



Manufacturer's Declaration

PV Rapid Shutdown Equipment – Inverter Compatibility Qualification

SMA has completed compatibility testing with the PV rapid shutdown equipment (PVRSE) and inverters identified below. SMA has found the PVRSE to be compatible with its inverters based on the test results described.

This notice is applicable to the following PVRSE:

Manufacturer: **SolarBOS, Inc.**

Model ID: **FaSK75R-b-FF-EEE*** with power supply: **TDK-Lambda DSP30-24/277A**

* where a = # of output circuits, b = # of input circuits per output circuit, FF = fuse rating, EEE = enclosure type

This notice is applicable to the following inverter types:

Sunny Tripower 12000/15000/20000/24000/30000TL-US Type designation: **STP xx000TL-US-10**

Sunny Tripower CORE1-US Type designation: **STP 50-US-40**

SMA qualification testing is intended to demonstrate that the tested PVRSE does not interfere with the inverter's normal operations.

The following tests have been performed:

Arc fault detection / masking

PVRSE has been tested to demonstrate that the PVRSE does not introduce noise on PV conductors that could interfere with the inverter's arc fault detection capabilities.

Test result: **PASS**

AFCI nuisance trip

PVRSE has been tested to demonstrate that opening of the PVRSE disconnect component(s) (rapid shutdown activation) does not cause the inverter's AFCI to trip.

Test result: **PASS**

Capacitive discharge – 30s

For PVRSE with internal capacitive discharge circuit(s) intended to discharge inverter input capacitors upon rapid shutdown activation, PVRSE has been tested to demonstrate that the PVRSE is capable of discharging the inverter input capacitors down to 30 VDC or less within 30 seconds.

Test result: **PASS**

Low Voltage Ride Through (LVRT)

PVRSE has been tested to demonstrate that the PVRSE does not interfere with the inverter's ability to fulfill LVRT as required by UL 1741SA.

Region	Voltage (% Nominal)	Ride-Through until (seconds)	Inverter Operation Mode	Max. Trip Time (seconds)	Test Result
LV1	$70 \leq V < 88$	20s	Mandatory Operation	21s	PASS
LV2	$50 \leq V < 70$	10s	Mandatory Operation	11s	PASS
LV3	$V < 50$	1s	Momentary Cessation	1.5s	PASS (≥80V)

Inability to fulfill UL 1741 SA LVRT requirements may restrict applications where advanced inverter capabilities are required by utility interconnection requirements beginning in Sept. 2017.

PV Startup (PV powered RSE)

For PVRSE that derive control power from the PV array, PVRSE has been tested to demonstrate that the PVRSE does not interfere with the normal and stable startup of the inverter.

Test result: **n/a**

Disclaimer: SMA is not responsible for 3rd party PVRSE performance or manufacturer product changes.
Contact PVRSE manufacturer for product details and installation instructions.

Niestetal, 17.08.2017

SMA Solar Technology AG



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