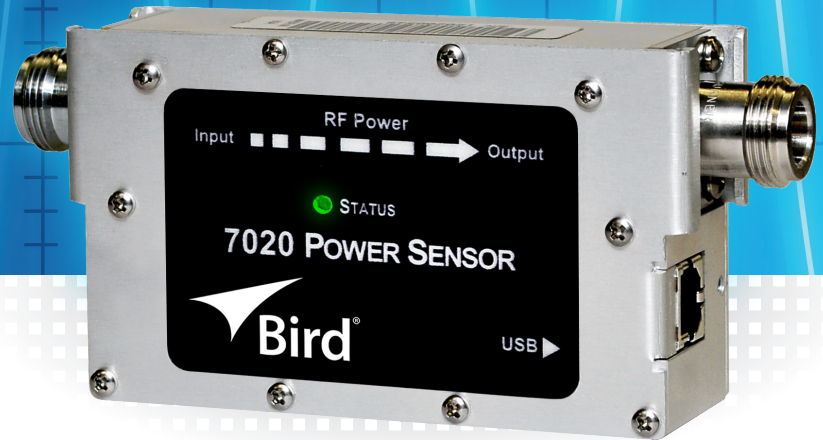


POWER SENSORS

Basic Power Sensor

±4% ACCURACY

7020 SERIES



Economical Power Measurement

The Bird 7020 Series of power sensors are a cost-effective, easy to use power measurement solution. This inline device doesn't require a directional coupler and plugs-and-plays with multiple display devices and utilizes the complimentary Virtual Power Meter (VPM3) application. The 7020 Series never requires field calibration giving technicians confidence in accurate field measurements. Using exceptionally accurate measurements of 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, the 7020 helps troubleshoot system failures to minimize downtime.

Factory calibration is only suggested once per year and is traceable to the National Institute of Standards and Technology (NIST), providing additional confidence in sensor measurements.

Plug-and play field
measurement that never
requires field calibration

PRODUCT FEATURES

- Measures forward and reflected power and VSWR to troubleshoot system failures
- Supports analog, digital, and multi-carrier signals to measure modulation independent measurements
- Monitor and perform maintenance for monitoring while DUT (Device Under Test) is in-service
- Economical power measurement solution
- Utilizes the complimentary Virtual Power Meter (VPM3) application
- Supported by 5000-NG Power Meter Display
- No field calibration required

MEASUREMENT APPLICATIONS

- 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

MEASUREMENT

Accuracy	±4% of reading + 0.05 W Add 3% to uncertainty above 35 °C or below 15 °C
Forward Power for Reflected Measurement	5.0 W min
Peak/Average Ratio	12 dB max
Insertion Loss	0.1 dB max
Insertion VSWR	1.10 max
VSWR Range	1.15 to 99.9
Impedance	50 Ohms nominal
Response Time	100 ms
PIM Rating	-130 dBc @ 460 MHz
Directivity	28 dB

CONNECTORS

RF Connectors	N Female
Display Interface	USB 2.0 Type 'B' with "SeaLATCH" locking USB connector

SYSTEM

Recommended Calibration Interval	1 year
Power Supply	5 VDC from USB host, 35 mA current draw
Data Logging	with VPM3 software
Upgradeability	Firmware field-upgradable via the USB port

PRODUCT SELECTION GUIDE

Model Number	Power Range	Frequency (MHz)
7020-1-030301	0.5 W to 500 W*	25 MHz to 1.0 GHz
7020-1-010101	0.15 W to 150 W	350 MHz to 4.0 GHz
7020-1-020101	350 MHz to 4.2 GHz	0.15 W to 150 W

* Derate maximum average power rating from 500 W at 300 MHz to 100 W at 1 GHz using a straight line on a log-log scale.

ENVIRONMENTAL

Operating Temperature	-30 °C to 60 °C (-22 °F to 140 °F)
Storage Temperature	-40 °C to 80 °C (-40 °F to 176 °F)
Humidity	95% max (non-condensing)
Altitude	Up to 15,000 ft (4,572 m)

PHYSICAL

Size	4.8 in x 2.6 in x 1.3 in (122 mm x 66 mm x 32 mm)
Weight	1 lb (0.45 kg)

CERTIFICATIONS

CE	EMC Directive (2004/108/EC): European Standard EN 61326-1:2006 – Electronic Equipment for Measurement, Control and Laboratory Use EMC Requirements in accordance with EMC Directive (2004/108/EC)
RoHS	Compliant
Shock	Mil-PRF-28800F Class 3
Vibration	Mil-PRF-28800F Class 3

STANDARD ACCESSORIES

5A2653-6L2	SeaLATCH USB Cable
VPM3	Virtual Power Meter
920-7020S	Instruction Manual (Sensor)
920-VPM3	Instruction Manual (VPM3)

COMPATIBLE DEVICES

SA-XT Series	SeaLATCH USB Cable
5000-NG	Digital Power Meter
Bird RF Meter	Android App

birdrf.com/products

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