Ginlong (Solis) Inverter DC Switch Color Change – July 2019

Mid-Year 2019, a Ginlong (Solis) vendor modified their integrated component used in North American Solis Residential (single phase) Inverters

Background

Ginlong (Solis) has been listed to the UL1741 Standard since 2009. And all Solis residential (single phase) PV string inverters distributed in the United States feature an integrated DC Switch. In 2019, the Ginlong manufacturing group tested, then accepted, and is now integrating a new DC Switch into Solis single-phase PV string inverters. This new switch has the same electrical specifications as the older model. The most obvious difference between the two switches is their color – the old switch was black and the new switch is red.

Specifications for Ginlong (Solis) integrated DC Switches

All Ginlong (Solis) residential (single phase) PV string inverters feature a new, red integrated DC switch that is certified to the UL 508i Test Standard by UL and CCC/CQC (including requirements for PV applications).

Electrical: Depending on the number of MPPT's in the inverter, the new switch will have either 4 poles, 6 poles or 8 poles (Model # XBUE3 -410, -610 or -810). All new switches are rated as Photovoltaic disconnect switches (DC Utilization category) and all are rated for 600 Vdc max, 25 Imax and can accept up to AWG #10 conductors. The switches have a rated short-circuit making capacity of 1 kA and a rated conditional short-circuit current rating of 5 kA. These electrical specifications match the specifications of the black dc switches seen on Ginlong (Solis) residential single-phase PV string inverters.

Physical: The Solis integrated DC Switch, mounted in a single hole in the bottom of the inverter, is rated IP65. The black switch had two (2) ON positions and two (2) OFF positions. The new red switch has a single OFF position (12 o'clock) and a single ON position (3 o'clock). The new red plastic switches are made with the same plastics used in the black switches and both the black and red switches are rated for operation and storage down to -40 C (-40 F). Allowed ambient operating temperatures range up to 70 C.

Input from North American Ginlong (Solis) Installers on the DC Switch

Ginlong (Solis) collects feedback from installers. Installers told us they wanted a switch that was easy to find, that was easy to manipulate, had clear ON-OFF positions and could be locked out / tagged out. Ginlong (Solis) made sure that all of these concerns were met. The new color DC Switch has the same grip as the old DC switch and it is a little easier to see now that the switch is red/orange in color. A slightly larger lock-out / tag-out hole is available for installers. Installers may notice that Ginlong (Solis) increased the size of the lettering indicating the ON-OFF positions.

The switch still makes a clear break when moved from one position to another. And installers are given the same audible indication that the switch has moved positions. The dc switch manufacturer recommends operating the switch a few times (e.g. 5x) annually to clean the terminals in the switch and extend its life. The manufacturer also recommends an annual inspection for any indication of overload or overheating.

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