Manufacturer: Delta Energy Systems

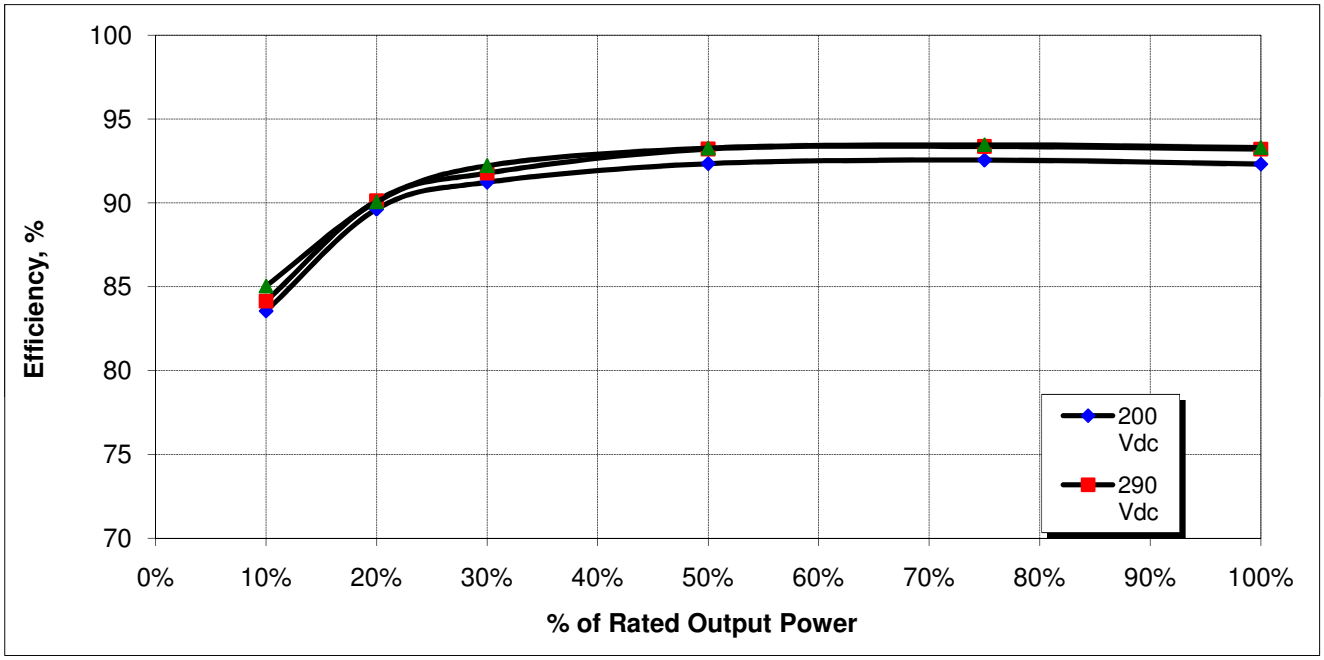
Model #: SI 1800 US (240V)

Rated Maximum Continuous Output Power: 1.80 kW  Night Tare Loss: 0.14 W

Vmin: 200 Vdc  Vnom: 290 Vdc  Vmax: 320 Vdc

| | | Power Level (%; kW) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 10% | 20% | 30% | 50% | 75% | 100% | |
| Input Voltage (Vdc) | | 0.18 | 0.36 | 0.54 | 0.90 | 1.35 | 1.80 | Wtd |
| Vmin | 200 | 83.6 | 89.6 | 91.2 | 92.3 | 92.6 | 92.3 | 91.8 |
| Vnom | 290 | 84.1 | 90.1 | 91.8 | 93.2 | 93.4 | 93.2 | 92.6 |
| Vmax | 320 | 85.0 | 90.1 | 92.2 | 93.3 | 93.5 | 93.3 | 92.8 |

**CEC Efficiency = 92.5%**



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 | 167.07 | 201.58 | 83.213 | 163.4 | 202.04 | 83.140 | 168.5 | 200.12 | 83.567 | 165.8 | 199.94 | 84.003 | 165.5 | 203.02 | 83.3 |
| 20% | Vmin | 359.13 | 200.55 | 89.250 | 361.23 | 199.96 | 89.230 | 363.4 | 200.9 | 90.013 | 367.1 | 201.89 | 90.320 | 372.9 | 202.51 | 90.1 |
| 30% | Vmin | 538.77 | 200.01 | 91.237 | 539.1 | 199.99 | 91.210 | 536.9 | 199.89 | 90.923 | 537 | 199.69 | 91.277 | 540.7 | 200 | 91.5 |
| 50% | Vmin | 902.13 | 200.7 | 92.267 | 903.37 | 200.79 | 92.287 | 904.3 | 200.67 | 92.337 | 904.8 | 200.56 | 92.440 | 904.1 | 200.73 | 92.3 |
| 75% | Vmin | 1357.6 | 199.45 | 92.587 | 1354.6 | 199.42 | 92.497 | 1361 | 199.96 | 92.503 | 1364 | 200.41 | 92.570 | 1364 | 200.45 | 92.6 |
| 100% | Vmin | 1775.8 | 200.25 | 92.280 | 1774.8 | 200.28 | 92.370 | 1772 | 200.3 | 92.347 | 1773 | 200.24 | 92.227 | 1777 | 200.13 | 92.2 |
| 10% | Vnom | 172.23 | 276.52 | 86.773 | 163.3 | 271.06 | 83.520 | 156 | 283.02 | 78.840 | 167.2 | 285.81 | 82.127 | 177.4 | 286.38 | 88.8 |
| 20% | Vnom | 342 | 290.05 | 90.087 | 347.27 | 289.5 | 90.317 | 351.3 | 290.71 | 90.230 | 347.8 | 289.25 | 89.883 | 345.6 | 289.3 | 90.047 |
| 30% | Vnom | 539.13 | 288.72 | 92.003 | 537.03 | 288.51 | 91.787 | 538.3 | 288.73 | 91.757 | 540.9 | 287.72 | 91.867 | 540 | 288.5 | 91.783 |
| 50% | Vnom | 910.57 | 290.31 | 93.323 | 899.1 | 289.29 | 93.080 | 896.7 | 289.58 | 93.083 | 898.9 | 289.76 | 93.537 | 903.1 | 290.04 | 93.430 |
| 75% | Vnom | 1399.5 | 287.66 | 93.373 | 1402.3 | 287.52 | 93.363 | 1402 | 287.44 | 93.393 | 1398 | 287.09 | 93.347 | 1400 | 287.5 | 93.270 |
| 100% | Vnom | 1799.6 | 290.08 | 93.330 | 1793.7 | 290.22 | 93.160 | 1789 | 290.23 | 93.030 | 1791 | 290.24 | 93.180 | 1794 | 290.24 | 93.380 |
| 10% | Vmax | 166.57 | 321.12 | 88.257 | 165.07 | 319.94 | 84.070 | 160.7 | 322.29 | 82.187 | 160.4 | 317.85 | 85.067 | 168.2 | 317.82 | 87.673 |
| 20% | Vmax | 346.43 | 320.98 | 89.607 | 346.8 | 319.37 | 90.073 | 358.4 | 318.33 | 90.657 | 361.7 | 317.99 | 90.013 | 358 | 318.2 | 89.650 |
| 30% | Vmax | 544.7 | 318.5 | 92.457 | 550.43 | 319.76 | 92.480 | 545.3 | 319.95 | 92.013 | 543.1 | 319.59 | 92.220 | 542.3 | 319.6 | 92.217 |
| 50% | Vmax | 909.33 | 319.12 | 93.400 | 904.37 | 319.54 | 93.407 | 897.7 | 319.84 | 93.153 | 900.2 | 319.04 | 92.970 | 907.6 | 319.47 | 93.323 |
| 75% | Vmax | 1412.7 | 319.79 | 93.363 | 1416.1 | 319.98 | 93.417 | 1408 | 318.35 | 93.537 | 1407 | 319.01 | 93.540 | 1419 | 320.24 | 93.440 |
| 100% | Vmax | 1737.5 | 320.64 | 93.130 | 1767.1 | 320.35 | 93.280 | 1758 | 320.49 | 93.467 | 1747 | 320.59 | 93.437 | 1762 | 320.38 | 93.153 |

| 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 | 169.17 | 202.8 | 83.500 | 170.53 | 202.36 | 84.180 | | | | | | | | | |
| 20% | Vmin | 368.73 | 200.74 | 89.427 | 365.3 | 200.94 | 89.000 | | | | | | | | | |
| 30% | Vmin | 539.57 | 199.87 | 91.370 | 538.1 | 200.18 | 91.087 | | | | | | | | | |
| 50% | Vmin | 904.87 | 200.74 | 92.333 | 904.87 | 200.73 | 92.423 | | | | | | | | | |
| 75% | Vmin | 1363.8 | 200.39 | 92.543 | 1363.2 | 200.41 | 92.600 | | | | | | | | | |
| 100% | Vmin | 1781.5 | 200.08 | 92.327 | 1781.1 | 200.12 | 92.410 | | | | | | | | | |
| 10% | Vnom | 172.6 | 282.13 | 85.223 | 166.8 | 287.85 | 83.737 | | | | | | | | | |
| 20% | Vnom | 351.73 | 289.78 | 90.453 | 354 | 286.02 | 89.890 | | | | | | | | | |
| 30% | Vnom | 535.27 | 288.7 | 91.690 | 534.7 | 288.49 | 91.583 | | | | | | | | | |
| 50% | Vnom | 893.87 | 289.82 | 93.083 | 897.8 | 289.09 | 92.963 | | | | | | | | | |
| 75% | Vnom | 1403.3 | 287.31 | 93.363 | 1404.2 | 287.38 | 93.453 | | | | | | | | | |
| 100% | Vnom | 1794.8 | 290.21 | 93.297 | 1788.6 | 290.24 | 93.090 | | | | | | | | | |
| 10% | Vmax | 170.07 | 324.76 | 85.450 | 159.87 | 324.26 | 82.570 | | | | | | | | | |
| 20% | Vmax | 355 | 318.17 | 90.013 | 357.77 | 318.96 | 90.413 | | | | | | | | | |
| 30% | Vmax | 545 | 320.1 | 92.233 | 544.8 | 319.69 | 91.913 | | | | | | | | | |
| 50% | Vmax | 905.43 | 320.12 | 93.450 | 903.1 | 320.13 | 93.190 | | | | | | | | | |
| 75% | Vmax | 1418.7 | 320.58 | 93.453 | 1418.2 | 320.21 | 93.527 | | | | | | | | | |
| 100% | Vmax | 1770.5 | 320.29 | 93.167 | 1768.7 | 320.37 | 93.480 | | | | | | | | | |