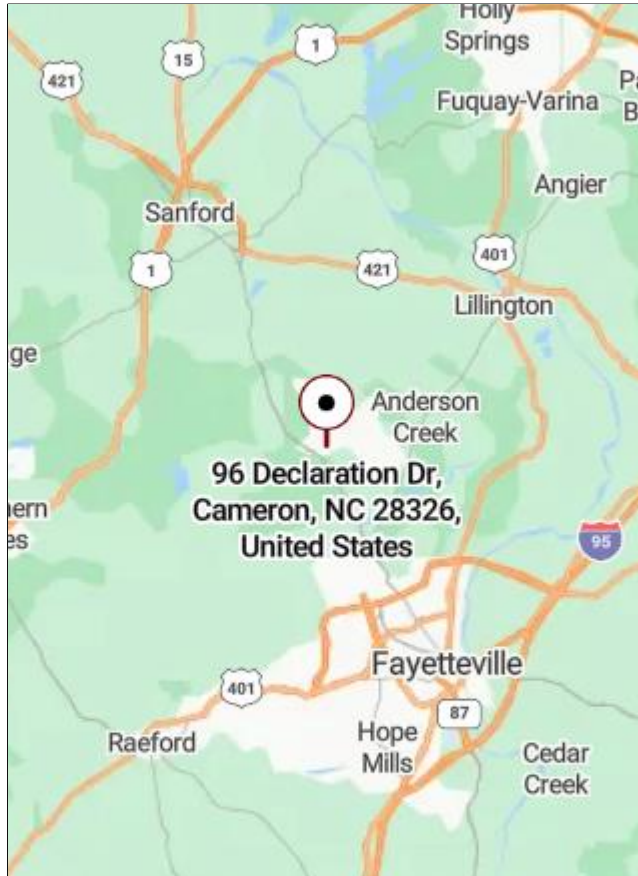


| PHOTOVOLTAIC ROOF MOUNT SYSTEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                 |                                                                                                    | SR.#                                 | PROJECT INFORMATION |                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------|---------------------|--------------------------------------------|--|
| <div><b>CODE AND STANDARDS</b></div> <div>THE INSTALLATION OF SOLAR ARRAYS AND PHOTOVOLTAIC POWER SYSTEMS SHALL COMPLY WITH THE FOLLOWING CODES:</div> <div><ul style="list-style-type: none"><li>2020 NATIONAL ELECTRICAL CODE</li><li>2018 NORTH CAROLINA RESIDENTIAL CODE</li><li>2018 NORTH CAROLINA BUILDING CODE</li><li>ALL OTHER ORDINANCE ADOPTED BY THE LOCAL GOVERNING AGENCIES</li></ul></div> <div><b>SITE NOTES / OSHA REGULATION</b></div> <div><div><div>1.</div><div>A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.</div></div><div><div>2.</div><div>THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.</div></div><div><div>3.</div><div>ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED AND IDENTIFIED BY RECOGNIZED ELECTRICAL TESTING LABORATORY.</div></div><div><div>4.</div><div>MODULES AND SUPPORT STRUCTURES SHALL BE GROUNDED</div></div><div><div>5.</div><div>SOLAR INVERTER SHALL BE LISTED TO UL1741</div></div><div><div>6.</div><div>ALL CONDUCTORS SHALL BE COPPER AND SHOULD BE 75 AND 90 DEG RATED</div></div><div><div>7.</div><div>REMOVAL OF AN INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BONDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR, THE PHOTOVOLTAIC SOURCE AND OUTPUT CIRCUIT GROUNDED CONDUCTORS.</div></div><div><div>8.</div><div>LIVE PARTS OF PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS OVER 150V TO GROUND SHALL NOT BE ACCESSIBLE TO OTHER THAN QUALIFIED PERSONS WHILE ENERGIZED.</div></div><div><div>9.</div><div>ALL PV MODULES AND ASSOCIATED EQUIPMENT AND WIRING SHALL BE PROTECTED FROM PHYSICAL DAMAGE.</div></div></div> <div><b>SOLAR CONTRACTOR</b></div> <div><div><div>1.</div><div>MODULE CERTIFICATIONS INCLUDE UL1703, IEC61646, IEC61370.</div></div><div><div>2.</div><div>IF APPLICABLE, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE MARKED GROUNDING LUG HOLES PER THE MANUFACTURERS INSTALLATION REQUIREMENTS.</div></div><div><div>3.</div><div>AS INDICATED BY DESIGN, OTHER NRTL LISTED MODULE GROUNDING DEVICES MAY BE USED IN PLACE OF STANDARD GROUNDING LUGS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ.</div></div><div><div>4.</div><div>ALL MICROINVERTERS, PHOTOVOLTAIC MODULES, AC COMBINERS, DC-AC CONVERTERS AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER NEC690.4(B).</div></div><div><div>5.</div><div>ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH LOCAL BUILDING CODE.</div></div><div><div>6.</div><div>TERMINALS AND LUGS WILL BE TIGHTENED TO MANUFACTURER TORQUE SPECIFICATIONS (WHEN PROVIDED) IN ACCORDANCE WITH NEC CODE 110.14(D) ON ALL ELECTRICAL CONNECTIONS.</div></div><div><div>7.</div><div>MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC UNLESS NOT AVAILABLE.</div></div></div> | 1                                                                                                                               | PV MODULES                                                                                         | 26 x Canadian Solar CS6.1-54TM-460H  |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2                                                                                                                               | INVERTER + BATTERY                                                                                 | 01 X POWERWALL3                      |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3                                                                                                                               | ROOF TYPE                                                                                          | ASPHALT SHINGLES                     |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4                                                                                                                               | RACKING                                                                                            | PSR-B84 RAILS (BLACK)                |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5                                                                                                                               | MOUNTING TYPE                                                                                      | INSTAFLASH2 (BLACK)                  |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6                                                                                                                               | DC SIZE                                                                                            | 11.96 KW                             |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7                                                                                                                               | AC SIZE                                                                                            | 11.5 KVA                             |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SR.#                                                                                                                            | PROJECT INFORMATION                                                                                |                                      |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1                                                                                                                               | PV1                                                                                                | DRAWING INDEX                        |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2                                                                                                                               | PV2                                                                                                | SITE LAYOUT                          |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3                                                                                                                               | PV3                                                                                                | STRING MAPPING                       |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4                                                                                                                               | PV4                                                                                                | ELECTRICAL ONE LINE DIAGRAM          |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5                                                                                                                               | PV5                                                                                                | DETAILED ELECTRICAL WIRING SCHEMATIC |                     |                                            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6                                                                                                                               | PV6                                                                                                | PV LABELS                            |                     |                                            |  |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PV7                                                                                                                             | BILL OF MATERIALS                                                                                  |                                      |                     |                                            |  |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PV8                                                                                                                             | ATTACHMENT DETAILS                                                                                 |                                      |                     |                                            |  |
| <div><div></div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                 |                                                                                                    |                                      |                     |                                            |  |
| <div><b>DESIGN CRITERIA</b><br/>WIND SPEED: 120 MPH<br/>GROUND SNOW LOAD: 10 PSF<br/>WIND EXPOSURE FACTOR: B</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <div><b>UTILITY COMPANY:</b><br/>CENTRAL ELECTRIC MEMBERSHIP CORP<br/><br/><b>PERMIT ISSUER (AHJ):</b><br/>HARNETT COUNTY</div> | <div><b>SCOPE OF WORK</b><br/>INSTALLATION OF UTILITY INTERACTIVE PHOTOVOLTAIC SOLAR SYSTEM.</div> | <div><b>VICINITY MAP</b></div>       |                     | <div><b>TOP VIEW OF THE BUILDING</b></div> |  |



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**Customer Information:**  
  
Tricia L Brookover  
  
96 Declaration Dr.  
Cameron, NC 28326

**Customer Signature:**

**Sheet Name:**  
  
Drawing Index

**JOB NUMBER:**  
  
25-689-JB

**Date:**  
  
09/24/2025

**Revision:**  
  
A

**Sheet Size:**  
  
ANSI C  
17" X 22"

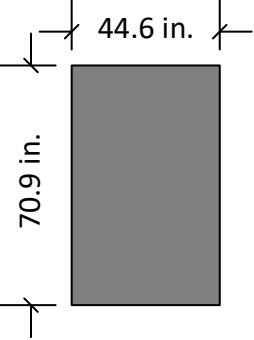
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PV1

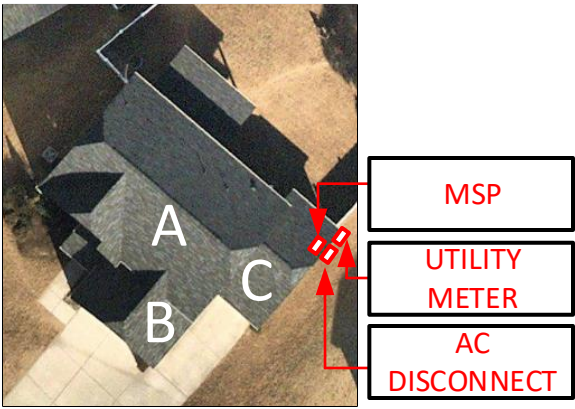


PV Installation Professional  
Ali Buttar  
PVIP #031310-32



11-06-2025

| ROOF DESCRIPTION |                                                                                   |                                                                                                                                                       |                | MODULE DIMENSIONS                                                                 | PV System Dead Load<br>(Panel + Racking weight) / PV System Area<br>(No. of panels x Weight of panel(lbs.) +Length of racking(ft.) x 1.15 lb.ft) /<br>(No. of panels x Height x Width) = Total psf |      |      |      |  |
|------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|--|
| ROOF             | PITCH                                                                             | AZIMUTH                                                                                                                                               | NO. OF MODULES |  | ROOF                                                                                                                                                                                               | A    | B    | C    |  |
| A                | 36°                                                                               | 220°                                                                                                                                                  | 15             |                                                                                   | DEAD LOAD (PSF)                                                                                                                                                                                    | 2.68 | 2.67 | 2.67 |  |
| B                | 45°                                                                               | 130°                                                                                                                                                  | 05             |                                                                                   |                                                                                                                                                                                                    |      |      |      |  |
| C                | 36°                                                                               | 220°                                                                                                                                                  | 06             |                                                                                   |                                                                                                                                                                                                    |      |      |      |  |
|                  |                                                                                   |                                                                                                                                                       |                |                                                                                   |                                                                                                                                                                                                    |      |      |      |  |
| Vent             |  | <ul style="list-style-type: none"><li>Roof A,B &amp; C has no vents</li><li>No vents will be covered by PV modules during the installation.</li></ul> |                |                                                                                   | <b>SYSTEM DETAILS</b><br><br>NUMBER OF PANELS : 26<br>PANELS MODEL : CANADIAN SOLAR CS6.1-54TM-460H<br>DC SIZE : 11.96 KW<br>AC SIZE : 11.5 KVA                                                    |      |      |      |  |



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Customer Signature:

Sheet Name:

Site Layout

JOB NUMBER:

25-689-JB

Date:

09/24/2025

Revision:

A

Sheet Size:

ANSI C  
17" X 22"

Sheet Number:

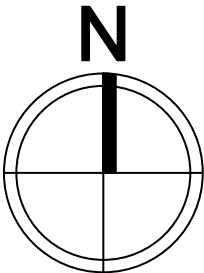
PV2

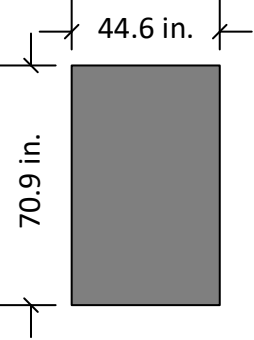


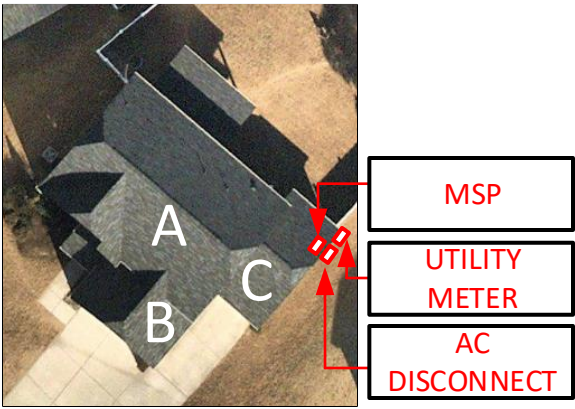
11-06-2025



SITE LAYOUT  
SCALE: 1/8" - 1'



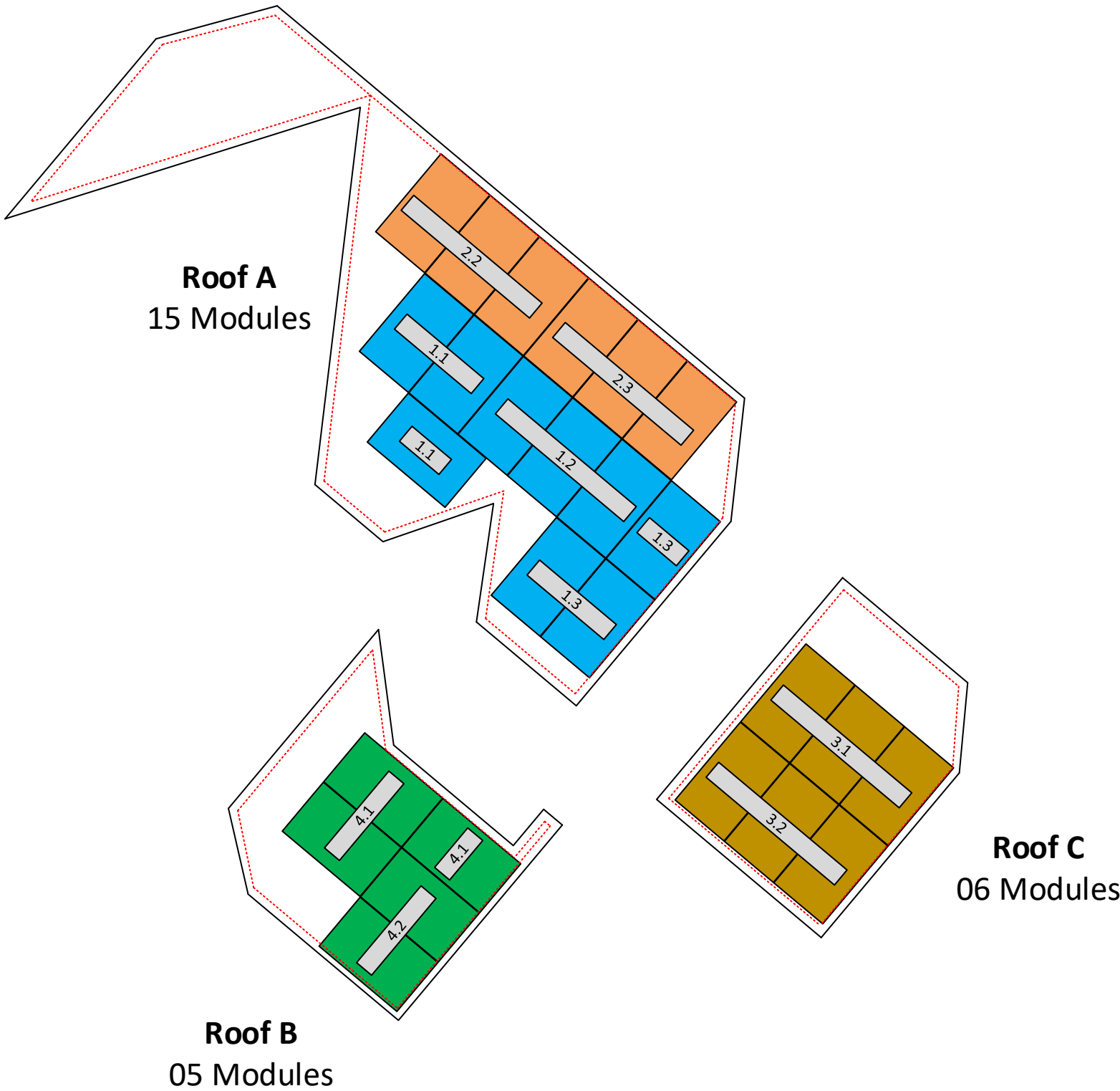
| ROOF DESCRIPTION |       |         |                | MODULE DIMENSIONS                                                                 | STRING LAYOUT    |                |       |           |                |       |
|------------------|-------|---------|----------------|-----------------------------------------------------------------------------------|------------------|----------------|-------|-----------|----------------|-------|
| ROOF             | PITCH | AZIMUTH | NO. OF MODULES |  | TESLA POWERWALL3 |                |       |           |                |       |
| A                | 36°   | 220°    | 15             |                                                                                   | Strings #        | No. of Modules | Color | Strings # | No. of Modules | Color |
| B                | 45°   | 130°    | 05             |                                                                                   | String 1         | 09             |       | String 4  | 05             |       |
| C                | 36°   | 220°    | 06             |                                                                                   | String 2         | 06             |       |           |                |       |
|                  |       |         |                |                                                                                   | String 3         | 06             |       |           |                |       |



|                                     |  |  |                                                                                   |
|-------------------------------------|--|--|-----------------------------------------------------------------------------------|
| Tesla MCI (Mid Circuit Interrupter) |  |  |  |
|-------------------------------------|--|--|-----------------------------------------------------------------------------------|

**SYSTEM DETAILS**

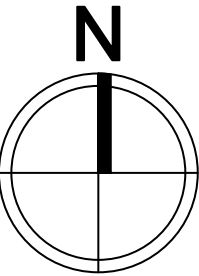
NUMBER OF PANELS : 26  
PANELS MODEL : CANADIAN SOLAR CS6.1-54TM-460H  
DC SIZE : 11.96 KW  
AC SIZE : 11.5 KVA



6in setback from  
sides of the roof

STRING MAPPING

SCALE: 1/8" - 1'





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**Customer Signature:**

**Sheet Name:**

String Mapping

**JOB NUMBER:**

25-689-JB

**Date:**

09/24/2025

**Revision:**

A

**Sheet Size:**

ANSI C  
17" X 22"

**Sheet Number:**

PV3



PV Installation  
Professional

Ali Buttar  
PVIP #031310-32



11-06-2025

STRING CALCULATION

| String # | No of Modules | Estimated Power | I <sub>max</sub> | I <sub>mpp</sub> | V <sub>oc</sub> | V <sub>mpp</sub> |
|----------|---------------|-----------------|------------------|------------------|-----------------|------------------|
| 1        | 09            | 4,140 W         | 21.49 Adc        | 13.78 Adc        | 353.7 Vdc       | 550 Vdc          |
| 2,3      | 06            | 2,760 W         | 21.49 Adc        | 13.78 Adc        | 235.8 Vdc       | 550 Vdc          |
| 4        | 05            | 2,300 W         | 21.49 Adc        | 13.78 Adc        | 196.5 Vdc       | 550 Vdc          |
|          |               |                 |                  |                  |                 |                  |

26 X CANADIAN SOLAR CS6.1-54TM-460H  
460W  
TESLA MCI-2 HIGH CURRENT  
RAPID SHUTDOWN EQUIPPED

NOTICE TO CONTRACTOR  
All construction must comply with current NC Building Codes and is subject to NCE inspection and verification.  
**APPROVED**  
Limited building only review.  
Permit holder responsible for full compliance with the code.  
11/13/2025

FROM UTILITY

Utility Meter

6

Backup Gateway 3

60A/2P 200A/2P

7

200A/2P

MAIN LOAD PANEL  
B.B RATING: 200A  
M.B RATING: 200A

String 1

String 2

String 3

String 4

Sola Deck

Attic

Tesla Powerwall3

AC

(Battery Section)

60A BREAKER CONNECTION INSIDE THE BACKUP GATEWAY 3

60A NON-FUSIBLE AC DISCONNECT

System Shutdown Switch (E-Stop)

- System Size: 11,960W DC
- Battery Total Energy: 13.5 KWh
- (26) Canadian Solar CS6.1-54TM-460H
- (09) Tesla MCI-2 High Current
- (01) Tesla Powerwall3
- Inverter Output: 48A max @ 240 VAC (each)
- 11.5 kVA AC output max

- Grounding will be done via Pegasus grounding lugs and mid-clamps to ensure the rail and panels are continuously grounded.
- Rapid Shutdown is included in the Mid Circuit Interrupter , refer to Mid Circuit Interrupter and Inverter attached datasheets.
- The load center/disconnect will be visible, lockable, accessible to utility linesmen, and properly labeled per NEC requirements. It will be located on the exterior wall next to the utility meter.
- Prepare cable in usual manner.
- Stretch tape and apply half-lapped to form void-free joint. Degree of stretch is not critical and may vary in different sections of joint to accomplish void-free application.
- Protect the joint with two half-lapped layers of any scotch vinyl plastic electrical tape.

| Sr.No | #Wire                                                          | Conduit Size | Ground Wire  | Amperage |
|-------|----------------------------------------------------------------|--------------|--------------|----------|
| 1     | 2 x #10 PV                                                     |              | #10 Bare Cu  | 21.49    |
| 2     | 8 x #10 THHN Cu                                                | 3/4" LFMC    | #10 Green Cu | 21.49    |
| 3     | 8 x #10 THHN Cu                                                | 3/4" EMT     | #10 Green Cu | 21.49    |
| 4     | 3 x #6 THHN Cu<br>2-conductor shielded (1 twisted pair) 18 AWG | 1" EMT       | #6 Green Cu  | 60       |
| 5     | 3 x #6 THHN Cu                                                 | 1" LFNC      | #6 Green Cu  | 60       |
| 6     | 3 x #3/0 THHN Cu                                               | 2" PVC       |              | 200      |
| 7     | 3 x #3/0 THHN Cu                                               | 2" PVC       | #4 Green Cu  | 200      |
| 8     | 4-conductor shielded (2 twisted pair) 18 AWG                   |              |              |          |
| 9     | 2-conductor shielded (1 twisted pair) 18 AWG                   | 1/2" LFNC    |              |          |

8MSOLAR  
ADVANCING ENERGY INDEPENDENCE

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**Customer Information:**

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**Sheet Name:**

Electrical One Line Diagram

**JOB NUMBER:**

25-689-JB

**Date:**

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**Revision:**

A

**Sheet Size:**

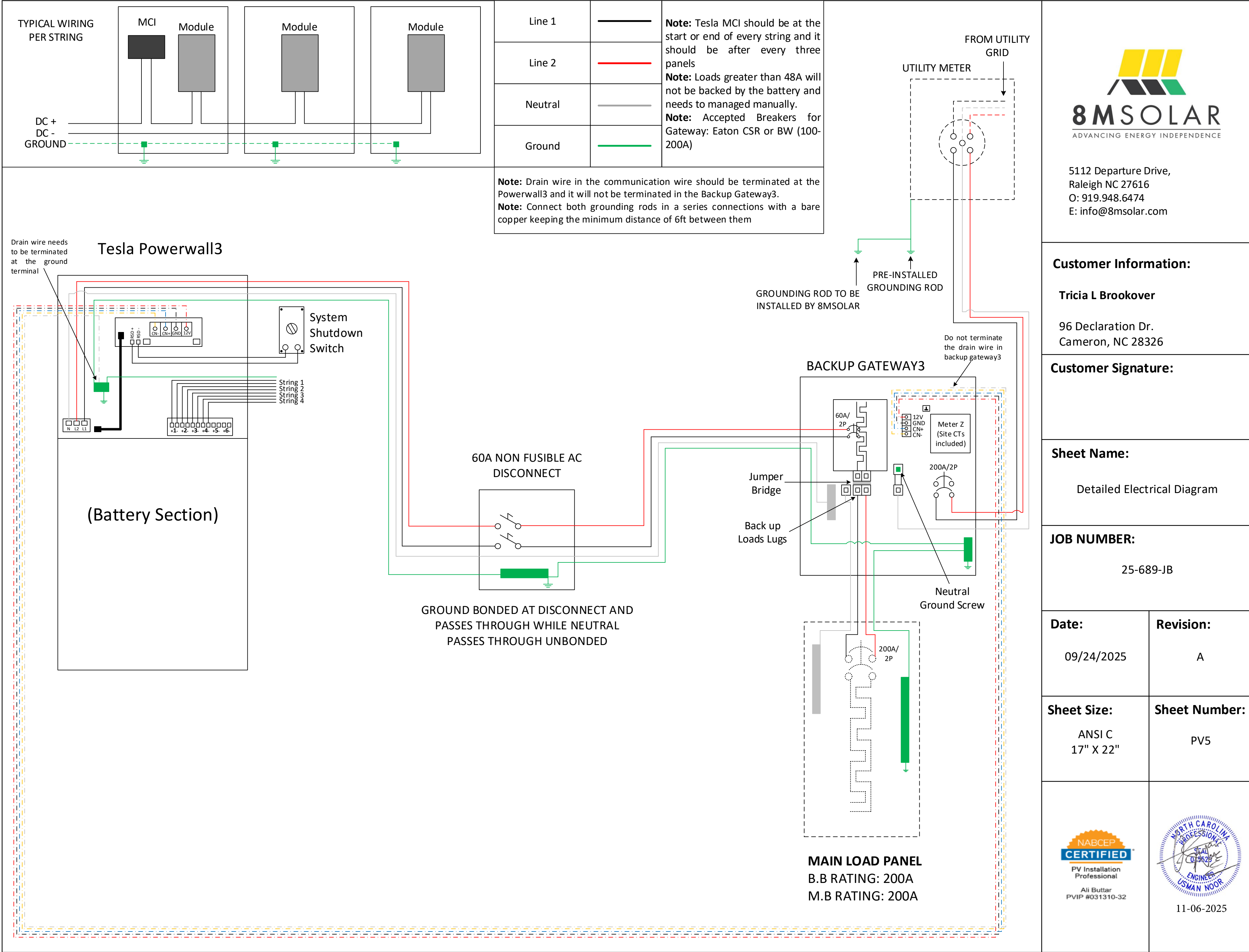
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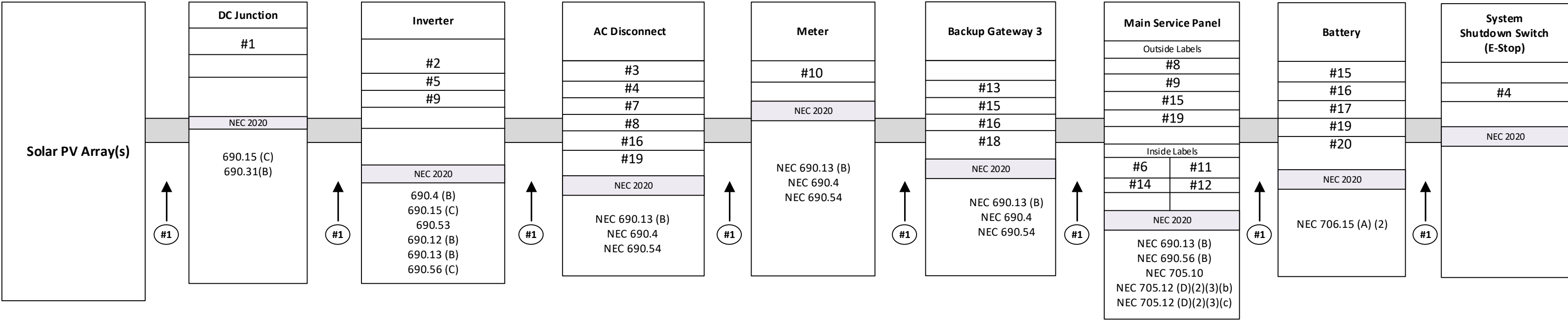
**Sheet Number:**

PV4

NABCEP  
CERTIFIED  
PV Installation Professional  
Ali Buttar  
PVIP #031310-32

11-06-2025





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# LABELING AND WARNING SIGNS: NEC 2020

A. PURPOSE  
PROVIDE EMERGENCY RESPONDERS WITH APPROPRIATE WARNING AND GUIDANCE WITH RESPECT TO ISOLATING THE SOLAR ELECTRIC SYSTEM. THIS CAN FACILITATE IDENTIFYING ENERGIZED ELECTRICAL LINES THAT CONNECT THE SOLAR PANELS TO THE INVERTER, AS SHOULD NOT BE CUT WHEN VENTING FOR SMOKE REMOVAL.

- B. MAIN SERVICE DISCONNECT:
1. RESIDENTIAL BUILDINGS- THE MARKING MAY BE PLACED WITHIN THE MAIN SERVICE DISCONNECT. THE MARKING SHALL BE PLACED ON THE OUTSIDE COVER IF THE MAIN SERVICE DISCONNECT IS OPERABLE WITH THE SERVICE PANEL CLOSED.
  2. COMMERCIAL BUILDINGS- THE MARKINGS SHALL BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT CLEARLY VISIBLE FROM THE LOCATION WHERE THE LEVER IS OPERATED
  3. MARKINGS, VERBIAGE, FORMAT AND TYPE OF MATERIAL

- a. VERBIAGE: CAUTION; SOLAR ELECTRIC SYSTEM CONNECTED  
b. FORMAT:

- (1) WHITE LETTERING ON A RED BACKGROUND  
(2) MINIMUM 3/8 INCH LETTER HEIGHT  
(3) ALL LETTERS SHALL BE CAPITALIZED  
(4) ARIAL OR SIMILAR FONT, NON-BOLD

- c. MATERIAL:

- (1) REFLECTIVE, WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT (USE UL-969) AS STANDARD FOR WEATHER RATING); DURABLE ADHESIVE MATERIALS MEET THIS REQUIREMENT.

C. MARKING REQUIREMENTS ON DC CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, DC COMBINERS AND JUNCTION BOXES;  
1. MARKING: PLACEMENT, VERBIAGE, FORMAT AND TYPE OF MATERIAL

- a. PLACEMENT: MARKINGS SHALL BE PLACED EVERY 10 (TEN) FEET ON ALL INTERIOR AND EXTERIOR DC CONDUITS, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES, AT TURNS ABOVE AND/OR BELOW PENETRATIONS, ALL DC COMBINERS AND JUNCTION

BOXES.

- b. VERBIAGE: CAUTION SOLAR CIRCUIT  
c. THE FORMAT AND TYPE OF MATERIAL SHALL ADHERE TO SECTION B-3.B & C ABOVE

D. INVERTERS ARE NOT REQUIRED TO HAVE CAUTION MARKINGS

#1 WARNING: PHOTOVOLATIC POWER SOURCE

#2 PHOTOVOLATIC  
DC DISCONNECT

#3 PHOTOVOLATIC  
AC DISCONNECT

#4 RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

#5 MAXIMUM VOLTAGE 550Vdc  
MAX. RATED CIRCUIT CURRENT 13.78Adc  
OF THE CHARGE CONTROLLER OR  
DC-TO-DC CONVERTER (IF INSTALLED)

#6 PHOTOVOLTIC POWER SOURCE  
OPERATING AC VOLTAGE 240 V  
MAXIMUM OPERATING AC OUTPUT CURRENT 48 A

#7 AC DISCONNECT PHOTOVOLTAIC SYSTEM POWER SOURCE  
RATED AC OUTPUT CURRENT 48 AMPS  
NOMINAL OPERATING AC VOLTAGE 240 VOLTS

#8 WARNING  
ELECTRIC SHOCK HAZARD  
TERMINAL ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

#9 WARNING  
THREE POWER SOURCES  
SOURCES: UTILITY GRID, BATTERY AND PV SOLAR ELECTRIC SYSTEM

#10 WARNING  
THREE POWER SOURCES  
SOURCES: UTILITY GRID, BATTERY AND PV SOLAR ELECTRIC SYSTEM

#11 WARNING  
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

#12 WARNING  
POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

#13 WARNING  
SOLAR ELECTRIC CIRCUIT BREAKER IS BACKFEED

#14 SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN  
TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY

#15 SOLAR AC DISCONNECT LOCATED AT SOUTH-EAST SIDE WALL OF THE HOUSE BESIDE THE UTILITY METER

#16 SERVICE DISCONNECT LOCATED IN THE BACKUP GATEWAY3 PANEL

#17 BATTERY

#18 MAIN BATTERY SYSTEM DISCONNECT

#19 BATTERY DISCONNECT LOCATED IN THE BACKUP GATEWAY3 PANEL

#20 ENERGY STORAGE SYSTEM DISCONNECT  
NOMINAL ESS AC VOLTAGE 240V  
NOMINAL ESS DC VOLTAGE 550V  
AVAILABLE FAULT CURRENT DERIVED FROM THE ESS 160A  
DATE CALCULATION PERFORMED 09/24/2025

## Customer Information:

Tricia L Brookover

96 Declaration Dr.  
Cameron, NC 28326

## Customer Signature:

## Sheet Name:

PV Labels

## JOB NUMBER:

25-689-JB

## Date:

09/24/2025

## Revision:

A

## Sheet Size:

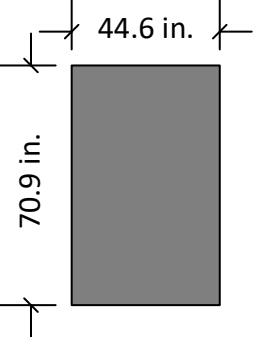
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17" X 22"

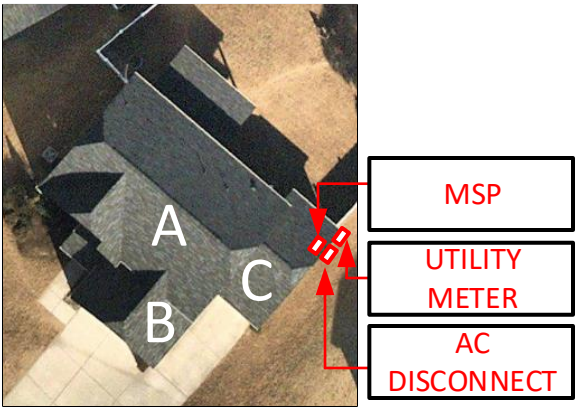
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PV6



11-06-2025

| ROOF DESCRIPTION |       |         |                | MODULE DIMENSIONS                                                                 | Rails and Splices : PSR-B84 (BLACK) | Roof Attachment : InstaFlash2                                          |
|------------------|-------|---------|----------------|-----------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------|
| ROOF             | PITCH | AZIMUTH | NO. OF MODULES |  |                                     |                                                                        |
| A                | 36°   | 220°    | 15             |                                                                                   |                                     |                                                                        |
| B                | 45°   | 130°    | 05             |                                                                                   | Rafter Spacing : 24 in              | There is one layer of shingles<br>Roofing material is asphalt shingles |
| C                | 36°   | 220°    | 06             |                                                                                   | Attachment Span : 6ft               | The roof is located in 120mph wind zone                                |
|                  |       |         |                |                                                                                   |                                     |                                                                        |



5112 Departure Drive,  
Raleigh NC 27616  
O: 919.948.6474  
E: info@8msolar.com

Customer Information:

Tricia L Brookover

96 Declaration Dr.  
Cameron, NC 28326

Customer Signature:

Sheet Name:

Bill of Material

JOB NUMBER:

25-689-JB

Date:

09/24/2025

Revision:

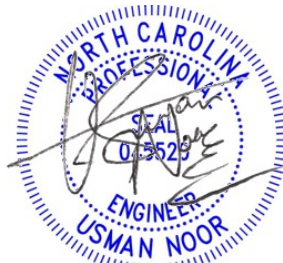
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Sheet Size:

ANSI C  
17" X 22"

Sheet Number:

PV7



11-06-2025

| PV LABELS |        |     |
|-----------|--------|-----|
| Sr No     | Code   | Qty |
| 01        | 02-314 | 12  |
| 02        | 03-301 | 01  |
| 03        | 03-302 | 01  |
| 04        | 02-316 | 02  |
| 05        | 03-308 | 01  |
| 06        | 03-390 | 01  |
| 07        | 03-306 | 01  |
| 08        | 05-215 | 02  |
| 09        | 05-230 | 02  |
| 10        | 03-230 | 01  |
| 11        | 05-372 | 01  |
| 12        | 05-216 | 01  |
| 13        | 05-342 | 01  |
| 14        | 07-111 | 01  |
| 15        | 8M-001 | 03  |
| 16        | 8M-002 | 03  |
| 17        | 03-395 | 01  |
| 18        | 04-304 | 01  |
| 19        | 8M-004 | 03  |
| 20        | 03-511 | 01  |

RAILS AND MOUNTING SYSTEM

- 38 x PSR-B84: Pegasus Rail, Black, 84" (7 Feet)
- 22 x PSR-SPLS: Pegasus - Bonded, Structural Splice
- 36 x PSR-MCB: Pegasus - Multiclamp, Mid/End, 30 to 40 mm, Black
- 32 x PSR-HEC: Pegasus - Hidden End Clamp
- 10 x PSR-LUG: Pegasus - Grounding Lug
- 66 x PSR-WMC: Pegasus - Wire Management Clip
- 05 x PSR-CBG: Pegasus - Cable Grip
- 32 x PSR-CAP: Pegasus - End Cap
- 55 x PIF2-BDT: Instaflash2 - Deck OR Rafter Attach - With Dovetail T-Bolt
- 140 x PF-DRW85: Pegasus Fastener – Deck-Rafter 85MM
- 52 x S6405: Heyco Wire Clips
- 02 x GEOC GC66100: SEALANT 2300 10.3OZ CLEAR (20) GEOCEL 230 TRIPOLY CLEAR
- 15 x MULTI 32.0017P0001-UR: PV MC4 MALE (10) [1000]
- 15 x MULTI 32.0016P0001-UR: PV MC4 FEMALE (10) [1000]

SOLAR MODULES

- 26 x CANADIAN SOLAR CS6.1-54TM-460H

INVERTER & SUPPORTING ITEMS

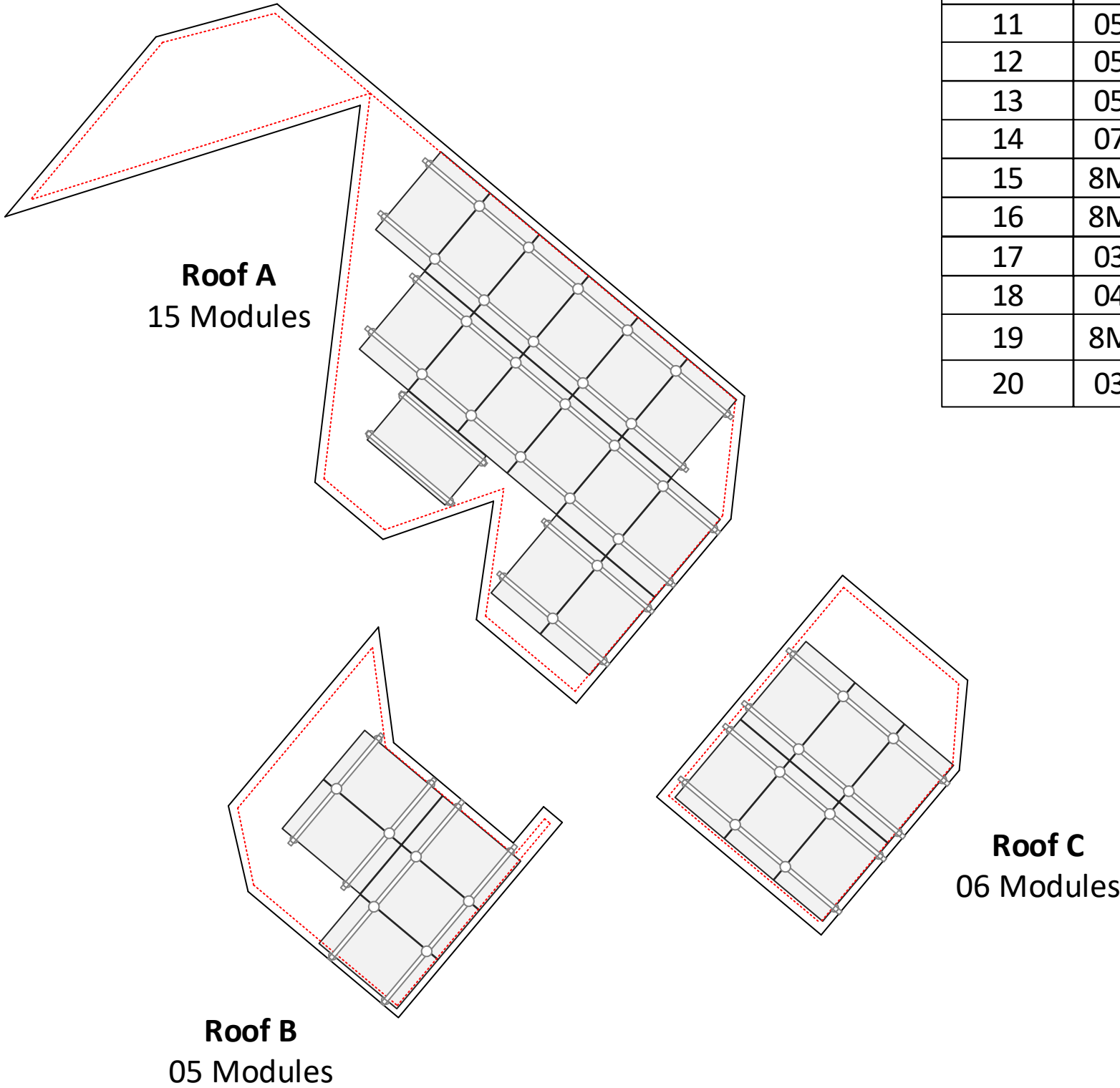
- 01 x 1707000-00-J :Tesla Powerwall3
- 09 x 1879359-15-B: Tesla MCI-2 High Current
- 01 x 1841000-01-C: Backup Gateway 3
- 01 x 1549184-00-X: 02" Conduit Hub Kit

Wire

- 01 x WIRPV 2KVPV10STRBLK500: PV #10 BLK 2000V CU 500ft.

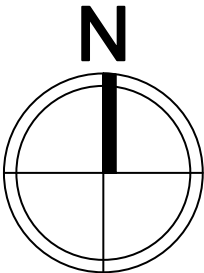
ELECTRICAL ITEMS

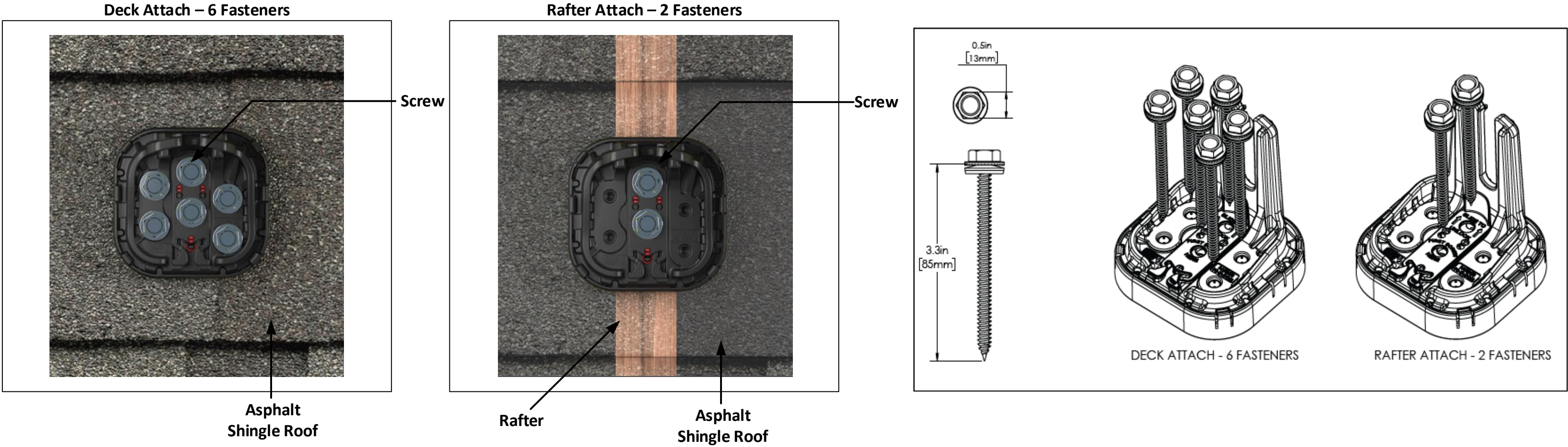
- 01 x BW2200: Gateway Main Breaker-Eaton BW2200
- 01 x BR260: Eaton BR 60/2
- 01 x DG222URB: 250volt/60amp/2pole non fusible disconnect (NEMA 3R)
- 01 x EATON M22PVK01: 22.5MM PB - EMG STOP W/ CONTACTOR
- 01 x Eaton M22I1PG: SFC MTG ENC - Emergency Stop Enclosure
- 01 x EZSLR JB-1.2: SolaDeck Boxes
- 25 x PSCA-0MB0: Roof Flashing Conduit Supports
- 25 x BPT 921S: 3/4" 1H EMT PIPE STRAP STEEL



6in setback from  
sides of the roof

BILL OF MATERIAL  
SCALE: 1/8" - 1'





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Customer Information:

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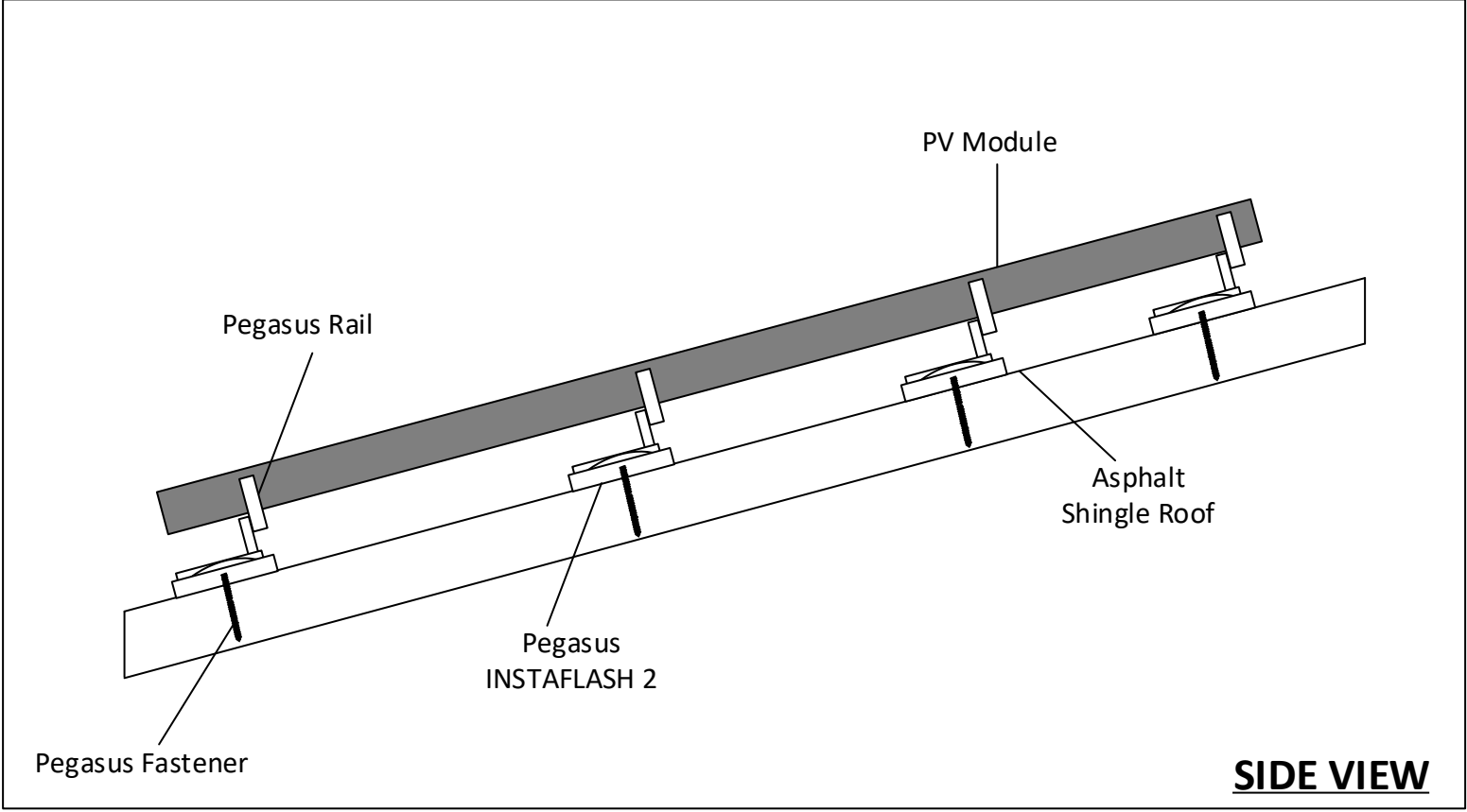
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Sheet Number:

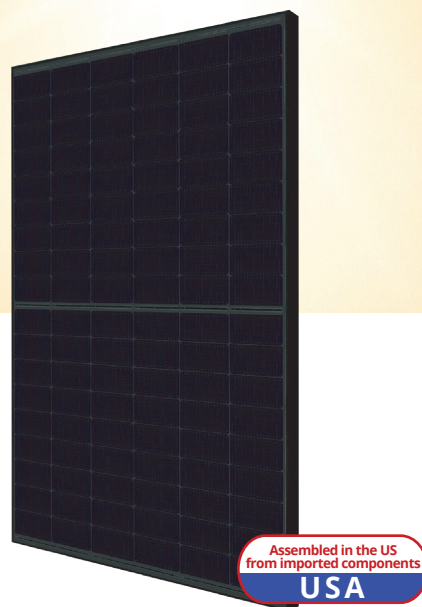
PV8

|                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Multi-Clamp                                                                       | Hidden End Clamp                                                                    | MLPE Mount                                                                          | Dovetail T-Bolt                                                                     | Ground Lug                                                                           | Cable Grip                                                                            |
| Torque Value<br>100 in-lbs.                                                       | Torque Value<br>135 in-lbs.                                                         | Torque Value<br>135 in-lbs.                                                         | Torque Value<br>300 in-lbs.                                                         | Torque Value<br>135 in-lbs.                                                          | Torque Value<br>135 in-lbs.                                                           |



| PV Dead Load |                                                                                                                                                                                           | PV Dead Load |                                                                                                                                                                                          | PV Dead Load |                                                                                                                                                                                          |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roof A       | <p>PV System Dead Load<br/>(Panel + Racking weight) / PV System Area<br/>(15 panels x 46.7 lbs./panel + 117 ft. of racking x 1.17 lb.ft) /<br/>(15 panels x 5.65' x 3.71') = 2.68 psf</p> | Roof B       | <p>PV System Dead Load<br/>(Panel + Racking weight) / PV System Area<br/>(05 panels x 46.7 lbs./panel + 38 ft. of racking x 1.17 lb.ft) /<br/>(05 panels x 5.65' x 3.71') = 2.67 psf</p> | Roof C       | <p>PV System Dead Load<br/>(Panel + Racking weight) / PV System Area<br/>(06 panels x 46.7 lbs./panel + 45 ft. of racking x 1.17 lb.ft) /<br/>(06 panels x 5.65' x 3.71') = 2.67 psf</p> |





# TOPHiKu6 (All-Black)

N-type TOPCon Technology

445 W ~ 470 W

CS6.1-54TM-445 | 450 | 455 | 460 | 465 | 470H

## MORE POWER



Module power up to 470 W  
Module efficiency up to 23.0 %



Excellent anti-LeTID & anti-PID performance.  
Low power degradation, high energy yield



Lower temperature coefficient (Pmax): -0.29%/°C,  
increases energy yield in hot climate



Lower LCOE & system cost

## MORE RELIABLE



Minimizes micro-crack impacts



Heavy snow load up to 8100 Pa,  
wind load up to 6000 Pa\*



**Industry Leading Product Warranty on Materials and Workmanship\***



**Linear Power Performance Warranty\***

**1<sup>st</sup> year power degradation no more than 1%  
Subsequent annual power degradation no more than 0.4%**

\*Subject to the terms and conditions contained in the applicable Canadian Solar Limited Warranty Statement. Also this 25-year limited product warranty is available only for products installed and operating on rooftops in certain regions.

## MANAGEMENT SYSTEM CERTIFICATES\*

ISO 9001:2015 / Quality management system  
ISO 14001:2015 / Standards for environmental management system  
ISO 45001: 2018 / International standards for occupational health & safety  
IEC62941: 2019 / Photovoltaic module manufacturing quality system

## PRODUCT CERTIFICATES\*

IEC 61215 / IEC 61730  
IEC 61701 / IEC 62716 / IEC 60068-2-68  
Take-e-way



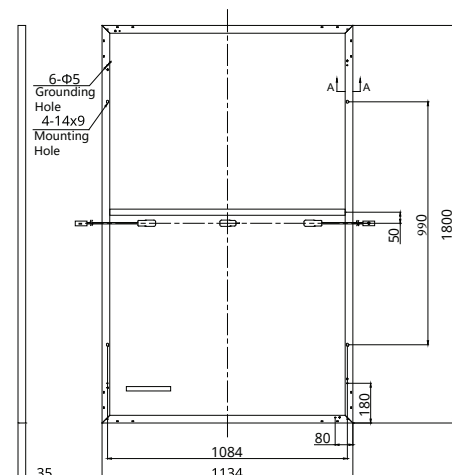
\* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

**CSI Solar Co., Ltd.** is committed to providing high quality solar photovoltaic modules, solar energy and battery storage solutions to customers. The company was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey. Over the past 22 years, it has successfully delivered over 100 GW of premium-quality solar modules across the world.

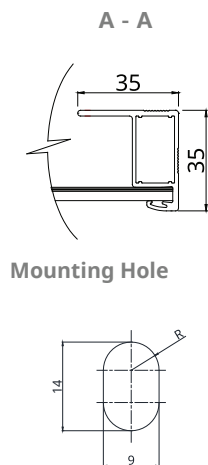
\* For detailed information, please refer to the Installation Manual.

## ENGINEERING DRAWING (mm)

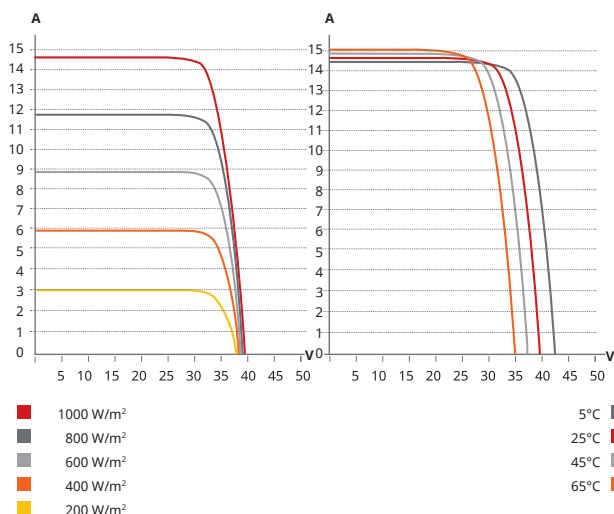
### Rear View



### Frame Cross Section



## CS6.1-54TM-455H / I-V CURVES



## ELECTRICAL DATA | STC\*

| CS6.1-54TM                   | 445H                                                                      | 450H    | 455H    | 460H    | 465H    | 470H    |
|------------------------------|---------------------------------------------------------------------------|---------|---------|---------|---------|---------|
| Nominal Max. Power (Pmax)    | 445 W                                                                     | 450 W   | 455 W   | 460 W   | 465 W   | 470 W   |
| Opt. Operating Voltage (Vmp) | 32.8 V                                                                    | 33.0 V  | 33.2 V  | 33.4 V  | 33.6 V  | 33.8 V  |
| Opt. Operating Current (Imp) | 13.59 A                                                                   | 13.66 A | 13.72 A | 13.78 A | 13.85 A | 13.91 A |
| Open Circuit Voltage (Voc)   | 38.7 V                                                                    | 38.9 V  | 39.1 V  | 39.3 V  | 39.5 V  | 39.7 V  |
| Short Circuit Current (Isc)  | 14.48 A                                                                   | 14.55 A | 14.61 A | 14.69 A | 14.77 A | 14.86 A |
| Module Efficiency            | 21.8%                                                                     | 22.0%   | 22.3%   | 22.5%   | 22.8%   | 23.0%   |
| Operating Temperature        | -40°C ~ +85°C                                                             |         |         |         |         |         |
| Max. System Voltage          | 1500V (IEC/UL) or 1000V (IEC/UL)                                          |         |         |         |         |         |
| Module Fire Performance      | TYPE 1 (UL 61730 1500V) or TYPE 2 (UL 61730 1000V) or CLASS C (IEC 61730) |         |         |         |         |         |
| Max. Series Fuse Rating      | 25 A                                                                      |         |         |         |         |         |
| Application Classification   | Class A                                                                   |         |         |         |         |         |
| Power Tolerance              | 0 ~ + 10 W                                                                |         |         |         |         |         |

\* Under Standard Test Conditions (STC) of irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.

## MECHANICAL DATA

| Specification                         | Data                                                |
|---------------------------------------|-----------------------------------------------------|
| Cell Type                             | TOPCon cells                                        |
| Cell Arrangement                      | 108 [2 X (9 X 6)]                                   |
| Dimensions                            | 1800 × 1134 × 35 mm<br>(70.9 × 44.6 × 1.38 in)      |
| Weight                                | 23 kg (50.7 lbs)                                    |
| Front Cover                           | 3.2 mm tempered glass with anti-ref-lective coating |
| Frame                                 | Anodized aluminium alloy                            |
| J-Box                                 | IP68, 3 bypass diodes                               |
| Cable                                 | 4 mm <sup>2</sup> (IEC), 12 AWG (UL)                |
| Connector                             | T6, MC4, MC4-EVO2 or MC4- EVO2A                     |
| Cable Length<br>(Including Connector) | 1550 mm (61.0 in) (+) /<br>1100 mm (43.3 in) (-)    |
| Per Pallet                            | 30 pieces                                           |
| Per Container (40' HQ)                | 720 pieces                                          |

## ELECTRICAL DATA | NMOT\*

| CS6.1-54TM                   | 445H    | 450H    | 455H    | 460H    | 465H    | 470H    |
|------------------------------|---------|---------|---------|---------|---------|---------|
| Nominal Max. Power (Pmax)    | 335 W   | 339 W   | 343 W   | 347 W   | 351 W   | 354 W   |
| Opt. Operating Voltage (Vmp) | 30.9 V  | 31.1 V  | 31.3 V  | 31.5 V  | 31.7 V  | 31.9 V  |
| Opt. Operating Current (Imp) | 10.85 A | 10.91 A | 10.96 A | 11.02 A | 11.07 A | 11.12 A |
| Open Circuit Voltage (Voc)   | 36.5 V  | 36.7 V  | 36.9 V  | 37.1 V  | 37.3 V  | 37.5 V  |
| Short Circuit Current (Isc)  | 11.68 A | 11.74 A | 11.79 A | 11.85 A | 11.92 A | 11.99 A |

\* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m<sup>2</sup> spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

## TEMPERATURE CHARACTERISTICS

| Specification                        | Data         |
|--------------------------------------|--------------|
| Temperature Coefficient (Pmax)       | -0.29 % / °C |
| Temperature Coefficient (Voc)        | -0.25 % / °C |
| Temperature Coefficient (Isc)        | 0.05 % / °C  |
| Nominal Module Operating Temperature | 42 ± 3°C     |

## PARTNER SECTION



\* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. CSI Solar Co., Ltd. reserves the right to make necessary adjustment to the information described herein at any time without further notice. Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

# Powerwall 3

## Power Everything

Powerwall 3 is a fully integrated solar and battery system, designed to accelerate the transition to sustainable energy. Customers can receive whole home backup, cost savings, and energy independence by producing and consuming their own energy while participating in grid services. Once installed, customers can manage their system using the Tesla App to customize system behavior to meet their energy goals.

Powerwall 3 achieves this by supporting up to 20 kW DC of solar and providing up to 11.5 kW AC of continuous power per unit. It has the ability to start heavy loads rated up to 185 LRA, meaning a single unit can support the power needs of most homes. Powerwall 3 Expansions make it easier and more affordable to scale up customers' systems to meet their current or future needs. Powerwall 3 is designed for fast and efficient installations, modular system expansion, and simple connection to any electrical service.



# Powerwall 3 Technical Specifications

## System Technical Specifications

|                                                                                        |                                                                                                                                                    |          |           |           |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|-----------|
| Model Number                                                                           | 1707000-xx-y                                                                                                                                       |          |           |           |
| Nominal Grid Voltage (Input & Output)                                                  | 120/240 VAC                                                                                                                                        |          |           |           |
| Grid Type                                                                              | Split phase                                                                                                                                        |          |           |           |
| Frequency                                                                              | 60 Hz                                                                                                                                              |          |           |           |
| Nominal Battery Energy                                                                 | 13.5 kWh AC <sup>1</sup>                                                                                                                           |          |           |           |
| Nominal Output Power (AC)                                                              | 5.8 kW                                                                                                                                             | 7.6 kW   | 10 kW     | 11.5 kW   |
| Maximum Apparent Power                                                                 | 5,800 VA                                                                                                                                           | 7,600 VA | 10,000 VA | 11,500 VA |
| Maximum Continuous Current                                                             | 24 A                                                                                                                                               | 31.7 A   | 41.7 A    | 48 A      |
| Overcurrent Protection Device <sup>2</sup>                                             | 30 A                                                                                                                                               | 40 A     | 60 A      | 60 A      |
| Configurable Maximum Continuous Discharge Power Off-Grid (PV Only, -20°C to 25°C)      | 15.4 kW <sup>3</sup>                                                                                                                               |          |           |           |
| Maximum Continuous Charge Current / Power (Powerwall 3 only)                           | 20.8 A AC / 5 kW                                                                                                                                   |          |           |           |
| Maximum Continuous Charge Current / Power (Powerwall 3 with up to (3) Expansion units) | 33.3 A AC / 8 kW                                                                                                                                   |          |           |           |
| Output Power Factor Rating                                                             | 0 – 1 (Grid Code configurable)                                                                                                                     |          |           |           |
| Maximum Output Fault Current (1 s)                                                     | 160 A                                                                                                                                              |          |           |           |
| Maximum Short-Circuit Current Rating                                                   | 10 kA                                                                                                                                              |          |           |           |
| Load Start Capability                                                                  | 185 LRA                                                                                                                                            |          |           |           |
| Solar to Battery to Home/Grid Efficiency                                               | 89% <sup>1,4</sup>                                                                                                                                 |          |           |           |
| Solar to Home/Grid Efficiency                                                          | 97.5% <sup>5</sup>                                                                                                                                 |          |           |           |
| Power Scalability                                                                      | Up to 4 Powerwall 3 units supported                                                                                                                |          |           |           |
| Energy Scalability                                                                     | Up to 3 Expansion units (for a maximum total of 7 units)                                                                                           |          |           |           |
| Supported Islanding Devices                                                            | Gateway 3, Backup Switch, Backup Gateway 2                                                                                                         |          |           |           |
| Connectivity                                                                           | Wi-Fi (2.4 and 5 GHz), Ethernet, Cellular (LTE/4G <sup>6</sup> )                                                                                   |          |           |           |
| Hardware Interface                                                                     | Dry contact relay, Rapid Shutdown (RSD) certified switch and 2-pin connector, RS-485 for meters                                                    |          |           |           |
| AC Metering                                                                            | Revenue Grade (+/- 0.5%, ANSI C12.20)                                                                                                              |          |           |           |
| Protections                                                                            | Integrated arc fault circuit interrupter (AFCI), Isolation Monitor Interrupter (IMI), PV Rapid Shutdown (RSD) using Tesla Mid-Circuit Interrupters |          |           |           |
| Customer Interface                                                                     | Tesla Mobile App                                                                                                                                   |          |           |           |
| Warranty                                                                               | 10 years                                                                                                                                           |          |           |           |

<sup>1</sup>Values provided for 25°C (77°F), at beginning of life. 3.3 kW charge/discharge power.

<sup>2</sup>See [Powerwall 3 Installation Manual](#) for fuse requirements if using fuse for overcurrent protection.

<sup>3</sup>15.4kW off-grid maximum continuous discharge power is only available if on-grid rating is 11.5 kW. If enabled, Powerwall 3 must be installed with an 80 A breaker and appropriately sized conductors.

<sup>4</sup>Typical solar shifting use case.

<sup>5</sup>Tested using CEC weighted efficiency methodology.

<sup>6</sup>The customer is expected to provide internet connectivity for Powerwall 3; cellular should not be used as the primary mode of connectivity. Cellular connectivity subject to network operator service coverage and signal strength.

# Powerwall 3 Technical Specifications

## Solar Technical Specifications

|                                                     |                     |
|-----------------------------------------------------|---------------------|
| Maximum Solar STC Input                             | 20 kW               |
| Withstand Voltage                                   | 600 V DC            |
| PV DC Input Voltage Range                           | 60 — 550 V DC       |
| PV DC MPPT Voltage Range                            | 60 — 480 V DC       |
| MPPTs                                               | 6                   |
| Maximum Current per MPPT ( $I_{MP}$ )               | 15 A <sup>7,8</sup> |
| Maximum Short Circuit Current per MPPT ( $I_{SC}$ ) | 19 A <sup>8</sup>   |

<sup>7</sup> Only applicable to Powerwall 3 units with 15 A  $I_{MP}$  on the product label. Otherwise, Powerwall 3 has an  $I_{MP}$  of 13 A.

<sup>8</sup> When PV strings are combined on the roof and the DC input current exceeds the MPPT rating, a jumper can be used to combine two MPPTs into a single input to intake DC current up to 30 A  $I_{MP}$  / 38 A  $I_{SC}$  (or 26 A  $I_{MP}$  / 30 A  $I_{SC}$  if Powerwall 3 is labeled with 13 A  $I_{MP}$  / 15 A  $I_{SC}$ ).

## Environmental Specifications

|                         |                                                                                                |
|-------------------------|------------------------------------------------------------------------------------------------|
| Operating Temperature   | –20°C to 50°C (–4°F to 122°F) <sup>9</sup>                                                     |
| Operating Humidity (RH) | Up to 100%, condensing                                                                         |
| Storage Temperature     | –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 Rating        | NEMA 3R                                                                                        |
| Ingress Rating          | IP67 (Battery & Power Electronics)<br>IP55 (Wiring Compartment)                                |
| Pollution Rating        | PD3                                                                                            |
| Operating Noise @ 1 m   | < 50 db(A) typical<br>< 62 db(A) maximum                                                       |

<sup>9</sup> Performance may be de-rated at operating temperatures above 40°C (104°F).

## Compliance Information

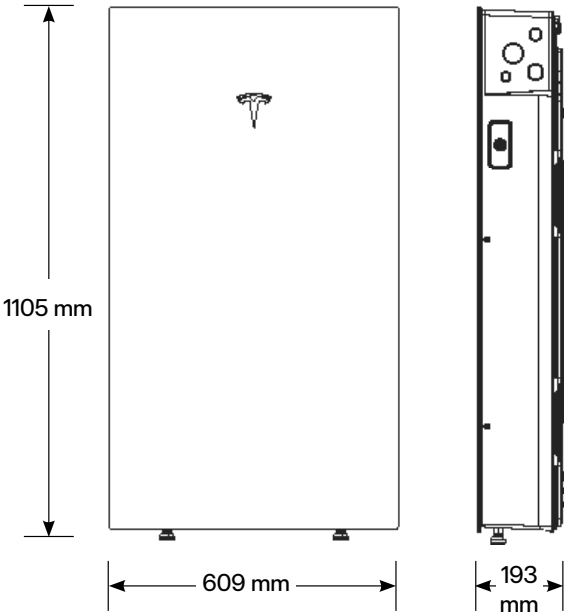
|                 |                                                                                                                                                                                                                                    |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Certifications  | UL 1741, UL 9540, UL 9540A, UL 3741, UL 1741 PCS, UL 1741 SA, UL 1741 SB, UL 1973, UL 1699B, UL 1998, CSA C22.2 No. 0.8, CSA C22.2 No. 107.1, CSA C22.2 No. 330, CSA 22.3 No. 9, IEEE 1547, IEEE 1547A, IEEE 1547.1, CA Rule No.21 |
| Grid Connection | United States and Canada                                                                                                                                                                                                           |
| Emissions       | FCC Part 15 Class B, ICES 003                                                                                                                                                                                                      |
| Environmental   | RoHS Directive 2011/65/EU                                                                                                                                                                                                          |
| Seismic         | AC156, IEEE 693-2005 (high)                                                                                                                                                                                                        |
| Fire Testing    | Meets the unit level performance criteria of UL 9540A                                                                                                                                                                              |

# Powerwall 3 Technical Specifications

## Mechanical Specifications

|                                |                                                        |
|--------------------------------|--------------------------------------------------------|
| Dimensions                     | 1105 x 609 x 193 mm (43.5 x 24 x 7.6 in) <sup>10</sup> |
| Total Weight of Installed Unit | 132 kg (291.2 lb)                                      |
| Weight of Powerwall 3          | 124 kg (272.5 lb)                                      |
| Weight of Glass Front Cover    | 6.5 kg (14.5 lb)                                       |
| Weight of Wall Bracket         | 1.9 kg (4.2 lb)                                        |
| Mounting Options               | Floor or wall mount                                    |

<sup>10</sup> These dimensions include the glass front cover being installed on Powerwall 3.



# Powerwall 3 Expansion Technical Specifications

## Battery Technical Specifications

|                        |                            |
|------------------------|----------------------------|
| Model Number           | 1807000-xx-y               |
| Nominal Battery Energy | 13.5 kWh                   |
| Voltage Range          | 52 – 92 V DC <sup>11</sup> |

<sup>11</sup> Powerwall 3 Expansion units are connected in parallel and are not field serviceable.

## Environmental Specifications

|                         |                                                                                                |
|-------------------------|------------------------------------------------------------------------------------------------|
| Operating Temperature   | –20°C to 50°C (–4°F to 122°F) <sup>12</sup>                                                    |
| Operating Humidity (RH) | Up to 100%, condensing                                                                         |
| Storage Temperature     | –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 Rating        | NEMA 3R                                                                                        |
| Ingress Rating          | IP67                                                                                           |
| Pollution Rating        | PD3                                                                                            |

<sup>12</sup> Performance may be de-rated at operating temperatures above 40°C (104°F).

## Compliance Information

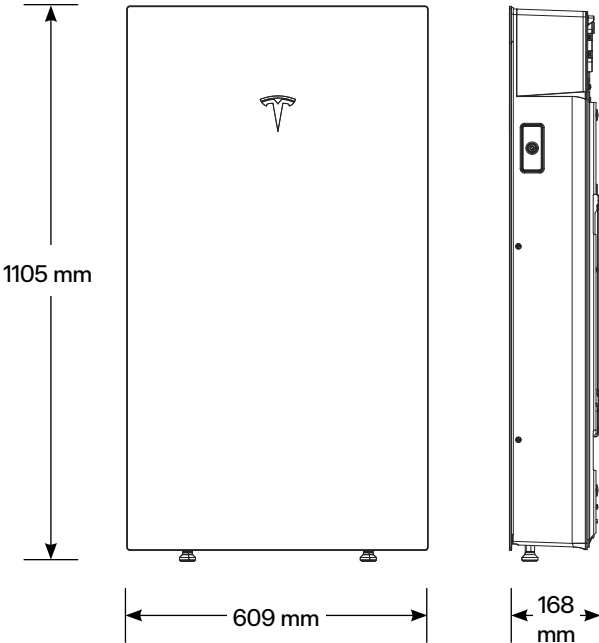
|                |                  |
|----------------|------------------|
| Certifications | UL 1973, UL 9540 |
|----------------|------------------|

## Mechanical Specifications

|                                             |                                                        |
|---------------------------------------------|--------------------------------------------------------|
| Dimensions                                  | 1105 x 609 x 168 mm (43.5 x 24 x 6.6 in) <sup>13</sup> |
| Total Weight of Wall-Mounted Expansion Unit | 118.5 kg (261.2 lb)                                    |
| Weight of Expansion Unit                    | 110 kg (242.5 lb)                                      |
| Weight of Glass Front Cover                 | 6.5 kg (14.5 lb)                                       |
| Weight of Wall Bracket                      | 1.9 kg (4.2 lb)                                        |
| Weight of Expansion Accessories             | 0.7 kg (1.5 lb)                                        |
| Mounting Options                            | Floor or wall mount                                    |
| Stacking Capability (Floor Mount Only)      | Up to (3) Expansion units behind a Powerwall 3         |
| Compatibility with Other Systems            | Only compatible with Powerwall 3                       |
| Connection to Powerwall 3 or Expansions     | Powerwall 3 Expansion harness <sup>14</sup>            |

<sup>13</sup> These dimensions include the glass front cover being installed on Powerwall 3 Expansion.

<sup>14</sup> The Powerwall 3 Expansion harness is a listed component of the UL 9540 certification.



# Solar Shutdown Device Technical Specifications

The Solar Shutdown Device is a Mid-Circuit Interrupter (MCI) and is integral to the rapid shutdown (RSD) function required for rooftop PV systems in accordance with Article 690 of the NEC. When paired with Powerwall 3, solar array shutdown is initiated by an External System Shutdown Switch or the On/Off Enable switch located on Powerwall 3. Systems not subject to rapid shutdown requirements must still install one or more MCIs for functional purposes; see the Powerwall 3 installation manual for details.

| Electrical Specifications                                                                                                                                                                                                                                                       | Model                                                  | MCI-1                                                                       | MCI-2                                  | MCI-2 High Current      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------|-------------------------|
|                                                                                                                                                                                                                                                                                 | Nominal Input DC Current Rating (I <sub>MP</sub> )     | 13 A                                                                        | 13 A                                   | 15 A                    |
|                                                                                                                                                                                                                                                                                 | Maximum Input Short Circuit Current (I <sub>SC</sub> ) | 19 A                                                                        | 17 A                                   | 19 A                    |
|                                                                                                                                                                                                                                                                                 | Maximum System Voltage                                 | 600 V DC                                                                    | 1000 V DC <sup>15</sup>                | 1000 V DC <sup>15</sup> |
|                                                                                                                                                                                                                                                                                 | Maximum Disconnect Voltage <sup>16</sup>               | 600 V DC                                                                    | 165 V DC                               | 165 V DC                |
| <sup>15</sup> Maximum System Voltage is limited by Powerwall to 600 V DC.                                                                                                                                                                                                       |                                                        |                                                                             |                                        |                         |
| <sup>16</sup> Maximum Disconnect Voltage is the maximum voltage allowed across each MCI in the open position (Rapid Shutdown Initiated). An individual MCI-2 has a voltage rating of 165V but in combination (connected in the same string) their voltage ratings are additive. |                                                        |                                                                             |                                        |                         |
| RSD Module Performance                                                                                                                                                                                                                                                          | Maximum Number of Devices per String                   | 5                                                                           |                                        |                         |
|                                                                                                                                                                                                                                                                                 | Control                                                | Power Line Excitation                                                       |                                        |                         |
|                                                                                                                                                                                                                                                                                 | Passive State                                          | Normally Open                                                               |                                        |                         |
|                                                                                                                                                                                                                                                                                 | Maximum Power Consumption                              | 7 W                                                                         |                                        |                         |
|                                                                                                                                                                                                                                                                                 | Warranty                                               | 25 years                                                                    |                                        |                         |
| Environmental Specifications                                                                                                                                                                                                                                                    | Operating Temperature                                  | -40°C to 50°C<br>(-40°F to 122°F)                                           | -45°C to 70°C<br>(-49°F to 158°F)      |                         |
|                                                                                                                                                                                                                                                                                 | Storage Temperature                                    | -30°C to 70°C<br>(-22°F to 158°F)                                           | -30°C to 70°C<br>(-22°F to 158°F)      |                         |
|                                                                                                                                                                                                                                                                                 | Enclosure Rating                                       | NEMA 4X / IP65                                                              |                                        |                         |
| Mechanical Specifications                                                                                                                                                                                                                                                       | Electrical Connections                                 | MC4 Connector                                                               |                                        |                         |
|                                                                                                                                                                                                                                                                                 | Housing                                                | Plastic                                                                     |                                        |                         |
|                                                                                                                                                                                                                                                                                 | Dimensions                                             | 125 x 150 x 22 mm<br>(5 x 6 x 1 in)                                         | 173 x 45 x 22 mm<br>(6.8 x 1.8 x 1 in) |                         |
|                                                                                                                                                                                                                                                                                 | Weight                                                 | 350 g (0.77 lb)                                                             | 120 g (0.26 lb)                        |                         |
|                                                                                                                                                                                                                                                                                 | Mounting Options                                       | ZEP Home Run Clip<br>M4 Screw (#10)<br>M8 Bolt (5/16")<br>Nail / Wood screw | Wire Clip                              |                         |
| Compliance Information                                                                                                                                                                                                                                                          | Certifications                                         | UL 1741 PVRSE, UL 3741,<br>PVRSA (Photovoltaic Rapid Shutdown Array)        |                                        |                         |
|                                                                                                                                                                                                                                                                                 | RSD Initiation Method                                  | External System Shutdown Switch or<br>Powerwall 3 Enable Switch             |                                        |                         |

## UL 3741 PV Hazard Control (and PVRSA) Compatibility

See [UL 3741 Application Addendum](#)

# Gateway 3

Tesla Gateway 3 controls connection to the grid in a Powerwall system, automatically detecting outages and providing seamless transition to backup power. It provides energy monitoring that is used by Powerwall for solar self-consumption, time-based control, and backup operation.

## Performance Specifications

|                                      |                                                                                          |                               |                                                                                                      |
|--------------------------------------|------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------|
| Model Number                         | 1841000-x1-y                                                                             | AC Meter                      | +/- 0.5%                                                                                             |
| Nominal Grid Voltage                 | 120/240 V AC                                                                             | Communication                 | CAN                                                                                                  |
| Grid Configuration                   | Split phase                                                                              | User Interface                | Tesla App                                                                                            |
| Grid Frequency                       | 60 Hz                                                                                    | Backup Transition             | Automatic disconnect for seamless backup                                                             |
| Continuous Current Rating            | 200 A                                                                                    | Overcurrent Protection Device | 100–200 A<br>Service entrance rated Eaton CSR, BWH, or BW, or Square D QOM breakers                  |
| Maximum Supply Short Circuit Current | 22 kA with Square D or Eaton main breaker<br>25 kA with Eaton main breaker <sup>17</sup> | Internal Panelboard           | 200 A<br>8-space/16 circuit breakers Eaton BR, Siemens QP, or Square D HOM breakers rated to 10–125A |
| IEC Protective Class                 | Class I                                                                                  | Warranty                      | 10 years                                                                                             |
| Overvoltage Category                 | Category IV                                                                              |                               |                                                                                                      |

<sup>17</sup> Only Eaton CSR or BWH main breakers are 25 kA rated.

## Environmental Specifications

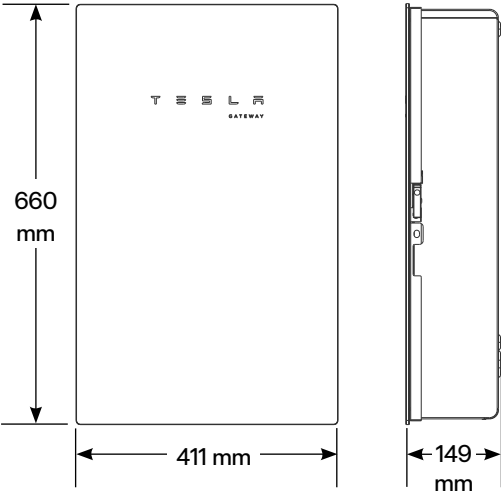
|                         |                               |
|-------------------------|-------------------------------|
| Operating Temperature   | –20°C to 50°C (–4°F to 122°F) |
| Operating Humidity (RH) | Up to 100%, condensing        |
| Maximum Elevation       | 3000 m (9843 ft)              |
| Environment             | Indoor and outdoor rated      |
| Enclosure Type          | NEMA 3R                       |

## Compliance Information

|                |                                                                  |
|----------------|------------------------------------------------------------------|
| Certifications | UL 67, UL 869A, UL 916, UL 1741 PCS, CSA 22.2 107.1, CSA 22.2 29 |
| Emissions      | FCC Part 15, Class B, ICES 003                                   |

## Mechanical Specifications

|                  |                                        |
|------------------|----------------------------------------|
| Dimensions       | 660 x 411 x 149 mm<br>(26 x 16 x 6 in) |
| Weight           | 16.3 kg (36 lb)                        |
| Mounting options | Wall mount                             |



# Backup Switch

The Tesla Backup Switch controls connection to the grid in a Powerwall system, and can be easily installed behind the utility meter or in a standalone meter panel downstream of the utility meter.

The Backup Switch automatically detects grid outages, providing a seamless transition to backup power. It communicates directly with Powerwall, allowing home energy usage monitoring from any mobile device with the Tesla app.

## Performance Specifications

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Model Number                         | 1624171-xx-y                     |
| Continuous Load Rating               | 200 A, 120/240 V split phase     |
| Maximum Supply Short Circuit Current | 22 kA with breaker <sup>18</sup> |
| Communication                        | CAN                              |
| AC Meter                             | +/- 0.5%                         |
| Expected Service Life                | 21 years                         |
| Warranty                             | 10 years                         |

<sup>18</sup> Breaker maximum supply short circuit current rating must be equal to or greater than the available fault current.

## Environmental Specifications

|                       |                                |
|-----------------------|--------------------------------|
| Operating Temperature | −40°C to 50°C (−40°F to 122°F) |
| Storage Temperature   | −40°C to 85°C (−40°F to 185°F) |
| Enclosure Rating      | NEMA 3R                        |
| Pollution Rating      | PD3                            |

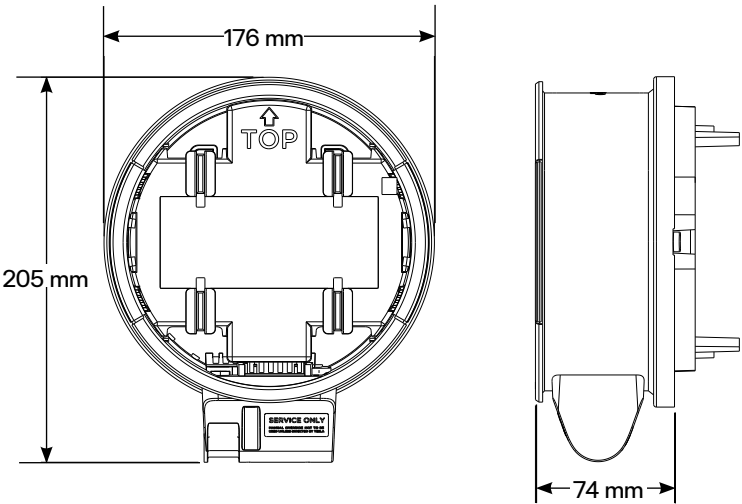
## Compliance Information

|                  |                                                     |
|------------------|-----------------------------------------------------|
| Safety Standards | USA: UL 414, UL 414 SB, UL 2735, UL 916, CA Prop 65 |
| Emissions        | FCC Part 15, Class B, ICES 003                      |

## Mechanical Specifications

|                                |                                                         |
|--------------------------------|---------------------------------------------------------|
| Dimensions                     | 176 x 205 x 74 mm (6.9 x 8.1 x 2.9 in)                  |
| Weight                         | 2.8 lb                                                  |
| Meter and Socket Compatibility | ANSI Type 2S, ringless or ring type                     |
| External Service Interface     | Contactor manual override <sup>19</sup><br>Reset button |
| Conduit Compatibility          | 1/2-inch NPT                                            |

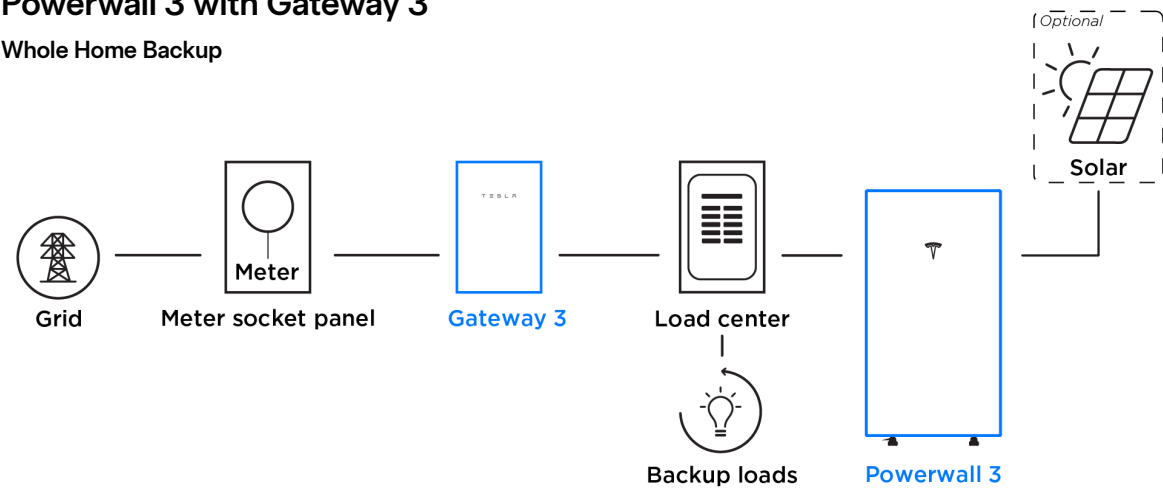
<sup>19</sup> Manually overrides the contactor position during a service event.



# Powerwall 3 Example System Configurations

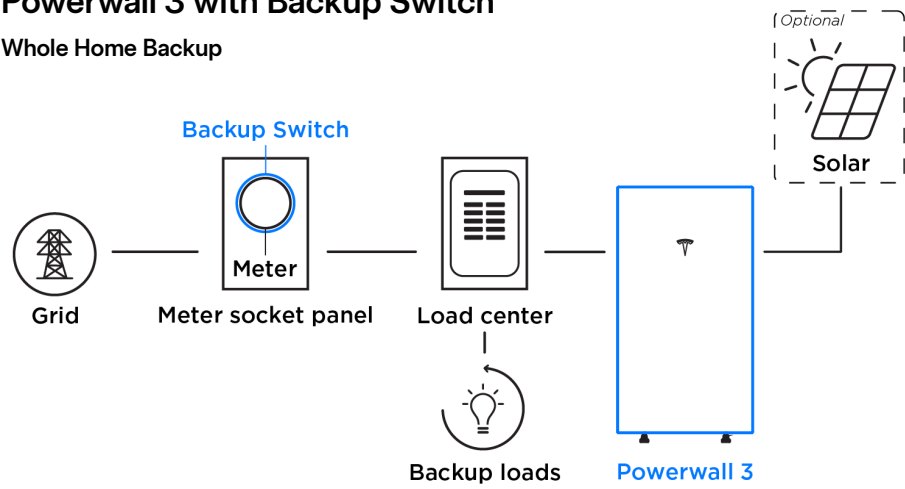
## Powerwall 3 with Gateway 3

Whole Home Backup



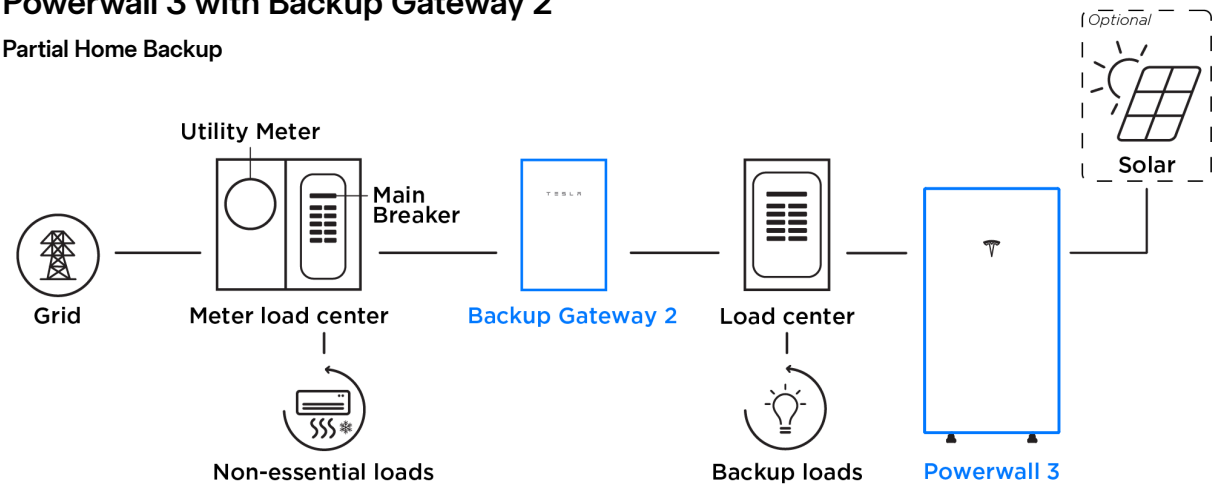
## Powerwall 3 with Backup Switch

Whole Home Backup



## Powerwall 3 with Backup Gateway 2

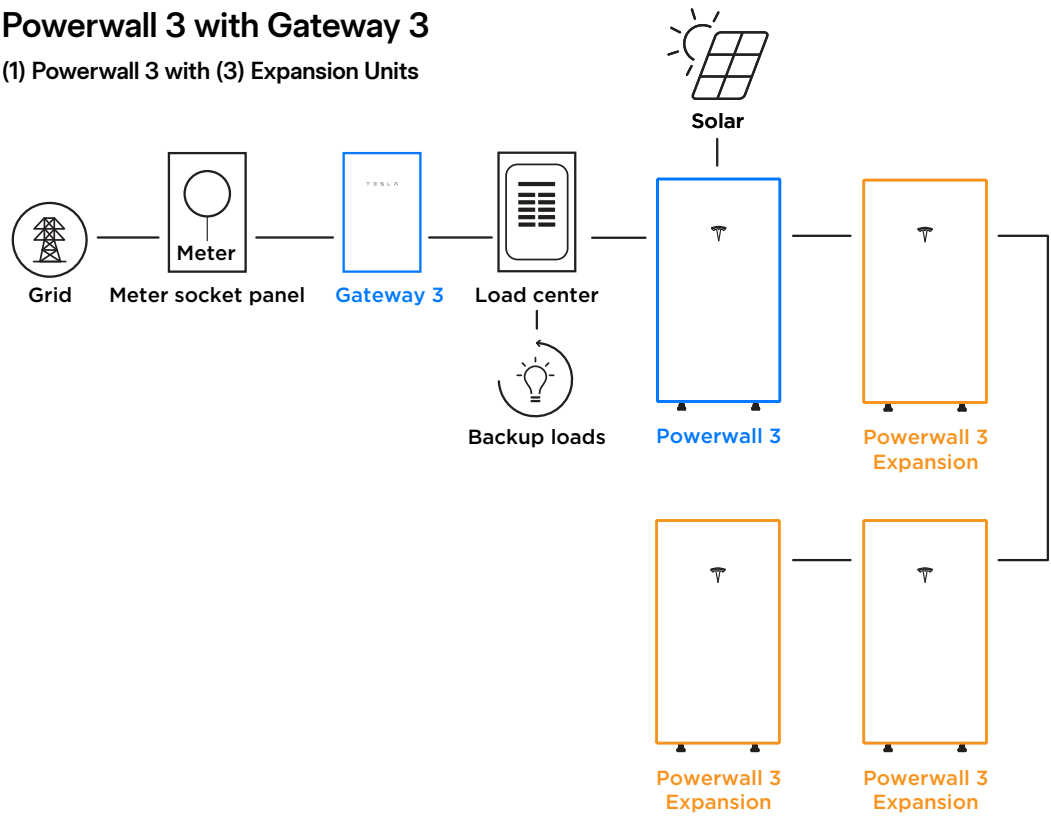
Partial Home Backup



# Powerwall 3 Example System Configurations

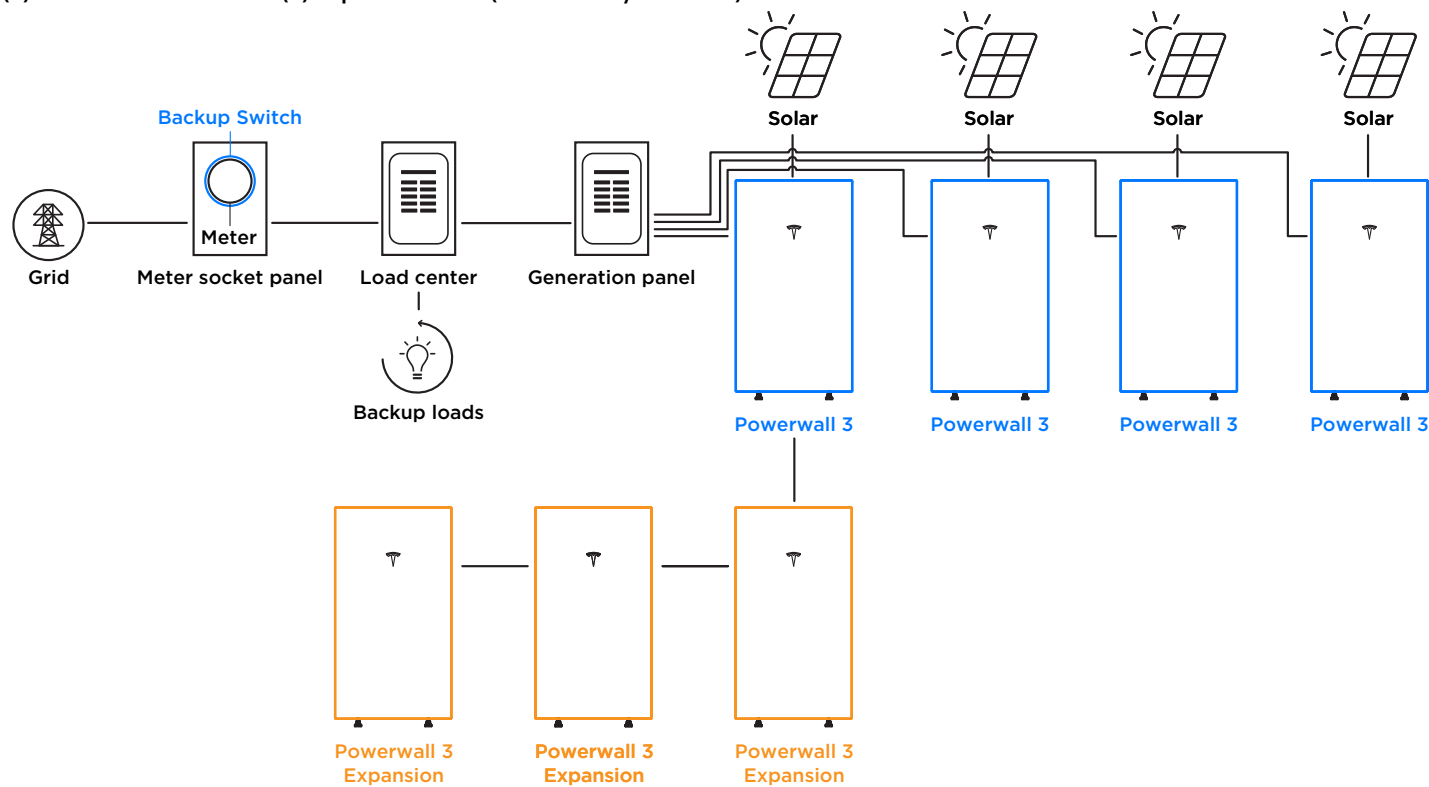
## Powerwall 3 with Gateway 3

(1) Powerwall 3 with (3) Expansion Units



## Powerwall 3 with Backup Switch

(4) Powerwall 3 Units with (3) Expansion Units (Maximum System Size)



# RAIL SYSTEM

## One Clamp Anywhere

The Multi-Clamp works as mid- or end-clamp, and fits standard 30-40mm frames.

## Instant Bonding

The N-S Bonding Jumper bonds row to row with no tools.

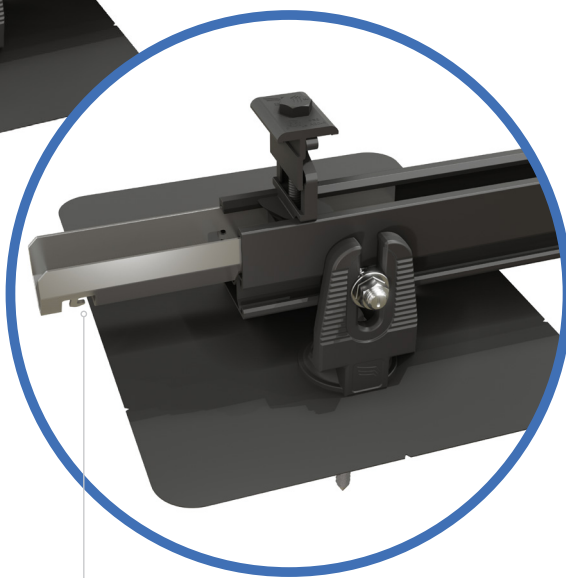


## Lifetime Wire Management

Open rail channel holds and protects wires. Clamps won't pinch wires after tightening.

## Bonding Structural Splice

Connect rails instantly, without tools, interference or limitations.



## Next-Level Solar Mounting

A complete system for hassle-free rooftop installation, from watertight mounts to lifetime wire management.



### Simplicity

1/2" socket for everything.  
One clamp for mid or end.  
No tool splicing and bonding.  
Easy wire management.



### Code Compliant

UL 2703 listed  
LTR-AE-001-2012 listed  
Class A fire rating for any slope  
ASCE 7-16 PE Certified



### Premium Aesthetics

The narrowest panel gap available. Optional Hidden End Clamps and End Caps provide a flush look on the edge of the array.



### Watertight for Life

Secured on industry-leading Pegasus Mounts, for composite shingle and tile roofs. Backed by a 25-year warranty.



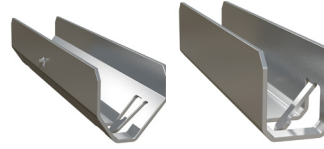
**Pegasus Rail**

Available in 14' and 7' lengths for easy layout and shipping.  
Open-channel design holds MC4 connectors, PV wire and trunk cables.  
Black and Mill finish



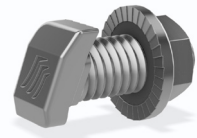
**Pegasus Max Rail**

Maximum-strength design.  
Meets specifications for high snow-load and hurricane zones.  
Black and Mill finish



**Splice and Max Splice**

Installs by hand.  
Works over mounts.  
Structurally connects and bonds rails automatically; UL2703 listed as reusable.



**Dovetail T-bolt**

Dovetail shape for extra strength.  
Uses 1/2" socket.



**Multi-Clamp**

Fits 30-40mm PV frames, as mid- or end-clamp.  
Twist-locks into position; doesn't pinch wires in rail.  
Bonds modules to rail; UL2703 listed as reusable



**Hidden End Clamp**

Offers premium edge appearance.  
Preinstalled pull-tab grips rail edge, allowing easy, one-hand installation.  
Tucks away for reuse.



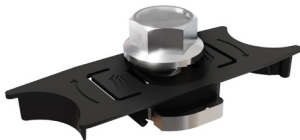
**Ground Lug**

Holds 6 or 8 AWG wire.  
Mounts on top or side of rail.  
Assembled on MLPE Mount.  
UL2703 listed as reusable.



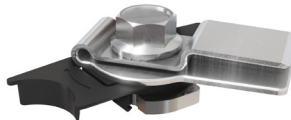
**N-S Bonding Jumper**

Installs by hand, eliminates row-to-row copper wire.  
UL2703 listed as reusable only with Pegasus Rail.



**MLPE Mount**

Secures and bonds most micro-inverters and optimizers to rail.  
Connectors and wires easily route underneath after installation.  
UL2703 listed as reusable.



**Cable Grip**

Secures four PV wires or two trunk cables.  
Stainless-steel backing provides durable grip.  
Eliminates sagging wires.



**Wire Clip**

Hand operable.  
Holds wires in channel.  
Won't slip.



**End Cap and Max End Cap**

Fits flush to PV module and hides raw or angled cuts.  
Hidden drain quickly clears water from rail.

## Certifications:

- UL 2703, Edition 1
- LTR-AE-001-2012
- ASCE 7-16 PE certified
- Class A fire rating for any slope roof



**FREE**  
PEGASUS SOLAR  
Design Tool

Quickly calculate the most efficient layout, spans and materials needed to suit your job. Visit the Pegasus Customer Portal. [pegasussolar.com/portal](https://www.pegasussolar.com/portal)

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| LOAD       |            | SPAN         |    |    |    |
|------------|------------|--------------|----|----|----|
| SNOW (PSF) | WIND (MPH) | 32"          | 4' | 6' | 8' |
| 0          | 120        | PEGASUS RAIL |    |    |    |
|            | 160        |              |    |    |    |
|            | 190        |              |    |    |    |
| 15         | 140        | PEGASUS RAIL |    |    |    |
|            | 160        |              |    |    |    |
|            | 190        |              |    |    |    |
| 30         | 160        | PEGASUS RAIL |    |    |    |
|            | 190        |              |    |    |    |
| 45         | 190        | PEGASUS RAIL |    |    |    |
| 70         | 190        | PEGASUS RAIL |    |    |    |
| 110        | 190        | PEGASUS RAIL |    |    |    |

For reference only. Spans above are calculated using ASCE 7-16 for a Gable Roof, Exposure Category B, 7-20deg roof angle, 30ft mean roof height with non-exposed modules. For PE certified span tables, visit [www.pegasussolar.com/spans](https://www.pegasussolar.com/spans).

## Rafter or Deck Attach!

- No pilot holes
- Pre-installed sealant
- No caulking, no ripping shingles



## Pre-installed sealant

**Before:** Sealant contained by protective cage. No contact with hands or tools.



## Instant, watertight seal

**After:** Non-hardening sealant automatically fills all gaps, overlays and butt joints.



## Install in any season

Install in 0 to 170° F weather, including rain and sleet. Watertight for life.

# The Ultimate Comp Roof Attachment

Simple to use. Works for rafter or deck attach. No caulking, no ripped shingles, no mess. Pre-installed sealant acts as a chemical flashing and fills all gaps, voids, and butt joints for an instant, watertight seal.



### 25-Year Warranty

Manufactured with advanced materials and coatings to outlast the roof itself



### Code Compliant

Fully IBC/CBC code compliant  
Exceeds ASCE 7-22 standards  
UL2703 certified



### Self-Healing

Proprietary non-hardening sealant will flex and reseal over years of thermal expansion and contraction



### Larger Spans

Extra-large L-foot and proprietary screws result in larger spans between mounts

**1**  
Release Safety.



**2**  
Install screw through center hole, and drive into roof until InstaFlash2 pushes through cage and seats onto the roof.



**3**  
If screw hits rafter, drive second screw in hole above. Ensure screws are embedded at least 2.5" into rafter. Installation complete.



**4**  
If first screw misses rafter, install second screw into the left or right screw holes over rafter.

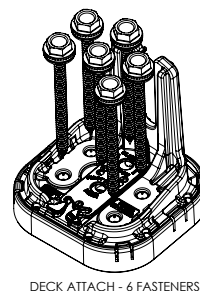
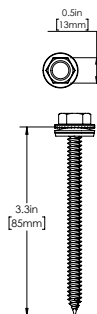
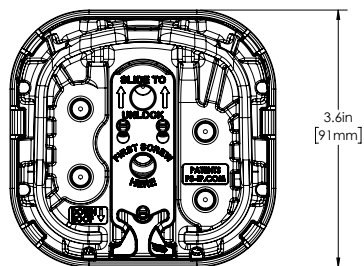
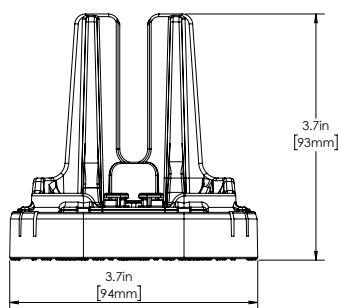


**5**  
Continue until 2 screws are embedded at least 2.5" into rafter.

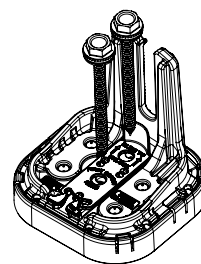


**6**  
For deck attach, use 6 screws.  
*Note: Deck attach may reduce max span.*





DECK ATTACH - 6 FASTENERS



RAFTER ATTACH - 2 FASTENERS

| SPECIFICATIONS           |                                                                                                    | INSTAFLASH KITS                    |                  |                                   |
|--------------------------|----------------------------------------------------------------------------------------------------|------------------------------------|------------------|-----------------------------------|
|                          | PIF2-B0                                                                                            | PIF2-BDT                           | PIF2-M0          | PIF2-MDT                          |
| Finish                   | Black                                                                                              |                                    | Mill             |                                   |
| Kit Contents             | Black InstaFlash2                                                                                  | Black InstaFlash2, Dovetail T-bolt | Mill InstaFlash2 | Mill InstaFlash2, Dovetail T-bolt |
| Attachment Type          | Rafter & Deck Attach                                                                               |                                    |                  |                                   |
| Roof Fasteners           | 1/2" Socket Driven; PF-DRW85 (sold separately in boxes of 24)                                      |                                    |                  |                                   |
| Roof Type                | Sloped Roof: Composition Shingle, Rolled Asphalt   Flat Roof: Modified Bitumen Roof, Built-Up Roof |                                    |                  |                                   |
| Flashing Type            | Factory Installed Non-Drying, Non-Skinning Butyl Based Chemical Flashing                           |                                    |                  |                                   |
| Installation Temperature | 0° F to 170° F                                                                                     |                                    |                  |                                   |
| Cure Time                | Instantly Waterproof; Non-Hardening                                                                |                                    |                  |                                   |
| Service Temperature      | -40° F to 195° F                                                                                   |                                    |                  |                                   |
| Certifications           | IBC, ASCE/SEI 7-16 & 7-22, UL2703                                                                  |                                    |                  |                                   |
| Install Application      | Most Railed Systems                                                                                |                                    |                  |                                   |
| Kit Quantity             | 24                                                                                                 |                                    |                  |                                   |
| Boxes Per Pallet         | 36                                                                                                 |                                    |                  |                                   |



SCAN FOR  
INSTALLATION  
VIDEO



SCAN FOR  
FREE TRIAL

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# SolaDeck

## PV ROOF-MOUNT ENCLOSURE



**UL50 Type 3R Enclosure • Stamped 18 gauge gal. steel • Powder coated finish • Weather tight**

**INTRODUCED AT  
*SOLAR POWER 2007***



### **Enclosure Includes:**

- Dual ground lug
- Universal DIN rail
- 1/2", 3/4" & 1" knockouts
- Wire strain relief clip
- Complete hardware package

### **PV Roof-Mount Combiner/Enclosure**

### **Benefits**

- The ability to prep the building is now possible
- Replaces several parts used today
- Provides professional looking install
- Saves time on install
- Allows for easy access
- Guaranteed seal to roof
- Low profile design

***For product information contact us at  
(866) 367-7782***

**[www.commdeck.com](http://www.commdeck.com)**



RSTC Enterprises, Inc  
2219 Heimstead Road  
Eau Claire, WI 54703  
1 (866) 367 - 7782





## **SolaDeck    Part # 780**

### **Specifications:**

**18 Gauge Steel Base (1) and Cover (2)**  
**Pre Punched 7 holes in base (1) for roof deck**  
**Pre Punched 4 holes in base (1) and cover (2) for match**  
**Draw Process both parts**  
**Powder Coated to withstand 1000 hours Salt Spray (Primer Gray)**  
**High UV resistance**  
**15" x 15" flashing dimension**  
**Cavity dimension 8"W x 9" L x 2.5"D**  
**Approx. 162 Cubic inch equipment cavity**  
**Norloked steel base plate (3) to drawn base (2)**  
**Three knockout locations .5", .75" and 1"**  
**3" DIN rail installed**  
**Grounding Lug- Installed (In Equipment Cavity)**  
**Wire Strain Relief Clip –Installed (In Equipment Cavity)**  
**Hardware pack withstands 500 hours Salt Spray**  
    **7 - 2" Trusshead Screws**  
    **4 - .5" 8-32 thread cutting screws**  
    **4 - #10 Bonded Seal washers**  
    **1 – Foam closed Cell Seal**  
**ETL Listed UL50 Type 3R**

**Total Weight 6.9 pounds each**

### **Packaging:**

**Individually bagged and boxed**  
**Box dimension 15.5"w x 16" L x 3" D**  
**White Carton labeled with Cut out template**  
**Print One Color - Black**

**Master Cartons of 6 Units each**  
**Master Carton dimension 18.75"x16"x16.375"**  
**Master Carton Weight – 42 pounds**  
**18 Master Cartons per skid Approx 800 pounds with skid**

# Eaton DG222URB

Catalog Number: DG222URB

Eaton General duty non-fusible safety switch, single-throw, 60 A, NEMA 3R, Rainproof, Painted galvanized steel, Two-pole, Two-wire, 240 V

Photo is representative

## General specifications

Product Name

Eaton general duty non-fusible safety switch

Catalog Number

DG222URB

UPC

782113144238

Product Length/Depth

7.38 in

Product Height

14.38 in

Product Width

8.69 in

Product Weight

9 lb

Warranty

Eaton Selling Policy 25-000, one (1) year NEC 230.62 (C) Compliant Barrier from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.

Compliances

Certifications

UL Listed

Catalog Notes

WARNING! Switch is not approved for service entrance unless a neutral kit is installed.



Type

Non-fusible, single-throw

Amperage Rating

60A

Number Of Poles

Two-pole

Product Category

General duty safety switch

Voltage rating

240V

Enclosure

NEMA 3R

Enclosure material

Painted galvanized steel

Fuse configuration

Non-fusible

Number of wires

2

Catalogs

[Eaton's Volume 2—Commercial Distribution](#)

Multimedia

[Double Up on Safety](#)

[Switching Devices Flex Center](#)

Specifications and datasheets

[Eaton Specification Sheet - DG222URB](#)

Warranty guides

[Selling Policy 25-000 - Distribution and Control Products and Services](#)



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