



# ALB180 Series

Klassic 10W C Band IFL  
Block-Up Converter

Designed to mount directly to the feedhorn, ideal for data and voice communication operating in different modulation formats for broadband applications in satellite IP networks.

High performance on output power linearity. Robust and highly reliable design to operate under harsh outdoor environment.

## Features

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- 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 18 to 60Vdc
- Wide operating temperature -40°C to +60°C
- IP65 Weatherproof
- RoHS Compliant

## Quality Assurance

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

## Reliability

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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      |
|------------|----------------|---------------|---------|
| Intelsat C | 5850 – 6425MHz | 950 – 1525MHz | 4900MHz |
| Full C     | 5850 – 6725MHz | 950 – 1825MHz | 4900MHz |

| Output Power | P <sub>1dB</sub> | P <sub>linear</sub> |
|--------------|------------------|---------------------|
| 10W (ALB180) | 40.0dBm (10W)    | 37.0dBm (5W)        |

|                          |   |
|--------------------------|---|
| <b>Small Signal Gain</b> | 63dB min  |
| <b>Gain Flatness</b>     | ±2dB within band<br>±1dB over 40MHz   |
| <b>Gain Variation</b>    | ±2dB within band over operating temperature   |
| <b>Intermodulation</b>   | -27dBc max @ P <sub>linear</sub>  |
| <b>Spurious</b>          | According to EN 301 443   |
| <b>Phase Noise</b>       | -93dBc/Hz max @100KHz offset<br>-83dBc/Hz max @10KHz offset<br>-73dBc/Hz max @1KHz offset |
| <b>VSWR</b>              | 2.0:1 max @input<br>2.0:1 max @output   |

### AC/DC Power

|                          |             |
|--------------------------|-------------|
| <b>Prime Power</b>       | 18 to 60Vdc |
| <b>Power Consumption</b> | 90VA max    |

### Interface

|                  |   |
|------------------|---|
| <b>IF Input</b>  | N-Type Female 50Ω<br>F-Type Female 75Ω (option) |
| <b>RF Output</b> | WR137 Grooved                                   |

### External Reference Requirement

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

### Monitor & Control

|                           |  |
|---------------------------|--|
| <b>Monitor</b>            | BUC Temperature<br>LO Unlock and Status Alarm<br>RF Forward and Output Power Detection |
| <b>Control</b>            | Gain adjustable 15dB with 0.5dB step<br>RF Output On/Mute                              |
| <b>Communication Port</b> | Serial RS232/RS485<br>SNMP & HTTP (Option)   |

### 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) | L248 x W130 x H94mm<br>L9.17" x W6.73" x H3.7" |
| <b>Weight</b>                                     | 3.1Kg / 6.8lbs                                 |

### 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

**ETSI EN 301 443** Satellite Earth Stations and Systems (SES); Harmonized EN for Very Small Aperture Terminal (VSAT); Transmit-only, transmit-and-receive, receive-only satellite earth stations operating in the 4 GHz and 6 GHz frequency bands covering essential requirements under article 3.2 of the R&TTE directive

**FCC Class A** Two levels of radiation and conducted emissions limits for unintentional radiators (FCC Mark)



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  
B03G12

# ALB180 Series

## Compact 10W C Band IFL Block-Up Converter

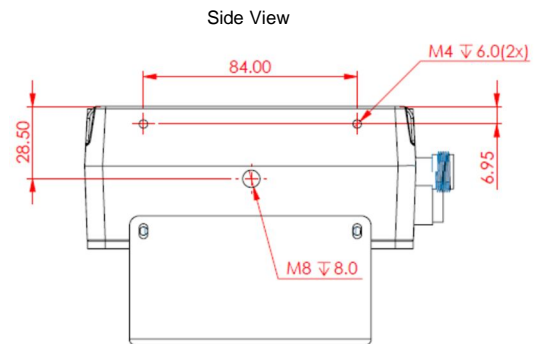
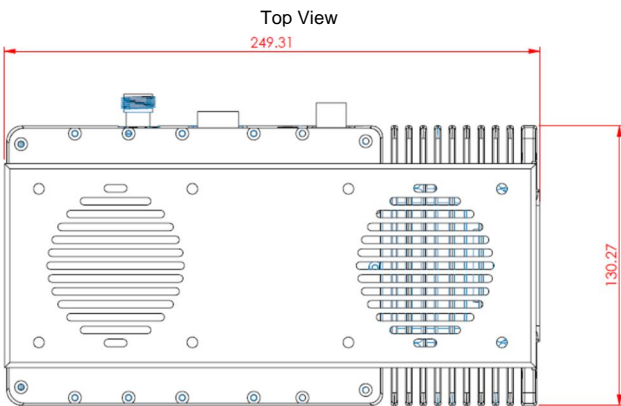
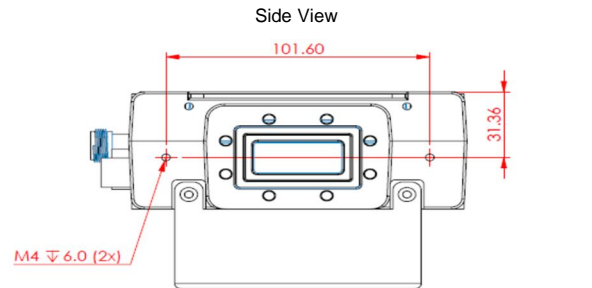
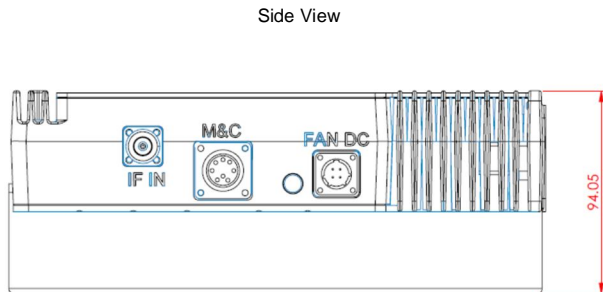
### Standard Part List for Standalone Configuration

| ITEM | PRODUCT NAME           | OPTION        | PART NUMBER   | QTY | DESCRIPTION                                       |
|------|------------------------|---------------|---------------|-----|---|
| 1    | BUC                    |               | ALB180xxxA-xx | 01  | BUC   |
| 2    | M&C Cable              | RS232 / RS485 | 2502041169    | 01  | C/A M&C 485/ETH 12-8P to DB9 (F) 2M               |
| 3    | M&C Cable              | ETH           | 2502041166    | 01  | C/A M&C ETH-DB9 (M) to RJ45 2M                    |
| 4    | Converter              | RS485         | 6103480008    | 01  | Converter USB to RS485                            |
| 5    | Mounting Accessory Set |               |               | 01  | Mounting screws including gasket for flange WR137 |

### Option Item

| ITEM | PRODUCT NAME | OPTION       | PART NUMBER | DESCRIPTION                                      |
|------|--------------|--------------|-------------|--|
| 1    | WG Flexible  | 0.6M         | 4203490309  | Flexible WG C band WR137 CPRG to WR137 CPRF 0.6M |
|      |              | 1.0M         | 4203490057  | Flexible WG C band WR137 CPRG to WR137 CPRF 1M   |
|      |              | 1.5M         | 4203490289G | Flexible WG C band WR137 CPRG to WR137 CPRF 1.5M |
| 2    | RF Cable     | 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                          |
| 3    | M&C Cable    | Serial / 6M  | 2502041980  | C/A M&C 485/ETH 12-8P to DB9 (F) 6M              |
|      |              | Serial / 50M | 2502041722  | C/A M&C 485/ETH 12-8P to DB9 (F) 50M             |

### Mounting Diagram

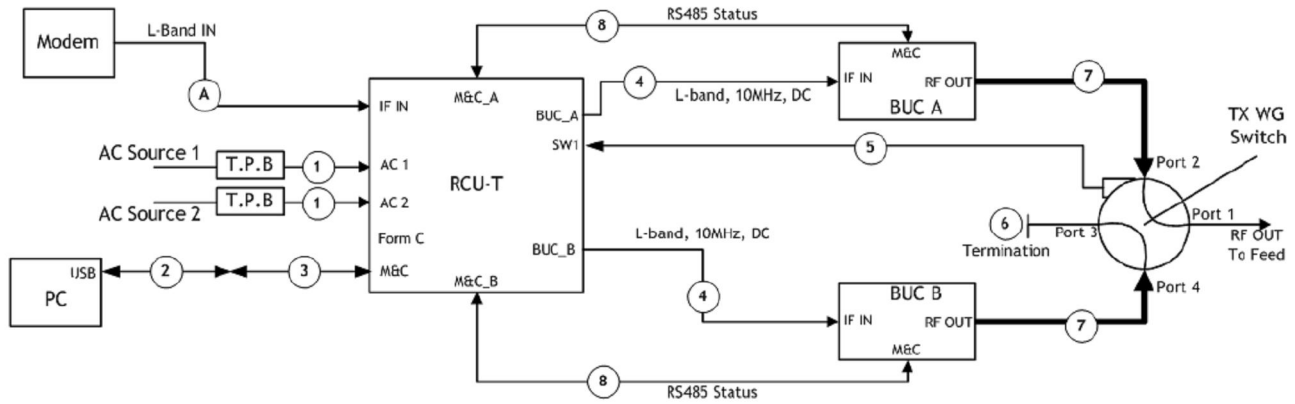


NOTE: Part list and drawing subject to change without notice  
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# ALB180 Series

## Compact 10W C Band IFL Block-Up Converter

### 1:1 Redundancy System Block Diagram



### Standard Part List for 1:1 Configuration

| ITEM | PRODUCT NAME               | OPTION     | PART NUMBER   | QTY | DESCRIPTION  |
|------|----------------------------|------------|---------------|-----|--|
| 1    | Prime Power Input Cable    | AC         | 1001520980    | 02  | Transient Protection Box 12-3S to Underterminated 220Vac 5A 3M         |
| 2    | Converter                  | RS485      | 6103480008    | 01  | Converter USB to RS485   |
| 3    | Cable M&C                  | Serial/ETH | 2502041169    | 01  | C/A M&C Serial/ETH 12-8P to DB9 (F) 2M                                 |
| 4    | Cable RF                   | 3M         | 2502040137    | 02  | C/A RF N (M) to N (M) 3M   |
| 5    | Cable Control              | 3M         | 2502040155    | 01  | C/A Switch RCU Control 10-6S to 10-6P 3M                               |
| 6    | WG Termination             |            | 5701200008    | 01  | Termination WR137 75W CPRF   |
| 7    | WG Flexible                | 1.0M       | 4203490057    | 02  | Flexible WG C band WR137 CPRG to WR137 CPRF 1M                         |
| 8    | Cable Control              | 2M         | 2502040561    | 02  | C/A Straight 12-8S to 12-8P 2M   |
| 9    | WG Switch                  |            | 5903290003    | 01  | SW WR137 SGL 5.85-8.2G 230VA   |
| 10   | RCU                        |            | AAV6103204-T  | 01  | Redundancy Control Unit  |
| 11   | BUC                        |            | ALB180xxxA-xx | 02  | C BUC 10W  |
| 12   | Cable M&C                  | ETH        | 2502041166    | 01  | C/A M&C ETH-DB9 (M) to RJ45 2M   |
| 13   | BUC Mounting Accessory Set |            |               | 02  | Mounting screws including brackets, studs, and gasket for flange WR137 |
| 14   | RCU Mounting Accessory Set |            |               | 01  | RCU Mounting brackets including screws and studs                       |

NOTE: Part list and drawing subject to change without notice  
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