

NOTES:

- THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY!
- ALL TESTING SHALL BE PERFORMED BY QUALIFIED PERSONNEL, WITH PROPER PERSONAL PROTECTIVE EQUIPMENT
- 3. THE PRODUCTION METER AND AC DISCONNECT SHOULD BE LOCATED TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF THE MAIN SERVICE METER
- 4. 24/7 UNESCORTED KEYLESS ACCESS SHALL BE PROVIDED FOR THE METERS AND AC DISCONNECT
- 5. UTILITY AC DISCONNECT SHOULD BE LOCATED WITHIN 10 FEET OF THE MAIN SERVICE METER
- NOTE ALL THE APPLICABLE NEC CODES
 SHOW ALL THE SYSTEMS INCLUDING STORAGE, EXISTING AND NEW (IF APPLICABLE)

PV SYSTEM:

ROOF SLOPE: 20°

AZIMUTH: 180°

PV MODULES: 320W

TOTAL: 14

MODULES PER STRING: 14

RACK CONFIGURATION:

INVERTER INFORMATION:

3.8 KW UL CERTIFIED INTVERTER, (1)

DC/AC RATIO: 1.179

ABBREVIATIONS:

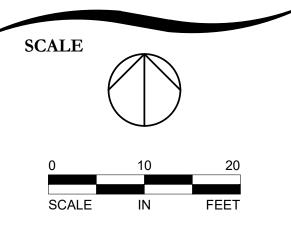
- 1. FOH: FRONT OF HOUSE
- FSB: FIRE SET BACKS
 (E): EXISTING
- 4. (N): NEW
- 5. PV: PHOTOVOLTAIC
- 6. MAX: MAXIMUM
- OCPD: OVERCURRENT PROTECTION DEVICE

EVS, INC.

10025 Valley View Road, Suite 140
Eden Prairie, Minnesota 55344
Phone: 952-646-0236
Fax: 952-646-0290
www.evs-eng.com

CUSTOMER NAME

JOHN DOE



EXAMPLE DRAWINGS
FOR SMALL SOLAR
INTERCONNECTIONS

INSTALLATION ADDRESS

INSTALLER NAME & CONTACT

SHEET
SITE PLAN
SUBMITTAL

EXAMPLE

DATE REVISION

01 09/12/17 Xcel's Comments

02 10/04/17 Xcel's Comments

03 10/09/17 Relocated MSP

APPLICATION OID OR SRC NUMBER

PROFESSIONAL CERTIFICATION

DRAWN BY C

CHECKED BY
S DAS

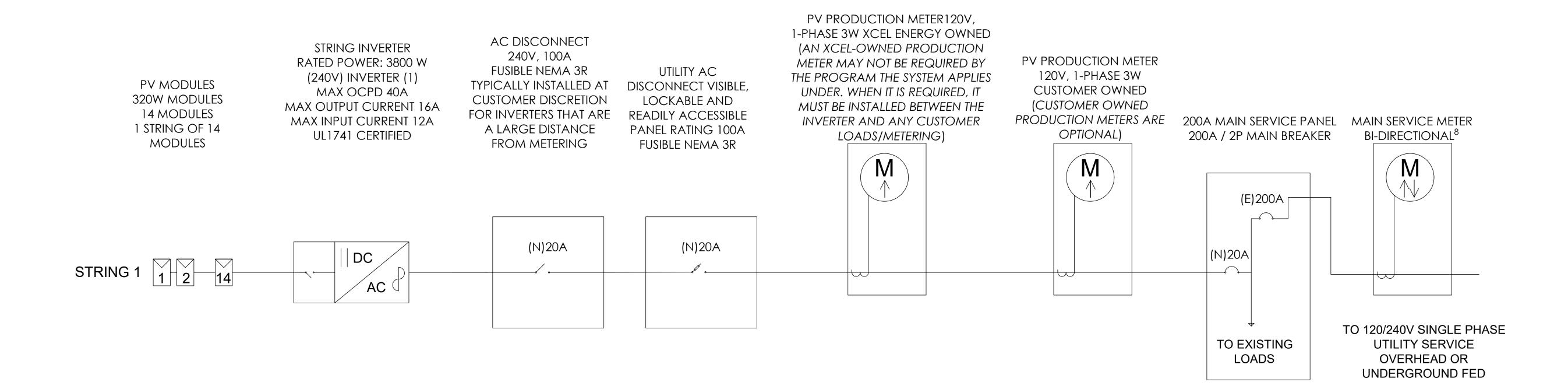
DATE PROJECT # **2017-106.1**

SHEET NUMBER

E-101-01

SYSTEM SIZE 3.8 KW AC / 4.48 4W DC

ONE-LINE EXAMPLE A: FOR SINGLE INVERTER SYSTEMS



	PV MODULE	INVERTER	UTILITY DISCONNECT	PV METER	MAIN SERVICE PANEL	INTERCONNECTION METHOD
Make:						
Model:						
Rating:						
Total:						

NOTES:

EQUIPMENT

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- 10 FEET OF THE MAIN SERVICE METER
- 6. NOTE ALL THE APPLICABLE NEC CODES 7. SHOW ALL THE SYSTEMS INCLUDING STORAGE, EXISTING AND NEW (IF APPLICABLE)
- 8. SERVICES <320A WILL USE SELF-CONTAINED MAIN SERVICE METERS. 320A SERVICES MUST INDICATE WHETEHER THE MTERING WILL BE SELF-CONTAINED OR TRANSFORMER METERED. ALL SERVICES 400A OR GREATER MUST BE TRANSFORMER METERED

PV SYSTEM:

ROOF SLOPE: 20°

PV MODULES: 320W

MODULES PER STRING: 14

AZIMUTH: 180°

TOTAL: 14

RACK CONFIGURATION:

INVERTER INFORMATION:

3.8 KW UL CERTIFIED INTVERTER, (1)

DC/AC RATIO: 1.179

- 2. FSB: FIRE SET BACKS
- 4. (N): NEW
- 7. OCPD: OVERCURRENT PROTECTION

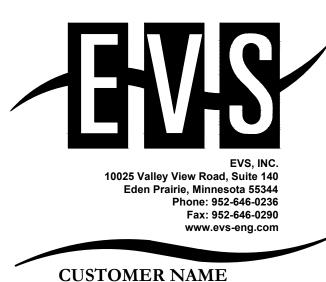
ABBREVIATIONS:

1.	FOH: FRONT OF HOUS
2	ECD. EIDE CET DACKO

- 3. (E): EXISTING
- 5. PV: PHOTOVOLTAIC 6. MAX: MAXIMUM

DEVICE

SYSTEM SIZE 3.8 KW AC / 4.48 4W DC



JOHN DOE

SCALE



INSTALLATION ADDRESS

INSTALLER NAME & CONTACT

SHEET ONE LINE DIAGRAM **SUBMITTAL EXAMPLE**

#	DATE	REVISION
01	09/12/17	Xcel's Commer
02	10/04/17	Xcel's Comme

APPLICATION OID OR SRC NUMBER

PROFESSIONAL CERTIFICATION

DRAWN BY CHECKED BY R PAWAR S DAS

PROJECT # DATE

2017-106.1 08.10.17

SHEET NUMBER

E-101-02A

ONE-LINE EXAMPLE B: FOR MULTIPLE INVERTER SYSTEMS

STRING INVERTER RATED POWER: 3800 W (240V) INVERTER (3) MAX OCPD 40A MAX OUTPUT CURRENT 16A

PV MODULES MAX INPUT CURRENT 12A 320W MODULES UL1741 CERTIFIED 14 MODULES/STRING TOTAL INVERTERS: 3'TOTAL TOTAL STRINGS: 3 RATED POWER: 11,400 W

AC DISCONNECT 240V, 100A FUSIBLE NEMA 3R TYPICALLY INSTALLED AT CUSTOMER DISCRETION FOR INVERTERS THAT ARE

A LARGE DISTANCE

FROM METERING

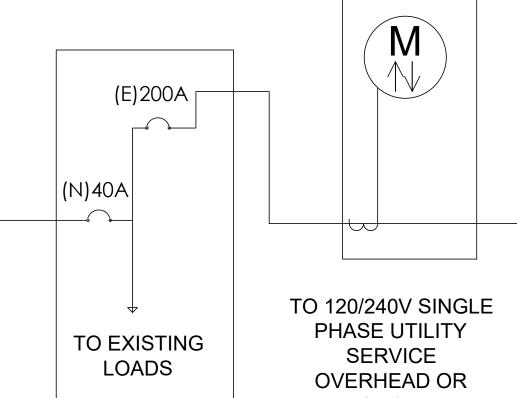
UTILITY AC DISCONNECT VISIBLE, LOCKABLE AND READILY ACCESSIBLE PANEL RATING 100A FUSIBLE NEMA 3R

INVERTER AND ANY CUSTOMER

PV PRODUCTION METER 120V, 1-PHASE 3W CUSTOMER OWNED (CUSTOMER OWNED PRODUCTION METERS ARE

OPTIONAL) M

200A MAIN SERVICE PANEL MAIN SERVICE METER BI-DIRECTIONAL⁸ 200A / 2P MAIN BREAKER M



EXAMPLE DRAWINGS FOR SMALL SOLAR INTERCONNECTIONS

INSTALLATION ADDRESS

10025 Valley View Road, Suite 140 Eden Prairie, Minnesota 55344 Phone: 952-646-0236

CUSTOMER NAME

JOHN DOE

SCALE

Fax: 952-646-0290

INSTALLER NAME & CONTACT

SHEET ONE LINE DIAGRAM **SUBMITTAL EXAMPLE**

#	DATE	REVISION
01	09/12/17	Xcel's Comment
02	10/04/17	Xcel's Comment

CHECKED BY

S DAS

NOTES:

Make:

Model:

Rating:

Total:

STRING 2 $\begin{bmatrix} 1 \\ 2 \end{bmatrix}$ $\begin{bmatrix} 14 \\ 2 \end{bmatrix}$

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PV SYSTEM:

ROOF SLOPE: 20° AZIMUTH: 180°

PV MODULES: 320W

TOTAL: 32

INVERTER

MODULES PER STRING: 14

RACK CONFIGURATION:

UTILITY DISCONNECT

INVERTER INFORMATION:

MAIN SERVICE PANEL

3.8 KW UL CERTIFIED INTVERTER, (3)

DC/AC RATIO: 1.179

PV METER

ABBREVIATIONS:

- FOH: FRONT OF HOUSE
- 2. FSB: FIRE SET BACKS
- 3. (E): EXISTING 4. (N): NEW
- 5. PV: PHOTOVOLTAIC
- 6. MAX: MAXIMUM 7. OCPD: OVERCURRENT PROTECTION
- DEVICE

DRAWN BY R PAWAR

> DATE PROJECT # 08.10.17 2017-106.1

SHEET NUMBER

E-101-02B

SYSTEM SIZE

11.4 KW AC / 13.44 W DC

METER MAY NOT BE REQUIRED BY THE PROGRAM THE SYSTEM APPLIES UNDER. WHEN IT IS REQUIRED, IT MUST BE INSTALLED BETWEEN THE LOADS/METERING)

(N)40A

(N)40A

DC (N)20A SAME AS THE SAME AS THE FIRST STRING FIRST INVERTER (N)20A

DC

TO REMAINING INVERTERS

(IF ALL INVERTERS ARE ALIKE, ADDITIONAL

A NOTE SIMILAR TO THIS SHOULD BE MADE)

PV MODULE

INVERTERS DO NOT HAVE TO BE SHOWN, BUT

STRING 1 1 2 14

(N)100A

LOAD CENTER

PV PRODUCTION METER 120V, 1-PHASE 3W XCEL ENERGY OWNED (AN XCEL-OWNED PRODUCTION

UNDERGROUND FED

INTERCONNECTION METHOD

APPLICATION OID OR SRC NUMBER

PROFESSIONAL CERTIFICATION

PRODUCTION METER

5

Photovoltaic Power Source



8

10

Turn off AC disconnect prior to working inside panel

WARNING

DO NOT DISCONNECT UNDER

LOAD

PV SYSTEM

DC DISCONNECT

MAIN PV SYSTEM

AC DISCONNECT



NOMINAL OPERATING AC VOLTAGE 240 V NOMINAL OPERATING AC FREQUENCY 60 Hz MAXIMUM AC POWER 3.8 kW **MAXIMUM AC CURRENT** 16 A OVERCURRENT PROTECTION RATING 20 A

CAUTION

BY 2014 NEC 690 WILL BE INSTALLED AS REQUIRED 2. LABELS, WARNING(S)AND MARKING SHALL COMPLY WITH ANSI Z535.4 3. A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED PROVIDING THE LOCATION OF THE SERVICE

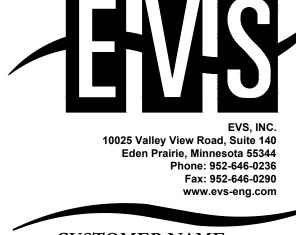
NOTES:

NEC 690.56(B)

1. ALL PLAQUES AND SIGNAGE REQUIRED

DISCONNECTING MEANS IF NOT IN THE

SAME LOCATION IN COMPLIANCE WITH



CUSTOMER NAME

JOHN DOE

EXAMPLE DRAWINGS FOR SMALL SOLAR **INTERCONNECTIONS**

INSTALLER NAME & CONTACT

SHEET **LABELS**

#	DATE	REVISION
01	09/12/17	Xcel's Comments
02	10/04/17	Xcel's Comments

Label Locations/Details **Production Meter** PV System Utility AC Disconnect, Main Service Disconnect DC BUS, DC Disconnect, Inverter(s) PV System Utility AC Disconnect, Main Service Disconnect DC BUS, DC Disconnect, Inverter(s) PV System Utility AC Disconnect, PV-AC Disconnect load side and line side PV-AC Disconnect PV System Utility AC Disconnect PV System DC Disconnect PV System Utility AC Disconnect Main Service Panel(House/Area Panel), Production meter 12 Main Service Panel(House/Area Panel), Production meter PV-AC Disconnect, AC Panel combiner, Production meter PV-AC Disconnect, AC Panel combiner, Production meter

> SYSTEM SIZE 3.8 KW AC / 4.48 4W DC

INSTALLATION ADDRESS

SUBMITTAL EXAMPLE

	/	
02	10/04/17	Xcel's Comments

APPLICATION OID OR SRC NUMBER

PROFESSIONAL CERTIFICATION

CHECKED BY S DAS **R PAWAR**

PROJECT # **DATE** 2017-106.1 08.10.17

SHEET NUMBER

E-101-03



ELECTRIC SHOCK HAZARD

THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE **ENERGIZED**



ELECTRIC SHOCK HAZARD

DO NOT TOUCH THESE TERMINALS, TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE **OPEN POSITION**



ELECTRIC SHOCK HAZARD

WHEN A GROUND FAULT IS ACTIVE CONDUCTORS THAT ARE NORMALLY GROUNDED MAY BE UNGROUNDED AND ENERGIZED



CAUTION

PHOTOVOLTAIC ENERGY IS BEING FED INTO THIS SYTEM

CAUTION (12) DUAL POWER SOURCE SECOND SOURCE IS A PV SYSTEM

CAUTION 13

MAXIMUM OPERATING CURRENT 16 A

MAXIMUM OPERATING AC VOLTS | 240 V