	FERGUSON RESIDENCE PHOTOVOLTAIC SYSTEM 64 SYLVAN LANE CAMERON, NC 28326 SYSTEM SIZE: 10.73 kW-DC 10.60 kW-AC MODULE: (29) SIL-370-NX-TITAN INVERTER: (1) SOLAREDGE SE7600H-US & (1) SOLAREDGESE3000H-US BATTERY: (1) TESLA POWERWALL 2.0 13.5 kW-DC	GOVERNING CODES ALL MATERIALS, EQUIPMENT, INSTALLATION AND WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES: • 2020 NATIONAL ELECTRIC CODE • 2015 INTERNATIONAL BUILDING CODE • 2015 INTERNATIONAL RESIDENTIAL CODE • 2015 INTERNATIONAL PLUMBING CODE • 2015 INTERNATIONAL FIRE CODE • 2015 INTERNATIONAL FIRE CODE • 2015 INTERNATIONAL MECHANICAL CODE • IEEE STANDARD 929 • OSHA 29 CFR 1910.269 • WHERE APPLICABLE, RULES OF THE PUBLIC UTILITIES COMMISSION REGARDING SAFETY AND RELIABILITY • THE AUTHORITY HAVING JURISDICTION • MANUFACTURERS' LISTINGS AND INSTALLATION INSTRUCTIONS • ANY OTHER LOCAL AMENDMENTS
e de sylvan en cameron, be de sylvan en camero	 general UTILITY SHALL BE NOTIFIED BEFORE ACTIVATION OF PV SYSTEM. AN ACCESS POINT SHALL BE PROVIDED THAT DOES NOT PCOMULE ADER TO REAL PLACE THE GROUND LADDER OVER OPENINGS SUCH AS SUCE ABREVALL ALL ELECTRICAL EQUIPMENT SHALL BE LABELED, LISTED, OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY ACCREDITED BY THE UNITED STATES OCCUPATIONAL SAFETY HEALTH ADMINISTRATION. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO INITIATING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO INITIATING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO INITIATING CONSTRUCTION. CONTRACTOR SHALL REVIEW ALL MANUFACTURER INSTALLATION DOCUMENTS PRIOR TO INITIATING CONSTRUCTION. ALL EQUIPMENT AND ASSOCIATED CONNECTIONS OF INVERTERS, MODULES, PV SOURCE CIRCUITS, BATTERY CONNECTIONS, STC. AND ALL ASSOCIATED CONNECTIONS, ETC. AND ALL ASSOCIATED CONNECTIONS OF INVERTERS, MODULES, PV SOURCE CIRCUITS, BATTERY CONNECTIONS, ETC. AND ALL ASSOCIATED CONSTRUCTION. ALL EQUIPMENT AND ASSOCIATED CONNECTIONS OF INVERTERS, MODULES, PV SOURCE CIRCUITS, BATTERY CONNECTIONS, ETC. AND ALL ASSOCIATED CONSTRUCTION. THE CONTRACTOR ROWNER MUST PROVIDE ROOF ACCESS (LADDER TO ROOF) FOR THE ALL REQUIRED INSPECTIONS. LADDERS MUST BE OSHA APPROVED, INSPECTIONS. LADDERS MUST BE OSHA APPROVED, INSPECTIONS. LADDERS MUST BE OSHA APPROVED, SOURCE ADARDA APPROVED, SOURCE ALARMS AND CARBON MONOXIDE ALARMS ARE MODULE SCURED BY REMOVABLE FASTENERS. 	AND EQUIPMENT SHALL BE LY CONTINUOUS. (CEC 250.90, ON BOXES, RACEWAYS, AND CIFIED, CONTRACTOR SHALL APPLICABLE CODES. -INTERACTIVE INVERTER OR ALL NOT DISCONNECT THE BETWEEN THE GROUNDING AND THE PV SOURCE AND/OR ED CONDUCTOR. EMS, THE PHOTOVOLTAIC RCUITS SHALL BE PROVIDED ' PROTECTION DEVICE OR A GROUND FAULT, INDICATES RRED, AND AUTOMATICALLY DUCTORS OR CAUSES THE TICALLY CEASE SUPPLYING ITS. (CEC 690.35(C)) STEMS, THE INVERTER IS FAULT PROTECTION AND A GFI FAULT PROTECTION AND A GFI FAULT PROTECTION AND A GFI FAULT PROTECTION SHEET. L SHALL BE BONDED TO BARE
da d	 REQUIRED TO BE RETROFITTED ONTO THE EXISTING DWELLING AS PER THE 2019 CRC. THESE SMOKE ALARMS ARE REQUIRED TO BE IN ALL BEDROOMS, OUTSIDE EACH BEDROOM, AND AT LEAST ONE ON EACH FLOOR OF THE HOUSE. CARBON MONOXIDE ALARMS ARE REQUIRED TO BE RETROFITTED OUTSIDE EACH BEDROOM AND AT LEAST ONE ON EACH FLOOR OF THE HOUSE. THESE ALARMS MAY BE SOLELY BATTERY OPERATED IF THE PHOTOVOLTAIC PROJECT DOES NOT INVOLVE THE REMOVAL OF INTERIOR WALL AND CEILING FINISHES INSIDE THE HOME; OTHERWISE, THE ALARMS MUST BE HARD WIRED AND INTERCONNECTED. (CRC R314, R315) 8. SMOKE AND CARBON MONOXIDE ALARMS ARE REQUIRED PER CRC SECTIONS R314 AND 315 TO BE VERIFIED AND INSPECTED BY THE INSPECTOR IN THE FIELD. 9. CONTRACTOR SHALL VERIFY THAT THE ROOF STRUCTURE WILL WITHSTAND THE ADDITIONAL LOADS. PLOTOVALTAIC STATE ON THE CONDUCTORS ARE INSTALLED UNDERGROUND, SECTION 300.5 OF THE CEC MUST BE FOLLOWED TO ENSURE PROPER PROTECTION. 	LUG, ILSCO GBL-4DBT LAY-IN ED LUG. RTER WILL BE LISTED AS UL 'STEM TO BE UL2703 RATED. NG ELECTRODE CONDUCTOR CEPT FOR SPLICES OR JOINTS D EQUIPMENT. (CEC 250.64(C)) ≷ IS THE METHOD OF UTILITY BREAKERS SHALL NOT READ 1% RULE OF CEC 705.12(D)(2). TO BE POSITIONED AT THE S FROM THE MAIN BREAKER. ICE AROUND THE EXISTING AS WELL AS THE NEW WILL BE MAINTAINED IN 10.26(A) FERGUSON, CLYDE 64 SYLVAN LANE CAMERON, NC 28326 (919)721-6599 LICENSE # U.33714 D CHARCONE TITAN SOLAR POWER 10815 JOHN PRICE RD. COVER PAGE REV #1: REV #1: REV #2: REV #3: PV-1







SYSTEM LEGEND

PHOTOVOLTAIC SYSTEM: DC SYSTEM SIZE: 10.73 kW

AC SYSTEM SIZE: 10.60 kW

UM MAIN SERVICE METER AND SERVICE POINT

MP MAIN SERVICE PANEL

AC FUSED AC DISCONNECT

(1) SOLAREDGE SE7600H-US INVERTER WITH INTEGRATED DC DISCONNECT

(29) SIL-370-NX-TITAN WITH SOLAREDGE P370 OPTIMIZERS MOUNTED UNDER EACH MODULE.

CONDUIT TO BE RUN IN ATTIC IF POSSIBLE, OTHERWISE CONDUIT BLOCKS MIN. 1"/MAX 6" ABOVE ROOF SURFACE, CLOSE TO RIDGE LINES, AND UNDER EAVES; TO BE PAINTED TO MATCH EXTERIOR/EXISTING BACKGROUND COLOR OF ITS LOCATION; TO BE LABELED AT MAX 10' INTERVALS. CONDUIT RUNS ARE APPROXIMATE AND ARE TO BE DETERMINED IN THE BY THE INSTALLERS

СР	COMBINER PANEL
TG	TESLA GATEWAY 2
В	TESLA GATEWAY 2.0
SB	BACKUP SUB PANEL 125A

SCALE: 3/32" = 1'-0"

FERGUSON, CLYDE 64 SYLVAN LANE CAMERON, NC 28326

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LICENSE # U.33714

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SITE PLAN







SYSTEM LEGEND

PHOTOVOLTAIC SYSTEM: DC SYSTEM SIZE: 10.73 kW AC SYSTEM SIZE: 10.60 kW

ROOF ATTACHMENT POINT

ROOF FRAMING (RAFTER/TRUSS)

RACKING

NOTE:- 2" LAG EMBEDMENT

SCALE: 1/16" = 1'-0"

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ROOF PLAN

PV-3.1



				POWER OPTIMIZER ELECTRICAL SP	ECIFICATIONS				
		r		OPTIMIZER TYPE	SOLAREDGE P370				
		INVERTER ELECTRICAL S	PECIFICATIONS	RATED INPUT DC POWER	370W			INVERTER ELECTRICAL S	PECIFICATIONS
PV MODULE ELECTRICAL	SPECIFICATIONS	INVERTER TYPE	SOLAREDGE SE7600H-US		c0)/	OVER-CURRENT PROTECTION DEVICE (OC	PD) CALCULATIONS	INVERTER TYPE	SOLAREDGE SE3000H-US
MODULE TYPE	SILFAB SIL-370-NX-TITAN	MAX INPUT DC VOLTAGE	480V	MAXIMUM INPUT VOLTAGE (V _{OC})	607		SOLAREDGE	MAX INPUT DC VOLTAGE	480V
	07014/			MAXIMUM SHORT CIRCUIT CURRENT (I _{SC})	11A	INVERTER TYPE	7600H-US &		
POWER MAX (P _{MAX})	370W	MAX INPUT CURRENT	20A	MAXIMUM DC INPUT CURRENT	13.75A		3000H-US	MAX INPUT CURRENT	20A
OPEN CIRCUIT VOLTAGE (V_{OC})	44.8V	NOMINAL DC INPUT VOLTAGE	400V		15A	# OF INVERTERS	1&1	NOMINAL DC INPUT VOLTAGE	380V
SHORT CIRCUIT CURRENT (ISC)	10.6A	MAXIMUM OUTPUT POWER	7600W					MAXIMUM OUTPUT POWER	3000W
	27.01/		2401/	MAXIMUM OUTPUT VOLTAGE	60V	MAX CONTINUOUS OUTPUT CURRENT	32A & 12.5A		2401/
MAX POWER-POINT VOLTAGE (VMP)	57.20	NOMINAL AC OUTPUT VOLTAGE	2400	MINIMUM STRING LENGTH	8	(# OF INVERTERS) X (MAX CONT, OUTPUT C	URRENT) X 125% <=	NOMINAL AC OUTPUT VOLTAGE	240V
MAX POWER-POINT CURRENT $(\mathrm{I}_{\mathrm{MP}})$	10.0A	MAXIMUM CONT. OUTPUT CURRENT	32A		5700W (6000W WITH	OCPD RATING	,	MAXIMUM CONT. OUTPUT CURRENT	12.5A
SERIES FUSE RATING	20A	CEC EFFICIENCY	99%	MAXIMUM POWER PER STRING	SE7600- SE11400)	(1 x 44.5A x 1.25)= 55.6A <= 60	A, OK	CEC EFFICIENCY	99%

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWICH TO THE "OFF" POSITION TO SHUTDOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY

LABEL 1 AT RAPID SHUTDOWN SYSTEM [NEC 690.56(C)(1)(A)].

RAPID SHUTDOWN SWITCH FOR **SOLAR PV SYSTEM**

LABEL 6 AT RAPID SHUTDOWN DISCONNECT SWITCH [NEC 690.56(C)(3)].

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

LABEL 11

AT RAPID SHUTDOWN SWITCH [NEC 690.56(C)]. LETTERS AT LEAST 3/8 INCH: WHITE ON RED BACKGROUND; REFLECTIVE [IFC 605.11.1.1]

!WARNING! ELECTRIC SHOCK HAZARD ELECTRIC SHOCK HAZARD O TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION. TERMINALS ON BOTH LINE AND LOAD SIDES DC VOLTAGE IS ALWAYS PRESENT WHEN MAY BE ENERGIZED IN THE OPEN POSITION. SOLAR MODULES ARE EXPLOSED TO SUNLIGHT LABEL 2 LABEL 3 AT EACH DISCONNECTING MEANS FOR AT EACH DISCONNECTING MEANS FOR PHOTOVOLTAIC EQUIPMENT PHOTOVOLTAIC EQUIPMENT [NEC 690.15] [NEC 690.13 AND 690.15] **! WARNING !** ! CAUTION ! C DUAL POWER SOURCES. PHOTOVOLTAIC SYSTEM SECOND SOURCE IS PV SYSTEM **CIRCUIT IS BACKFED** LABEL 7 LABEL 8 AT POINT OF INTERCONNECTION; LABEL, SUCH AS LABEL 7 OR LABEL 8 MUST IDENTIFY PHOTOVOLTAIC SYSTEM [NEC 705.12(B)(4)]

!WARNING!

WARNING: PHOTOVOLTAIC **POWER SOURCE**

LABEL 12

AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS: SPACED AT MAXIMUM 10 FT SECTION OR WHERE SEPARATED BY ENCLOSURES. WALLS. PARTITIONS. CEILINGS. OR FLOORS. [NEC 690.31(G)] LETTERS AT LEAST 3/8 INCH; WHITE ON RED BACKGROUND; REFLECTIVE

[IFC 605.11.1.1]

UTILITY 0 AC DISCONNECT

0

LABEL 13

AT EACH AC DISCONNECTING MEANS [NEC 690.13(B)]

!WARNING! POWER SOURCE OUTPUT CONNECTION - DO NOT RELOCATE THIS OVERCURRENT DEVISE

BI-DIRECTIONAL METER

480 V DC

20 A DC

MAXIMUM CIRCUIT CURRENT:

THE CHARGE CONTROLLER

OR DC-TO-DC CONVERTER

LABEL 4

0

LABEL 9

0

AT UTILITY METER

[NEC 690.56(B)]

[NEC 690.53]

MAX RATED OUTPUT CURRENT OF

AT EACH DC DISCONNECTING MEANS

LABEL 14

AT POINT OF INTERCONNECTION OVERCURRENT DEVICE [NEC 705.12(B)(2)(3)(B)]

PHOTOVOLTAIC AC DISCONNECT \cap OPERATING CURRENT: 44.5 A AC OPERATING VOLTAGE: 240 V AC

LABEL 5

0

AT POINT OF INTERCONNECTION, MARKED AT DISCONNECTING MEANS [NEC 690.54]

0

LABEL 10 AT EACH DC DISCONNECTING MEANS [NEC 690.13(B)]

#03-359 LOCAL CODES

WARNING 🕭 THIS SERVICE METER IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM





FERGUSON, CLYDE 64 SYLVAN LANE CAMERON, NC 28326 (919)721-6599

LICENSE # U.33714

TITAN SOLAR POWER

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ELECTRICAL PHOTOS





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OPTIMIZER MAP

PV-7

FOR INSTALLER USE ONLY

	PERSONS COVERED BY THIS JOB SAFETY PLAN	INJURED A
NLANE	PRINT NAME	INITIAL
64 SYLVAN		



TITAN SOLAR PANEL

-IN-TIME

HIGH EFFICIENCY PREMIUM MONO-PERC PV MODULE



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← H U B B*
* Chubb provides error and omission insurance to Silfab Solar I
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PRODUCT



MAXIMUM ENERGY OUTPUT

Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners, such as Titan Solar have the latest in solar innovation.

NORTH AMERICAN QUALITY

Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



ANKABL

III BAA / ARRA COMPLIANT

These panels are designed and manufactured to meet Buy American Act Compliance. The US State Department, US Military and FAA have all utilized Silfab panels in their solar installations.

III LIGHT AND DURABLE

Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

WOULITY MATTERS

Total automation ensures strict quality controls during the entire manufacturing process at ISO certified facilities.

III DOMESTIC SUPPORT / SERVICES

Our 500+ North American team is ready to help Titan Solar win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

##AESTHETICALLY PLEASING

All black sleek design, ideal for high-profile residential or commercial applications.

III PID RESISTANT

PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications			SIL-370	NX mono PERC		
Test Conditions			STC	NC		
Module Power (Pmax)	Wp		370	26		
Maximum power voltage (Vpmax)	V		37.2	33		
Maximum power current (Ipmax)	Α		10.0	7.		
Open circuit voltage (Voc)	V	V 44.8				
Short circuit current (lsc)	A	A 10.6				
Module efficiency	%		20.2	18		
Maximum system voltage (VDC)	V	V 1000				
Series fuse rating	A			20		
Power Tolerance	Wp	Wp +/-3%				
Measurement conditions: STC 1000 W/m2 • AM 1.5 • Temperature 25 °C • N • Sun simulator calibration reference modules from Fraunhofer Institute. Elect	IOCT 800 W/m ² • AM 1. rical characteristics may v	5 • Measurement unce ary by ±5% and powe	ertainty ≤ 3% r by +/-3%.			
Temperature Ratings			SIL-370 NX	mono PERC		
Temperature Coefficient Isc			0.064	4 %/°C		
Temperature Coefficient Voc			-0.28	3 %/°C		
Temperature Coefficient Pmax			-0.36	5%/°C		
NOCT (± 2°C)		46 °C				
Operating temperature	-40/+85 °C					
Mechanical Properties and Components			SIL-370 NX	mono PERC		
Module weight			44±(0.4 lbs		
Dimensions (H x L x D)			72.13 in x 39	9.4 in x 1.5 in		
Maximum surface load (wind/snow)*			83.5/112	.8 lb/ft^2		
Hail impact resistance			ø 1 in at	51.6 mph		
Cells			66 - Si mono-PERC - 5	busbar, 62.25 x 62.25 in		
Glass		0.126	in high transmittance, temp	pered, DSM anti-reflective co		
Cables and connectors (refer to installation manual)			47.2 in, ø 0.22 in	, MC4 from Staubli		
Backsheet	High dura	ability, superior h	ydrolysis and UV resistance,	, multi-layer dielectric film, flu		
Frame			Anodized Alu	minum (Black)		
Bypass diodes		3 diodes-30SQ	045T (45V max DC blockin	g voltage, 30A max forward ree		
Junction Box			UL 3730 Certified, IEC 6	2790 Certified, IP67 rated		
Warranties		SIL-370 NX mono PERC				
Module product workmanship warranty		25 years**				
Linear newer performance guarantee			30	years		
	≥ 97.1%	% end 1st year	≥ 91.6% end 12 th year	≥ 85.1% end 25 th year		
Certifications			SIL-370 NX	mono PERC		
		ULC ORD (C1703, UL1703, CEC listed	d***, UL 61215-1/-1-1/-2, UL 6		
Product		IEC 61215	-1/-1-1/-2***. IEC 61730-1/-2	2***, CSA C22.2#61730-1/-2, II		
		Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certifed, UL Fire F				

Factory

All states except California Modules Per Pallet: 26 Pallets Per Truck: 34 Modules Per Truck: 884 California Modules Per Pallet: 26 Pallets Per Truck: 32 Modules Per Truck: 822 Modules Per Truck: 822 Modules Per Truck: 824 Modules Per Truck: 822 Modules Per Truck: 824 Modules Per Pallet: 924 Modules Per Pall

12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com. *Certification and CEC listing in progress. PAN files generated from 3rd party performance data are available for download at: www.silfabsolar.com/downloads.



Mesa, AZ 85210 Tel 855 SAY-SOLAR Titansolarpower.com info@titansolarpower Silfab Solar Inc.

Titan Solar Power

525 W Baseline Rd



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Silfab Solar Inc. 240 Courtneypark Drive East Mississauga ON L5T 2Y3 Canada Tal +1 905-255-2501 | Fax +1 905-696-0267 info@silfabsolar.com | www.silfabsolar.com Silfab Solar Inc. 800 Cornwall Ave





ISO9001:2015

NOCT		
266 33.7		
7.9 40.7		
8.3 18.2		
coating		
fluorine-free PV backsheet		
rectified current)		
≥ 82.6% end 30 th year		
L 61730-1/-2,		
2, IEC 62716 re Rating: Type 2		
1.5" [38mm]		
Siffab, 2021		
6.67" (423		
6" [60mm] "[200mm] m]		
2.3 7.87 [832mm] [832mm] 332mm] is subject t		
38.7 72.13" [1		
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	JOB # TSP102581	
	DATE: 1/11/2022	PV-9_1
	DRAWN BY: AN	

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US





Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking 99% weighted efficiency
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020 per article 690.11 and 690.12

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- / UL1741 SA certified, for CPUC Rule 21 grid compliance
- Small, lightweight, and easy to install both outdoors or indoors
- Built-in module-level monitoring
- Optional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade metering (0.5% accuracy, ANSI C12.20)



NVERTERS

/ Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/ SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXBXX4						
OUTPUT							
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	
AC Output Voltage MinNomMax. (211 - 240 - 264)	~	*	~	✓	~	~	
AC Output Voltage MinNomMax. (183 - 208 - 229)	-	*	-	✓	-	-	
AC Frequency (Nominal)				59.3 - 60 - 60.5			
Maximum Continuous Output Current @240V	12.5	12.5 16 21 25 32					
Maximum Continuous Output Current @208V	-	16	-	24	-	-	
Power Factor			1	, Adjustable - 0.85 to	0.85		
GFDI Threshold				1			
Utility Monitoring, Islanding Protection, Country Configurable Thresholds				Yes			
INPUT							
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	
Maximum DC Power @208V	-	5100	-	7750	-	-	
Transformer-less, Ungrounded				Yes			
Maximum Input Voltage				480			
Nominal DC Input Voltage		į	380			400	
Maximum Input Current @240V ⁽²⁾	8.5	10.5	13.5	16.5	20	27	
Maximum Input Current @208V ⁽²⁾	-	9	-	13.5	-	-	
Max. Input Short Circuit Current	45						
Reverse-Polarity Protection				Yes			
Ground-Fault Isolation Detection				600ka Sensitivity			
Maximum Inverter Efficiency	99			9	9.2		
CEC Weighted Efficiency				99			
Nighttime Power Consumption				< 2.5			
h							

(1) For other regional settings please contact SolarEdge support

(2) A higher current source may be used; the inverter will limit its input current to the values stated

S	SE11400H-US	
	1	
	11400 @ 240V 10000 @ 208V	VA
	11400 @ 240V 10000 @ 208V	VA
	~	Vac
	1	Vac
		Hz
	47.5	А
	48.5	A
		А
	17650	W
	15500	W
		Vdc
		Vdc
	30.5	Adc
	27	Adc
		Adc
		%
	99 @ 240V 98.5 @ 208V	%
		W
_		

FERGUSON, CLYDE 64 SYLVAN LANE CAMERON, NC 28326

CAMERON, NC 28326 (919)721-6599

LICENSE # U.33714

TITAN SOLAR POWER 10815 JOHN PRICE RD, CHARLOTTE, NC 28273 WWW.TITANSOLARPOWER.COM

INVERTER DATASHEET



Power Optimizer

For North America

P320 / P340 / P370 / P400 / P405 / P485 / P505



POWEROPTIMIZ フ

PV power optimization at the module-level

- I Specifically designed to work with SolarEdge inverters
- // Up to 25% more energy
- Superior efficiency (99.5%)
- / Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization

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- Fast installation with a single bolt
- / Next generation maintenance with modulelevel monitoring
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- / Module-level voltage shutdown for installer and firefighter safety



/ Power Optimizer For North America

P320 / P340 / P370 / P400 / P405 / P485 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for high- power 60-cell modules)	P370 (for higher- power 60 and 72- cell modules)	P400 (for 72 & 96-cell modules)	P405 (for high- voltage modules)	P485 (for high- voltage modules)	P505 (for higher current modules)	
INPUT								
Rated Input DC Power ⁽¹⁾	320	340	370	400	405	485	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	4	18	60	80	125%	2)	83(2)	Vdc
MPPT Operating Range	8 -	48	8 - 60	8 - 80	12.5 - 1	105	12.5 - 83	Vdc
Maximum Short Circuit Current (Isc)	-	11			10.1		14	Adc
Maximum DC Input Current		13.75 12.5 17.5 Ac						
Maximum Efficiency		99.5						%
Weighted Efficiency			ç	98.8			98.6	%
Overvoltage Category				11				
OUTPUT DURING OPERA	TION (POWE	R OPTIMIZER	CONNECTED	TO OPERATIN	IG SOLAREDGE	INVERTER)		
Maximum Output Current				15				Adc
Maximum Output Voltage		60 85				Vdc		
OFF) Safety Output Voltage per Power Optimizer STANDARD COMPLIANCI	E	1 ± 0.1						Vdc
EMC			ECC Part15 C	lass B. IEC 61000-6-2	. IEC61000-6-3			
Safety			IEC62	2109-1 (class II safety)	UI 1741			
Material				JL94 V-0 , UV Resist	ant			
RoHS				Yes				
INSTALLATION SPECIFICA	ATIONS							
Maximum Allowed System Voltage				1000				Vdc
Compatible inverters			All SolarEdge Si	ingle Phase and Thre	e Phase inverters			
Dimensions (W x L x H)	129 :	129 x 153 x 27.5 / 5.1 x 6 x 1.1 129 x 153 x 27.5 / 5.1 x 6 x 1.1 129 x 153 x 33.5 / 5.1 x 6 x 1.2 129 x 153 x 33.5 / 5.1 x 6 x 1.9 5.1 x 6 4 x 2.3					mm / in	
Weight (including cables)		630 / 1.4		750 / 1.7	845 /	1.9	1064 / 2.3	gr / lb
Input Connector			MC4 ⁽³⁾			Single or dual MC4 ⁽³⁾⁽⁴⁾	MC4(3)	
Input Wire Length				0.16 / 0.52				m / ft
Output Wire Type / Connector			[Double Insulated / M	C4			
Output Wire Length	0.9 /	2.95	1.2 / 3.9	1.2 / 3.9	1.2 / 3	3.9	1.2 / 3.9	m / ft
Operating Temperature Range ⁽⁵⁾				-40 - +85 / -40 - +1	85			°C / °F
Protection Rating				IP68 / NEMA6P				
Relative Humidity				0 - 100				%

[®] Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed [®] NEC 2017 requires max input voltage be not more than 80V

^(a) For other connector types please contact SolarEdge ⁽⁴⁾ For dual version for parallel connection of two modules use the P485. In the case of an odd number of PV modules in one string, installing one P485 dual version power optimizer ^(a) For arbitruit temperature above +45°C / +185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details.

PV System Desig a SolarEdge Inve	n Using erter ⁽⁶⁾⁽⁷⁾	Single Phase HD-Wave	Single phase	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length	P320, P340, P370, P400	8	3	10	18	
(Power Optimizers)	P405, P485, P505	6	5	8	14	
Maximum String Length (Power Optimizers)		2	5	25	50(8)	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400- US)	5250	6000 ⁽⁹⁾	12750(10)	W
Parallel Strings of Different Lengths		Yes				

⁶ For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf
 ⁶ It is not allowed to mix P405/P485/P505 with P320/P340/P370/P400 in one string
 ⁶ A string with more than 30 optimizers does not meet NEC rapid shutdown requirement; safety voltage will be above the 30V requirement
 ⁶ For 2084 "gid: it is allowed to install up to 6,500W per string when the maximum power difference between each string is 1,000W
 ⁶⁰ For 2277/480V grid: it is allowed to install up to 17,550W per string when the maximum power difference between each string is 2,000W

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OPTIMIZER DATASHEET



Mounting systems for solar technology





NEW PRODUCT

CrossRail 44-X

- Optimized rail profile
- One rail for all markets
- Built-in wire management
- Maintains same structural integrity as 48-X
- Tested up to 200 mph winds
- Tested up to 100 PSF snow loads



Part Number	Description
4000019	CrossRail 44-X 166'', Mill
4000020	CrossRail 44-X 166'', Dark
4000021	CrossRail 44-X 180", Mill
4000022	CrossRail 44-X 180", Dark
4000051	RailConn Set, CR 44-X, Mill
4000052	RailConn Set, CR 44-X, Dark
4000067	End Cap, Black, CR 44-X



www.everest-solarsystems.com

CrossRail 44-X Product Sheet US01 | 0520 · Subject to change · Product illustrations are exemplary and may differ from the original.

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RACKING DATASHEET





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MOUNTING DATASHEET



POWERWALL

Tesla Powerwall is a fully-integrated AC battery system for residential or light commercial use. Its rechargeable lithiumion battery pack provides energy storage for solar selfconsumption, time-based control, and backup.

Powerwall's electrical interface provides a simple connection to any home or building. Its revolutionary compact design achieves market-leading energy density and is easy to install, enabling owners to quickly realize the benefits of reliable, clean power.

PERFORMANCE SPECIFICATIONS

AC Voltage (Nominal)	120/240 V
Feed-In Type	Split Phase
Grid Frequency	60 Hz
Total Energy ¹	14 kWh
Usable Energy ¹	13.5 kWh
Real Power, max continuous	5 kW (charge and discharge)
Real Power, peak (10s, off-grid/backup)	7 kW (charge and discharge)
Apparent Power, max continuous	5.8 kVA (charge and discharge)
Apparent Power, peak (10s, off-grid/backup) 7.2 kVA (charge and discharge)
Maximum Supply Fault Current	10 kA
Maximum Output Fault Current	32 A
Overcurrent Protection Device	30 A
Imbalance for Split-Phase Loads	100%
Power Factor Output Range	+/- 1.0 adjustable
Power Factor Range (full-rated power)	+/- 0.85
Internal Battery DC Voltage	50 V
Round Trip Efficiency ^{1,2}	90%
	10 years

MECHANICAL SPECIFICATIONS

1150 mm x 753 mm x 147 mm (45.3 in x 29.6 in x 5.75 in) Dimensions³ Weight³ 114 kg (251.3 lbs) Mounting options Floor or wall mount ³Dimensions and weight differ slightly if manufactured before March 2019. Contact Tesla for additional information. 147 mm 753 mm (29.6 in) (5.75 in) TESLA 1150 mm (45.3 in)

TESLE

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Recommended Temperature	0°C to 30°C (32°F to 86°F)
Operating Humidity (RH)	Up to 100%, condensing
Storage Conditions	–20°C to 30°C (–4°F to 86°F) Up to 95% RH, non-condensing State of Energy (SoE): 25% initial
Maximum Elevation	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	NEMA 3R
Ingress Rating	IP67 (Battery & Power Electronics) IP56 (Wiring Compartment)
Wet Location Rating	Yes
Noise Level @ 1m	< 40 dBA at 30°C (86°F)

TYPICAL SYSTEM LAYOUTS



Powerwall backup

PARTIAL HOME BACKUP



TESLA

COMPLIANCE INFORMATION

Certifications	UL 1642, UL 1741, UL 1973,
	UL 9540, IEEE 1547, UN 38.3
Grid Connection	Worldwide Compatibility
Emissions	FCC Part 15 Class B, ICES 003
Environmental	RoHS Directive 2011/65/EU
Seismic	AC156, IEEE 693-2005 (high)



Reality

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BATTERY DATASHEET

JOB #: TSP102581 DATE: 1/11/2022 DRAWN BY: AN

PV-9.6

TESLA.COM/ENERGY

