



Vertiv™ NetSure™  
IPE Series, R48-2000C2  
Ordering Guide



## Benefits

- Rapidly deploy your wireless and broadband networks with outdoor rectifiers that easily mount directly to a pole or wall using quick connectors on load and AC input cables
- Power your critical infrastructure in hard to reach spaces with IP65-rated high-density modules that operate up to +75 °C
- Keep network operating costs to a minimum by using highly available DC power that operates at up to 96% efficiency and requires no energy for cooling
- Eliminate voltage drops and running heavy cables to remote radio heads (RRHs) by placing these compact rectifiers directly on top of the tower
- Quietly support your network with silent, convection-cooled DC power

*Lightweight and maintenance-free, Vertiv™ NetSure™ IPE outdoor power systems power your network in harsh environments.*

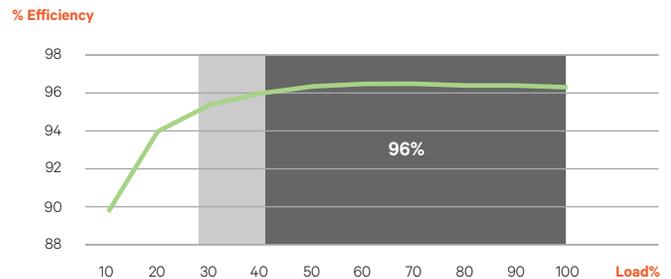
## Description

The Vertiv™ NetSure™ IPE series high-efficiency R48-2000C2 rectifier is designed to support 5G radio applications such as small cells and remote radio heads (RRHs) and broadband applications such as DSLAMs and OLTs. Fanless cooling eliminates maintenance and results in silent operation. Ideal for rapid deployment in urban, rural, or noise sensitive public areas.

The rectifier meets IP65 rating for use in harsh outdoor environments. Flexible installation options include pole or wall mounting in flag or flat position. Quick connectors and a cable-strain relief plate minimize the time to install cables.

The 96% high-efficiency rectifier includes an integrated controller that offers Bluetooth communication for initial system set-up. It can then be turned-off or left on for on-going monitoring and control depending on the operator's preference. All rectifiers are also equipped with alarm relay outputs.

The space-saving Vertiv NetSure IPE Series is ideal for use in network edge applications including 5G small cells, RAN, Distributed Antenna Systems (DAS) and broadband. Rapid deployment outdoors is easy since the unit is hardened and does not require a separate housing for protection against the elements.



R48-2000C2 Efficiency Curve at 230 VAC Nominal

## Versatile Mounting Options



**Flag Orientation**  
(bracket 10024600\*)



**Flat Orientation**  
(bracket 10024600\*)

\* included with rectifier

## Technical Specifications

### AC Input

Voltage, Nominal	85 VAC to 300 VAC
Voltage Range	100-120 VAC and 200-240 VAC
Single or Three-Phase	Single
Frequency	45 to 65 Hz
Maximum Current	12A
Power Factor	>0.90 for 25% to 50% load, >0.98 for 50% to 100%
Total Harmonic Distortion	≤5% from 50% to 100% of rated output current at 220 VAC to 240 VAC

### DC Output

Voltage, Nominal	-48 VDC
Voltage Range	-42 to -58 VDC
Maximum Power	2000 W (see figure 1)
Maximum Current	41.6 A @ -48 VDC (see figure 2)
Peak Efficiency	>93% at ≥ 100 VAC input, >96.3% at ≥ 230 VAC input
Load Outputs	2x2kW and 2x1kW fuse protected outputs

### DC Load Distribution

Fuse Type	High Speed
Fuse Positions	4
Fuse Rating	2x 30A; 2x 70A

### Monitoring

Local Display	3x Status LEDs
Communication	Ethernet and Bluetooth
Protocols	SNMPv2

### Environmental

Operating Temperature	-40 to 75°C / -40 to +167°F (see figure 3)*
Storage Temperature	-40 to +70°C / -40 to +158°F
Relative Humidity	5 to 100%
Altitude	-61 to 3048 (m): up to 3000 m at full power / -200 to 10000 (feet): up to 9842 feet at full POWER

### Physical

Body Color	Off White
Height	15.7"/400 mm
Width	11.8"/300 mm
Depth	2.4"/62 mm
Maximum Weight (Approximate)	21 lbs / 9.5 kg
Access	Bottom of rectifier
Cable Entry	Quick connectors

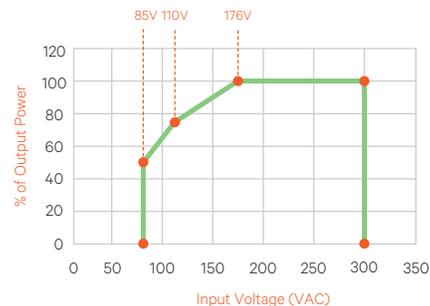
### Standards Compliance

Safety	IEC62368-1, UL62368-1, CSA-C22.2 NO. 62368-1
EMC	EN55022, ETSI EN300 386, FCC CFR 47 Part 15 (Class B), GR-1089-CORE Issue 7:2017
Environment	IEC 60529, REACH, RoHS, WEEE
Ingress Protection	IP65
Seismic	Zone 4

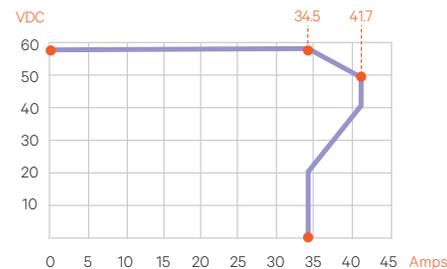
### Warranty

Standard Warranty	1 Year
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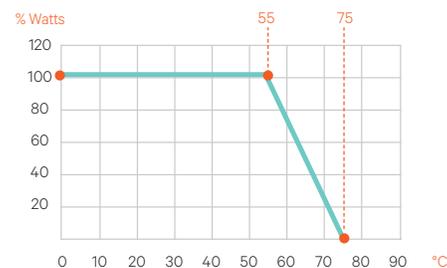
## Figures



**Figure 1:** Output Power vs. Input Voltage and  $V_o > 48V$  at  $Temp < 55^\circ C$



**Figure 2:** Output Voltage vs. Output Current at Maximum Output Power 2000 W



**Figure 3:** Output Power vs. Temperature at 290 VAC  $\geq V_{in} \geq 200$  VAC

## Ordering Information

### Part Number

### Description

#### 2000 Watt Rectifier

1R482000C2-6 Vertiv™ NetSure™ IPE, -48 VDC, 2000 W, with controller, quick connections. Standard mounting kit included with cable-strain relief plate.

#### 2000 Watt Rectifier Kits (see matrix below for details - cables and mounting brackets can be ordered individually on following page)

Kit 1 - 10032448 1R482000C2-6 rectifier with input, communication and (1) 2kW output cables

Kit 2 - 10032449 1R482000C2-6 rectifier with input, communication and (2) 1kW output cables

Kit 3 - 10032451 1R482000C2-6 rectifier with input, communication, (2) 2kW output, (2) 1kW output cables

Category	Description	Length	Part Number	Rectifier 1R482000C2-6	Kit 1 10032448	Kit 2 10032449	Kit 3 10032451
	2kW Rectifier	-	1R482000C2-6	1	1	1	1
	AC Input	16.4 ft	10024814				
	AC Input	32.8 ft	10023461		1	1	1
<b>Power Cables</b>	1kW Load	30.0 ft	10023471			2	2
	2kW Load	30.0 ft	10023420		1		2
<b>Communication Cable</b>	Alarm/Ethernet	32.8 ft	10039061		1	1	1
<b>Mounting Bracket</b>	Rectifier (included w/ rectifier)	-	10024600	1	1	1	1

Cables are pre-connectorized on one end and raw ended on the other

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## 2000 Watt Rectifier Cables

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10024814	AC input power cable, IP65 quick connector/unterminated - 16.4 ft
10023461	AC input power cable, IP65 quick connector/unterminated - 32.8 ft
10023471	1 kW output power cable, IP65 quick connector/unterminated - 30 ft
10023420	2 kW output power cable, IP65 quick connector/unterminated - 30 ft
0039061	Alarm/Ethernet communication cable, DB-15 connector/unterminated - 32.8 ft

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Cables are pre-connectorized on one end and raw ended on the other

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## Spare/Replacement Parts

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10026784	Fuse, 160 VDC, 30 A - for 1kW outputs
10026786	Fuse, 300 VAC, 70 A - for 2kW outputs

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