# BOOK CLIFFS WEST

## WESTERN SLOPES NEW ENERGY

## SO1234

### ABBREVIATIONS

| | |
|---|---|
| A | AMPS |
| AC | ALTERNATING CURRENT |
| ACD | AC DISCONNECT |
| AWG | AMERICAN WIRE GAUGE |
| C | CELSIUS |
| CB | CIRCUIT BREAKER |
| CT | CURRENT TRANSFORMER |
| CU | COPPER |
| DAS | DATA ACQUISITION SYSTEM |
| DC | DIRECT CURRENT |
| DCD | DC DISCONNECT |
| DISC | DISCONNECT |
| F | FAHRENHEIT |
| FO | FIBER OPTIC |
| GHI | GLOBAL HORIZONTAL IRRADIANCE |
| GND | GROUND |
| HV | HIGH VOLTAGE |
| ID | INSIDE DIAMETER |
| INV | INVERTER |
| JB | JUNCTION BOX |
| KV | KILOVOLT |
| KW | KILOWATT |
| KWH | KILOWATT-HOUR |
| LV | LOW VOLTAGE |
| MAX | MAXIMUM |
| MCE | MAIN COMMUNICATION ENCLOSURE |
| MIN | MINIMUM |
| MV | MEDIUM VOLTAGE |
| NEC | NATIONAL ELECTRIC CODE |
| NEG | NEGATIVE |
| OCP | OVERCURRENT PROTECTION |
| OD | OUTSIDE DIAMETER |
| POA | PLANE OF ARRAY |
| PB | PANELBOARD |
| PCC/POCC | POINT OF COMMON COUPLING |
| POS | POSITIVE |
| PV | PHOTOVOLTAIC |
| SCADA | SUPERVISORY CONTROL AND DATA ACQUISITION |
| SCH | SCHEDULE |
| TYP | TYPICAL |
| UL | UNDERWRITERS LABORATORIES |
| V | VOLTS |
| VAC | VOLTS AC |
| VAR | VOLT-AMPERE REACTIVE |
| VDC | VOLTS DC |
| W | WATTS |
| WS | WEATHER STATION |
| XF | TRANSFORMER |

### PROJECT DESCRIPTION

| | |
|---|---|
| SITE NAME | BOOK CLIFFS WEST |
| SITE ADDRESS | 1961 10 3/8 RD, MACK, CO 81525, USA |
| SITE OWNER | GRAND MESA SOLAR |
| EPC NAME | WESTERN SLOPES NEW ENERGY |
| SYSTEM SIZE | 2060 KW DC |
| SYSTEM TYPE | MONITORING/STANDARD |
| TECH CONTACT NAME | GLEN MACK |
| TECH CONTACT EMAIL | GLEN@WESLOPES.COM |
| TECH CONTACT PHONE | 970-555-5555 |
| ALSOENERGY SALES REP. | TERRI SMITHFIELD |
| ALSOENERGY PROJ. MGR. | HALOGETON GLOMERATUS |

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### ⚠ WARNINGS ⚠

[EN] LINE VOLTAGES UP TO 600 VRMS ARE PRESENT ON THE INPUT TERMINALS OF THE DEVICE AND THROUGHOUT THE CONNECTED LINE CIRCUITS DURING NORMAL OPERATION. THESE VOLTAGES MAY CAUSE SEVERE INJURY OR DEATH. INSTALLATION AND SERVICING SHOULD BE PERFORMED ONLY BY QUALIFIED, PROPERLY TRAINED PERSONNEL. THIS IS A CLASS III MEASUREMENT DEVICE.

[FR] DES TENSIONS DE LIGNE JUSQU'À 600 VRMS SONT PRÉSENTES SUR LES BORNES D'ENTRÉE DE L'APPAREIL ET DANS TOUS LES CIRCUITS DE LIGNE RACCORDÉS PENDANT LE FONCTIONNEMENT NORMAL. CES TENSIONS PEUVENT CAUSER DES BLESSURES GRAVES OU LA MORT. L'INSTALLATION ET L'ENTRETIEN DOIVENT ÊTRE EFFECTUÉS UNIQUEMENT PAR DU PERSONNEL QUALIFIÉ ET CORRECTEMENT FORMÉ. CECI EST UN APPAREIL DE MESURE DE CLASSE III.

### GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH APPLICABLE CODE.
2. THIS SYSTEM HAS BEEN DESIGNED TO ALSOENERGY SPECIFICATIONS. MODIFICATIONS MADE TO THE SYSTEM MAY CAUSE IMPROPER OPERATION UNLESS YOU NOTIFY ALSOENERGY OF THE CHANGES.
3. INTERNAL DEVICES SUPPLIED PRE-WIRED BY ALSO ENERGY WITH IP AND MODBUS ADDRESSING CONFIGURED.
4. THE RS-485 BUS USES DAISY-CHAINED CONFIGURATION FOR ALL DEVICES, I.E. NO MORE THEN TWO WIRES ON ANY TERMINAL.
5. FOR RS-485 CONNECTIONS, GROUND THE DRAIN WIRE OF THE SHIELDED CABLE AT ONE END ONLY. DO NOT GROUND THE DRAIN WIRE AT BOTH ENDS OF A CABLE RUN.
6. USE BELDEN 3106A OR EQUIVALENT FOR ALL RS-485 TYPE CONNECTIONS. 4000FT MAX LENGTH PER BUS, 1000FT MAX BETWEEN EACH DEVICE.
7. USE BELDEN 7919A CAT5e NETWORK CABLE OR EQUIVALENT FOR ALL HUB TO CABLE MODEM TO GATEWAY ETHERNET CONNECTIONS, 300FT MAX.
8. SINGLE MODE FIBER CABLE WILL BE OS2 WITH LC CONNECTORS.
9. MULTI-MODE FIBER CABLE WILL BE 50/125µm OR 62.5/125µm WITH SC CONNECTORS. (PRE-TERMINATED WITH PULL RING RECOMMENDED FOR EASE OF INSTALL)
10. SENSOR CABLES ARE CALIBRATED. LENGTH SHOULD NOT BE MODIFIED WITHOUT APPROVAL FROM ALSOENERGY.
11. RADIO CONNECTIONS MUST BE LINE OF SIGHT.
12. WARRANTY IS VOID IF HOLES ARE MADE ANYWHERE OTHER THAN BOTTOM OF ENCLOSURE OR IF BOTTOM HOLES ARE MADE WITHIN 1" (25.4MM) OF EDGES.

PRELIMINARY

AlsoEnergy beyond measure

REV: A | BY: DVW | DATE: 2018-02-08 | DESCRIPTION: AUTO DRAFTED

BOOK CLIFFS WEST
WESTERN SLOPES NEW ENERGY
SO1234

SIZE: ANSI C
SCALE: NONE

AlsoEnergy beyond measure
Boulder, CO 80301
866-303-5668, USA
www.AlsoEnergy.com

| | | | |
|---|---|---|---|
| DRAWN BY: | DVW | | |
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