ORION TELECOM NETWORKS

ORION TELECOM NETWORKS INC.

AC to DC Converter
Desktop Version
48 V DC, 1.1 Amps
50 Watts
1 Fused Output

Data Sheet & Product Brochure

Headquarters: Phoenix, Arizona

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Description

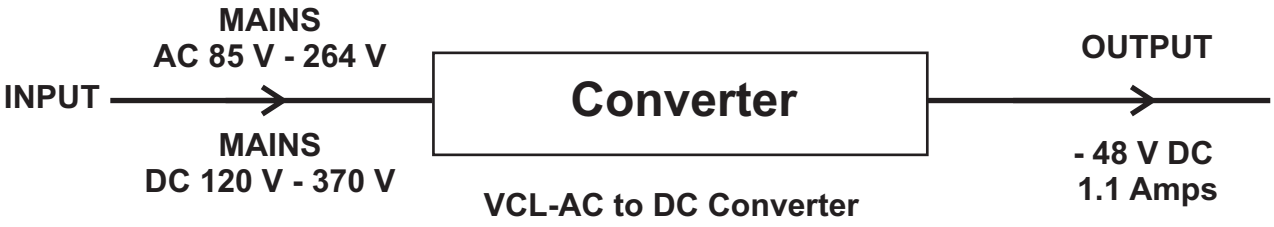
Orion's AC to DC converter may be used to convert 85V AC-264V AC, 47Hz-63Hz AC Mains Input Voltage to - 48 V DC output voltage. It may be also used to convert 120 V DC - 370 V DC Input Voltage to - 48 V DC Output Voltage.

VCL-AC to DC Converter

The AC to DC / DC to DC converter is designed for telecom applications requiring stable DC voltage with low EMI and EMC interference.

This is an external converter power supply, which is available in a portable desktop version with one fused - 48 V DC output.

Application Diagram



Features

- Converts universal AC Mains Input (85 V DC - 264 V AC, 47 Hz - 63 Hz) to - 48 V DC, 1.1 Amps
- Converts 120 V DC to 370 V DC to - 48 V DC output current @ - 48 V DC = 1.1 Amps
- Small and compact
- High quality and cost effective
- Auto ranging voltage
- UL, recognized, TUV approved, CSA certified
- Built-in inrush current, over current and over voltage protection circuits
- Harmonic attenuator, PFC (Complies with IEC61000-3-2)
- Rugged PCB type
- RoHS Compliant

Safety Agency Approvals

- Complies with DEN-AN
- UL1950
- C-UL recognized
- TUV approved

EMI Compliance

- FCC-B
- CISPR22-B
- EN55022-B
- VCCI-B

EMC Compliance

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11
- EN552022-B
- EN61000-3-2

CE Marking

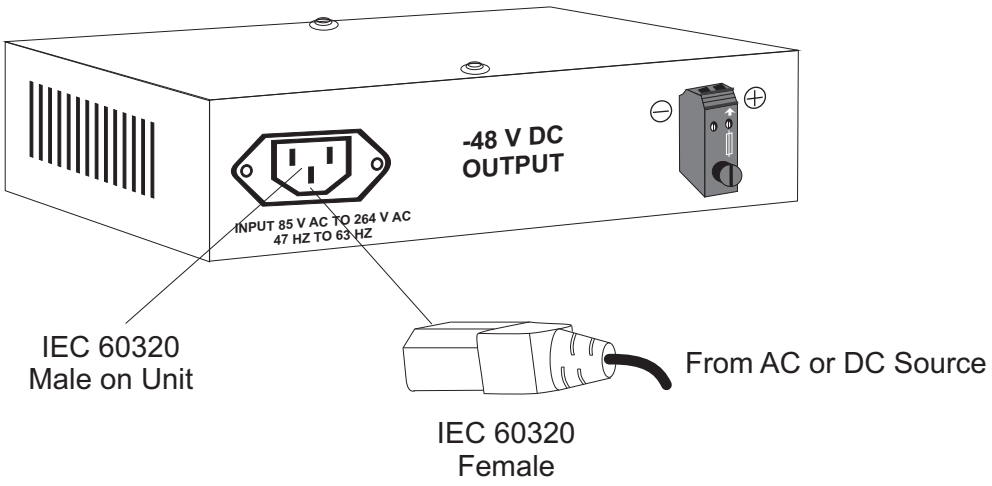
- Low Voltage Directive
- EMC Directive

INPUT VOLTAGE [V]	**AC** 85-264 **DC** 120-370
MAX OUTPUT WATTAGE [W]	52.8
DC OUTPUT	1.1A @ 48 V DC

Technical Specifications

Input Voltage	[V]		**AC** 85 to 264 **DC** 120 to 370
Current	[A]	ACIN 100V ACIN 200V	0.7typ 0.35typ
Frequency AC	[Hz]		50/60 (47-63) or DC
Efficiency	[%]	ACIN 100V ACIN 200V	83typ 85typ
Inrush Current	[A]	ACIN 100V ACIN 200V	15typ (Io=100%) (At cold start) (Ta=25°C) 30typ (Io=100%) (At cold start) (Ta=25°C)
Leakage Current	[mA]		0.75max (60Hz, According to IEC60950 and DEN-AN)
Output Voltage	[V]		48V DC
Current	[A]		1.1A
Line Regulation	[mV]		192 max
Load Regulation	[mV]		300 max
Ripple [mVp-p]	0 to +50° C -10 to 0° C		150 max 200 max
Ripple Noise [mVp-p]	0 to +50° C -10 to 0° C		350 max 400 max
Temperature Regulation [mV]	0 to +50° C -10 to 50° C		480 max 600 max
Drift	[mV]		48 max
Start-Up Time	[mS]		500 max (ACIN 100V, Io=100%)
Hold- Up Time	[mS]		20typ (ACIN 100V, Io=100%)
Overcurrent Protection			Works over 105 % of rating (-H:peak) and recovers Automatically
Overvoltage Protection			Works at 115 ~140% of rating
Input- Output -RC **Isolation**			AC3000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)
Input-FG Isolation			AC2000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)
Output -RC-FG Isolation			AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)
Output -RC Isolation			AC100V 1minute, Cutoff current = 100mA, DC100V 10MΩ min (At Room Temperature)
Operating Temp., Humidity and Altitude			-10 to +70°C, 20~90% RH (Non-condensing) 3000 m (10,000 feet) max
StorageTemp., Humidity and Altitude			-20 to +75°C, 20~90% RH (Non-condensing) 9000 m (30,000 feet) max
Vibration			10 to 55Hz,19.6m/s^2 (2G), 3 minutes period, 60 minutes each along X, Y and Z axis
Impact			196.1m/s^2 (20G), 11ms, once each X, Y and Z axis
Safety Agency Approvals			UL60950-1, C-UL, EN60950-1, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input)
Conducted Noise			Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B
Cooling Method			Convection

AC-DC Converter Shelf Desktop Version



Ordering Information

AC to DC Converter			
S. No.	**Part #**	**Product Description**	**Qty**
1.	VCL-ACDC-48-50W-1.1A	Power Supply (External) AC to DC Converter, DC to DC Converter, Desktop Version 50 Watts External Converter. Converts Universal 85 V AC - 264 V AC, 47 Hz - 63 Hz Main Voltage, or 120 V DC -370 V DC to - 48 V DC Output 1.1 Amps.	1

Technical specifications are subject to changes without notice.
Revision 8 - December 28, 2008

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