

NETSURE™ 1100 SERIES

DC Power System – 1 kW



KEY FEATURES

- Convection cooling without noise – for silent operation in residential and office locations
- Up to IP65 high level protection – for harsh environments
- High efficiency, above 95% – reduces power consumption for lower operating costs
- Wide input AC or DC voltage range to operate in a variety of applications
- Wide temperature operating range from -40°C to +75°C / -40°F to 167°F to meet the harshest environments
- Compliant with global standards – delivers quality, performance and reliability, no matter what the application or location demands
- Digital Signal Processing (DSP) – means fewer components, optimized operation and active load sharing for increased reliability
- Flexible installation options include wall and pole mounting

The high efficiency NetSure™ 1100 Series reduces power consumption and lowers operating costs while delivering superior performance and uncompromised reliability.

Description

The 1000 Watt high-efficiency NetSure 1100 Series, R48-1000C, is designed for applications with low power requirements, such as small cell or DAS sites. Fanless cooling eliminates maintenance and results in silent operation, enabling deployment in residential and office sites. Flexible installation options include pole or wall mounting.

The IP55 rated models, C1-C3, accept either AC or DC input and can be used in a variety of applications, such as remote powering with a centralized battery plant. Modules can be connected in parallel for higher load capacity.

This module is not available in North America.

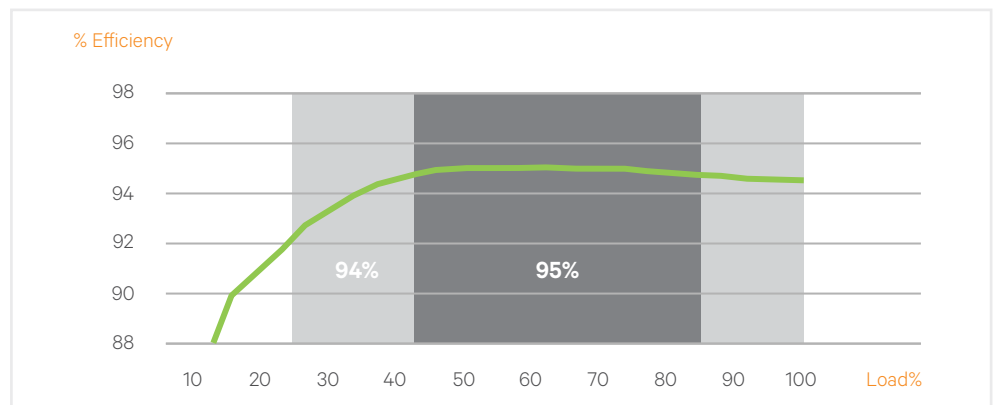
The IP65 rated models, C4-C6, accept AC input and is designed for outdoor applications in harsh environments. Connections to this unit are made through quick connect connectors.

Both modules accommodate several different -48 VDC distribution options and offer relay output for remote alarms.



Application

The NetSure 1100 Series is ideal for use in network edge applications including WiMAX, small cell sites, business offices, and multi-dwelling units (MDUs). Rapid deployment outdoors is easy since the unit is hardened and does not require a separate housing for protection against the elements. Fanless cooling also enables use inside residential and office environments. Simply mount the R48-1000C power system module indoors or outdoors, and connect the quick connectors to your local power source.



R48-1000C Efficiency Curve at 220 VAC Nominal

Technical Specifications

| INPUT | MODELS C1, C2, C3 | MODELS C4, C5, C6 |
|--------------------------------|--|--|
| Voltage | 85 VAC to 300 VAC, 200 VDC to 400 VDC | 85 VAC to 300 VAC (see figure 1) |
| Voltage, Nominal | 100 VAC to 250 VAC, 200 VDC to 400 VDC | 100 VAC to 250 VAC |
| Line Frequency (AC) | 45 to 65 Hz | |
| Maximum Current | 7.5A (AC), 5.6A (DC) | 7.5A (AC) |
| Power Factor (AC) | >0.90 for 25% to 50% load, >0.98 for 50% to 100% | |
| Total Harmonic Distortion (AC) | ≤5% for 50% to 100% load | |
| OUTPUT | | |
| Voltage | -54 VDC | |
| Maximum Power | 1000 W | |
| Maximum Current | 20.8 A @ -48 VDC, limit set point 0 to 20.8 A (see figure 2) | |
| Peak Efficiency | 95% | |
| ENVIRONMENTAL | | |
| Operating | -40 to 75°C / -40 to +167°F (see figure 3 for derating) | |
| Storage | -40 to +70°C / -40 to +158°F | |
| Relative Humidity | 5 to 100% | |
| Altitude | -61 to 3048 (m): up to 2000 m at full power / -200 to 10000 (feet): up to 6560 feet at full power | |
| STANDARDS COMPLIANCE | | |
| Safety | 60950-1, 60950-22 (EN, IEC, UL) | |
| EMC | EN55022, ETSI EN300 386, FCC CFR 47 Part 15, Telcordia GR-1089-CORE Issue 6 (Class B conducted and radiated) | |
| Environment | IP55 60529 (IEC), REACH, RoHS 6, WEEE, Zone 4 | IP65 60529 (IEC), REACH, RoHS 6, Zone 4 |
| MECHANICS | | |
| Dimensions (H x W x D) | 360 x 180 x 90 (mm) / 14.2 x 7.1 x 3.5 (inches) | |
| Weight | 5 kg / 11.0 lbs | |

Ordering Process

1. Order quantities of models C4, C5, C6 as needed.
2. Order GMT fuses as required, for model C6.

Ordering Information

| MODEL | PART NUMBER | DESCRIPTION |
|-------------------|-------------|--|
| IP55 Rated | | |
| 1R481000C1* | | NetSure 1100, -48 VDC, 1000 W, IP55, terminal connection |
| 1R481000C2* | | NetSure 1100, -48 VDC, 1000 W, IP55, (2) 12A CBs |
| 1R481000C3* | | NetSure 1100, -48 VDC, 1000 W, IP55, 6 GMT fuse holder |
| IP65 Rated | | |
| 1R481000C4** | 561664 | NetSure 1100, -48 VDC, 1000 W, IP65, bulk distribution |
| 1R481000C5** | 561665 | NetSure 1100, -48 VDC, 1000 W, IP65, 30A CB |
| 1R481000C6** | 561666 | NetSure 1100, -48 VDC, 1000 W, IP65, 6 GMT fuse holder |

* Models C1, C2, C3 are not available in North America.

** Models C4 C5, C6 are not available in Europe, Middle East and Africa.

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Figures

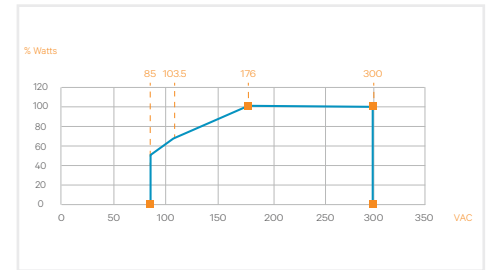


Figure 1: Output Power vs. Input Voltage and $V_o > 48\text{ V}$ at $T_{amb} < 55^\circ\text{C}$

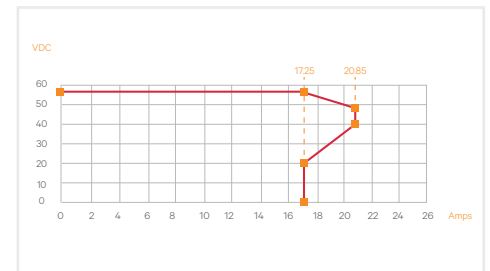


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 1000 W

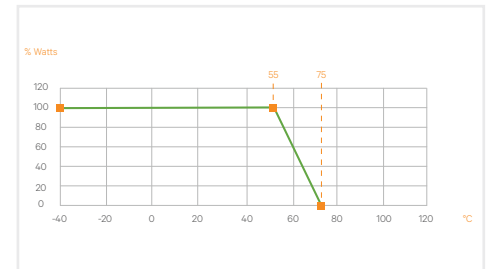


Figure 3: Output Power vs. Temperature at 290 VAC $\geq U_{in} \geq 176\text{ VAC}$

GMT Fuses

| AMPS | PART NUMBER | FUSE COLOR |
|----------------|-------------|-------------|
| 18/100 (GMT-A) | 248610301 | - |
| 1/4 | 248610200 | Violet |
| 1/2 | 248610300 | Red |
| 3/4 | 248610500 | Brown |
| 1-1/3 | 248610700 | White |
| 2 | 248610800 | Orange |
| 3 | 248610900 | Blue |
| 5 | 248611000 | Green |
| 7-1/2 | 248611300 | Black-white |
| 10 | 248611200 | Red-white |