

Model ASC300LW (930 MHz to 2300 MHz) Beacon Receiver

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Functional Description

The Model **ASC300-LW Beacon Receiver** is a high performance unit that is designed to real time track the power density of a satellite beacon and output a DC voltage that is linearly proportional to the beacon power by utilizing a true, RMS-responding power detector. The applications for the ASC300-LW are for antenna step track controlling and uplink power control system. Also can be used on telemetry beacons.

Systems Specifications

Input Frequency..... 930 MHz to 2300 MHz
Warm up from cold start..... Within 1 dB in < 2 minutes
Temperature Stability..... ± 1.5 dB, 0 to 50 deg C
Pre-detection Bandwidth 60 kHz
Input Level -90 dBm, min.; -30 dBm max.
..... For full tracking range capability
Frequency Tuning..... 10 kHz Steps
Frequency Adjust..... Front Panel or Remotely
C/N₀ ≤ 45 dB-Hz for capture
AFC ± 30 kHz
Image Rejection..... >40 dB, 930 to 2300MHz
Input Impedance (**Note 1**) 50 Ohm
Input Connector (**Note 1**)..... Type-N, Female
Output Impedance 100 Ohm, single ended
Output Connector Terminal plug and BNC Female
Tracking Gradient 0.5 V/dB
Tracking Response..... 0 to +10 VDC
..... for a 20 dB input level change
System Level Range 60 dB
System Level Adjust..... 0 to 60dB, 0.5dB Steps
Frequency Stability <1 ppm, 0^oc to +50^o c
Phase Noise >75 dB-Hz, 1 kHz from Carrier
Alarms Unit Lock
Alarm Relay Form-C

External LNB Power +18 VDC, Switched, In/Out, 500 ma, max
..... +15 VDC (**Optional**)
CDS (**Optional**)..... DB-9, RS-232
Front Panel Display Vacuum Fluorescent
M&C RS-232 or RS-422/485 switched on rear panel
M&C Connector..... DB-9, Female
Ethernet 10/100 Base T (**Optional**) RJ-45 Jack connector

Physical Characteristics

Size 1.75" H X 16.00" D X 19.00" W
Weight 8 lb. (3.63 kg)
Primary Power..... 90 - 264 VAC 47 - 63Hz, 1.4 A AutoSensing

Environmental Specifications:

Operating Temperature 0^oc to +50^o c
Storage Temperature 40^oc to +70^o c
Humidity 95% RH @ 40^o c

Options

Note 1: 75 Ohm F female or 50 Ohm SMA female are available.
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(Optional) CDS, Continuous Digital Streaming

The streaming option associated with the ASC300 series of beacon receivers provides a continuous, two byte, data stream running at 9600 baud that contains ten bits of signal strength level indication as well as lock or alarm condition of the unit. Other baud rates are available. A female DB9, RS-232 interface connector on the rear of the unit is specifically dedicated for this option.