



# RF Directional ThruLine Power Sensor

## 4020 Series



The RF Experts

- Cost-effective solution for maintaining critical RF systems.
- Only 5 models are required to cover the frequency range of 1.8 MHz to 3 GHz and power range from 300 mW - 10 kW.
- Full-Scale Accuracy  $\pm 3\%$  for applications requiring accurate forward and reflected power measurement.
- Direct plug-in operation with industry-standard Bird® 4421 Multifunction Power Meter.
- Low insertion loss.

### SPECIFICATION

<b>Frequency Range</b>	4021	1.8-32 MHz
	4022	25 MHz-1 GHz
	4023A3G	800-3000 MHz
	4024	1.5-32 MHz
	4025	100 kHz-2.5 MHz
<b>Power Input</b>	4021	300 mW to 1 kW (1.2 kW max.)
	4022	300 mW to 1 kW (1.2 kW max.)
	4023A3G	300 mW to 200 W
	4024	3 W to 10 kW (12 kW max.)
	4025	3 W to 10 kW (12 kW max.)
<b>Impedance</b>		50 Ohms
<b>Accuracy, Fwd</b>		$\pm 3\%$ of reading from rated Max to rated Min.
<b>VSWR Measurement Range</b>		1.00 to 2.00 (40.0 to 9.5 dB Return Loss)
<b>Directivity, Min.</b>	4021	30 dB
	4022	30 dB
	4023A3G	28 dB
	4024	28 dB, 1.5-2.5 and 25-32 MHz, 30 dB, 2.5-25 MHz
	4025	28 dB, 100-125 kHz 30 dB, 125-2500 kHz
<b>Insertion Loss Max. (with female "N" connectors)</b>	4021	0.05 dB
	4022	0.05 dB, 25-512 MHz, 0.13 dB, 512 MHz-1 GHz
	4023A3G	0.15 dB
	4024	0.05 dB
	4025	0.05 dB
<b>VSWR, Max.</b>	4021	1.05:1
	4022	1.05:1, 25-512 MHz, 1.10:1, 512 MHz-1 GHz
	4023A3G	1.10:1
	4024	1.05:1
	4025	1.05:1
<b>Sampling Rate</b>		Nominal 2 readings per second

### POWER REQUIREMENTS

**External DC** 12 VDC, supplied from Bird 4421 Power Meter

### PHYSICAL SPECIFICATIONS

<b>Dimensions</b>	5.2" L x 2.5" W x 3.25" H (137 x 64 x 83 mm)
<b>Weight</b>	1lb., 11oz. (0.8 kg)
<b>Connectors</b>	N (F) standard, other customer specified from QC list appropriate for frequency and power.

### ENVIRONMENTAL SPECIFICATIONS

<b>Operating Temperature</b>	0 to 50°C (32 to 122 °F)
<b>Storage Temperature</b>	-20 to 70°C (-4 to +158 °F)
<b>Humidity</b>	95% maximum (non-condensing)
<b>Altitude</b>	Up to 10,000 feet (3,048 m)
<b>Emissions</b>	EN-55011, 1991, Class B
<b>General EMC</b>	Designed to carry CE mark
<b>Immunity</b>	EN-50082-1, 1995
<b>Safety</b>	EN-61010, 1993 in accordance with Council Directives 73/23/EEC and 93/68/EEC
<b>Calibration Cycle</b>	Nominal 1 year



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