Manufacturer: SMA Technologie AG

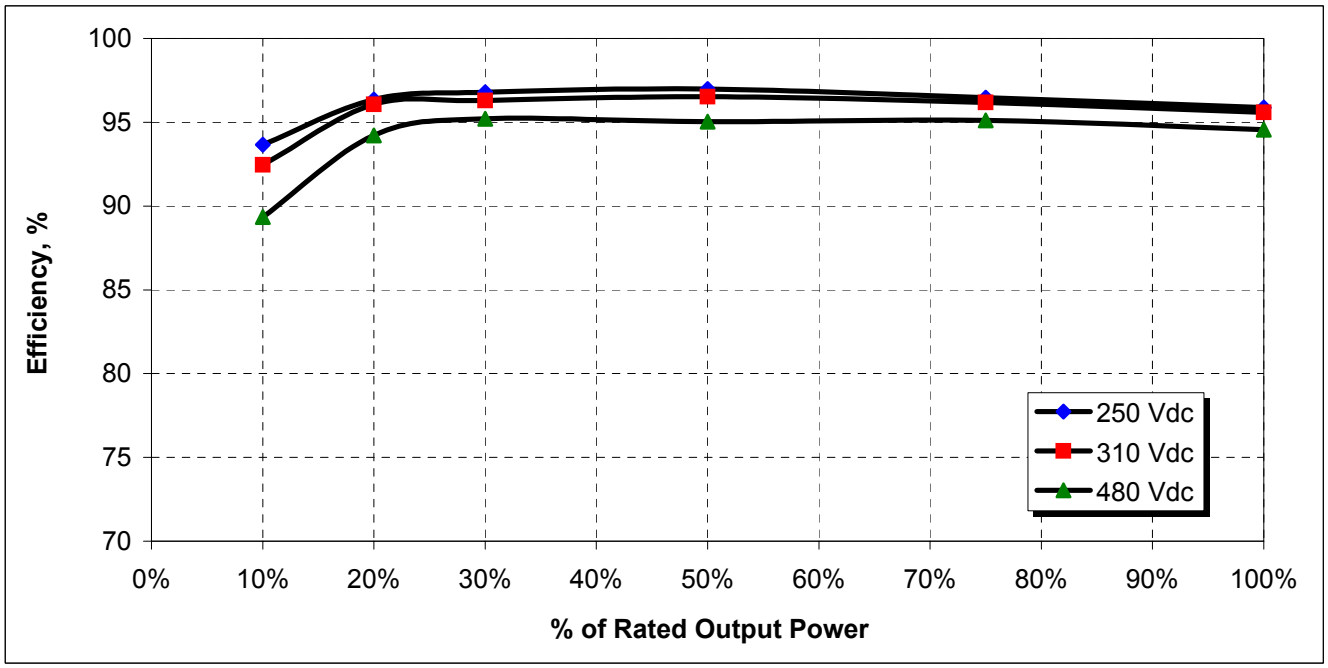
Model #: ST42, 277 Vac

Rated Maximum Continuous Output Power: 42.00 kW Night Tare Loss: 1.41 W

Vmin: 250 Vdc Vnom: 310 Vdc Vmax: 480 Vdc

		Power Level (%; kW)						
		10%	20%	30%	50%	75%	100%	
Input Voltage (Vdc)		4.20	8.40	12.60	21.00	31.50	42.00	Wtd
Vmin	250	93.7	96.3	96.8	97.0	96.5	95.9	96.5
Vnom	310	92.5	96.1	96.3	96.5	96.2	95.6	96.1
Vmax	480	89.3	94.2	95.2	95.0	95.1	94.6	94.8

CEC Efficiency = 96.0%



Inverter Efficiency Data

Minimum of 5 samples required--Multiply all power values by 6

Specified		Sample #1			Sample #2			Sample #3			Sample #4			Sample #5		
Output Power	Input Voltage	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency
(% of rated)	(Vdc)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)
10%	Vmin	690.2	250.2	93.825	691.3	250.2	93.708	690.9	250.2	93.696	692.5	250.2	93.558	692.9	250.2	93.517
20%	Vmin	1512.2	250.3	96.422	1514.6	250.3	96.387	1512.8	250.3	96.354	1516.4	250.3	96.333	1515.6	250.3	96.222
30%	Vmin	2228	250.3	96.912	2228	250.3	96.787	2230	250.3	96.785	2230	250.3	96.746	2228	250.3	96.743
50%	Vmin	3175	250.4	97.125	3175	250.4	96.976	3175	250.5	96.976	3176	250.4	96.918	3175	250.5	96.887
75%	Vmin	4917	248.7	96.527	4920	248.6	96.487	4913	248.6	96.469	4917	248.6	96.468	4916	248.6	96.409
100%	Vmin	6669	251.7	96.080	6691	251.3	95.917	6671	251.5	95.862	6666	251.8	95.778	6658	251.6	95.776
10%	Vnom	692.3	309.8	92.531	693.1	309.8	92.506	694.3	309.8	92.487	693.8	309.8	92.422	692.1	309.8	92.344
20%	Vnom	1506.4	309.8	96.194	1509.1	309.9	96.087	1511.2	309.9	96.081	1510.1	309.9	96.048	1510.2	309.9	95.946
30%	Vnom	2246	309.9	96.353	2245	309.9	96.352	2246	310	96.312	2243	309.9	96.266	2247	309.9	96.225
50%	Vnom	3167	308.7	96.677	3167	308.8	96.614	3168	308.7	96.468	3171	308.7	96.468	3168	308.8	96.437
75%	Vnom	4929	308.8	96.251	4924	308.9	96.213	4930	308.8	96.177	4929	308.8	96.175	4928	308.8	96.116
100%	Vnom	6717	309	95.601	6720	308.9	95.600	6713	309	95.588	6715	309	95.587	6714	309	95.572
10%	Vmax	693.3	476.3	89.517	690.4	476.2	89.364	691	476.2	89.334	691.8	476.2	89.259	693.4	476.2	89.207
20%	Vmax	1496.9	478.8	94.255	1497.9	478.8	94.248	1496	478.7	94.204	1497.8	478.7	94.184	1497.5	478.8	94.167
30%	Vmax	2256	480.1	95.232	2255	480.1	95.190	2256	480.1	95.190	2257	480.1	95.190	2256	480.1	95.190
50%	Vmax	3181	478.7	95.072	3180	478.8	95.040	3179	478.8	95.040	3183	478.8	95.015	3183	478.8	94.982
75%	Vmax	4919	478.8	95.148	4923	478.9	95.148	4921	478.8	95.110	4922	478.8	95.094	4924	478.9	95.053
100%	Vmax	6728	479	94.590	6728	476.3	94.583	6731	478.9	94.574	6725	478.9	94.563	6732	478.9	94.521

Specified		Sample #6			Sample #7			Sample #8			Sample #9			Sample #10		
Output Power	Input Voltage	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency	Output Power	Input Voltage	Efficiency
(% of rated)	(Vdc)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)	(W)	(Vdc)	(%)
10%	Vmin															
20%	Vmin															
30%	Vmin															
50%	Vmin															
75%	Vmin															
100%	Vmin															
10%	Vnom															
20%	Vnom															
30%	Vnom															
50%	Vnom															
75%	Vnom															
100%	Vnom															
10%	Vmax															
20%	Vmax															
30%	Vmax															
50%	Vmax															
75%	Vmax															
100%	Vmax															