



Manufacturer's Declaration

Multi-Stage Overvoltage Monitoring

All SMA PV inverters listed below are equipped with three-stage overvoltage monitoring for safe grid disconnection. This will ensure the following: the greater the voltage deviation from the nominal voltage, the faster the PV inverters are disconnected from the grid. The table below shows the two required disconnection times in accordance with UL 1741.

Nominal voltage (V_{nom})	Overvoltage protection (stage 1, 110% to 120% V_{nom})		Overvoltage protection (stage 2, > 120% V_{nom})	
RMS value [V]	RMS value [V]	Disconnection time	RMS value [V]	Disconnection time
208.0	228.8 to 249.6	< 1,000 ms	> 249.6	< 160 ms
240.0	264.0 to 288.0	< 1,000 ms	> 288.0	< 160 ms
277.0	304.7 to 332.4	< 1,000 ms	> 332.4	< 160 ms

Example: SB 6000US

Furthermore, according to the table below, the PV inverters are equipped with a third stage of overvoltage monitoring which is, however, not required by UL 1741.

Nominal voltage (V_{nom})		Transient voltage protection (not required)		
RMS value [V]	Peak value [V]	RMS value [V]	Peak value [V]	Disconnection time
208.0	294.1	291.2	411.8	< 0.5 ms
240.0	339.4	336.0	475.1	< 0.5 ms
277.0	391.7	349.0	493.6	< 0.5 ms

Example: SB 6000US

SUNNY BOY	SUNNY BOY	SUNNY TRIPOWER
With transformer	Transformerless	Transformerless
SB 240-US	SB 3000TL-US	STP 12000TL-US
Multigate-US	SB 3800TL-US	STP 15000TL-US
SB 2000HF-US	SB 4000TL-US	STP 20000TL-US
SB 2500HF-US	SB 5000TL-US	STP 24000TL-US
SB 3000HF-US	SB 6000TL-US	
SB 3000-US	SB 7000TL-US	
SB 3800-US	SB 8000TL-US	
SB 4000-US	SB 9000TL-US	
SB 5000-US	SB 10000TL-US	
SB 6000-US	SB 11000TL-US	
SB 7000-US		
SB 8000-US		

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