



Tigo Rapid Shutdown with SMA Inverters

Tigo rapid shutdown devices are tested and UL-certified with many inverter manufacturers, including SMA. You can see a list of compatible Tigo/SMA pairings in our [SMA Compatibility Letter](#), which is in the [Certifications & Compliance](#) section of the [Resources > Downloads](#) area on our website.

Which Fire Safety products are compatible?

Tigo TS4-F (Fire Safety) Products

UL Certification of a PV Rapid Shutdown System (PVRSS) is required by code in solar rooftop applications in most all locations in the United States. All SMA "-41" inverters are UL certified to PVRSS when installed with Tigo Fire Safety products:

- TS4-A-F (add-on single)
- TS4-A-2F (add-on dual)

There is a Rapid Shutdown System (RSS) Transmitter built-in to the "-41" SMA inverters which is designed and manufactured by SMA; this SMA RSS transmitter provides a keep-alive signal to the Tigo TS4-F family of product using Power Line Communications (PLC) over the inverter's DC side (PV array). The SMA RSS Transmitter is also powered from the inverter's DC side and requires a minimum input of 5.0V to operate and generate a keep-alive signal. Since each TS4-A-F or TS4-A-2F unit generates 0.6V in the shutdown state, this means that a string of at least nine Fire Safety TS4 units is needed for the SMA RSS Transmitter to power up and operate.

Insufficient voltage to the SMA RSS Transmitter may cause the string to remain in the shutdown state indefinitely as the keep alive signal may not transmit.

When using only the dual TS4-A-2F for each pair of PV modules, this means strings of 17 or 18 PV modules to meet the Transmitter's minimum input voltage requirement.

If string length does not permit nine dual TS4-A-2F units in series, there are two workarounds:

- Single TS4-A-F units can be substituted for some of the TS4-A-2F units to bring the total number of Fire Safety units to nine or more per string.
- There is a Tigo version of the RSS Transmitter available which may be externally installed. The Tigo version is normally powered by an AC circuit via a power supply and therefore has no minimum PV input voltage. If an external Tigo RSS Transmitter is used, the SMA internal RSS Transmitter should be disabled.

Tigo Wireless Products

All of Tigo's TS4-S (Safety) and TS4-O (Optimization) products are fully compatible and UL-listed with all of the SMA "-41" inverters. The TS4-O is also UL-listed with most of the SMA "-40" inverters and some of the SMA "-10" inverters.