

NE075AC48ATEZ+ Infinity Rectifier



Advanced Technology to Simplify Your Network

The OmniOn Power™ NE075AC48ATEZ+ Infinity Single-phase Rectifier is designed to efficiently transform energy from any AC source into the 48 Volt DC power needed for Central Office, MTSO and wireless cellular sites. This means that one single rectifier can be used globally to meet all your 48V powering needs.

Efficiency is market leading for diode protected, true hot pluggable, 48Volt rectifiers.

The NE075AC48ATEZ+ offers a powerful combination of efficiency, network simplicity and reliability.

A True System Solution

Infinity Rectifiers are part of the proven Infinity Power System platform particularly designed to meet the unique needs of the ever-changing network landscape.

- Monitoring / control – the built in microprocessor controls and monitors all critical rectifier functions and communicates with the system controller using the built in Galaxy Protocol serial interface.
- Dual Voltage Compatible – unique connector pin designation allows the 48 Volt rectifiers to be used in a “Universal” power shelf, alongside DC-DC converters supporting loads at 24 Volts dc.
- Plug and Play – installation of the rectifier in a shelf connected to a compatible system controller initializes all set up parameters automatically. No adjustments are needed.
- Proportional Load Share – when paired with a NE050, both rectifiers share equal amount of load in relation to each unit’s capacity.
- Meets most 3 phase needs. Works with 208V 3 Phase in a phase to phase configuration. Works from 480V 3 Phase in a line to neutral configuration.

Feature and Advantages

- Compact – 1RU form factor provides high power density 34 Watts/Cubic inch.
- Efficient – Peak efficiency of 97.3% occurs at 50% load matching sweet spots with customer use patterns.
- Flexibly provides 75 Amps of 48 Volt power from both conventional and sustainable sources of energy.
- Starts and runs at any AC voltage from 95 to 305 V_{AC}.
- Operates over a broad temperature range (-40°C through +75°C).
- Fail safe performance – hot insertion capabilities allow for rectifier replacement without system shutdown; soft start tripping and inrush current protection prevent nuisance tripping of upstream breakers.
- Extended service life – parallel operation with automatic load sharing ensures that units are not unduly stressed.

(See footnotes on last page.)

Technical Specification

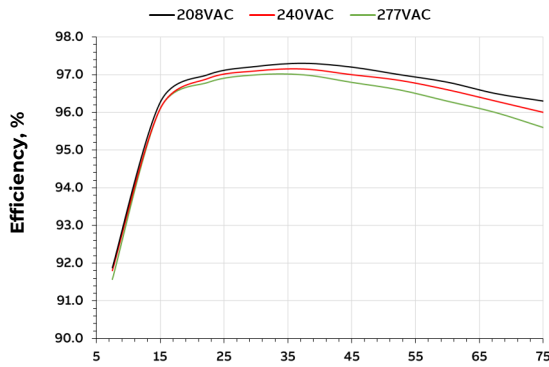
Electrical Specifications

INPUT VOLTAGE & OUTPUT POWER	
Response to AC Input Voltage	Operates according to figure, turning on at all V_{IN} above $90V_{AC}$ Output power: $1200W < 140V_{AC}$ $4087W > 175V_{AC}$ Output power follows linear path between defined points. 305V max excursion voltage
AC Input Current	15A max @ $120V_{AC}$ 22-16A @ $200-277V_{AC}$
Power Factor	0.98 @ loads over 50%
THD	< 5% @ loads over 50%
Holdup	Typical, 15ms @ 66A load
Frequency	45-66Hz or DC

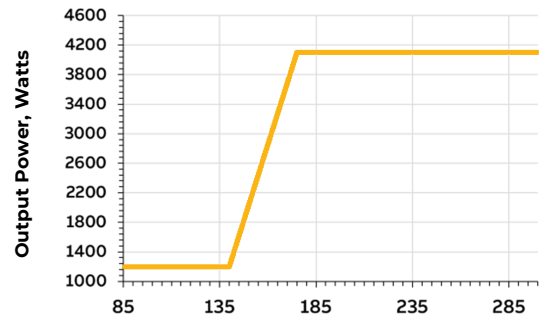
OUTPUT	
V_{OUT}	+42–58 V_{DC} range Default = 54.5 V_{DC}
I_{OUT}	22A @ low input line 75A @ high input line 50A @ high line in older shelves
Regulation	± 0.05 w/controller
Ripple	100 mV _{RMS} , 250 mV _{P-P}
Efficiency	Approaching 97.3%
Soft Start	Starts up into fully discharged batteries.

Technical Specification (continued)

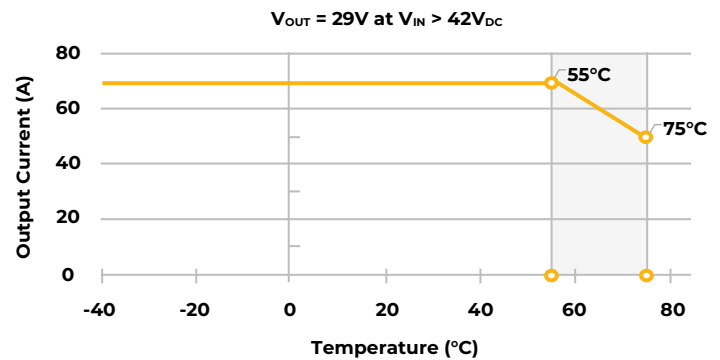
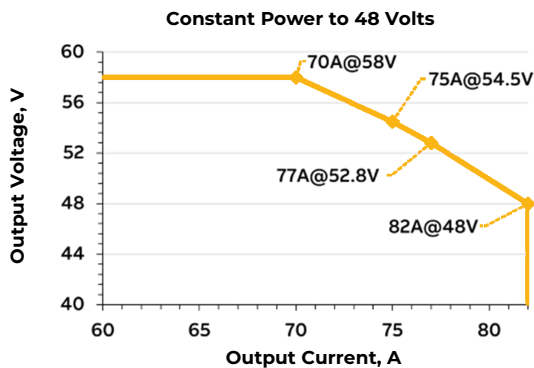
Characteristic Curves



Efficiency vs Output Current
(Temp: 25°C, V_{IN}: 208/240/277V_{AC}, Freq: 60Hz)



Output Power vs Input Voltage

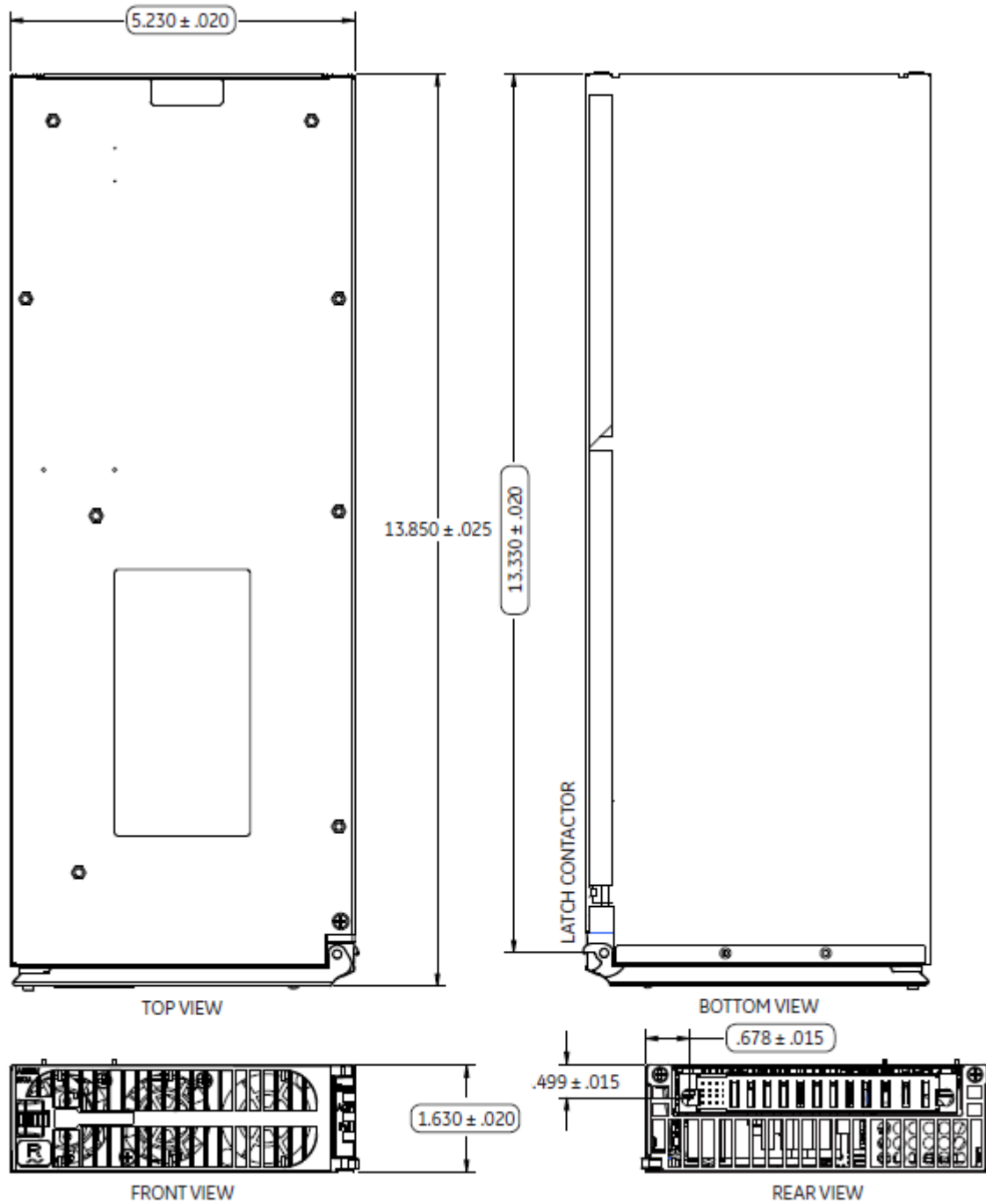


Environmental, Compliance & Physical

Operating Ambient Temperature Range	-40°C to +75°C (Output derates at 2%/°C beginning at 55°C)
Cooling Method	Front to back airflow with onboard temperature controlled fans
Operating Relative Humidity	0 - 95% (non-condensing) for use in a controlled environment
Electromagnetic Compatibility	FCC Part 15, EN 55022 (CISPR22), EN 55024, Level A, GR-1089
Lightning Surge	EN/IEC 61000-4-5 Level 4 (Error free), ANSI C62.41 Category B 100 kHz
Agency Certifications* Planned	UL1950, EN60950, CSA*234/950, NEBS GR-1089, GR-63-CORE, RoHS 6/6
Heat Release	191 Watts, or 908 BTU/hr at full load of 4087 Watts
Mean Time Between Failure (MTBF)	300k Hours @ 25°C per Telcordia SR-332, Method 1, Case 3
Height x Width x Depth, Weight	1.63x5.23x13.85in (42x133x352mm)
Packaged Weight	5.90 lbs (2.7 kg), 6.95 lbs (3.2kg)

Technical Specification (continued)

Physical Interface Dimensions



Change History (excludes grammar & clarifications)

Revision	Date	Description of the change
1.0	03/20/2023	Initial release
1.1	10/20/2023	Updated as per OmniOn template
1.2	01/04/2024	Updated to change FS to DS
1.3	05/10/2024	Update head release watts Pg. 3.
1.4	05/22/2024	Updated content of Electrical Specifications
1.5	06/21/2024	Formatting changes
1.6	06/26/2024	Removed unsubstantiated Claim

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