

ALB190/290 Series

Compact 20W/25W/40W/50W/60W C Band
Block-Up Converter

Designed to mount directly to the feedhorn, 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.

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
- Built-in redundancy ready
- Wide DC input ranging 38 to 60Vdc
AC input voltage option available
- Wide operating temperature -40°C to +60°C
- Fanless 20W option available
- 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
Gorizont 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 _{sat}	P _{1dB}	P _{linear}
25W (ALB290)	44.0dBm (25W)	-	40.2dBm (10.5W)
40W (ALB290)	46.0dBm (40W)	-	42.2dBm (16.6W)
50W (ALB290)	47.0dBm (50W)	-	43.2dBm (20.9W)
60W (ALB290)	47.8dBm (60W)	-	44.0dBm (25W)
20W (ALB190)	-	43.0dBm (20W)	40.0dBm (10W)
25W (ALB190)	-	44.0dBm (25W)	41.0dBm (12.5W)
40W (ALB190)	-	46.0dBm (40W)	43.0dBm (20W)
50W (ALB190)	-	47.0dBm (50W)	44.0dBm (25W)

Small Signal Gain	66dB min (20W/25W) 70dB min (40W/50W/60W)
Gain Flatness	±2dB within band
Gain Variation	±2dB within band over operating temperature
Intermodulation	-25dBc max @ P _{linear}
Spurious	According to EN 301 443
Phase Noise	-93dBc/Hz max @100KHz offset -83dBc/Hz max @10KHz offset -73dBc/Hz max @1KHz offset
VSWR	2.0:1 max @input 1.5:1 max @output (with external isolator)

AC/DC Power

Prime Power	38 to 60Vdc auto range 90 to 264Vac (option)
Power Consumption	144VA max @20W 205VA max @40W 300VA max @50W

Interface

IF Input	N-Type Female 50Ω F-Type Female 75Ω (option)
RF Output	WR137 Grooved

Reference Requirement

Frequency	10MHz
Power Level	-5dBm to +5dBm
Phase Noise	-160dBc/Hz max @100KHz offset -155dBc/Hz max @10KHz offset -150dBc/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)	L233 x W171 x H88mm (DC model) L9.17" x W6.73" x H3.46" L233 x W171 x H148mm (AC model) L9.17" x W6.73" x H5.82"
Weight	4.0Kg / 8.8lbs (DC model) 5.8Kg / 12.8lbs (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 Class A	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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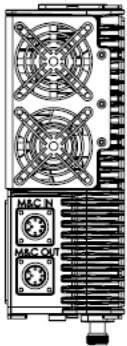
Compact 20W/25W/40W/50W/60W C Band Block-Up Converter

Standard Part List for Standalone Configuration

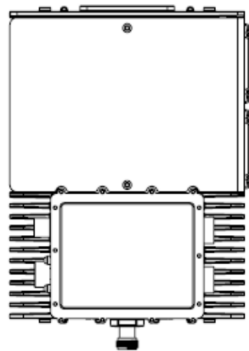
ITEM	PRODUCT NAME	OPTION	PART NUMBER	QTY	DESCRIPTION
1	BUC			01	BUC
2	Prime Power Input Cable	AC		01	Transient Protection Box 10A 12-3S to Unterminated 3M
3	M&C Cable	RS232 / RS485		01	Cable Assembly Serial/ETH 14-19P to DB9 (F) 2M
4	Converter	ETH	2502041166	01	Cable Assembly ETH-DB9 to RJ45 2M
5	Converter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

Mounting Diagram

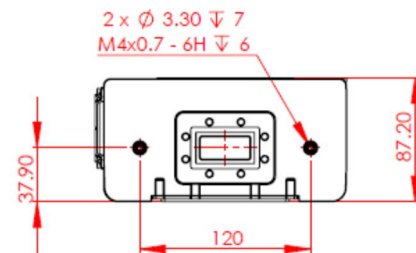
Side View – DC Model



Top View – DC Model



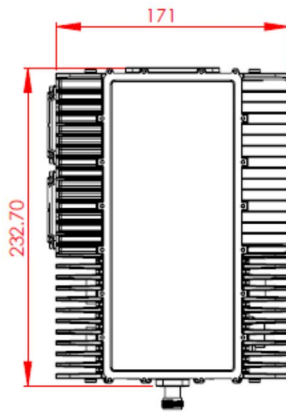
Side View – DC Model



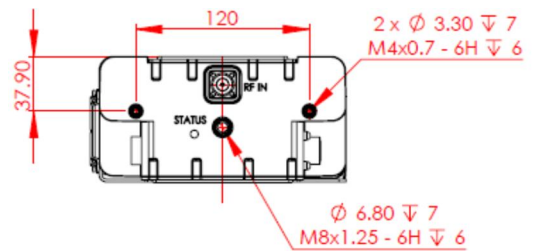
Side View – DC Model



Bottom View



Side View – DC Model

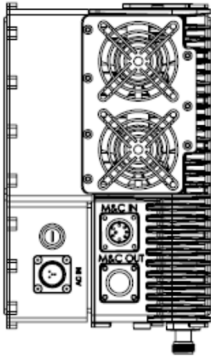


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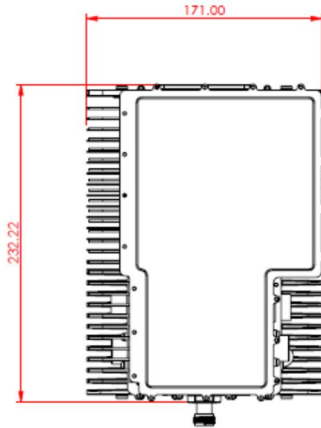
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Mounting Diagram

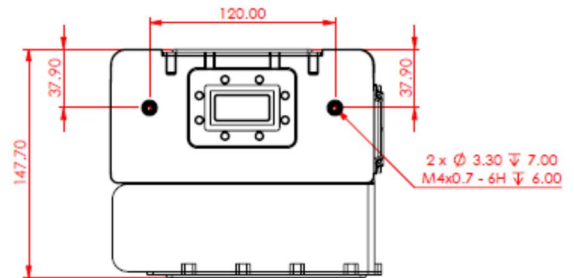
Side View – AC Model



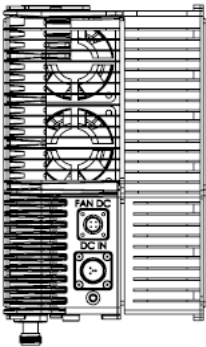
Top View – AC Model



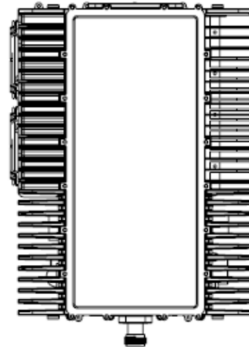
Side View – AC Model



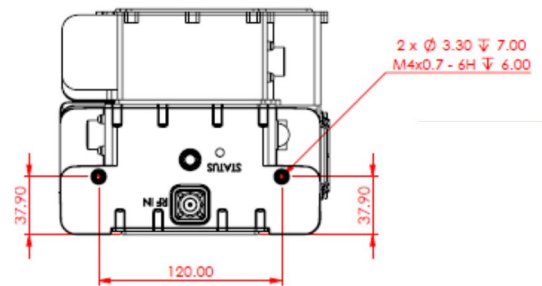
Side View – AC Model



Bottom View



Side View – AC Model



Option Item

ITEM	PRODUCT NAME	OPTION	PART NUMBER	DESCRIPTION
1	WG Flexible		4203490309	Flexible WG C band WR137 CPRG to WR137 CPRF 0.6m
			4203490057	Flexible WG C band WR137 CPRG to WR137 CPRF 1m
			4203490289G	Flexible WG C band WR137 CPRG to WR137 CPRF 1.5m

NOTE: Part list and drawing subject to change without notice
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