



# ALB190/290 Series

Compact 80W/100W/150W/200W C Band  
Block-Up Converter

Compact and lightweight, ideal for mobile and satellite uplink applications.

Innovative and excellent efficiency thermal design makes this BUC one of the most power efficient, robust and reliable to operate under harsh outdoor environment.

Simple and seamless 1+1 redundancy setup. Built-in redundancy-ready easily configured without need of external controller.

## Features

- Forward, reflected and input power detection
- Monitoring and Control through Serial and Ethernet ports
- Fault identification and alarm generation
- LED status and alarm indicator
- Auto gain control throughout operating temperature
- Wide AC input range 90 to 264Vac
- Built-in redundancy ready
- Built-in harmonics rejection filter
- Wide operating temperature -40°C to +60°C
- IP65 Weatherproof
- RoHS Compliant

## Quality Assurance

100% thorough stringent quality checks in addition to well-defined Electrical Stress Screening to ensure operation in harsh outdoor environment conditions. All subjected to seal test for water ingress verification.

## Reliability

Field proven to operate under harsh environment conditions. Designed and tested to withstand operating temperature -40°C to +60°C under 100% humidity.

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## Technical Specifications

### RF Specifications

Freq Band	Transmit	IF	LO
Horizont C	5725 – 6525MHz	975 – 1775MHz	4750MHz
Intelsat C	5850 – 6425MHz	950 – 1525MHz	4900MHz
Full C	5850 – 6725MHz	950 – 1825MHz	4900MHz
Insat C	6725 – 7025MHz	1100 – 1400MHz	5625MHz

Output Power	P <sub>sat</sub>	P <sub>1dB</sub>	P <sub>linear</sub>
80W (ALB290)	49.0dBm (80W)	-	45.2dBm (33W)
100W (ALB290)	50.0dBm (100W)	-	46.2dBm (42W)
150W (ALB290)	51.8dBm (150W)	-	48.0dBm (63W)
200W (ALB290)	53.0dBm (200W)	-	49.2dBm (83W)
80W (ALB190)	-	49.0dBm (80W)	46.0dBm (40W)
100W (ALB190)	-	50.0dBm (100W)	47.0dBm (50W)
150W (ALB190)	-	51.8dBm (150W)	48.8dBm (75W)
200W (ALB190)	-	53.0dBm (200W)	50.0dBm (100W)

<b>Small Signal Gain</b>	70dB min (80W/100W) 75dB min (150W/200W)
<b>Gain Flatness</b>	±2dB within band
<b>Gain Variation</b>	±2dB over operating temperature
<b>Intermodulation</b>	-27dBc max @ P <sub>linear</sub>
<b>Spurious</b>	According to EN 301 443
<b>Phase Noise</b>	-100dBc/Hz max @100KHz offset -90dBc/Hz max @10KHz offset -80dBc/Hz max @1KHz offset
<b>VSWR</b>	1.5:1 max @input 1.5:1 max @output
<b>Noise Power Density</b>	Tx Band : -70dBW/4KHz max Rx Band : -142dBW/4KHz max

### AC/DC Power

<b>Prime Power</b>	90 to 264Vac
<b>Power Consumption</b>	650VA typ @100W 850VA typ @200W

### Interface

<b>IF Input</b>	N-Type Female 50Ω
<b>RF Output</b>	WR137 Grooved

### Reference

<b>Frequency</b>	10MHz
<b>Power Level</b>	-5dBm to +5dBm
<b>Ext Ref Phase Noise</b>	-160dBc/Hz max @100KHz offset -155dBc/Hz max @10KHz offset -150dBc/Hz max @1KHz offset

### Monitor & Control

<b>Monitor</b>	BUC Temperature Status Alarm with LED Indicator LO Unlock Alarm RF Input & Forward Power Detection Output Reflected Power Detection
<b>Control</b>	Gain adjustable 30dB with 0.5dB step RF Output On/Mute
<b>Communication Port</b>	Serial RS232/RS485 Ethernet (SNMP & HTTP)
<b>Transmit Redundancy</b>	Built-In

### Environmental

<b>Operating Temperature</b>	-40°C to +60°C
<b>Relative Humidity</b>	Up to 100%
<b>Weatherproof</b>	IP65

### Mechanical

<b>Dimension</b> (excluding interface connectors)	L284 x W210 x H165mm (80W/100W P <sub>sat</sub> ) L11.2" x W8.2" x H6.5" L296 x W210 x H175mm (100W P <sub>1dB</sub> /150W/200W) L11.7" x W8.2" x H6.9"
<b>Weight</b>	9Kg / 19.8lbs (80W/100W P <sub>sat</sub> ) 10.5Kg / 23.1lbs (100W P <sub>1dB</sub> /150W/200W)

### Compliance Standard



Certification of products with radio technologies for the Brazilian market based on approval by the local authority Agência Nacional de Telecomunicações (Anatel).

The certification is based on national specifications for the testing and certification process and is a condition for market approval in Brazil.

NOTE: All specifications subject to change without notice  
200622

# ALB190/290 Series

## Compact 80W/100W/150W/200W C Band Block-Up Converter

### Standard Part List for Standalone Configuration

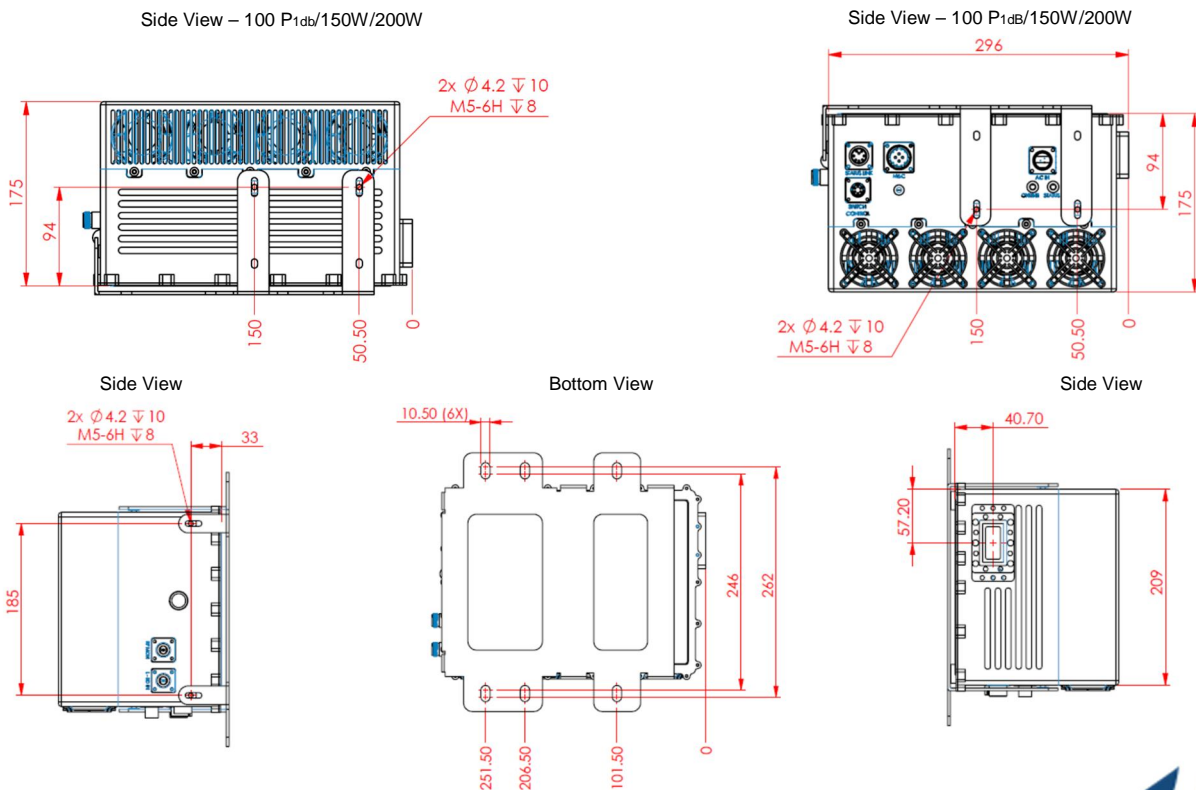
ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable	AC 220V	1001522412	01	Transient Protection Box 12-3S to Underterminated 220Vac 10A 3M
3	Cable M&C	RS232 / RS485		01	C/A M&C Serial/ETH 14-19P to DB9 (F) 2M
4	Cable M&C	ETH	2502041166	01	C/A M&C ETH-DB9 (M) to RJ45 2M
5	Converter	RS485	6103480008	01	Converter USB to RS485
6	Mounting Accessory Set			01	Mounting brackets, studs, screws, gasket flange WR137

### Option Items

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	Prime Power Input Cable	AC 110V 3M	1001522818	Transient Protection Box 12-3S to Underterminated 110Vac 10A 3M
		AC 220V / 10M	1001523741	Transient Protection Box 12-3S to Underterminated 220Vac 10A 10M
2	WG Flexible	0.6M	4203490309	WG Flexible C Band WR137 CPRG to WR137 CPRF 0.6M
		1.0M	4203490057	WG Flexible C Band WR137 CPRG to WR137 CPRF 1.0M
		1.5M	4203490289G	WG Flexible C Band WR137 CPRG to WR137 CPRF 1.5M
3	Cable RF	3M	2502040137	C/A RF N (M) to N (M) 3M
		7M	2502040109	C/A RF N(M) TO N(M) 7M
		10M	2502041952	C/A RF N(M) TO N(M) 10M
4	Cable M&C	RS485 / 5M	2502041751	C/A M&C - 485/ETH 14-19P to DB9 (F) 5M
		RS485 / 30M	2502041714	C/A M&C 485/ETH 14-19P to DB9 (F) 30M

NOTE: Part list and drawing subject to change without notice  
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### Mounting Diagram



# ALB190/290 Series

## Compact 80W/100W/150W/200W C Band Block-Up Converter

### Standard Part List for Redundancy 1+1 Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			02	BUC
2	Prime Power Input Cable	AC 220V	1001522412	02	Transient Protection Box 12-3S to Underterminated 220Vac 10A 3M
3	Cable M&C	RS232 / RS485		02	C/A M&C Serial/ETH 14-19P to DB9 (F) 2M
4	Cable M&C	ETH	2502041166	02	C/A M&C ETH-DB9 (M) to RJ45 2M
5	Converter	RS485	6103480008	02	Converter USB to RS485
6	Mounting Accessory Set			02	Mounting brackets, studs, screws, gasket flange WR137
7	WG Flexible			02	WG Flexible C Band WR137 CPRG to WR137 CPRF 1M
8	WG Switch			01	WG Switch C Band WR137 Dual 230Vac
9	WG Termination			01	WG Termination C Band WR137 CPRF 150W 120mm
10	WG H-Bend			01	WG H-Bend C band WR137 CPRF to WR137 CPRF
11	Termination			01	Termination Coaxial N (M)
12	Cable Status Link		2502041099	01	C/A Status Link 12-8P to 12-8P 1.8M
13	Cable Switch Control		2502040155	01	C/A Switch RCU Control 10-6S to 10-6P 3M
14	Cable Switch Control		2502041006	01	C/A Switch Tx Control 10-6S to 10-6P 3M
15	Cable RF		6202040155	02	C/A RF N (M) to N (M) 1.5M

### Option Item

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	Mounting Frame		4004430053G	Mounting Frame w 1 Vertical Frame H1040 x W580mm, Base 840 x 580mm
2	Cable Switch Control	10M	2502042323	C/A Switch RCU Control 10-6S to 10-6P 10M
		50M	2502042308	C/A Switch RCU Control 10-6S to 10-6P 50M

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### Mounting Diagram

