

Infinity NE DC/DC Converter NE070DC58A

±58V_{DC}, 70A_{DC} Output, 54.5V_{DC} Input



Packing More Power and Efficiency into Small Spaces

The OmniOn Power™ INFINITY NE DC/DC converter NE070DC58A integrates the latest Switch mode technology with superior power density, protection and control features in a compact, cost efficient power conversion system. Designed as a key element in the revolutionary INFINITY NE Universal Power Plant, the NE070DC58A converter converts 54.5V_{DC} input power into the 58 V_{DC} voltage level required to power end user equipment. Operation over a wide temperature range (-40°C to +75°C) makes the NE070DC58A suitable for controlled and uncontrolled environments.

Applications

- Wireless Cell Site Power Systems
- Dual Voltage Power Plants
- MTSO and Central Office Power Plants
- Base Station Power Plants

Key Features

- Universal Power shelf compatible
- Microprocessor controlled
- 2 – wire digital interface
- Hot pluggable
- Digital load sharing
- Field replaceable fans
- Optional Fan filter
- UL recognized
- CE marked

Benefits

- Compact - 1RU form factor providing high power density (34 W/in³).
- Dual Voltage compatibility – the unique connector pin designation allows the converter to be used in a “universal” power shelf, alongside converters or DC/DC converters with different output voltages.
- Plug and Play – installation of the converter in a shelf connected to a compatible system controller initializes all set up parameters automatically. No adjustments are needed.
- Extended service life – parallel operation with automatic load sharing ensures that parallel units are not unduly stressed even when a unit fails or is removed.
- Monitoring / control – the built in microprocessor controls and monitors all critical converter functions and communicates with the system controller using the built in Galaxy Protocol serial interface.
- Fail safe performance – hot insertion capabilities allow for converter replacement without system shutdown; soft start and inrush current protection are also incorporated.

Technical Specification

Electrical Specifications

INPUT	
Nominal Operating Voltage	40-60V _{DC}
Absolute Voltage Limits	80V _{DC}
Nominal DC Input current	70A at 54.5V _{DC} input
Max DC input current	85A (at V _{IN} Minimum, I _{OUT} Maximum)

OUTPUT	
Voltage range	54/58V _{DC}
Output Current	70 A at 58 V _{DC}
Regulation (with controller)	±0.5%
Ripple	100 mV _{RMS}
Efficiency	95% (at normal input and 50% load)
Temperature Derating	Derate 2%/DegC from 55°C up to 75°C
Input Voltage Derating	Linear derate on V _{IN} from 54V (4070W) to 40V (3000W) at nominal ambient temperature

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*CSA is a registered trademark of Canadian Standards Association.

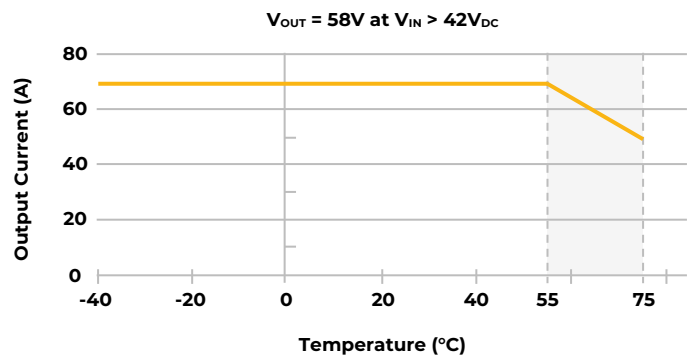
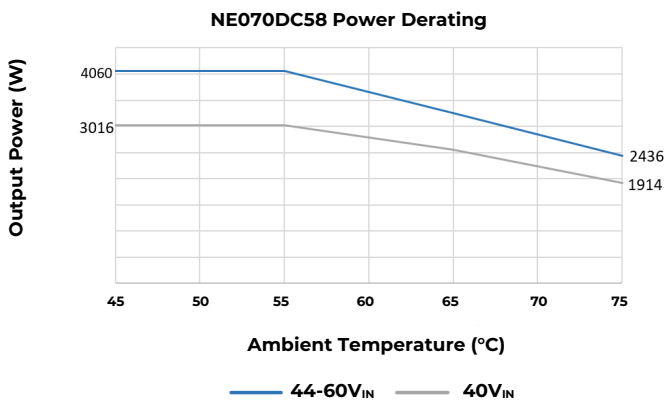
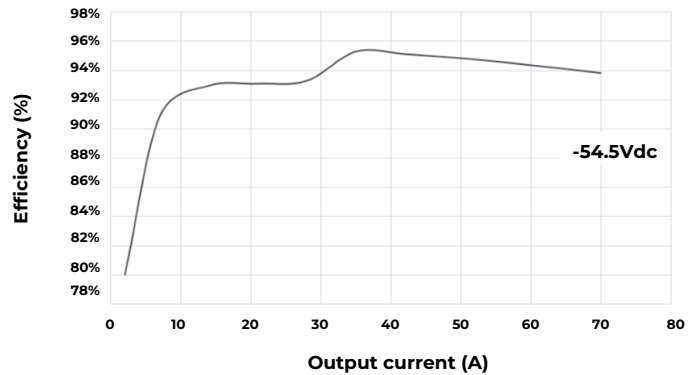
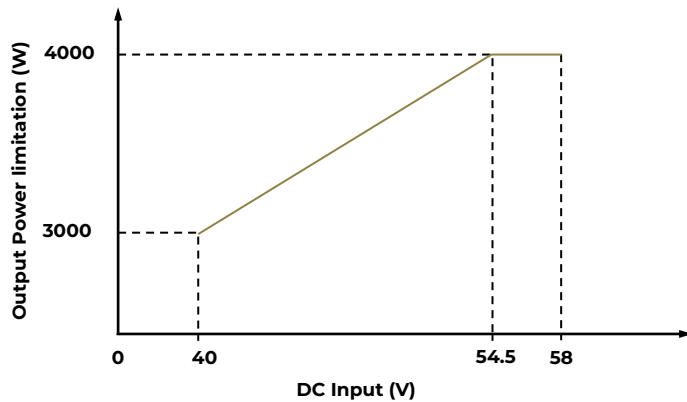
†VDE is a trademark of Verband Deutscher Elektrotechniker e.V.

UL is a registered trademark of Underwriters Laboratories, Inc.

This product is intended for integration into end user equipment. All the procedures for CE marking of end user equipment should be followed.

Technical Specification (continued)

Characteristics Curves



Environmental, Compliance & Physical

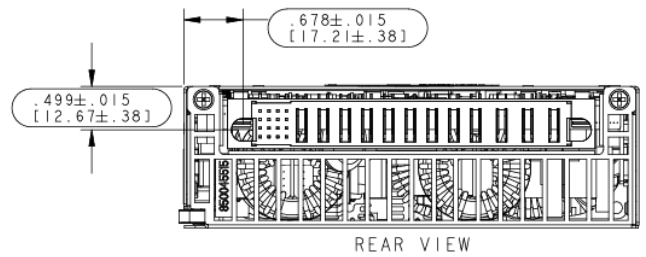
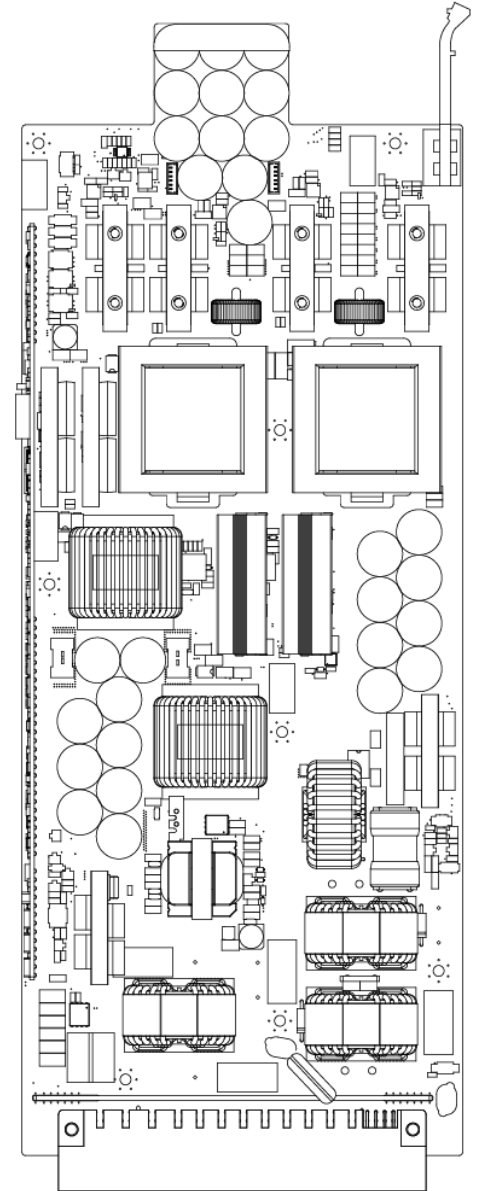
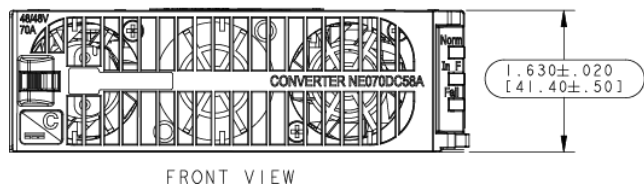
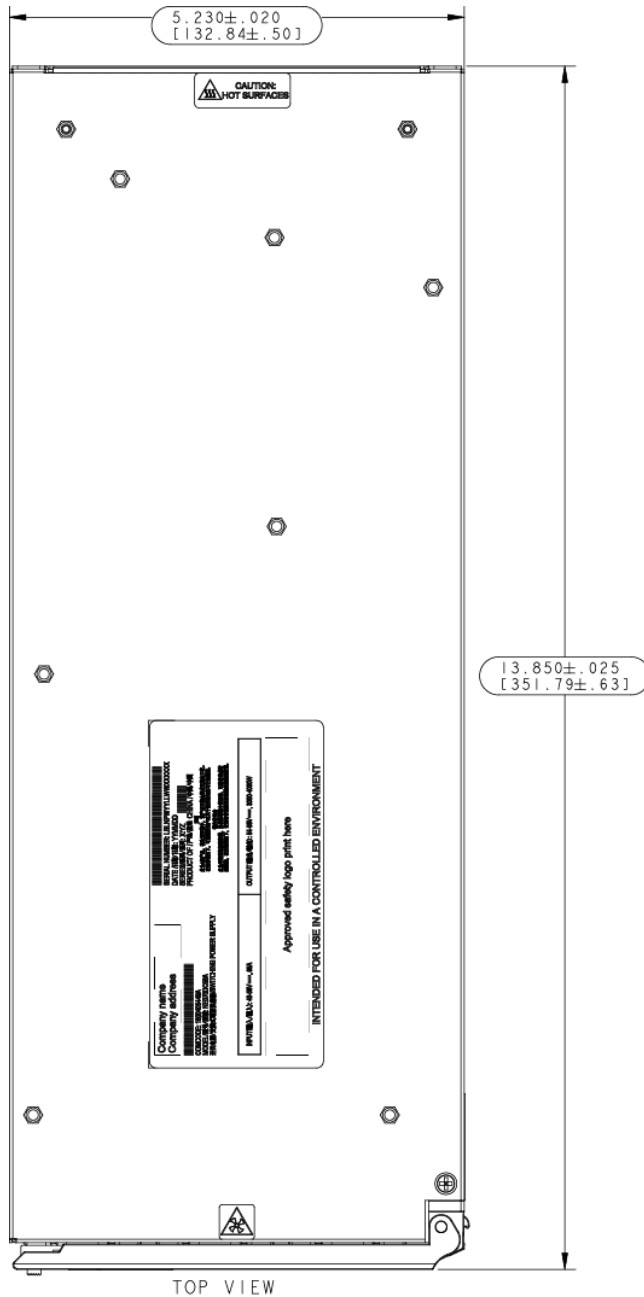
Operating Temperature Range	-40°C to 75°C
Operating Humidity	10-80%RH for 90% of the time 5-85%RH for 10% of the time
Storage Temperature Range	-40°C to 85°C
Heat Release	273 Watts, or 931 BTU/hr at full load of 4060 Watts
EMC	FCC, EN 55032, CISPR22, Level A, conducted and radiated
ESD	IEC/EN 61000-2, level 4
Safety Standards	UL1950, EN62368 (IEC950), CSA*234/950
Certification Marks	UL Recognized (Canada and U.S.), CE marking
Height x Width x Depth Weight	1.63x5.23x13.85in (42x133x352mm) 6 lbs (2.7kg)

Control and Monitoring

Visual Indicators	Norm, Input and Fail LEDs
Serial Interface	2 wire RS485 with GP Protocol

Technical Specification (continued)

Physical Interface Dimensions



Technical Specification (continued)

Ordering Information

Power module	Input	Output	Density	Ordering Code
NE070DC58A Converter	54.5 V _{DC}	58 V _{DC}	34 W/in ³	1600405449A

Related Product Literature

[Infinity S CPB-NES_Ordering Guide](#)

[Infinity M Dual Voltage Power Systems_Ordering Guide](#)

With our wide range of product offerings along with extensive application notes, development tools, pre- and post-sales support including technical support, OmniOn Power™ can provide a total solution to your current and future powering needs.

OmniOn Power™ is the industry's most trusted provider of reliable and innovative power conversion solutions, holding more than 400 power supply patents. A long-standing leader in the telecom industry, OmniOn Power™ leverages an 80-year design history that includes highly regarded companies like Bell Labs, Western Electric, AT&T, Lucent Technologies and most recently, Tyco Electronics. Engineering talent, superior service and energy efficient solutions make OmniOn Power™ the right choice for addressing your power requirements and network challenges.

Contact Us

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Change History (excludes grammar & clarifications)

Revision	Date	Description of the change
1.0	08-23-2023	Initial release
1.1	11-06-2023	Updated as per OmniOn template
1.2	06-24-2024	Updated Power Derating curve, Formatting changes

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