



# GC730 Series Power Sensors



# GC730 Series

## Power Sensors

### Introduction

The GC730 Series power sensors consist of Terminating or Directional power sensors types that can be used for any power measurement application.

The GC730 power sensors are portable for field applications and can interface with a PC or any GenComm's instrument.

The Directional Power Sensors (GC731A, GC733A) are used to measure forward power and reflected power without having any service disturbance. Typical applications include installation, maintenance, and monitoring of transmitters with antenna in wireless base station.

The Terminating Power Sensor (GC732A) is used to measure out-of-service power. Typical applications include installation, and maintenance of base station in wireless and RF generators or repeaters.

While conventional power sensors can be used in conjunction with additional power meters, The GC730 power sensors are small and lightweight making the optimal portable solutions for field applications, together with the benefit of being powered via the PC, or GenComm's instruments.

### Features

#### **Optimal Power Testing**

The GC730 power sensors offers the optimal power testing solutions since it performs power measurements without the need of additional test instruments, able to display the measurement results on a PC.

#### **Field Test Solution**

The GC730 power sensors are the ideal field test solutions for its compact size, lightweight and ability to operate with a laptop computer in standalone mode or with GenComm's field instruments as an accessory. Making the GC730 power sensors the optimal solution for installation and maintenance of modern wireless and RF base stations.

#### **No Zeroing Calibration**

The GC730 power sensors are not required to get disconnected or to recycle power for zeroing calibration. The power sensors do not need any additional calibration beyond the factory's calibration which ensures measurement accuracy.

#### **Measurement Methodologies**

The GC730 power sensors have two different measurement methodologies, terminating for out-of-service applications and directional for in-service applications.

# Applications



## STANDALONE



Terminating Power Sensor



Directional Power Sensor

## ACCESSORY



Cable and Antenna Analyzer with  
Terminating Power Sensor



Base Station Analyzer with  
Terminating Power Sensor

# Directional Power Sensor



## Directional Power Sensors GC731A, GC733A

Directional power sensors are connected between the transmitter and the load measuring the following power metrics without any service disturbance ideal for in-field monitoring and maintenance of wireless bases station.

- Average Power
- Peak Power
- VSWR

### Average Power (RMS Value)

This power metric provides an average power value for modulated, non-modulated or multi-carriers signals.

### Peak Power (Peak Envelope Power)

This power metric provides peak power values of the modulated envelope, indicating the maximum signal's power.

### VSWR or Return Loss

This power metric provides forward and reverse average power ratios for matching characteristics of loads. This metric is presented as VSWR (Voltage Standing Wave Ratio) or Return Loss.



Directional Power Sensor  
Front View



Directional Power Sensor  
Top View



Directional Power Sensor  
Standalone



# Terminating Power Sensor

## Terminating Power Sensor (GC732A)

This power sensor measures the true RMS power from -30dBm to +20dBm in a terminating mode, where all the power is absorbed by the power sensor.

This is a typical power measurement methodology for out-of-service applications including engineering, laboratory, and manufacturing, as well as installation and maintenance.



Terminating Power Sensor Front View



Terminating Power Sensor Accessory



Terminating Power Sensor Top View



Terminating Power Sensor Standalone



# Specifications



<b>Directional power Sensor (GC731A)</b>	
Frequency Range	300 ~ 3800MHz
Power Range	Average Power: 0.15W ~ 150W Peak Power: 4 ~ 400W
Measurement Uncertainty	±4% of reading + 0.05W (If Temp > 35°C or Temp < 15 °C add 3%)
Return loss	27 dB min
Directivity	27 dB min
Insertion loss	Type 0.05 dB (Max 0.1dB)
RF connectors	N- Female on both ends
<b>General</b>	
Serial Interface	1 port
USB Interface t	1 port
DC Input	5V 1.2A
Operation Temperature	0°C ~ 50°C (32°F ~ 122°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Calibration Cycle	2 years
<b>Dimension</b>	
Weight	0.57Kg
Size (WxHxD)	98 x 118.7 x 33.2 mm (without connectors)

<b>Terminating Power Sensor (GC732A)</b>	
Frequency Range	20 ~ 3800MHz
Power Measurement Type	Average
Power Range	-30 ~ +20dBm (1uW ~ 100mW)
Measurement Uncertainty	±7%
RF connectors	N-Male
<b>General</b>	
Serial Interface	1 port
USB Interface	1 port
DC Input	5V 1.2A
Operation Temperature	0°C ~ 50°C (32°F ~ 122°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Calibration Cycle	2 years
<b>Dimension</b>	
Weight	0.57Kg
Size (WxHxD)	64 x 96 x 38 mm (without connector)

# Specifications



<b>Directional power Sensor (GC733A)</b>	
Frequency Range	150 ~ 3500MHz
Power Range	Average Power: 0.25W ~ 20.0W Peak Power: 0.25W ~ 20W
Measurement Uncertainty	±4% of reading (If Temp > 35°C or Temp < 15 °C add 3%)
Return loss	27 dB min
Directivity	27 dB min
Insertion loss	Type 0.05 dB (Max 0.1dB)
RF connectors	N- Female on both ends
<b>General</b>	
Serial Interface	1 port
USB Interface	1 port
DC Input	5V 1.2A
Operation Temperature	0°C ~ 50°C (32 °F ~ 122°F)
Storage Temperature	-20°C ~ 70°C (-4 °F ~ 158°F)
Calibration interval	2 years
<b>Dimension</b>	
Weight	0.57Kg
Size (WxHxD)	98 x 118.7 x 33.2 mm (without connectors)

Product specification and description are subject to change without notice.



## **GC730 Series**

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