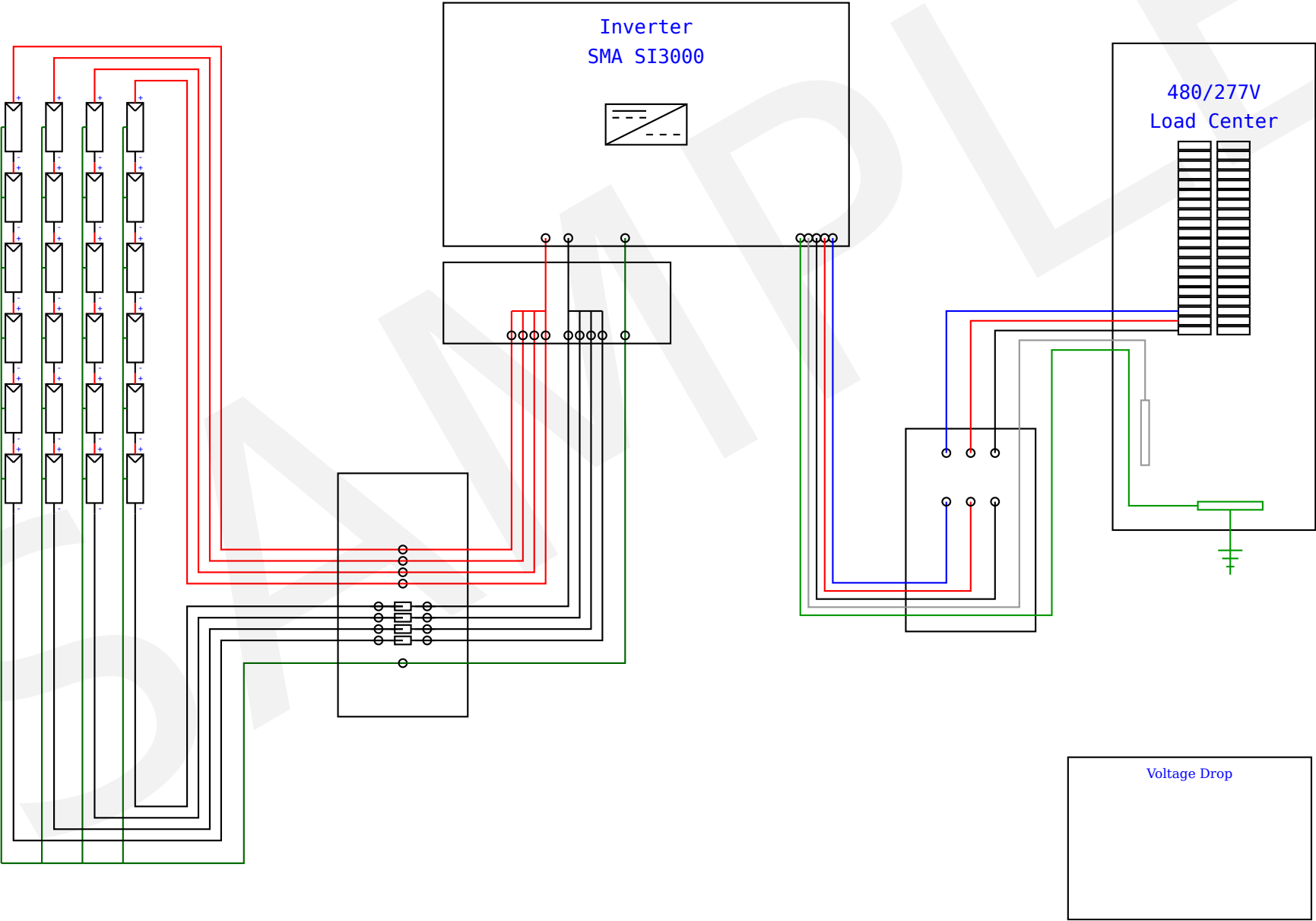
FSEC Plans Machine
DEMO

Contents

PV-01	PV system wiring diagram
PV-02	PV system specifications

General Notes

		Wire		Conduit	
		AWG	Type	Size	Type
1	Ground				
2	Neutral				
3	L1				
4	L2				
5	L3				



SMA SI3000 Inverter System
Suniva 255-60-4-1B0 (4 strings of 6 modules)

PV
01

Roof

Width	25.00
Length	15.00
Slope	6:12
Type	Gable
Height	6.71

Module

Make	Suniva
Model	255-60-4-1B0
Orientation	Portrait
Width	30.00
Length	50.00
Pmp	255.00
Isc	8.96
Voc	38.10
Imp	8.45
Vmp	30.20

Array

Modules Per String	6.00
Num Strings	4.00
Isc	35.84
Voc	228.60
Imp	33.80
Vmp	181.20
Pmp	6124.56
Number Of Modules	24.00

DC

Home Run Length	50.00
Wire Size	-Undefined-

Inverter

Make	SMA
Model	SI3000

AC

Loadcenter Types	480/277V
Type	480V Wye
Distance To Loadcenter	50.00
Conductors	ground,neutral,L1,L2,L3
Num Conductors	5.00
Wire Size	-Undefined-

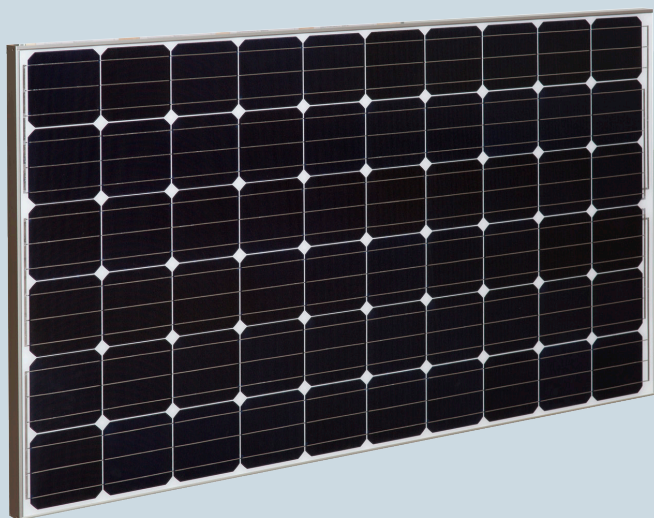
Calculation Sheet

SMA SI3000 Inverter System
Suniva 255-60-4-1B0 (4 strings of 6 modules)



High-quality and high-efficiency
PV yields sensible solar

SUNIVA OPTIMUS® SERIES MONOCRYSTALLINE SOLAR MODULES



OPTXXX-60-4-100 (60 CELL MODULE)

The Optimus® modules consist of Suniva's latest technology: ARTisun® Select. These superior monocrystalline cells are designed and manufactured in the U.S.A. using our proprietary low-cost processing techniques. Engineered with our pioneering ion implantation technology, high power-density Optimus modules provide excellent value, performance and reliability.

Certifications:



UL 1703
IEC 61215
IEC 61730- 1/2



CEC



AS5033
Compliant



CEC AUSTRALIA

Engineering Excellence

- Built exclusively with Suniva's highest-efficiency ARTisun Select cells, providing one of the highest power outputs per square meter at an affordable manufacturing cost
- Suniva's state-of-the art manufacturing facility features the most advanced equipment and technology
- Suniva is a U.S. -based company spun out from the Georgia Tech University Center of Excellence in Photovoltaics (one of only two such research centers in the U.S.)

Features

- Contains the latest ARTisun Select cell technology - over 19%
- Positive only tolerance ensures predictable output
- Marine grade aluminum frame with hard anodized coating
- Industry leading linear warranty (10 year warranty on workmanship and materials; 25 year linear performance warranty delivering 80% power at STC)
- Buy America compliant upon request
- Qualifies for U.S. EXIM financing
- System and design services available

Quality & Reliability

Suniva Optimus modules are manufactured and warranted to our specifications assuring consistent high performance and quality worldwide.

- Rigorous quality management
- Performance longevity with advanced polymer backsheet
- Produced in an ISO 9001: 2008 certified facility
- Passed the most stringent salt spray test (Severity 6) based on IEC 61701
- Passed enhanced stress tests¹ based on IEC 61215 conducted at Fraunhofer ISE²
- Certified PID free
- Ask about our validated PAN files

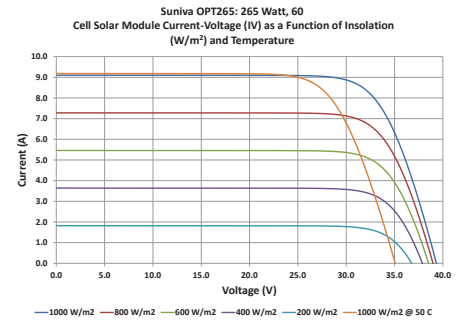
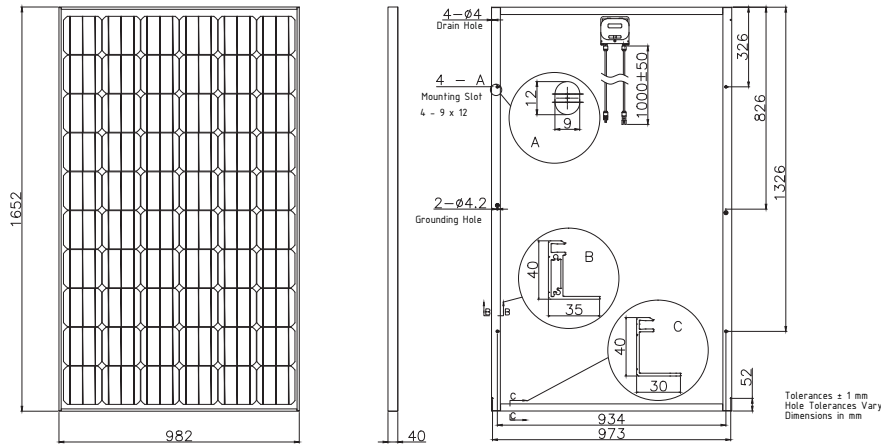
OUR PRODUCTS:

Monocrystalline Modules
OPTIMUS SERIES 60 cell
OPTIMUS SERIES 72 cell

Multicrystalline Modules
MV SERIES 60 cell
MV SERIES 72 cell

Monocrystalline Cells
19%+ efficiency

Balance of Systems Solutions (BOSS)
Racking, Inverters, Batteries, Energy
Storage Appliances and EV Chargers



ELECTRICAL DATA (NOMINAL)

The rated power may only vary by -0/+4.99Wp and all other electrical parameters by $\pm 5\%$

Power Classification	Pmax (W)	255	260	265	270
Module efficiency	%	15.71	16.02	16.33	16.60
Model Number	OPT	255-60-4-100	260-60-4-100	265-60-4-100	270-60-4-100
Voltage at Max. Power Point	Vmp (V)	30.00	30.20	30.70	31.20
Current at Max. Power Point	Imp (A)	8.50	8.60	8.64	8.68
Open Circuit Voltage	Voc (V)	37.90	38.10	38.30	38.50
Short Circuit Current	Isc (A)	9.05	9.08	9.12	9.15

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m² with AM 1.5 spectra at 25°C.

DIMENSIONS AND WEIGHT

Cells / Module	60 (6x10)
Module Dimensions	1652 x 982 mm (65.04 x 38.66 in.)
Module Thickness (Depth)	40 mm (1.57 in.)
Approximate Weight	17.9 +/- 0.5kg. (39.5 +/- 1.1 lb.)

CHARACTERISTIC DATA

Type of Solar Cell	High-efficiency ARTisun® Select monocrystalline cells of 156 x 156 mm (6 in.)
Frame	Silver anodized aluminum alloy; black frame available by custom order
Glass	Tempered (low-iron), anti-reflective coating
Junction Box	NEMA IP65 rated; 3 internal bypass diodes
Cable & Connectors	12 AWG (4.0 mm²) cable with Tyco or MC4 compatible connectors ³ ; cable length approximately 1000 mm
Hardware (Available Upon Request)	Grounding screws: (2) #10-32 12.7 mm (#10-32 x 0.5 in.) Stainless steel flat washers: (4) 5 x 10 x 1 mm (0.2 in. ID x 0.394 in. OD x 0.030 in.)

TEMPERATURE COEFFICIENTS

Voltage	β , Voc (%/°C)	-0.335
Current	α , Isc (%/°C)	+0.047
Power	γ , Pmax (%/°C)	-0.420
NOCT Avg	(+/- 2 °C)	46.0

LIMITS

Max. System Voltage	1000 VDC for IEC (600 VDC for UL)
Operating Module Temperature	-40°C to +85°C
Storm Resistance/Static Load	Tested to IEC 61215 for loads up to 5400 Pa; hail and wind resistant

Suniva® reserves the right to change the data at any time. View manual at suniva.com. *CEC pending for 270W

¹UV 90 kWh, TC 400, DH 2000. ²Tests were conducted on module type OPT 60. ³See sales rep.

[SAMD_0010]

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(Rev. 13)