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Functional Description

The Model ASC300Ku-I Beacon Receiver is a high performance self contained 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 ASC300Ku-I will tune over any of the three primary Ku band satellites (10.7-11.70 GHz, 11.70-12.75 GHz) by utilizing an internal block down converter. The frequency band must be customer specified. The applications for the ASC300 Ku-I are for antenna tracking controllers and uplink power control system.

Systems Specifications

Input FrequencyCustomer Specified
Internal Block Converter (See below bands)
Pre-detection Bandwidth 60 kHz
Input Level90 dBm, min.; -30 dBm max
For full tracking range capability
Frequency Tuning10 kHz Steps
Frequency Adjust Front Panel or Remotely
AFC <u>+</u> 30 kHz
Threshold<45 dB-Hz (C/N ₀) for acquisition Input
Impedance
Input Connector Type-N, Female (SMA Optional)
Output Impedance100 Ohm, single ended
Output ConnectorTerminal plug and BNC Female
Tracking Gradient 0.5 V/dB, Sto
Tracking Response 0 to +10 VDC for a
20 dB input level change
System Level Adjust 0 to 60dB, 0.5dB Steps
Frequency Stability<1 ppm, 0°c to +50°c

Frequency Reference10 MHz (Internal)
Phase Noise>75 dBc-Hz, 1 kHz from Carrier
Alarms
Alarm RelayForm-C
External LNB Power None
CDS (Optional)
Front Panel DisplayVacuum Fluorescent
M&C RS-232 or RS-422/485Switchable on rear panel
M&C Connector
Ethernet 10/100 Base T (Optional) RJ-45 Connector
Physical Characteristics
Size1.75"H X 16.00"D X 19.00"W
Weight
Primary Power
Auto-Sensing
Environmental Specifications:
Operating Temperature0°c to +50° c
Storage Temperature40°c to +70° c
Humidity95% RH@ 40° c
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* 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. A female DB9, interface connector on the rear of the unit is specifically dedicated for this option.