



AC to DC Converter Rack Mounting Version 48 V DC 3.2 Amps 150 Watts 4 Fuse Protected Outputs

Data Sheet & Product Brochure

U.K.

Valiant Communications (UK) Ltd
Central House Rear Office
124 High Street, Hampton Hill
Middlesex, TW12 1NS,
U.K.

E-mail: gb@valiantcom.com

U.S.A.

Valcomm Technologies Inc.
4000 Ponce de Leon Blvd.,
Suite 470, Coral Gables,
FL 33146, U.S.A.

E-mail: us@valiantcom.com

INDIA

Valiant Communications Limited
71/1, Shivaji Marg,
New Delhi - 110015,
India

E-mail: mail@valiantcom.com

Description

Valiant's AC to DC converter may be used to convert 93V AC-276V AC, 47Hz-63Hz AC Mains Input Voltage to - 48 V DC output voltage.



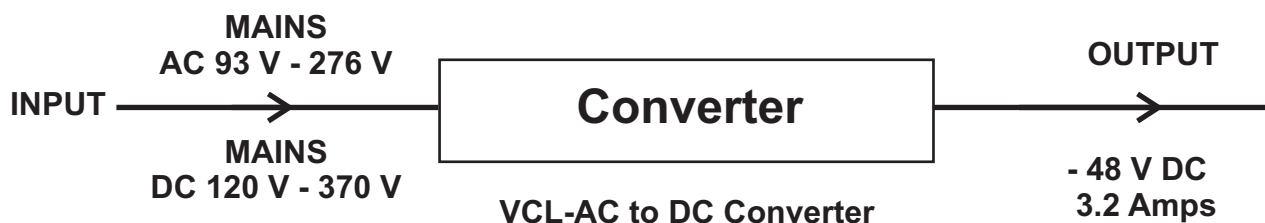
VCL-AC to DC Converter

It may be also used to convert 120 V DC - 370 V DC Input Voltage to - 48 V DC Output Voltage.

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 fuse protected outputs in the rack mount version.

Application Diagram



Features

- Converts universal AC Mains Input (93 V DC - 276 V AC, 47 Hz - 63 Hz) to - 48 V DC, 3.2 Amps
- Converts 120 V DC to 370 V DC to - 48 V DC output current @ - 48 V DC = 3.2 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
- 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

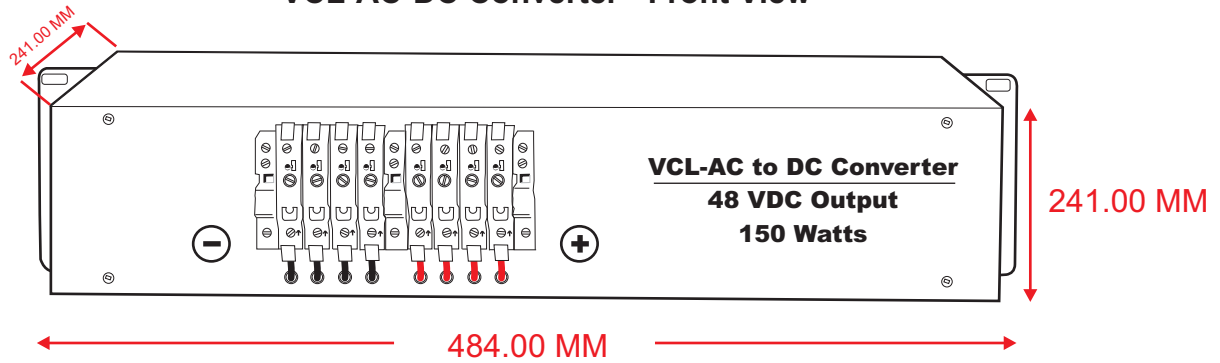
INPUT VOLTAGE [V]	AC 93-276, 47 Hz - 63 Hz DC 120-370
MAX OUTPUT WATTAGE [W]	153.6 (Peak 288)
DC OUTPUT	3.2A @ 48 V DC

Technical Specifications

Input Voltage	[V]	AC 93 to 276, 47 Hz - 63 Hz 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	84typ (Io=100%) 87typ (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]	48V DC
Current	[A]	0 to 3.2A (Peak 6)
Line Regulation	[mV]	48 max
Load Regulation	[mV]	150 max
Ripple [mVp-p]	0 to +45° C -10 to 0° C	150 max 300 max
Ripple Noise [mVp-p]	0 to +45° C -10 to 0° C	250 max 350 max
Temperature Regulation [mV]	0 to +45° C -10 to 45° C	240 max 300 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

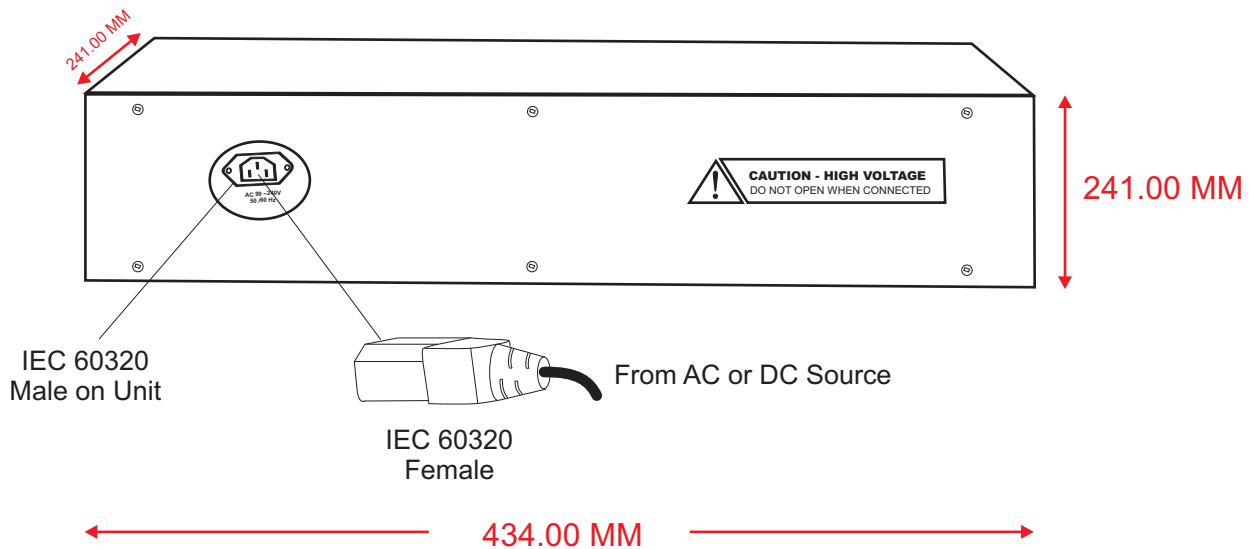
VCL-AC-DC Converter - Front View



Front View - Dimensions

Weight	484.00 MM
Depth	241.00 MM
Height	88.00 MM

VCL-AC-DC Converter - Back View



Back View - Dimensions

Weight	434.00 MM
Depth	241.00 MM
Height	88.00 MM

Ordering Information

AC to DC Converter			
S.No.	Part #	Product Description	Qty
1	VCL-ACDC-48-150W-3.2A-RK	Power Supply (External) AC to DC Converter 19" 2U Rack Mount Version, Universal AC Input [93VAC-276VAC,47Hz-63Hz] to DC Output [(-) 48VDC~3.20A 150W] (4 Fused outputs)	1

Technical specifications are subject to changes without notice.
Revision 12 - April 24, 2019

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