

MODULE SPECIFICATION		INVERTER CHARACTERISTICS - SOLAREEDGE SE 7600H-US			OPTIMIZER CHARACTERISTICS SOLAREEDGE P505/S440			PHOTOVOLTAIC SYSTEM		AMBIENT TEMPERATURE SPECS		PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
MANUFACTURER & MODEL NO.	CANADIAN SOLAR CS3N-415MS	MAX OUTPUT POWER	7600	W	DC INPUT POWER	505W	440W	DC SYSTEM SIZE (kW)	8.300	RECORD LOW TEMP	-14°		
MAX. POWER-POINT CURRENT (IMP)	10.98 AMPS	SYSTEM OPERATING VOLTAGE	400	V	DC MAX INPUT VOLTAGE	80 V	60V	AC SYSTEM SIZE (kW)	7.600	AMBIENT TEMP (HIGH TEMP 2%)	33°		
MAX. POWER-POINT VOLTAGE (VMP)	37.8 VOLTS	MAX CONTINUOUS OUTPUT CURRENT	32	A	MAX OUTPUT CURRENT	15A	15A	TOTAL NUMBER OF MODULES	20	CONDUIT HEIGHT	1.0"		
OPEN-CIRCUIT VOLTAGE (VOC)	45.1 VOLTS	MAX INPUT VOLTAGE	480	V	MINIMUM STRING LENGTH	6	8	NOMINAL AC VOLTAGE	240V	ARRAY TOP TEMP	65°		
SHORT-CIRCUIT CURRENT (ISC)	11.68 AMPS	SYSTEM SHORT CIRCUIT CURRENT	15	A	MAXIMUM STRING LENGTH	25	25			CONDUCTOR TEMPERATURE RATE	90°		
NOM. MAX. POWER AT STC (PMAX)	415 WATT	MAX EFFICIENCY	99	%	MAXIMUM POWER PER STRING	6000W	5700W						

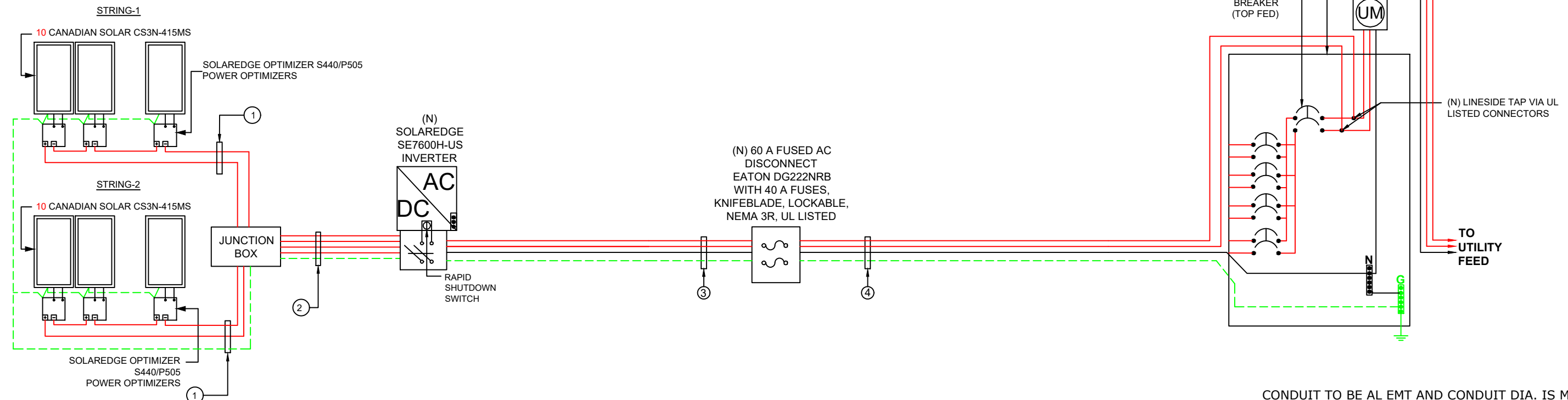
NOTE:-THE OPTIMIZER IS SELECTED AS PER SITE.

DISCONNECTS	
QUANTITY	1
MAKE AND MODEL NO	EATON DG222NRB
RATED CURRENT	60
MAX RATED VOLTAGE	240V

UTILITY HAS 24-HR UNRESTRICTED ACCESS TO ALL PHOTOVOLTAIC SYSTEM COMPONENTS LOCATED AT THE SERVICE ENTRANCE.
 CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE LISTED AS SUNLIGHT RESISTANT PER NEC ARTICLE 300.6 (C) (1) AND ARTICLE 310.10 (D).
 CONDUCTORS EXPOSED TO WET LOCATIONS SHALL BE SUITABLE FOR USE IN WET LOCATIONS PER NEC ARTICLE 310.10 (C).
 ALL BOS COMPONENTS WITHIN 10 FT OF UTILITY METER.

AC RATING: 7.6kw
 THE DISCONNECTING MEANS SHALL BE ADJACENT TO THE UTILITY METER.

METER NUMBER: AM113641234



CONDUIT TO BE AL EMT AND CONDUIT DIA. IS MINIMUM

WIRE TAG #	WIRE FROM:	CONDUIT	WIRE QTY	WIRE GAUGE:	WIRE TYPE	WIRE MATERIAL	TEMP RATING:	WIRE AMP	TEMP DE-RATE:	ADJUSTMENT FACTOR :	WIRE OCPD:	STRING WATTAGE	OPERATING VOLTAGE	STRING AMPS	X NEC	= MAX AMPS	MAX. SYSTEM VOLTAGE:	GRND SIZE	GRND WIRE TYPE
1	ARRAY TO JUNCTION BOX	IN AIR	2	#10	PV WIRE	COPPER	90°	40A	x 0.96	x 1.00	= 38.4A	4150	/ 400	= 10.38	X 1.25	= 12.97A	480	#6	BARE
2	JUNCTION BOX TO INVERTER	AL/EMT-3/4"	4	#10	THWN-2	COPPER	90°	40A	x 0.96	x 0.80	= 30.72A	4150	/ 400	= 10.38	X 1.25	= 12.97A	480	#10	THWN-2
3	INVERTER TO AC DISCONNECT	AL/EMT-3/4"	3	#8	THWN-2	COPPER	75°	50A	x 0.94	x 1.00	= 47.0A			= 32A	X 1.25	= 40.00A	240	#10	THWN-2
4	AC DISCONNECT TO MSP	AL/EMT-3/4"	3	#6	THWN-2	COPPER	75°	65A	x 0.94	x 1.00	= 61.1A			= 32A	X 1.25	= 40.00A	240	#10	THWN-2

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 New Orleans 70121
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JOB NUMBER: 202226
 UTILITY: ENTERGY NEW ORLEANS
 RACKING: K2 CROSS RAIL SYSTEM
 MODULES: (20) CANADIAN SOLAR CS3N-415MS
 OPTIMIZER: (20) SOLAREEDGE OPTIMIZER S440/P505
 INVERTER: (1) SOLAREEDGE SE7600H-US

OWNER:
 VERNON WILLIS SR
 2754 HOLIDAY DRIVE
 NEW ORLEANS LA 70131
 Account Number : 182642173

DESCRIPTION:
 VERNON WILLIS SR,
 RESIDENCE
 8.30 kWDC ROOF
 SOLAR SYSTEM
 PRODUCTION: 10,304 KWH

STAMP:
 PV-5.0
 PAGE NAME:
THREE-LINE DIAGRAM
 SCALE:
 NTS
 DATE:
 8/31/2022

REV:
 DESIGNED BY: KARAN RANA

GROUNDING NOTES		7	EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC ARTICLE 690.45, AND BE A MINIMUM OF #10AWG WHEN NOT EXPOSED TO DAMAGE, AND #6AWG SHALL BE USED WHEN EXPOSED TO DAMAGE
1	ALL EQUIPMENT SHALL BE PROPERLY GROUNDED PER THE REQUIREMENTS OF NEC ARTICLES 250 & 690		
2	INSTALLER SHALL CONFIRM THAT MOUNTING SYSTEM HAS BEEN EVALUATED FOR COMPLIANCE WITH UL 2703 "GROUNDING AND BONDING" WHEN USED WITH PROPOSED PV MODULE.		
3	PV MODULES SHALL BE GROUNDED TO MOUNTING RAILS USING MODULE LUGS OR RACKING INTEGRATED GROUNDING CLAMPS AS ALLOWED BY LOCAL JURISDICTION. ALL OTHER EXPOSED METAL PARTS SHALL BE GROUNDED USING UL-LISTED LAY-IN LUGS.		
4	GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLOR CODED GREEN, OR MARKED GREEN IF #4AWG OR LARGER		
5	AC SYSTEM GROUNDING ELECTRODE CONDUCTOR (GEC) SHALL BE A MINIMUM SIZE #8AWG WHEN INSULATED, #6AWG IF BARE WIRE.		
6	IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE A VERIFIABLE GROUNDING ELECTRODE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.		

NOTES :

1. MATING CONNECTORS SHALL COMPLY WITH NEC 690.33.
2. SOLAR EDGE SYSTEM MEETS REQUIREMENTS FOR PHOTOVOLTAIC RAPID SHUTDOWN SYSTEM (PVRSS), AS PER NEC 690.12(B).
3. THE SPECIFIED OPTIMIZER CAN BE SUBSTITUTED WITH A P400, P405, P505, P401, OR P485. THESE OPTIMIZERS HAVE AN INPUT VOLTAGE WINDOW WIDE ENOUGH TO ACCOMMODATE THE OUTPUT VOLTAGE RANGE OF THE MODULE AT THE DESIGN TEMPERATURES, HAVE A MAX INPUT CURRENT RATING THAT IS ABOVE THE MAX OUTPUT CURRENT OF THE MODULE, AND A MAX POWER INPUT THAT IS ABOVE THE RATED POWER OUTPUT OF THE MODULE.
4. DC PV CONDUCTORS ARE NOT SOLIDLY-GROUNDED. NO DC PV CONDUCTOR SHALL BE WHITE- OR GRAY-COLORED
5. ALL METAL ENCLOSURES, RACEWAYS, CABLES AND EXPOSED NONCURRENT-CARRYING METAL PARTS OF EQUIPMENT SHALL BE GROUNDED TO EARTH AS REQUIRED BY NEC 250.4(A) AND PART III OF ARTICLE 250 AND EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC 690.45. THE GROUNDING ELECTRODE SYSTEM SHALL ADHERE TO NEC 690.47(A) AND NEC 250.169. THE DC GROUNDING ELECTRODE SHALL BE SIZED ACCORDING TO NEC 250.166 AND INSTALLED IN COMPLIANCE WITH NEC 250.64.
6. MAX DC VOLTAGE OF ARRAY FIXED BY THE INVERTER AT 380V REGARDLESS OF TEMPERATURE. THE MAX DC VOLTAGE OF THE MODULE AT -15°C IS 53.2V (-15°C - 25°C) X -0.138V/C + 47.7V = 53.2V).
7. POINT-OF-CONNECTION IS ON THE SUPPLY SIDE OF SERVICE DISCONNECT, INSIDE PANELBOARD ENCLOSURE USING UNUSED TERMINALS, TERMINALS THAT ARE SUITABLE FOR DOUBLE LUGGING, OR USING OTHER LOCALLY-APPROVED METHODS AND HARDWARE, IN COMPLIANCE WITH NEC 705.12(A). THE PANELBOARD SHALL HAVE SUFFICIENT SPACE TO ALLOW FOR ANY TAP HARDWARE AS REQUIRED BY NEC 110.3 AND NEC 312.8(A)
8. PV system disconnect shall be visible knife-blade type disconnect that is accessible and lockable by the utility, The disconnect shall be located within 10 ft of IPC (IPC for Tap). Disconnect shall be grouped in Accordance with NEC 230.72
9. We require the disconnect to be located adjacent to the meter base and have turned down an installation recently that was within 10' of the meter because it was around the corner from the meter base.



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