



# 7020 Series Power Sensor



Bird's® new 7020 Power Sensor is an economical plug and play solution to your power measurement needs. The 7020 determines and reports Forward and Reflected True Average Power and VSWR over a wide frequency range of 25 MHz to 1.0 GHz or 350 MHz to 4.0 GHz. It also never requires field calibration, factory calibration suggested once per year, the sensors are traceable to National Institute of Standards and Technology (NIST).

## PROBLEMS ► SOLUTIONS

Have analog, digital, and multi-carrier signals to measure  
► Modulation independent measurements

Tight budget

- Inline device, no directional coupler required
- Complimentary Virtual Power Meter (VPM2) application

Downtime is unacceptable

- Monitor and perform maintenance for monitoring while DUT is in-service
- Measure forward and reflected power to troubleshoot system failures

Varying field tech skill levels

- Sensor plugs and plays with multiple display devices

Need confidence in measurement

- No field calibration required
- NIST traceable calibration



**Works with the  
Bird RF Meter App!**  
Free download from Google Play Store

## APPLICATIONS

WPS measures: Analog Cellular, Digital Cellular, 3G, 4G, Tetra, APCO/P25, Trunking, CDMA, TDMA, WCDMA, GSM, Transportation, Tactical Military, Radar, Avionics, Marine, LMR, Analog Broadcast, Digital Broadcast, GSM, GPRS, EDGE, UMTS, HSDPA, Bluetooth, Fire, GPS, NPSPAC, Paging, Project 25, Public Safety, Telematics, Utilities, WIMAX and WLAN.

Measurements performed: Forward and Reflected

Calculations Performed: VSWR and True Average Power

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## SPECIFICATIONS

### Frequency Range

<b>7020-1-030301</b>	25 MHz - 1.0 GHz
<b>7020-1-010101</b>	350 MHz - 4.0 GHz

### Power Measurement Range

<b>7020-1-030301</b>	0.5 W to 500 W
<b>7020-1-010101</b>	0.15 W to 150 W

<b>Measurement Accuracy</b>	+/- (4% of reading + 0.05 W) (above 35 °C or below 15 °C add 3%)
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<b>Min, Forward Power for Reflected Measurement</b>	5.0 W
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<b>Peak/Average Ratio, Max</b>	12 dB
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<b>Insertion Loss, Max:</b>	0.1 dB
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<b>Insertion VSWR</b>	1.10 max
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<b>Impedance, Nominal</b>	50 ohms
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<b>Response Time</b>	100 ms
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<b>VSWR Range</b>	1.15 to 99.9
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<b>RF Connector</b>	N Female
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<b>Directivity, Min</b>	28 dB
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<b>Recommended Calibration Interval</b>	Annually
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### Power Supply

<b>Source</b>	5Vdc from USB host
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<b>Current Draw</b>	35 mA
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### Interface

<b>Protocol</b>	USB 2.0
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<b>Connector</b>	USB Type 'B' with "SeaLATCH" locking USB connector
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<b>Data Logging</b>	with VPM3 Software
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## STANDARDS COMPLIANCE

<b>CE</b>	European Standard EN 61326-1:2006 – Electronic Equipment for Measurement, Control and Laboratory Use – EMC Requirements in accordance with EMC Directive (2004/108/EC)
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<b>RoHS</b>	Compliant
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<b>Upgradability</b>	Firmware field-upgradable via the USB port
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## MECHANICAL AND ENVIRONMENTAL

<b>Dimensions, Nominal</b>	4.8" x 2.6" x 1.3" (122mm x 66mm x 32mm)
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<b>Weight, nominal</b>	1.0 lbs (0.45 kg)
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<b>Shock</b>	Mil-PRF-28800F Class 3
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<b>Vibration</b>	Mil-PRF-28800F Class 3
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<b>Operating Temperature</b>	-30 to +60 °C (-22 to +140 °F)
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<b>Storage Temperature</b>	-40 to +80 °C (-40 to +176 °F)
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<b>Humidity, Max</b>	95% (non-condensing)
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<b>Altitude, Max</b>	4,572 m (15,000ft)
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## STANDARD ACCESSORIES (INCLUDED)

<b>5A2653-6L2</b>	Sealatch USB Cable
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<b>VPM3</b>	Virtual Power Meter
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<b>920-7020S</b>	Instruction Manual (Sensor)
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<b>920-VPM2</b>	Instruction Manual (VPM2)
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## OPTIONAL ACCESSORIES (NOT INCLUDED)

<b>PTA-MNMN</b>	Adapter
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<b>PTA-MNME</b>	Adapter
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<b>PTA-MNFE</b>	Adapter
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## COMPATIBLE DEVICES

<b>SA-XT Series</b>	Site Analyzer
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<b>VPM3</b>	Virtual Power Meter
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<b>5000-XT</b>	Digital Power Meter
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<b>Bird RF Meter</b>	Android App
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