

### **DESCRIPTION**

The 3.5" high A330 series and the 5.25" high A340 series of medium power microprocessor based instrumentation and subsystem amplifiers provide the user with proven reliable instrumentation for a wide variety of test and system applications.

The operating modes are selectable via front panel push button controls and the operating mode is displayed on a one line, 16 character, LED digital display. Additionally, salient power supply voltages, currents and fault indicators can be displayed.

Each amplifier can be remote controlled via the standard IEEE-488 GPIB.

This amplifier utilizes class A linear power devices that provide excellent linearity, high gain, and wide dynamic range. High efficiency operation is achieved by employing a unique broadband microstrip RF network and advanced GaAs FET devices.

These solid-state amplifiers are compact and lightweight making them ideal for bench operation or rack mounting.

The amplifier is protected for load VSWRs from open to short (at all phases) with an internal isolator. Input/output VSWR is specified at 2:1 max.

### **FEATURES**

- **Monitor-Digital Display**
  - Standby
  - Faults
- **Mode-Digital Display**
  - Power On/Off
  - RF On
- **Controls**
  - Power On
  - Power Off
  - RF On
  - RF Off
  - Local Select
- **Ease of Maintenance**
- **Designed to meet the safety requirements of IEC-348 and UL1419**
- **Broadband Frequency**
- **C.E. Certified**

## APPLICATIONS

- EMC Susceptibility Testing
- Communications
- General Laboratory Instrumentation
- System Preamplifiers
- Threat Simulation
- Antenna Patterns Testing
- Component Testing

## RF SPECIFICATIONS

Model Number	Frequency Range (GHz)	Min Pwr Out* (Watts)	Min Small Signal Gain (dB)	Max NF (dB)
<b>A330 SOLID-STATE SERIES - FULL RACK 3.50" HIGH</b>				
A330/L	1.0 - 2.0	20	45	10
A330/S	2.0 - 4.0	20	43	10

### A340 SOLID-STATE SERIES - FULL RACK 5.25" HIGH

A340/L	1.0 - 2.0	20	45	10
A340/S	2.0 - 4.0	20	43	10

Harmonics: -20 dBc typical @ 1 dB comp.

Spurious: >-60 dBc

In/Out Impedance: 50 Ohms

In/Out VSWR: 2.0:1 Maximum

RF Connectors :

Frequency	Input	Output
1.0 GHz - 4.0 GHz	Type N	Type N
Location:	Front Panel	Front Panel

## ENVIRONMENTAL

Operating Temperature:	0 to 50°C (40°C @ 10,000 feet)
Relative Humidity:	95% (noncondensing)
Operating Altitude:	10,000 feet Maximum
NonOperating Temp.:	-20 to 70°C
NonOperating Altitude:	50,000 feet Maximum

## PRIME POWER

Switchable 115 or 230 VAC,  $\pm 10\%$ , Single Phase, 50-400 Hz, 250 VA maximum.

## MECHANICAL

Dimensions:

A330 Series:	3.50" (89mm) H x 16.5" (419mm) W x 20.5" (521mm) D Rack Mount
A340 Series:	5.25" (133mm) H x 16.5" (419mm) W x 20.5"

(521mm) D Rack Mount

**Weight:**

A330 Series: 35 pounds (17.3 kg)

A340 Series: 35 pounds (17.3 kg)

**Cooling:**

Internal Forced Air

Air Intake: Rear Panel

Air Exhaust: Rear Panel

**REMOTE OPERATION**

Standard: Operating mode control and status monitoring via IEEE-488 GPIB.

**OPTIONS AVAILABLE**

Option 04-XX: Alternate Prime Power (2)

Option 07: Input Pin diode Pulse Modulator with 40dB Isolation;  
15ns rise/fall times (1)

Option 12: RF Sample of the output (30 dBc) (1)

Option 13: Chassis Slides for Standard 19" Rack Mounting

Option 15: Input Attenuator; 20dB range (2)

Option 18: RF Input/Output Connectors on the Rear Panel

Option 22: Internal System Diagnosis

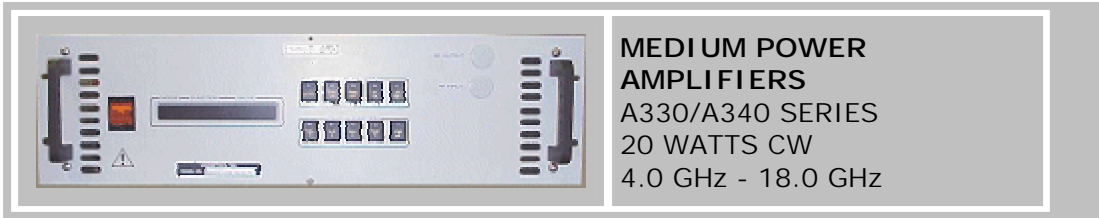
Option 30: RF Output Power displayed on Digital Front Panel Display  
(1)

Other options available (2)

**NOTES:**

(1) Option may affect rated output power and gain

(2) Consult factory for features and other functions



## DESCRIPTION

The 3.5" high A330 series and the 5.25" high A340 series of medium power microprocessor based instrumentation and subsystem amplifiers provide the user with proven reliable instrumentation for a wide variety of test and system applications.

The operating modes are selectable via front panel push button controls and the operating mode is displayed on a one line, 16 character, LED digital display. Additionally, salient power supply voltages, currents and fault indicators can be displayed.

Each amplifier can be remote controlled via the standard IEEE-488 GPIB.

Each amplifier features complete regulation of the helix, filament and grid power supplies, thus providing stable operation and long life for the TWTs. The TWT is fully protected against power supply malfunctions such as helix overcurrent.

Optionally, the TWTAs can be supplied with complete input and output VSWR protection.

These medium power TWTAs are compact and lightweight making them ideal for bench operation or rack mounting.

## FEATURES

- **Monitor-Digital Display**
  - Standby
  - Faults
  - Helix Voltage/Current
  - Collector Voltage
- **Mode-Digital Display**
  - Power On/Off
  - RF On
- **Controls**
  - Power On
  - Power Off
  - RF On
  - RF Off
  - Local Select
- **Ease of Maintenance**
- **Designed to meet the safety requirements of IEC-348 and UL1419**
- **Broadband Frequency**

- C.E. Certified

## APPLICATIONS

- EMC Susceptibility Testing
- Communications
- General Laboratory Instrumentation
- System Preamplifiers
- Threat Simulation
- Antenna Patterns Testing
- Component Testing

## RF SPECIFICATIONS

Model Number	Frequency Range (GHz)	Min Pwr Out* (Watts)	Min Sat Gain* (dB)	Max NF (dB)
<b>A330 SERIES - FULL RACK 3.5" HIGH</b>				
A330/C	4.0 - 8.0	20	33	35
A330/CJ	4.0 - 18.0	20	30	35
A330/X	8.0 - 12.4	20	33	35
A330/U	12.4 - 18.0	20	33	35
A330/IJ	6.0 - 18.0	20	33	35
<b>A340 SERIES - FULL RACK 5.25" HIGH</b>				
A340/C	4.0 - 8.0	20	33	35
A340/CJ	4.0 - 18.0	20	30	35
A340/X	8.0 - 12.4	20	33	35
A340/U	12.4 - 18.0	20	33	35
A340/IJ	6.0 - 18.0	20	33	35

\* Higher output power and gains available

**Spurious:** -40 dBc (-50 dBc available)

**In/Out Impedance:** 50 Ohms

**In/Out VSWR:** 2.5:1 Maximum

**Residual AM/FM:** 1% maximum (-40dBc) (3)

**RF Connectors :**

Frequency	Input	Output
4.0 GHz - 18.0 GHz	Type N	Type N
<b>Location:</b>	Front Panel	Front Panel

## ENVIRONMENTAL

Operating Temperature:	0 to 50°C (40°C @ 10,000 feet)
Relative Humidity:	95% (noncondensing)
Operating Altitude:	10,000 feet Maximum
NonOperating Temp.:	-20 to 70°C

NonOperating Temp.: -20 to 70°C  
NonOperating Altitude: 50,000 feet Maximum

### **PRIME POWER**

A330 Switchable 115 or 230 VAC,  $\pm 10\%$ , Single Phase, 50-400 Hz,  
Series: 750 VA maximum  
A340 Switchable 115 or 230 VAC,  $\pm 10\%$ , Single Phase, 50/60 Hz,  
Series: 750 VA maximum

### **MECHANICAL**

#### **Dimensions:**

A330 Series: 3.50" (89mm) H x 16.5" (419mm) W x 20.5"  
(521mm) D Rack Mount

A340 Series: 5.25" (133mm) H x 16.5" (419mm) W x 20.5"  
(521mm) D Rack Mount

#### **Weight:**

A330 Series: 38 pounds (17.3 kg)

A340 Series: 38 pounds (17.3 kg)

#### **Cooling:**

Internal Forced Air  
Air Intake: Rear Panel  
Air Exhaust: Rear Panel

### **REMOTE OPERATION**

Standard: Operating mode control and status monitoring via IEEE-488 GPIB.

### **OPTIONS AVAILABLE**

Option 03: Reflected Power Cutoff VSWR Protection (1)  
Option 04-XX: Alternate Prime Power (2)  
Option 07: Input Pin diode Pulse Modulator with 40dB Isolation;  
15ns rise/fall times (1)  
Option 08: Integral Output Circulator (1) (4)  
Option 09: Integral Input Isolator (1) (4)  
Option 12: RF Sample of the output (30 dBc) (1)  
Option 13: Chassis Slides for Standard 19" Rack Mounting  
Option 14: Internal Preamplifier for rated power @ less than 0 input  
Option 15: Input Attenuator; 20 dB range (2)  
Option 18: RF Input/Output Connectors on the Rear Panel  
Option 22: Internal System Diagnosis  
Option 30: RF Output Power displayed on Digital Front Panel Display  
(1)  
Option 30R: Reflected Power Metering  
Other options available (2)

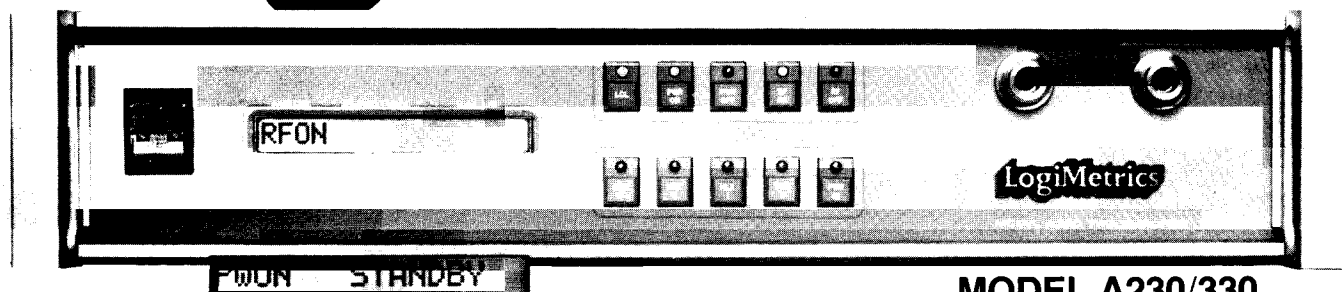
#### **NOTES:**

(1) Option may affect rated output power and gain

(2) Consult factory for features and other functions

- (3) Typically -46 dBc AM; -55 dBc FM
- (4) Not available on Model CJ.

# LogiMetrics



MODEL A230/330

## Traveling Wave Tube Amplifier

### FEATURES:

- Built-in RF power monitoring eliminates need for external instruments, a LogiMetrics exclusive.
- Front panel system voltage/current display.
- Low profile chassis with solid state power supply.
- Power supply and TWT fault detection.
- Internal forced air cooling.



The LogiMetrics Model A230/330 is a microprocessor based TWT Amplifier that provides a digital read out displaying key parameters of the TWT amplifier and fault condition. The instrument is fully controllable via the IEEE-488 GPIB and also can be equipped with an optional CIIL/Mate compatibility. Models are available to operate over the 1.0 to 18.0 GHz range providing 10 or 20 Watt outputs with a saturated gain of 33 dB and 35 dB noise figure. The input/output impedance is 50 ohms and a maximum load VSWR of 2.5:1.

Options available include internal preamplifier, input/output isolators, amplitude control and RF sample.

LOGIMETRICS, INC. 121-03 DUPONT STREET, PLAINVIEW, NEW YORK 11803 • (516) 349-1700



# LOGIMETRICS TRAVELING WAVE TUBE AMPLIFIER

## MODEL A230/330

### SERIES CW TWTA

#### APPLICATIONS:

- ATE Systems
- RFI/EMI Susceptibility Testing
- Calibration Laboratories
- Component Testing
- System Preamplifiers
- Antenna Pattern Testing
- Communications Systems
- General Laboratory Use

#### SPECIFICATIONS

##### ELECTRICAL

Model No.	Freq. Range (GHz)	Min. Pwr. Output (Watts)	Min. Sat. Gain (dB)	Max. Noise Figure (dB)
A230/L	1.0 - 2.0	10	30	35
A230/S	2.0 - 4.0	10	30	35
A230/C	4.0 - 8.0	10	30	35
A230/IJ	8.0 - 18.0	10	30(*)	35
A330/L	1.0 - 2.0	20	33	35
A330/S	2.0 - 4.0	20	33	35
A330/C	4.0 - 8.0	20	33	35
A330/IJ	7.0 - 18.0	20	33(*)	35

(\*) Higher Min. Sat. Gain available, consult Factory for details.

Load VSWR: 2.5:1 max  
 Spurious: - 40 dBc min  
 Residual AM: 1% max ( - 40 dBc)  
 Residual FM: - 55 dBc

A microprocessor based instrument with a front panel digital display indicating power output, power supply voltages, and system faults.

#### GENERAL

Programmability: IEEE-488 GPIB  
 Prime Power: 115/220 VAC + / - 10% 50-400 Hz  
 Overall Dimensions: 3.5" H x 16.5" W x 20.5" D (8.9cm H x 41.9cm W x 52cm D)  
 Rack Mount Configuration: 19" Rack Mount Adapter (Std)  
 RF Connector: Front Panel Precision Type N  
 Cooling: Internal Forced Air  
 Air Inlet/Exhaust: Rear Panel  
 Weight: 35 lbs. max (15.9 KGM)

#### ENVIRONMENTAL

Operating Temperature: 0°C to 50°C  
 Relative Humidity: 95% (Non-Condensing)  
 Altitude: 10,000 Feet  
 Storage Temperature: - 20°C to 70°C

#### OPTIONS

Option 07 Pulse Modulation—Pin Diode Modulator/40 dB iso. 15 ns TR/TF (1)  
 Option 08 Integral Output Isolator (1)  
 Option 09 Integral Input Isolator (1)  
 Option 10-2 CILL/Mate Compatibility  
 Option 10-3 RS232 Compatibility  
 Option 12 RF Sample ( - 30 dBc) (1)  
 Option 13 Rack Mount Adapter with slides  
 Option 14 Internal preamp—rated power with 0 dBm input  
 Option 15 Pin Diode attenuator at input of the TWT, 20 dB range (1)  
 Option 18 RF Connectors on Rear Panel  
 Option 22 Internal System Diagnosis

Note (1): May affect the rated output power and gain.

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