NetSure™ IPE Series

R48-1000C

Benefits

- Rapidly deploy your 5G network with outdoor rectifiers that easily mount directly to a pole or wall
- Power your critical infrastructure in harsh environments with durable IP65-rated modules that operate up to +75 °C
- Keep network operating costs to a minimum by using highly available DC power that operates at 95% efficiency
- Eliminate voltage drops and running massive cables to remote radio heads (RRHs) by placing these compact rectifiers directly on top of the tower
- Avoid disrupting the neighborhood by running your network on silent, convection-cooled DC power

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

Description

The NetSure IPE series high-efficiency R48-1000C rectifier is designed for applications with low power requirements, such as small cells and remote radio heads (RRHs). Fanless cooling eliminates maintenance and results in silent operation, enabling deployment in public areas.

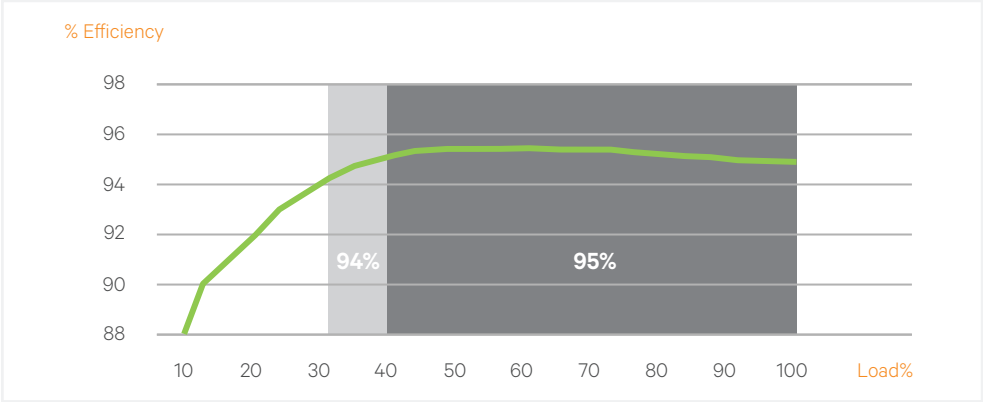
IP55 rated models accept either AC or DC input and can be used in a variety of applications, such as remote powering with a centralized battery plant. Modules can be connected in parallel for higher load capacity.

IP65 rated models accept AC input and are designed for outdoor applications in harsh environments. Connections to these units are made through quick-connect connectors. Simply mount the R48-1000C module indoors or outdoors and connect to your local power source.

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

Application

The NetSure IPE Series is ideal for use in network edge applications including 5G, DAS 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.



R48-1000C Efficiency Curve at 230 VAC Nominal

Technical Specifications

Input	IP55 Models	IP65 Models
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 Information

Part Number	Description
IP55 Rated	
02131008*	R48-1000C, -48 VDC, 1000 W, IP55, terminal connection
02131013*	R48-1000C, -48 VDC, 1000 W, IP55, (2) 12A CBs
02131018*	R48-1000C, -48 VDC, 1000 W, IP55, 6 GMT fuse holder
IP65 Rated	
02131023 / 561664**	R48-1000C, -48 VDC, 1000 W, IP65, bulk distribution
2131028 / 561665**	R48-1000C, -48 VDC, 1000 W, IP65, 30A CB
02131033 / 561666**	R48-1000C, -48 VDC, 1000 W, IP65, 6 GMT fuse holder

*IP55 rated models are not available in North America.
**Use part numbers 561664, 561665, 561666 for North America.

Figures

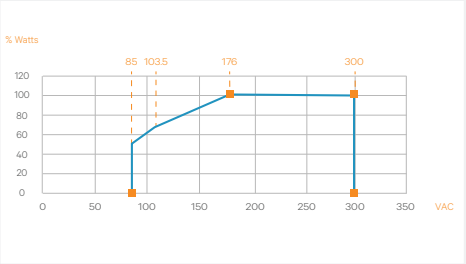


Figure 1: *Output Power vs. Input Voltage and Vo > 48 V at Tamb <55°C*

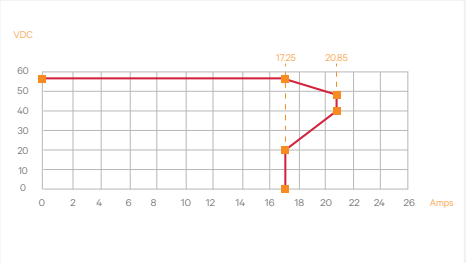


Figure 2: *Output Voltage vs. Output Current at Maximum Output Power 1000 W*

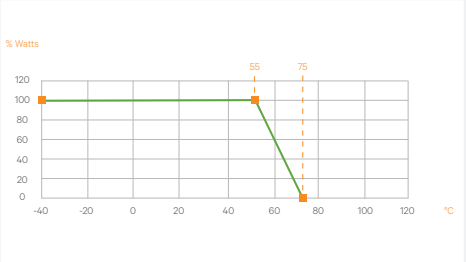


Figure 3: *Output Power vs. Temperature at 290 VAC ≥ Uin ≥ 176 VAC*

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

Note: For part number 561666 only.

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