

# ALB129/229 Series

Compact 40W/50W Ku Band  
Block-Up Converter

Designed to mount directly to the feedhorn, ideal for SOTM, fixed and maritime applications.

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

Easy installation with redundancy ready features to work in 1+1 redundancy mode.

## Features

- Feed mountable
- Forward 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 DC input ranging 38 to 60Vdc  
AC input voltage option available
- 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 under harsh environment conditions. Agilis ODUs can withstand temperature ranging from -40°C to +60°C under 100% humidity.

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## Technical Specifications

### RF Specifications

Freq Band	Transmit	IF	LO
Standard	14.00 – 14.50GHz	950 – 1450MHz	13.05GHz
Extended	13.75 – 14.50GHz	950 – 1700MHz	12.80GHz
Output Power	P <sub>sat</sub>	P <sub>1dB</sub>	P <sub>linear</sub>
40W (ALB229)	46.0dBm (40W)	-	42.2dBm (16.6W)
50W (ALB229)	47.0dBm (50W)	-	43.2dBm (20.9W)
40W (ALB129)	-	46.0dBm (40W)	43.0dBm (20W)

<b>Small Signal Gain</b>	74dB min
<b>Gain Flatness</b>	±2dB within band ±1dB over 40MHz
<b>Gain Variation</b>	±2dB within band over operating temperature
<b>Intermodulation</b>	-25dBc max @ P <sub>linear</sub>
<b>Spurious</b>	According to EN 301 428
<b>Phase Noise</b>	-93dBc/Hz max @100KHz offset -83dBc/Hz max @10KHz offset -73dBc/Hz max @1KHz offset
<b>VSWR</b>	1.5:1 max @input 1.25:1 max @output with optional external isolator
<b>Noise Power Density</b>	Tx Band : -70dBW/4KHz max Rx Band : -142dBW/4KHz max

### AC/DC Power

<b>Prime Power</b>	38 to 60Vdc auto range 90 to 264Vac (option)
<b>Power Consumption</b>	280VA

### Interface

<b>IF Input</b>	N-Type Female 50Ω F-Type Female 75Ω (option)
<b>RF Output</b>	WR75 Square Grooved

### Reference Requirement

<b>Frequency</b>	10MHz 50MHz (Option)
<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 Forward Power Detection
<b>Control</b>	Gain adjustable 20dB with 0.5dB step RF Output On/Mute
<b>Communication Port</b>	Serial RS232/RS485 Ethernet (SNMP & HTTP)
<b>Transmit Redundancy</b>	Redundancy-Ready (with external controller unit)

### 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)	L210 x W130 x H130mm (DC model) L8.27" x W5.12" x H5.12" L210 x W130 x H235mm (AC model) L8.27" x W5.12" x H9.25"
<b>Weight</b>	4Kg / 8.8lbs (DC model) 6.5Kg / 14.3lbs (AC model)

### Compliance Standard

<b>IEC 609501-2nd Edition</b>	International Safety Standard for Information Technology Equipment
<b>ETSI EN 301 489-12</b>	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) Standard for radio equipment and services; Part 12: Specific conditions for Very Small Aperture Terminal, Satellite Interactive Earth Stations operated in the frequency ranges between 4GHz and 30GHz in the Fixed Satellite Service (FSS)
<b>ETSI EN 301 489-1</b>	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electro Magnetic Compatibility Standard for Radio Equipment and Services
<b>FCC Part 15 Class B</b>	Two levels of radiation and conducted emissions limits for unintentional radiators (FCC Mark)

NOTE: All specifications subject to change without notice  
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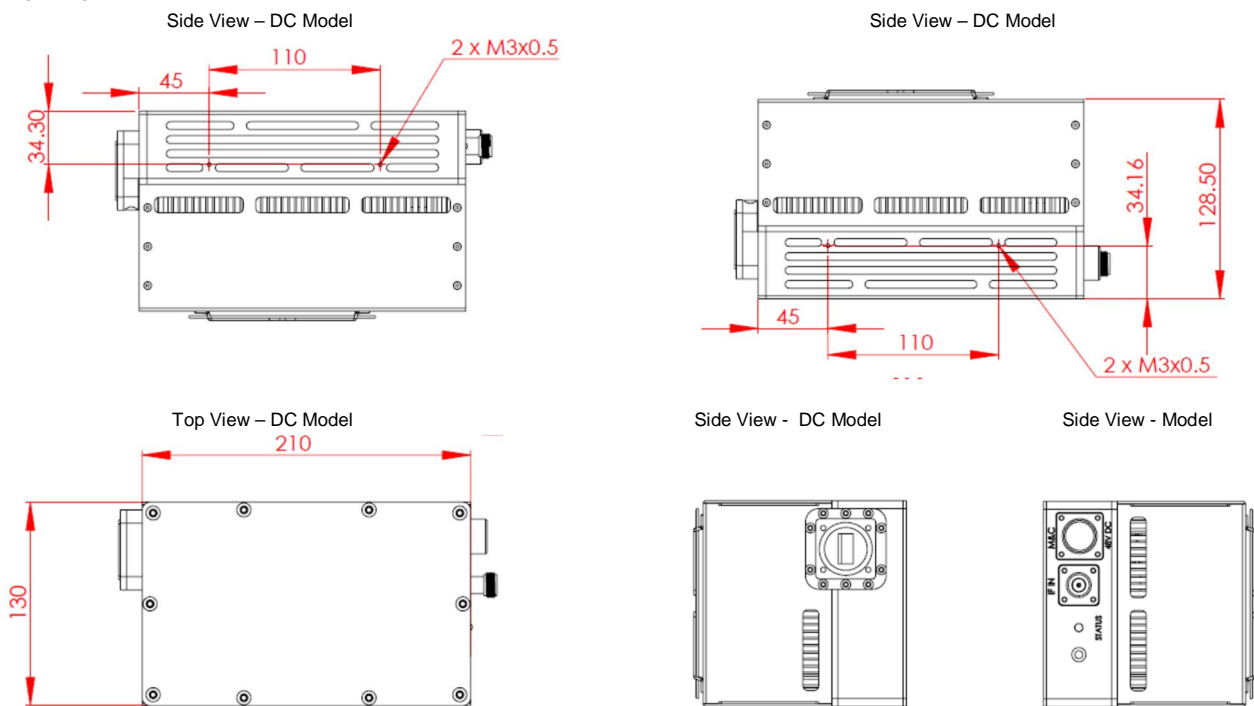
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### Standard Part List for Standalone Configuration

ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable	AC		01	Transient Protection Box 5A 22-9S to Underterminated 3M
3	Cable M&C	RS232 / RS485		01	Cable Assembly ETH/Serial 14-12S to DB9 2M
4	Converter	ETH	2502041166	01	Cable Assembly ETH-DB9 to RJ45 2M
5	Converter	RS485	6103480008	01	Converter USB to RS485
6	Mounting Accessory Set			01	Mounting screws including brackets, studs, and gasket for flange WR75

### Mounting Diagram



### Option Items

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	WG Flexible	0.6m	4203490010	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 0.6m
		1.0m	4203490049	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1m
		1.5m	4203490014	Flexible WG Ku band WR75 Sq Grooved to WR75 Sq Cover 1.5m

NOTE: Part list and drawing subject to change without notice  
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