Manufacturer: Eaton 18Feb2011

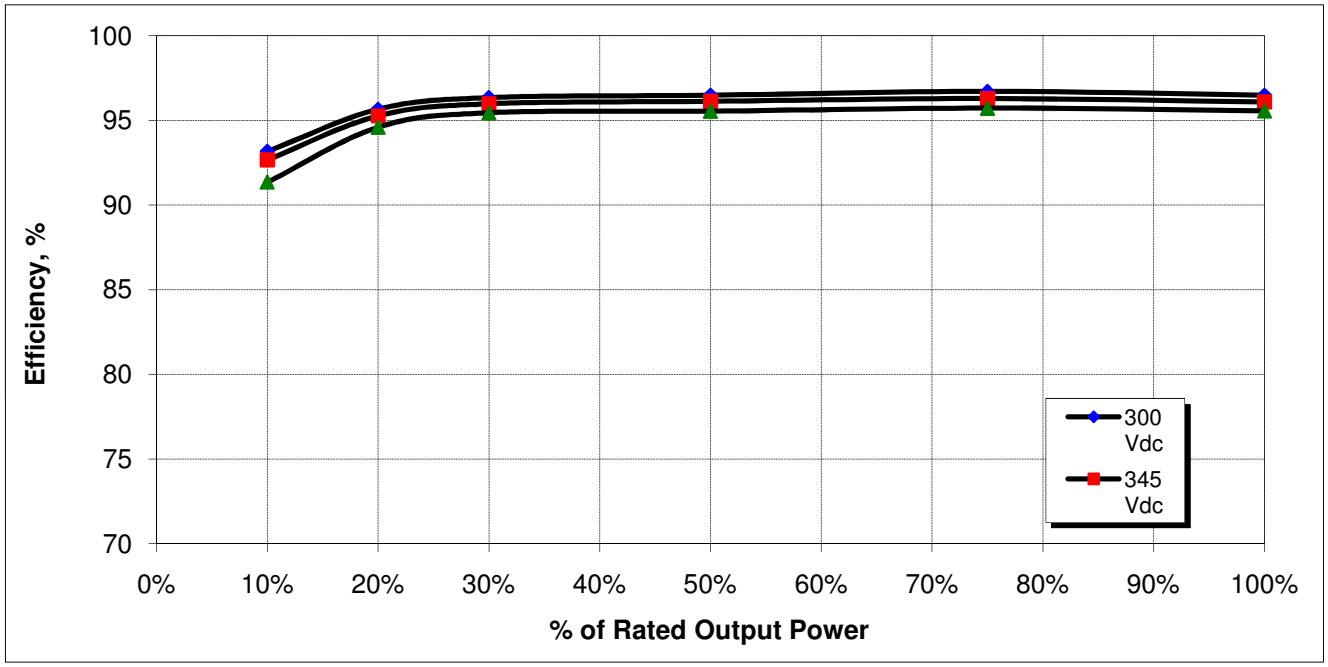
Model #: S-Max 250KW - SM1003

Rated Maximum Continuous Output Power: 250.00 kW  Night Tare Loss: 69.32 W

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

| | | Power Level (%; kW) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 10% | 20% | 30% | 50% | 75% | 100% | |
| Input Voltage (Vdc) | | 25.00 | 50.00 | 75.00 | 125.00 | 187.50 | 250.00 | Wtd |
| Vmin | 300 | 93.2 | 95.7 | 96.3 | 96.5 | 96.7 | 96.5 | 96.4 |
| Vnom | 345 | 92.7 | 95.3 | 96.0 | 96.1 | 96.3 | 96.1 | 96.0 |
| Vmax | 480 | 91.4 | 94.6 | 95.4 | 95.5 | 95.7 | 95.6 | 95.4 |

**CEC Efficiency = 96.0%**



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 | 24006.00 | 302.27 | 92.96 | 24887.00 | 302.24 | 93.16 | 25313.00 | 302.22 | 93.32 | 25402.00 | 302.24 | 93.39 | 24060.00 | 302.26 | 93.04 |
| 20% | Vmin | 49983.00 | 301.76 | 95.61 | 51468.00 | 301.64 | 95.74 | 50130.00 | 301.73 | 95.64 | 51057.00 | 301.68 | 95.67 | 50129.00 | 301.76 | 95.61 |
| 30% | Vmin | 75850.00 | 301.16 | 96.39 | 74866.00 | 301.23 | 96.37 | 74929.00 | 301.23 | 96.38 | 75495.00 | 301.20 | 96.30 | 74336.00 | 301.30 | 96.32 |
| 50% | Vmin | 129090.00 | 301.46 | 96.51 | 130410.00 | 301.40 | 96.51 | 129900.00 | 301.43 | 96.43 | 129350.00 | 301.51 | 96.55 | 130550.00 | 301.39 | 96.42 |
| 75% | Vmin | 180670.00 | 302.79 | 96.65 | 180730.00 | 302.67 | 96.67 | 181070.00 | 302.73 | 96.70 | 180310.00 | 302.79 | 96.70 | 179210.00 | 302.80 | 96.68 |
| 100% | Vmin | 235860.00 | 301.19 | 96.61 | 235850.00 | 302.10 | 96.45 | 239590.00 | 301.04 | 96.51 | 236530.00 | 301.16 | 96.47 | 241200.00 | 301.24 | 96.38 |
| 10% | Vnom | 25283.00 | 342.76 | 92.72 | 25354.00 | 342.76 | 92.81 | 24669.00 | 342.77 | 92.65 | 24092.00 | 342.85 | 92.50 | 24409.00 | 342.84 | 92.61 |
| 20% | Vnom | 49709.00 | 342.81 | 95.25 | 49944.00 | 342.83 | 95.21 | 50775.00 | 342.74 | 95.23 | 50875.00 | 342.76 | 95.23 | 50417.00 | 342.79 | 95.24 |
| 30% | Vnom | 76090.00 | 342.28 | 95.97 | 75752.00 | 342.22 | 96.01 | 74877.00 | 342.22 | 95.94 | 75110.00 | 342.27 | 95.97 | 74866.00 | 342.33 | 95.98 |
| 50% | Vnom | 130770.00 | 341.90 | 96.11 | 129490.00 | 341.97 | 96.12 | 130250.00 | 341.91 | 96.15 | 130570.00 | 341.92 | 96.11 | 129840.00 | 341.87 | 96.12 |
| 75% | Vnom | 179810.00 | 342.07 | 96.28 | 178470.00 | 342.03 | 96.25 | 179810.00 | 342.03 | 96.32 | 179780.00 | 342.03 | 96.27 | 178970.00 | 342.06 | 96.29 |
| 100% | Vnom | 238720.00 | 342.27 | 96.08 | 238490.00 | 342.31 | 96.14 | 238270.00 | 342.28 | 96.05 | 238140.00 | 342.31 | 96.10 | 239510.00 | 342.31 | 96.15 |
| 10% | Vmax | 25088.00 | 477.45 | 91.47 | 24627.00 | 477.43 | 91.46 | 24037.00 | 477.47 | 91.20 | 24105.00 | 477.46 | 91.26 | 24203.00 | 477.45 | 91.32 |
| 20% | Vmax | 50683.00 | 477.10 | 94.58 | 49703.00 | 477.17 | 94.58 | 50160.00 | 477.21 | 94.57 | 49975.00 | 477.16 | 94.58 | 51023.00 | 477.12 | 94.67 |
| 30% | Vmax | 75830.00 | 476.75 | 95.46 | 75306.00 | 476.72 | 95.44 | 74837.00 | 476.78 | 95.42 | 75820.00 | 476.70 | 95.45 | 74961.00 | 476.76 | 95.47 |
| 50% | Vmax | 130680.00 | 476.43 | 95.57 | 130520.00 | 476.40 | 95.54 | 129820.00 | 476.42 | 95.48 | 130760.00 | 476.44 | 95.54 | 129700.00 | 476.45 | 95.55 |
| 75% | Vmax | 179620.00 | 476.47 | 95.73 | 179980.00 | 476.46 | 95.70 | 178440.00 | 476.50 | 95.74 | 179710.00 | 476.44 | 95.76 | 179600.00 | 476.48 | 95.71 |
| 100% | Vmax | 238260.00 | 476.47 | 95.58 | 238940.00 | 476.44 | 95.51 | 240020.00 | 476.41 | 95.57 | 240330.00 | 476.39 | 95.55 | 239950.00 | 476.40 | 95.56 |

| 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 | 24420.00 | 302.22 | 93.13 | 25074.00 | 302.21 | 93.26 | 24129.00 | 302.27 | 93.03 | 24557.00 | 302.25 | 93.11 | 24861.00 | 302.26 | 93.27 |
| 20% | Vmin | 51419.00 | 301.70 | 95.67 | 51106.00 | 301.69 | 95.69 | 50720.00 | 301.74 | 95.68 | 50042.00 | 301.75 | 95.67 | 51186.00 | 301.74 | 95.63 |
| 30% | Vmin | 75212.00 | 301.16 | 96.37 | 75369.00 | 301.22 | 96.34 | 75269.00 | 301.19 | 96.35 | 74489.00 | 301.26 | 96.32 | 74243.00 | 301.23 | 96.34 |
| 50% | Vmin | 130770.00 | 301.33 | 96.51 | 129720.00 | 301.42 | 96.46 | 130020.00 | 301.36 | 96.52 | 129900.00 | 301.39 | 96.50 | 130060.00 | 301.38 | 96.51 |
| 75% | Vmin | 179160.00 | 302.82 | 96.67 | 179560.00 | 302.82 | 96.74 | 179700.00 | 302.72 | 96.62 | 179420.00 | 303.01 | 96.68 | 182640.00 | 303.14 | 97.04 |
| 100% | Vmin | 237800.00 | 300.63 | 96.40 | 238790.00 | 301.04 | 96.54 | 237600.00 | 301.11 | 96.52 | 237460.00 | 301.11 | 96.50 | 238470.00 | 301.09 | 96.53 |
| 10% | Vnom | 25200.00 | 342.77 | 92.80 | 23941.00 | 342.88 | 92.41 | 25290.00 | 342.78 | 92.81 | 24596.00 | 342.84 | 92.62 | 25352.00 | 342.78 | 92.79 |
| 20% | Vnom | 50804.00 | 342.76 | 95.28 | 51045.00 | 342.75 | 95.37 | 50511.00 | 342.76 | 95.26 | 50565.00 | 342.77 | 95.28 | 50791.00 | 342.75 | 95.28 |
| 30% | Vnom | 74943.00 | 342.24 | 95.98 | 75559.00 | 342.22 | 96.00 | 75263.00 | 342.24 | 96.01 | 74887.00 | 342.32 | 95.97 | 74632.00 | 342.32 | 95.99 |
| 50% | Vnom | 130390.00 | 341.99 | 96.09 | 130500.00 | 341.92 | 96.12 | 130780.00 | 341.88 | 96.15 | 130690.00 | 341.90 | 96.14 | 129740.00 | 341.95 | 96.12 |
| 75% | Vnom | 179300.00 | 342.04 | 96.30 | 179700.00 | 342.09 | 96.30 | 178080.00 | 342.06 | 96.23 | 178680.00 | 342.05 | 96.32 | 178500.00 | 342.16 | 96.32 |
| 100% | Vnom | 239200.00 | 342.35 | 96.09 | 238980.00 | 342.31 | 96.09 | 238760.00 | 342.38 | 96.04 | 238420.00 | 342.37 | 96.10 | 239970.00 | 342.13 | 96.07 |
| 10% | Vmax | 24835.00 | 477.44 | 91.43 | 24740.00 | 477.46 | 91.42 | 24234.00 | 477.46 | 91.22 | 24165.00 | 477.41 | 91.28 | 25142.00 | 477.44 | 91.46 |
| 20% | Vmax | 49478.00 | 477.28 | 94.55 | 49462.00 | 477.24 | 94.59 | 50876.00 | 477.16 | 94.62 | 49785.00 | 477.22 | 94.57 | 49846.00 | 477.23 | 94.58 |
| 30% | Vmax | 74943.00 | 476.77 | 95.41 | 74626.00 | 476.77 | 95.42 | 75775.00 | 476.71 | 95.46 | 75303.00 | 476.77 | 95.43 | 75708.00 | 476.72 | 95.45 |
| 50% | Vmax | 130820.00 | 476.37 | 95.58 | 130790.00 | 476.40 | 95.54 | 130500.00 | 476.45 | 95.53 | 129540.00 | 476.43 | 95.51 | 130680.00 | 476.38 | 95.54 |
| 75% | Vmax | 178320.00 | 476.49 | 95.67 | 178960.00 | 476.47 | 95.73 | 179680.00 | 476.43 | 95.72 | 179630.00 | 476.45 | 95.73 | 179380.00 | 476.50 | 95.68 |
| 100% | Vmax | 238630.00 | 476.46 | 95.60 | 240140.00 | 476.43 | 95.57 | 238240.00 | 476.44 | 95.54 | 238820.00 | 476.38 | 95.57 | 237990.00 | 476.45 | 95.55 |