

Application Note: Mounting a Ginlong Solis RSD to a Sloped Roof



Ginlong Solis US Rapid Shutdown Devices (RSD) can be mounted on a Sloped Roof whether there are PV module support rails or not

Introduction

At most PV system installation sites, the Ginlong Rapid Shutdown Device (RSD) will be bolted to the PV module support structure. However, in some of the new PV array mounting schemes, there are no rails to mount the RSD to.

Sites Where There are no PV Module Support Rails

Where there are no PV module support rails to mount the RSD to, the installer can “create” a support rail on the roof (using Uni-Strut or equivalent, see Figure 1) and then bolt the RSD to the Uni-Strut. The RSD may be near flush to the roof surface and both the mounting rail and RSD can be hidden under the modules (see Figure 2).

If the Uni-Strut is mounted to a flashed mounting plate and support leg, the overall structure may be too tall to fit under the PV modules (see Figure 3). Although Ginlong Solis recommends that the RSD be mounted under the modules to reduce exposure to UV and reduce the operating temperature of the RSD, the RSD will not be harmed by exposure to UV light and will operate normally at ambient roof temperatures up to 70°C (158°F)



Figure 1. Uni-Strut

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Figure 2. Flashed mounting plate with L-Foot

Proper Mounting of Uni-Strut Rails to the Roof

Ensuring that the roofing warranty remains in place is the goal of any PV system installer when mounting a PV array (or the RSD) to the roof. Using a flashed mounting base can ensure that roof penetrations that hold the Uni-Strut in place will not leak over time (see Figures 2 and 3).



Figure 3. Flashed mounting base with Uni-Strut supporting PV modules on the Roof

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There are some types of L-foot mounting systems that include roof-sealing components. These can be lower in profile than many of the flashed mounting bases available from Quick Mount and other manufacturers.

Although lower in overall profile, mounting an L-foot (without integrated and tested roof-sealing components) directly to the composite shingles and then sealing the hole with silicone is not recommended (see Figure 4). Exposure to UV will dry out the silicone, causing it to shrink. This may lead to roof leaks.



Figure 4. Un-flashed mounting base ("L-foot") sealed with silicone in the field (not recommended)