



ORION TELECOM NETWORKS INC.

AC to DC Converter Rack Mounting Version 24 V DC 6.3 Amps 150 Watts 4 Fused Outputs

Data Sheet & Product Brochure

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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 24 V DC output voltage. It may be also used to convert 120 V DC - 370 V DC Input Voltage to 24 V DC Output Voltage.

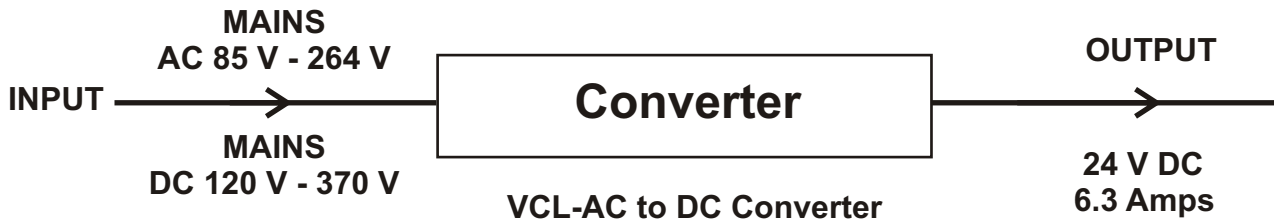


VCL AC to DC Converter

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 and 19 inch rack mount version, with four fused outputs in the rack mount version.

Application Diagram



Features

- Converts universal AC Mains Input (85 V DC - 264 V AC, 47 Hz - 63 Hz) to 24 V DC, 6.3Amps
- Converts 120 V DC to 370 V DC to 24 V DC output current @ 24 V DC = 6.3Amps
- 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 construction
- RoHS Compliant

Safety Agency Approvals

- Complies with DEN-AN
- UL60950
- C-UL (CSA60950) 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
- EN55022-B
- EN61000-3-2

CE Marking

- Low Voltage Directive
- EMC Directive

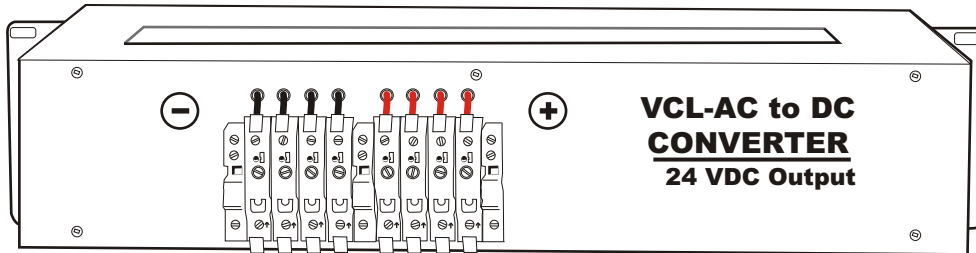
| | |
|------------------------|---------------------------------------|
| INPUT VOLTAGE [V] | AC 85-264 DC 120-370 |
| MAX OUTPUT WATTAGE [W] | 151.2 (Peak 288) |
| DC OUTPUT | 6.3A @ 24 V DC |

Technical Specifications

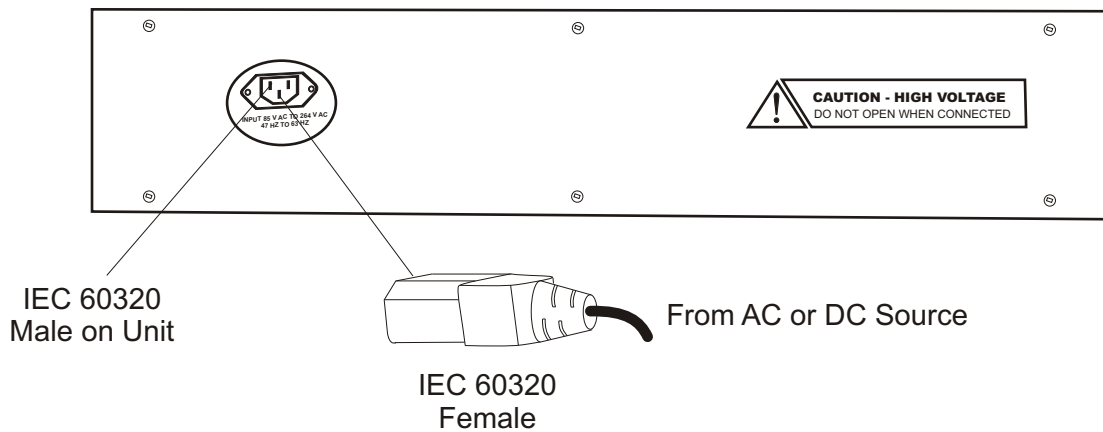
| | | |
|----------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------|
| Input Voltage | [V] | AC 85 to 264 DC 120 to 370 |
| Current | [A] ACIN 100V ACIN 200V | 2.0typ (Io=100%) 1.0typ (Io=100%) |
| Frequency AC | [Hz] | 50/60 (47 to 63) or DC |
| Efficiency | [%] ACIN 100V ACIN 200V | 82typ (Io=100%) 85typ (Io=100%) |
| 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] | 24V DC |
| Current | [A] | 0 to 6.3A (Peak 12) |
| Line Regulation | [mV] | 48 max |
| Load Regulation | [mV] | 76 max |
| Ripple [mVp-p] | 0 to +45° C -10 to 0° C | 120 max 160 max |
| Ripple Noise [mVp-p] | 0 to +45° C -10 to 0° C | 150 max 180 max |
| Temperature Regulation [mV] | 0 to +45° C -10 to 45° C | 120 max 145 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 101% of rating (-H:peak) and recovers automatically |
| Overvoltage Protection | | Works at 115 to 140% of rating |
| Input- Output -RC Isolation | | AC3000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature) |
| Input-FG Isolation | | AC2000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature) |
| Output -RC-FG Isolation | | AC500V 1minute, Cutoff current = 100mA, DC500V 50M Ω min (At Room Temperature) |
| Output -RC Isolation | | AC100V 1minute, Cutoff current = 100mA, DC100V 10M Ω min (At Room Temperature) |
| Operating Temp., Humidity and Altitude | | -10 to +70°C, 20 to 90% RH (Non-condensing) 3000 m (10,000 feet) max |
| Storage Temp., Humidity and Altitude | | -20 to +75°C, 20 to 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

VCL-AC-DC Converter Frontpanel



VCL-AC-DC Converter Backpanel



Ordering Information

| AC to DC Converter | | | |
|--------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| S.No. | Part # | Product Description | Qty |
| 1 | VCL-ACDC-24-150W-6.3A-RK | Power Supply (External) AC to DC Converter, DC to DC Converter, 19 inch Rack Mount External Converter Universal AC Input [93VAC-276VAC, 47Hz-63Hz] or 120 V DC -370 V DC to 24 V DC Output 6.3 Amps | 1 |

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

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