



ALB129/229 Series

Compact 16W/20W/25W 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 and reliable to operate under 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
- 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
Plan	12.75 - 13.25GHz	950 – 1450MHz	11.80GHz
Standard	14.00 – 14.50GHz	950 – 1450MHz	13.05GHz
Extended	13.75 – 14.50GHz	950 – 1700MHz	12.80GHz

Output Power	P _{sat}	P _{1dB}	P _{linear}
16W (ALB229)	42.0dBm (16W)	-	38.2dBm (6.6W)
20W (ALB229)	43.0dBm (20W)	-	39.2dBm (8.3W)
25W (ALB229)	44.0dBm (25W)	-	40.2dBm (10.5W)
16W (ALB129)	-	42.0dBm (16W)	39.0dBm (8W)
20W (ALB129)	-	43.0dBm (20W)	40.0dBm (10W)
25W (ALB129)	-	44.0dBm (25W)	41.0dBm (12.5W)

Small Signal Gain	68dB min
Gain Flatness	±2dB within band ±1dB over 40MHz
Gain Variation	±2dB within band over operating temperature
Intermodulation	-25dBc max @ P _{linear}
Spurious	According to EN 301 428
Phase Noise	-93dBc/Hz max @100KHz offset -83dBc/Hz max @10KHz offset -73dBc/Hz max @1KHz offset
VSWR	2.0:1 max @input 1.25:1 max @output with optional external isolator
Noise Power Density	Tx Band : -70dBW/4KHz max Rx Band : -142dBW/4KHz max

AC/DC Power

Prime Power	38 to 60Vdc auto range 90 to 264Vac (option)
Power Consumption	190VA @16W 210VA @20W 230VA @25W

Interface

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

Reference Requirement

Frequency	10MHz
Power Level	-5dBm to +5dBm
Ext Ref Phase Noise	-155dBc/Hz max @100KHz offset -145dBc/Hz max @10KHz offset -135dBc/Hz max @1KHz offset

Monitor & Control

Monitor	BUC Temperature Status Alarm with LED Indicator LO Unlock Alarm RF Forward Power Detection
Control	Gain adjustable 20dB with 0.5dB step RF Output On/Mute
Communication Port	Serial RS232/RS485 Ethernet (SNMP & HTTP)
Transmit Redundancy	Redundancy-Ready (with external controller unit)

Environmental

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

Mechanical

Dimension (excluding interface connectors)	L200 x W130 x H113mm (16W/20W, DC model) L7.87" x W5.12" x H4.43" L200 x W130 x H130mm (25W, DC model) L7.87" x W5.12" x H5.12" L200 x W130 x H203mm (AC model) L7.87" x W5.12" x H7.99"
Weight	3.2Kg / 7lbs (16W/20W, DC model) 3.5Kg / 7.7lbs (25W, DC model) 4.7Kg / 10.3lbs (AC model)

Compliance Standard

IEC 609501-2nd Edition	International Safety Standard for Information Technology Equipment
ETSI EN 301 489-12	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)
ETSI EN 301 489-1	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electro Magnetic Compatibility Standard for Radio Equipment and Services
FCC Part 15 Class 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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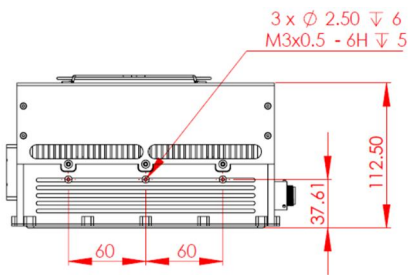
Compact 16W/20W/25W Ku Band Block-Up Converter

Standard Part List for Standalone Configuration

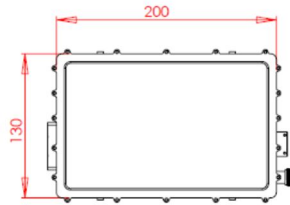
ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable	AC		01	Transient Protection Box 5A 22-9S to Underterminated 3M
3	Cable M&C	RS232 / RS485		01	Cable Assembly ETH/Serial 14-12S to DB9 (F) 2M
4	Converter	ETH	2502041166	01	Cable Assembly ETH-DB9 to RJ45 2M
5	Converter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

Mounting Diagram

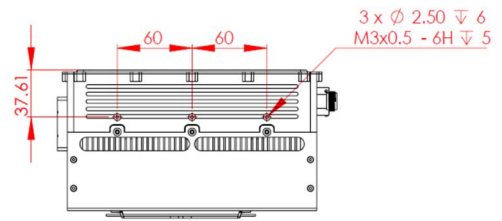
Side View – 16W/20W, DC Model



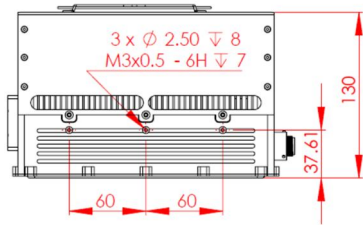
Top View



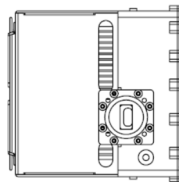
Side View



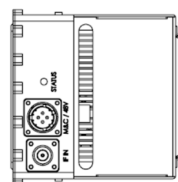
Side View – 25W, DC Model



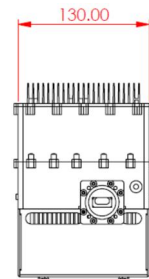
Side View – DC Model



Side View – DC Model



Side View – AC Model



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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