Manufacturer: SMA Technology AG

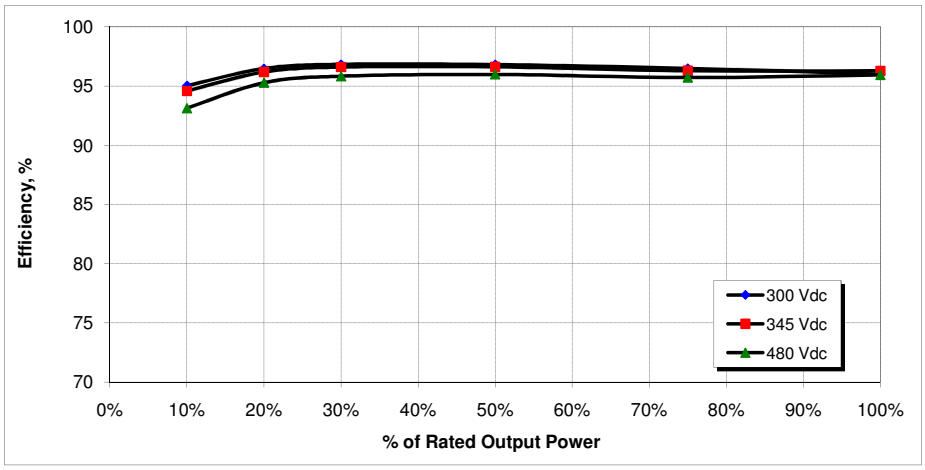
Model #: SB8000US

Rated Maximum Continuous Output Power: 7.60 kW  Night Tare Loss: 0.17 W

Vmin: 300 Vdc  Vnom: 345 Vdc  Vmax: 480 Vdc

| | | Power Level (%; kW) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 10% | 20% | 30% | 50% | 75% | 100% | |
| Input Voltage (Vdc) | | 0.76 | 1.52 | 2.28 | 3.80 | 5.70 | 7.60 | Wtd |
| Vmin | 300 | 95.0 | 96.5 | 96.8 | 96.8 | 96.5 | 96.0 | 96.5 |
| Vnom | 345 | 94.6 | 96.2 | 96.6 | 96.6 | 96.3 | 96.3 | 96.3 |
| Vmax | 480 | 93.1 | 95.3 | 95.8 | 96.0 | 95.7 | 95.9 | 95.7 |

**CEC Efficiency = 96.0%**




**NOTE: Spreadsheet is for Unit Operating in 240 VAC Output Mode with 32 A current limitation resulting in a maximum output power rating of 7.60 kW.**

Inverter Efficiency Data

Minimum of 5 samples required

| 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) | (kW) | (Vdc) | (%) | (kW) | (Vdc) | (%) | (kW) | (Vdc) | (%) | (kW) | (Vdc) | (%) | (W) | (Vdc) | (%) |
| 10% | Vmin | 870.82 | 300.55 | 95.039 | 871 | 300.55 | 95.043 | 870.9 | 300.56 | 95.036 | 871 | 300.55 | 95.032 | 871.1 | 300.55 | 95.067 |
| 20% | Vmin | 1667.7 | 300.8 | 96.495 | 1669 | 300.8 | 96.473 | 1668 | 300.8 | 96.478 | 1668 | 300.8 | 96.480 | 1668 | 300.8 | 96.475 |
| 30% | Vmin | 2455.2 | 300.33 | 96.847 | 2456 | 300.33 | 96.840 | 2457 | 300.33 | 96.819 | 2456 | 300.33 | 96.857 | 2457 | 300.33 | 96.849 |
| 50% | Vmin | 3480.6 | 300.62 | 96.816 | 3481 | 300.62 | 96.802 | 3480 | 300.62 | 96.820 | 3481 | 300.62 | 96.813 | 3481 | 300.62 | 96.835 |
| 75% | Vmin | 5366.8 | 300.77 | 96.504 | 5367 | 300.78 | 96.492 | 5368 | 300.77 | 96.505 | 5367 | 300.77 | 96.507 | 5367 | 300.77 | 96.499 |
| 100% | Vmin | 7274.7 | 300.17 | 96.017 | 7274 | 300.18 | 96.015 | 7274 | 300.17 | 96.009 | 7273 | 300.18 | 96.011 | 7273 | 300.18 | 96.014 |
| 10% | Vnom | 870.85 | 345.36 | 94.582 | 871 | 345.36 | 94.560 | 870.7 | 345.36 | 94.629 | 871 | 345.36 | 94.629 | 871 | 345.36 | 94.602 |
| 20% | Vnom | 1663.6 | 344.95 | 96.192 | 1662 | 344.95 | 96.183 | 1663 | 344.95 | 96.203 | 1661 | 344.96 | 96.175 | 1662 | 344.95 | 96.221 |
| 30% | Vnom | 2459.3 | 345.44 | 96.618 | 2460 | 345.44 | 96.604 | 2460 | 345.44 | 96.624 | 2459 | 345.44 | 96.588 | 2460 | 345.44 | 96.617 |
| 50% | Vnom | 3487.2 | 345.06 | 96.634 | 3487 | 345.06 | 96.636 | 3487 | 345.06 | 96.638 | 3487 | 345.06 | 96.627 | 3487 | 345.06 | 96.627 |
| 75% | Vnom | 5355.7 | 345 | 96.315 | 5355 | 345 | 96.305 | 5355 | 345 | 96.304 | 5355 | 345 | 96.300 | 5355 | 345 | 96.304 |
| 100% | Vnom | 7254.8 | 345.89 | 96.292 | 7256 | 345.89 | 96.295 | 7255 | 345.9 | 96.291 | 7256 | 345.89 | 96.287 | 7256 | 345.89 | 96.294 |
| 10% | Vmax | 872.73 | 480.01 | 93.102 | 872.8 | 480.01 | 93.192 | 872.8 | 480.01 | 93.150 | 872.6 | 480.02 | 93.075 | 872.8 | 480.01 | 93.151 |
| 20% | Vmax | 1664.9 | 479.76 | 95.254 | 1664 | 479.76 | 95.299 | 1664 | 479.76 | 95.284 | 1665 | 479.76 | 95.295 | 1665 | 479.76 | 95.300 |
| 30% | Vmax | 2462.3 | 480.47 | 95.837 | 2462 | 480.47 | 95.813 | 2462 | 480.47 | 95.865 | 2462 | 480.47 | 95.817 | 2462 | 480.47 | 95.855 |
| 50% | Vmax | 3459.3 | 480.41 | 95.989 | 3459 | 480.42 | 95.996 | 3460 | 480.42 | 95.983 | 3459 | 480.42 | 95.996 | 3459 | 480.42 | 95.970 |
| 75% | Vmax | 5356 | 480.89 | 95.720 | 5356 | 480.89 | 95.732 | 5356 | 480.89 | 95.724 | 5355 | 480.89 | 95.719 | 5354 | 480.89 | 95.726 |
| 100% | Vmax | 7256.2 | 480.12 | 95.951 | 7257 | 480.11 | 95.938 | 7257 | 480.12 | 95.948 | 7257 | 480.12 | 95.938 | 7257 | 480.12 | 95.934 |

| 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 | 871.02 | 300.55 | 94.998 | 871.1 | 300.55 | 95.050 | 871.3 | 300.55 | 95.020 | 871.3 | 300.55 | 95.066 | 871.6 | 300.54 | 95.018 |
| 20% | Vmin | 1669 | 300.8 | 96.471 | 1669 | 300.8 | 96.466 | 1669 | 300.8 | 96.501 | 1669 | 300.8 | 96.502 | 1669 | 300.8 | 96.482 |
| 30% | Vmin | 2456.2 | 300.33 | 96.816 | 2457 | 300.33 | 96.846 | 2456 | 300.33 | 96.841 | 2457 | 300.33 | 96.840 | 2458 | 300.34 | 96.848 |
| 50% | Vmin | 3480.9 | 300.62 | 96.805 | 3481 | 300.63 | 96.820 | 3482 | 300.62 | 96.818 | 3483 | 300.62 | 96.822 | 3482 | 300.62 | 96.807 |
| 75% | Vmin | 5367.4 | 300.77 | 96.501 | 5368 | 300.77 | 96.520 | 5367 | 300.77 | 96.500 | 5368 | 300.77 | 96.505 | 5368 | 300.77 | 96.500 |
| 100% | Vmin | 7273.3 | 300.18 | 96.012 | 7272 | 300.18 | 96.004 | 7272 | 300.18 | 96.015 | 7273 | 300.18 | 96.012 | 7271 | 300.19 | 96.014 |
| 10% | Vnom | 870.99 | 345.36 | 94.576 | 871 | 345.36 | 94.582 | 870.9 | 345.36 | 94.539 | 871.2 | 345.36 | 94.594 | 871.1 | 345.36 | 94.603 |
| 20% | Vnom | 1661.8 | 344.95 | 96.191 | 1663 | 344.95 | 96.204 | 1663 | 344.95 | 96.204 | 1664 | 344.95 | 96.183 | 1662 | 344.95 | 96.171 |
| 30% | Vnom | 2459.6 | 345.44 | 96.607 | 2460 | 345.44 | 96.617 | 2460 | 345.44 | 96.619 | 2460 | 345.44 | 96.627 | 2460 | 345.44 | 96.610 |
| 50% | Vnom | 3487.5 | 345.06 | 96.624 | 3487 | 345.06 | 96.623 | 3489 | 345.06 | 96.629 | 3487 | 345.06 | 96.641 | 3487 | 345.06 | 96.639 |
| 75% | Vnom | 5354.3 | 345 | 96.300 | 5354 | 345 | 96.300 | 5354 | 345 | 96.299 | 5354 | 345 | 96.290 | 5354 | 345 | 96.299 |
| 100% | Vnom | 7254.4 | 345.9 | 96.297 | 7254 | 345.89 | 96.298 | 7255 | 345.89 | 96.287 | 7255 | 345.89 | 96.295 | 7256 | 345.89 | 96.289 |
| 10% | Vmax | 872.87 | 480.01 | 93.149 | 872.6 | 480.02 | 93.157 | 872.7 | 480.02 | 93.148 | 872.8 | 480.01 | 93.081 | 872.9 | 480.01 | 93.130 |
| 20% | Vmax | 1663.5 | 479.76 | 95.254 | 1663 | 479.76 | 95.263 | 1665 | 479.76 | 95.336 | 1665 | 479.76 | 95.247 | 1665 | 479.76 | 95.278 |
| 30% | Vmax | 2462.9 | 480.47 | 95.830 | 2462 | 480.47 | 95.832 | 2463 | 480.47 | 95.803 | 2462 | 480.47 | 95.838 | 2462 | 480.47 | 95.851 |
| 50% | Vmax | 3459.5 | 480.42 | 95.971 | 3459 | 480.42 | 95.976 | 3459 | 480.42 | 95.964 | 3459 | 480.42 | 95.991 | 3459 | 480.42 | 95.983 |
| 75% | Vmax | 5354.9 | 480.9 | 95.717 | 5355 | 480.89 | 95.716 | 5355 | 480.89 | 95.720 | 5353 | 480.89 | 95.708 | 5354 | 480.89 | 95.712 |
| 100% | Vmax | 7255.8 | 480.12 | 95.949 | 7257 | 480.12 | 95.941 | 7257 | 480.12 | 95.945 | 7256 | 480.12 | 95.943 | 7257 | 480.12 | 95.946 |