



## MODEL 43 — Portable Wattmeter

**Power Range** 100 mW to 10 kW using Bird Plug-in Elements.\*  
**Frequency Range** 450 kHz to 2.7 GHz (depending on element)  
**Insertion VSWR** with N Connectors 1.05 max. to 1000 MHz  
**Accuracy** ±5% of full scale  
**Connectors** QC Type (Female N normally supplied)  
**Finish** Light Gray powder coat  
**Nominal Size** 6 7/8" H x 5 1/8" W x 3 5/8" D,  
 (includes connectors) (175mm x 130mm x 92mm)  
**Weight** 3 lbs. (1.4 kg)  
**Elements** Tables 1, 2, 3, 3A, 4, 6 (page 33-34)



## PEP WATTMETER 4314B — Portable Wattmeter

**Power Range** 100 mW to 10 kW using Bird Plug-in Elements.\*  
**Frequency Range** 450 kHz to 2.7 GHz (depending on element)  
**Insertion VSWR** with N Connectors 1.05 max. to 1000 MHz  
**Accuracy** ±5% of full scale CW, ±8% PEP  
**Pulse Parameters** (min.) Pulse width 0.4 μs (100-2300 MHz),  
 1.5 μs (26-99 MHz) and 15 μs (2-25 MHz);  
 repetition rate 30 pps and duty factor 1 x 10<sup>-4</sup> min.  
**Battery** Two 9-Volt alkaline transistor batteries  
**Connectors** QC Type (Female N normally supplied)  
**Finish** Light Gray powder coat  
**Nominal Size** 6 7/8" H x 5 1/8" W x 3 5/8" D,  
 (includes connectors) (175mm x 130mm x 92mm)  
**Weight** 3 lbs. (1.4 kg)  
**Elements** Tables 1, 2, 3, 3A, 4, 5, 6 (page 33-34)  
**Accessories** Case (page 39), spare batteries (page 38),  
 extra QC connectors (page 37).



## PEAK POWER RETROFIT KIT 4300-400 — Portable Wattmeter

**Power Range** 100 mW to 10 kW using Bird Plug-in Elements.\*  
**Frequency Range** 450 kHz to 2.7 GHz (depending on element)  
**Accuracy** CW Mode: ±5% full scale, Peak mode: ±8% full scale  
**Modulation** Normal voice audio; or  
 (Peak Mode) Rectangular Pulses  
 Duty cycle: 2% (min),  
 Repetition rate: 100 pps (min),  
 Pulse width: 200 μs (min)  
**Battery Life** 48 hours typical  
**Weight** Adds 1 lb. to Model 43



## HIGH-POWER WATTMETER 4305A — Portable Wattmeter

**Power Range** 50 W to 25 kW using Bird Plug-in Elements.\*  
**Frequency Range** 450 kHz to 2.3 GHz (depending on element)  
**Insertion VSWR** with N Connectors 1.05 max.  
**Accuracy** ±5% of full scale  
**Connectors** QC Type (Female N normally supplied)  
**Finish** Gray powder coat  
**Nominal Size** 6 5/16" H x 5 1/8" W x 4 1/4" D,  
 (includes connectors) (161 mm x 131 mm x 108 mm)  
**Weight** 3 1/4 lbs. (1.5 kg)  
**Elements** 4305A element table below  
 and 1 5/8AA table (page 35)  
**Accessories** Case (page 39)



## VARIABLE RF TAP 4431 — Portable Wattmeter

**Power and Frequency Range** 5 kW max. 2 to 30 MHz,  
 1 kW max. 30 to 1000 MHz\*\*  
 using Bird Plug-in Elements\*  
**Insertion VSWR** with N Connectors 1.07 max.\*\* to 1000 MHz  
**Accuracy** ±5% of full scale  
**Insertion Loss** 0.1 dB max (2-512 MHz),  
 0.2 dB max (512-1000 MHz)\*  
**RF Sample Output Connectors** Variable – 15 to – 70 dB from BNC (Female) port  
 QC Type (Female N normally supplied)  
**Finish** Gray powder coat  
**Nominal Size** 6 7/8" H x 5 1/8" W x 3 5/8" D,  
 (includes connectors) (175 mm x 130 mm x 92 mm)  
**Weight** 3 1/2 lbs. (1.6 kg)  
**Elements** Tables 1, 2, 3, 3A, 4, 6 (page 33-34)  
 (within power/frequency range limits stated above)  
**Accessories** Case (page 39)



## MODEL 4304A FIXED 25-1000 MHz 5-500 WATT ELEMENT — Portable Wattmeter

**Power Ranges** 5, 15, 50, 150, 500 W, with no scale limitations  
 except power limited to 150 W from 800–1000 MHz  
**Frequency Range** 25 MHz to 1.0 GHz  
**Insertion VSWR** 25–521 MHz, 1.05 max.  
 (with UHF female conn.), 512–1000 MHz, 1.07 max.  
**Insertion Loss** 25–512 MHz, 0.10 dB max with UHF female conn.,  
 512–1000 MHz range, 0.13 dB max  
**Accuracy** 25–100 MHz, ±7% of full scale, using correction charts.  
 100–512 MHz, ±6 of full scale, no correction needed.  
 512–1000 MHz, ±7% of full scale, no correction needed.  
**Connectors** QC Type (Female N normally supplied)  
**Finish** Light Gray powder coat  
**Nominal Size** 6 7/8" H x 5 1/8" W x 3 5/8" D,  
 (includes connectors) (175 mm x 130 mm x 92 mm)  
**Weight** 3 lbs. (1.36 kg)  
**Accessories** Case (page 39)



4305A Elements	Frequency (MHz)					
	.45-2.5	2-30	50-125	100-250	400-1000	1100-1800
50 W	—	—	—	—	—	50K7
2500 W	—	—	2500B7	2500C7	2500E7	—
5000 W	—	—	5000B7	—	—	—
10 Kw	—	10KH7	—	—	—	—
25 Kw	25KP7	—	—	—	—	—

\*\*Applies only when coupling is less than 30 dB

\*Quoted accuracy only when used with other Bird Products



**MODEL 4308 CELLULAR SPECIALIST WATTMETER — Portable Wattmeter**

- Power Ranges** 1.5, 5, 15, 50 W, with no scale limitations
- Frequency Range** 440–960 MHz
- Insertion VSWR** 1.05 with TNC connectors (QC Type)
- Accuracy** ±5% of full scale
- Connectors** QC Type (Female TNC normally supplied)
- Finish** Gray powder coat
- Nominal Size** 6 7/8" H x 5 1/8" W x 3 5/8" D,  
(includes connectors) (175mm x 130mm x 92mm)
- Weight** 3 lbs. (1.36 kg)
- Accessories** Case (page 39)



**MULTIPOWER, ±5% READING ACCURACY 4410 SERIES— Portable Wattmeters**

- Power Range** **4410A and 4412**  
2 mW to 10 W, 20 mW to 100 W, 200 mW to 1 kW  
or 2 W to 10 kW full scale in one single Plug-in Element.  
Any Bird Series 4410-Element may be used.
- Frequency Range** 200 kHz to 2.3 GHz CW or FM
- Insertion VSWR** with N Connectors 1.25 max. to 2300 MHz
- Accuracy** ±5% of reading for any reading above 20% of the Power Range selected for FM or CW signals without AM. This accuracy is maintained for a full 37 dB dynamic range with each 3310 Element (except No. 4410-1 200 kHz-535 kHz which is accurate to ±10% of reading, and 4410-15 1.0-1.8GHz and 4410-16 1.8-2.3 GHz which are accurate to ±8% of reading.)
- Ambient Temperature Range** Elements 4410-1 through -8 and -10 through -16 are temperature compensated for rated accuracy from 0° to 50° C (32° to 122°F) and 4410-20 through -27 from 20° C to 30° C (68° to 86°F)
- Over-Range Protection** To 120% of nominal full scale  
(i.e. 12 W, 120 W, 1200 W, or 12,000 W). No damage or degradation to the unit will result, regardless of the Range Selector Switch position.
- Connectors** QC Type (Female N normally supplied)
- Finish** Gray powder coat
- Nominal Size** 6 7/8" H x 5 1/8" W x 3 5/8" D,  
(includes connectors) (175 mm x 130 mm x 92 mm)
- Weight** 4410: 3 lbs. (1.4 kg), 4412: 3 1/3 lbs. (1.5 kg)
- Elements** Tables 9, 9A, 10, 11, 12 (below)
- Accessories** Case (page 39), spare battery (page 38)



**4410 Elements**

**Table 9 - Full-Scale Power and Frequency Ranges 0-100, 300 Milliwatts 1, 3, 10, 30 Watts**

MHz	30-50	50-88	88-108	100-152	150-250	225-400	400-800	800-900	900-1000
Model	4410-20	4410-21	4410-27	4410-22	4410-23	4410-24	4410-25	4410-26	4410-28

**Table 9A - Full-Scale Power and Frequency Ranges 0-100, 300 Milliwatts 1, 3, 10, 30 Watts**

MHz	864-868		917-970
Model	4410-38		4410-29
Accuracy	±10% of reading accuracy on 100 mW, 300mW and 1 W, ±5% on all other scales		±5% 10 mW to 1 W only

**Table 10 - Full-Scale Power and Frequency Ranges 0-100, 300 Milliwatts 1, 3, 10, 30 Watts**

MHz	25-80	50-125	100-250	200-500	400-1000	1000-1800	1800-2300
Model	4410-10	4410-11	4410-12	4410-13	4410-14	4410-15*	4410-16*

**Table 11 - Full-Scale Power and Frequency Ranges 0-1, 3, 10, 30, 100, 300, 1000 Watts**

MHz	2-30	25-80	50-200	144-520	200-1000
Model	4410-3	4410-5	4410-6	4410-7	4410-8

**Table 12 - Full-Scale Power and Frequency Ranges 0-10, 30, 100, 300, 1000, 3000, 10,000 Watts**

MHz	0.2-0.535	0.45-2.5	2-30
Model	4410-1	4410-2	4410-4

\*Accuracy is ±8% of reading





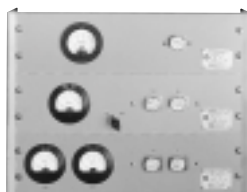
**MODEL APM-16 AVERAGE-READING POWER METER — Portable Wattmeters**

- Power Range** 1 W to 1000 W
- Frequency Range** 2 MHz to 2.3 GHz
- Accuracy** 10° to 35° C ±4% reading, ±1% full scale,  
-20° to 50° C ±6% reading, ±2% full scale
- Peak/Avg. Ratio** In excess of 10 dB
- Insertion VSWR** (with N connector) 1.05 max. to 1000 MHz
- Setting Time** < 1 second
- Meter** Shock mounted, linear scale with expanded scales of 25, 50 and 100 for full scale 1 to 1000 W readings. Mirrored scale includes 5% overrange.
- Temp. Ranges** -20° to 50° C operating; -25° to 65° C storage
- Humidity** 95% ±5% max. (noncondensing)
- Battery** Internal 9 volt
- Connectors** QC type (Female N normally supplied)
- Nominal Size** 6 7/8" H x 5 1/8" W x 3 5/8" D, (175 mm x 130 mm x 92 mm)
- Weight** 3 lbs. (1.4 kg)
- Elements** Special APM Series (below)
- Recommended Accessories** Case (page 39)



**APM-16 Elements**

Power Range	Frequency Bands (MHz)								
	2-30	25-60	50-125	100-250	200-500	400-1000	950-1260	1100-1800	2200-2300
1W	—	—	APM-1B	APM-1C	—	APM-1E	APM-1J	—	APM-1M
2.5W	—	—	APM-2.5B	—	APM-2.5D	APM-2.5E	APM-2.5J	APM-2.5K	—
5 W	APM-5H	APM-5A	APM-5B	APM-5C	APM-5D	APM-5E	APM-5J	APM-5K	—
10 W	APM-10H	APM-10A	APM-10B	APM-10C	APM-10D	APM-10E	APM-10J	APM-10K	—
25 W	—	—	APM-25B	APM-25C	APM-25D	APM-25E	—	APM-25K	—
50 W	—	—	—	APM-50C	APM-50D	APM-50E	APM-50J	APM-50K	—
100 W	APM-100H	APM-100A	APM-100B	APM-100C	APM-100D	APM-100E	APM-100J	—	—
250 W	APM-250H	APM-250A	APM-250B	APM-250C	APM-250D	APM-250E	—	—	—
500 W	APM-500H	—	APM-500B	APM-500C	APM-500D	APM-500E	—	—	—
1000 W	APM-1000H	—	APM-1000B	APM-1000C	—	APM-1000E	—	—	—



**0.45 - 2700 MHz, Model 4521, 4522, and 4526 — Panel-Mount Wattmeters**

- Models** 4521, 4522, 4526
- Power Range** 100 mW to 10 kW using Bird Plug-in Elements
- Frequency Range** 450 kHz to 2.7 GHz (depending on element)
- Insertion VSWR** with N Connectors 1.05 max. to 1000 MHz
- Accuracy** ±5% of full scale
- Connectors** QC Type (Female N normally supplied)
- Finish** Gray powder coat
- Nominal Size** 19" W x 5 7/32" H x 1 11/16" D (483 mm x 133 mm x 43 mm)
- Weight** 3 1/2 lbs. (1.6 kg)
- Elements** Tables 1, 2, 3, 3A, 4, 6 (pages 33-34)



\*Applies only when coupling is less than 30 dB

\*\*Quoted accuracy only when used with other Bird Products



**2-512 MHz With Sampler Port  
MODEL 4527 — Panel-Mount Wattmeters**

<b>Power Range</b>	100 mW to 10 kW using Bird Plug-in Elements*
<b>Frequency Range</b>	2 to 512MHz (depending on element)
<b>Insertion VSWR</b>	with N Connectors 1.05 max. to 512 MHz
<b>Accuracy</b>	±5% of full scale
<b>RF Sample Output</b>	Fixed at -53 dB from 512 to 10 MHz, decreasing to -70 dB at 2 MHz BNC (Female) port
<b>Connectors</b>	QC Type (Female N normally supplied)
<b>Finish</b>	Gray powder coat
<b>Nominal Size</b>	19" W x 5 7/32" H x 1 11/16" D (483 mm x 133 mm x 43 mm)
<b>Weight</b>	3 1/2 lbs. (1.6 kg)
<b>Elements</b>	2 to 512 MHz models within Tables 1, 2, 6 (pages 33-34)



**High Speed, FWD/RFL Alarm Wattcher®  
MODEL 3170A — Wattcher® RF Monitoring System**

<b>Power Range</b>	100 mW to 10 kW using Bird Plug-in Elements*
<b>Frequency Range</b>	450 kHz to 2.7 Ghz
<b>Insertion VSWR</b>	with N connectors 1.05 max. to 1000 MHz, 1.1 max. to 2700 MHz
<b>Accuracy</b>	±5% of full scale
<b>Meter Scales</b>	FWD and RFL 25, 50, 100 W
<b>Alarms</b>	Front Panel Buzzer, "Active" and "Trip" LEDs for forward/reflected
<b>Response Time</b>	25 µs max.
<b>Activate Forward</b>	73 µs to 50 ms nominal (adjustable) monitor delay
<b>Front Panel Controls</b>	Reset push-button, adjust FWD/RFL alarm levels screw, element sockets
<b>Rear Panel Features</b>	DC FWD/RFL signal inputs, main and remote meter drive outputs, external 12-16 VDC supply input, alarm in/out, reset in/out, AC line voltage selector, fuse, IEC 320 AC receptacle.
<b>Inputs/Outputs</b>	TTL compatible +5 V logic. Outputs for remote meter
<b>AC Power</b>	115/230 VAC, 50/60 Hz @ 56 mA
<b>DC Power</b>	12.7 to 16.0 VDC @ 400 mA max.
<b>Connectors</b>	QC Type (Female N normally supplied)
<b>Finish</b>	Gray powder coat
<b>Nominal Size</b>	19" W x 5 7/32" H x 9 5/16" D (483 mm x 133 mm x 237 mm)
<b>Weight</b>	7 lbs. (3.2 kg)
<b>Required Products</b>	Elements: Two from Tables 1, 2, 3, 3A, 4, or 6 (pages 33-34)



**100 mW - 10 kW Wattcher®  
MODEL 3128A — Wattcher® RF Monitoring System**

<b>Power Range</b>	100 mW to 10 kW using Bird Plug-in Elements*
<b>Frequency Range</b>	450 kHz to 2.7 Ghz
<b>Accuracy</b>	±5% of full scale
<b>Meter Scales</b>	FWD and RFL 25, 50, 100 W
<b>Meter Sensitivity</b>	30 µA/1400 Ω
<b>Alarms</b>	Front Panel Buzzer and red LED
<b>Front Panel Controls</b>	Reset push-button, reflected power limit display button, adjust alarm level recessed screw
<b>Rear Panel Features</b>	FWD/RFL DC signal inputs (BNC), DC power/remote reset connector, DPDT interlock relay connector, fail-safe/nonfail-safe selector, alarm buzzer disable, AC line voltage selector, safety fuses and IEC 320 AC receptacle.
<b>Cable</b>	Includes two 25 ft. DC cables
<b>AC Power</b>	115/230 VAC, 50/60 Hz @ 0.125A
<b>DC Power</b>	9 - 16 VDC @ 1A
<b>Finish</b>	Gray powder coat
<b>Nominal Size</b>	19" W x 5 7/32" H x 3 3/4" D (483 mm x 133 mm x 95 mm)
<b>Weight</b>	5 lbs. (2.28 kg)
<b>Required Products</b>	Line Section: 4230-053 or 4522-002-5 from (page 18) QC connectors: Two from (page 37) Elements: Two from Tables 1, 2, 3, 3A, 4, or 6 (pages 33-34)



**Rugged, PEP RF Power Analyst®  
MODEL 4391A — Portable Wattmeter**

<b>Power Range</b>	100 mW to 10 kW using Bird Plug-in Elements*
<b>Frequency Range</b>	450 kHz to 2.7 Ghz
<b>Insertion VSWR</b>	with N connectors 1.05 max. to 1000 MHz
<b>Accuracy</b>	<b>Power Readings:</b> ±5% of full scale CW, ±8% PEP <b>VSWR:</b> ±10% of reading <b>% Modulation:</b> (CW power 1/3 or more of full scale) ±5% (0-90%), ±10% (90-100%) to 120% of scale (CW, PEP, SWR and Return Loss)
<b>Usable Over-range</b>	to 120% of scale (CW, PEP, SWR and Return Loss)
<b>Sampling Rate</b>	2 to 3 readings per second
<b>Display</b>	3 1/2 digit, 0.3" LED strobed
<b>Modulation Frequency</b>	25 to 10,000 Hz (Audio)
<b>Pulse Parameters</b>	(min.) Pulse width 0.8 µs (100-2700 MHz), 1.5 µs (26-99 MHz) and 15 µs (2-25 MHz) Repetition Rate 25 PPS, and Duty Factor 1 x 10 <sup>-4</sup>
<b>Return Loss</b>	±0.3 dB to corresponding SWR value
<b>Battery Life</b>	8 hours (rechargeable)
<b>AC Power</b>	100-130/200-260 V, 50/60 Hz, 6 W
<b>Connectors</b>	QC Type (Female N normally supplied)
<b>Finish</b>	Blue vinyl with silver anodized side panels
<b>Nominal Size</b>	9 9/16" L x 5 7/32" W x 4 5/16" H (243 mm x 158 mm x 110 mm)
<b>Weight</b>	5 3/4 lbs. (2.6 kg)
<b>Elements</b>	Select two elements in a 10:1 power ratio from Tables 1, 2, 3, 3A, 4, 5, 6 and 14 (pages 33-34)
<b>Accessories</b>	Case (page 39), Bus Interface Units (page 17)



\*Quoted accuracy only when used with other Bird products.



## BUS INTERFACE UNITS, MODEL 4380A-488

- Output** 3 1/2 digit ASCII format
- Logic Levels** Meets all IEEE standards 488-1978 specifications
- GPIB Capabilities** Supports AH1, SH1, T5, L4 SR1, RLO, PPO, DC1, DT1, CO AND E1
- Environment** Operating temperature range 0°C to +50°C  
Storage temperature range -40°C to +100°C
- AC Power** 100-130/200-260 Vac, 50/60 Hz
- Dimensions and Weight** 5 3/8" L x 3 1/4" W x 10 1/2" H (137 mm x 82 mm x 267 mm); 2 lbs. 10 oz. (1.2kg)
- Output Connector** 24-pin IEEE-488 standard connector
- Cable supplied** 20 in. interconnecting cable to RF POWER ANALYST®
- Optional Cables** 3 1/4 ft. (1 m) IEEE-488 bus interface cable, Bird P/N 5-1317-1  
6 1/2 ft. (2m) IEEE-488 bus interface cable, Bird P/N 5-1317-2  
Use of longer bus interface cables is not recommended.



## BUS INTERFACE UNITS, MODEL 4380A-232

- Output** 3 1/2 digit ASCII format
- Logic Levels** Meets all EIA standard RS-232C specifications
- Environment** Operating temperature range 0°C to +50°C  
Storage temperature range -40°C to +100°C
- AC Power** 100-130/200-260 Vac, 50/60 Hz
- Dimensions and Weight** 5 3/8" L x 3 1/4" W x 10 1/2" H (137 mm x 82 mm x 267 mm); 2 lb. 10 oz. (1.2kg)
- Output Connector** Standard 25-pin subminiature D style RS-232
- Cable supplied** 20 in. interconnecting cable to RF POWER ANALYST®
- Optional Cables** 5 ft. (1.5 m) RS-232 bus interface cable, Bird P/N 5-1662-1  
10 ft. (3 m) RS-232 bus interface cable, Bird P/N 5-1662-2



## VARIABLE RF SIGNAL SAMPLERS, MODEL 4273, 4275

	4273	4275
<b>Power Rating</b>	5 kW max	1 kW max
<b>Frequency Range</b>	1.5 - 35 MHz	20 - 1000 MHz
<b>Impedance</b>	50 ohms nominal	50 ohms nominal
<b>Insertion VSWR</b>	with N Connectors 1.07 max	with N Connectors 1.1 max 2 to 512 MHz, 1.25 max. 512 to 1000 MHz
<b>Insertion Loss</b>	0.1 dB max.	0.1 dB max. 2 to 512 MHz, 0.2 dB max 512 to 1000 MHz
<b>Coupling</b>	Adjustable as shown within ±3 dB	—
<b>Ambient Temperature Range</b>	-40°C to +45°C	
<b>Connectors</b>	QC Type (Choose any two connectors from page 37)	
<b>Finish</b>	Bright silver plate	
<b>Nominal Size</b>	2 51/64" L x 2 7/8" W x 1 1/4" D, (71 mm x 73 x 32 mm)	
<b>Weight</b>	10 oz. (280 g)	





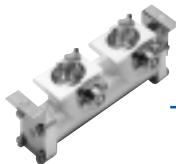
**FIELD-STRENGTH ELEMENT AND METER MODELS 4030, 4041**

	4030	4041
Frequency Range	1 to 1000 MHz	1 to 1000 MHz
Dynamic Range	30 dB min.	30 dB min.
Typical Sensitivity	Full Scale deflection at 8 ft. (2 1/2 m) from a 1 W source broadcasting at 150 MHz through a quarter wave antenna	Full Scale deflection at 8 ft. (2 1/2 m) from a 1 W source broadcasting at 150 MHz through a quarter wave antenna
Output Characteristics	Compatible with 30 µA meter instruments (Models 43, 43P, 4305A, 4314B, 4410, 4430, 4431, 4521, 4522, 4526, 4527)	—
Battery Life	100 hours min.	200 hours min.
Battery Type	Three, 3V Lithium-Manganese Dioxide, cells (Duracell DL2032 or equivalent)	One, 9V alkaline, "Transistor" battery (NEDA No. 1604A)
Ambient Temp Range	0°C to +50°C	0°C to +50°C
Nominal Size	—	(w/o antenna) 4 3/8" L x 2 1/4" W x 1 15/16" D, (111mm x 57mm x 49mm)
Weight	(includes batteries) 3 oz.	(includes batteries) 10 oz. (283 g)



**THRULINE® WATTMETER COMPONENTS METER MOVEMENT 30µA**

	8-000	4210A100
Type	3 1/2" Round Kit w/ Cable	3 1/4" Square Meter in Housing
Current	30 µA/1400 Ω	30 µA/1400 Ω
Scales	25/50/100W	25/50/100W
Use with Element Tables	1, 2, 3, 3A, 4, 6 (pages 33-34)	1, 2, 3, 3A, 4, 6 (pages 33-34)



**THRULINE® WATTMETER COMPONENTS— Line Sections Cable 7/8" Rigid Line**

Model	4230-018	4230-006-1	4230-059	4230-053	4522-002-5	4501-000	4502-000
Line Type*	Cable	Cable	Cable	Cable	Cable	7/8"	7/8"
Connector Type	QC-N(F)	QC(not incl.)	QC(not incl.)	QC(not incl.)	QC(not incl.)	Flg.	Flg.
Element Sockets	1	1	1 w/bracket	2	2 panel mt.	1	2
Length (Inches)	5 1/2	4	4	4	6 7/32	4	4
Weight (lbs.)	1 1/3	1	1 1/4	1	1 1/4	1	1 1/4
Use with Wattmeters	—	—	—	3128, 4201A501, 4201A502, 4201A100, 8-000	3128, 4201A501, 4201A502, 4201A100, 8-000	—	3128, 4201A501, 4201A502, 4201A100, 8-000





**HIGH SPEED, FWD/RFL ALARM WATTCHER® MODEL 3171A — RF Monitoring System**

Models	3171A	3171A-020
Power Range	100 W to 250 kW using Bird Plug-in Elements*	
Frequency Range	2 MHz to 1 GHz	
Accuracy	±5% of full scale	
Meter Scales	FWD and RFL 5, 10, 25 kW	FWD and RFL 15, 30, 60 kW
Alarms	Front Panel Buzzer, "Active" and "Trip" LEDs for forward/reflected	
Response Time	25 µs max.	
Activate Forward	73 µs to 50 ms nominal (adjustable) Monitor Delay	
Front Panel Controls	Reset push-button, adjust FWD/RFL alarm levels screw	
Rear Panel Features	DC FWD/RFL signal inputs, main and remote meter drive outputs, external 12-16 VDC supply input, alarm in/out, reset in/out, AC line voltage selector, fuse, IEC 320 AC receptacle.	
Inputs/Outputs	TTL compatible +5 V logic. Outputs for remote meter	
Cable	Includes two 25 ft. DC cables	
AC Power	115/230 V, 50/60 Hz @ 56 mA max.	
DC Power	12.7 to 16.0 VDC @ 400 mA max.	
Finish	Gray powder coat	
Nominal Size	19" W x 5 7/32" H x 9 21/64" D (483 mm x 133 mm x 237 mm)	
Weight	5 1/2 lbs. (2.5 kg)	
Required Products	Line Section: 1 5/8", 3 1/8", 4 1/16", 6 1/8" from page 20	
	Elements (pages 35-36): Two from Tables 1 5/8 AA, 3 1/8 AA, 4 1/16 AA, or 6 1/8 AA.	Elements (pages 35-36): Two from Tables 1 5/8 BB, 3 1/8 BB, 4 1/16 BB, or 6 1/8 BB.
	Cable: If length other than 25 ft. is desired, order two BNC (M) cables from page 38	



**100 W — 250 kW WATTCHER® MODELS 3126A, 3127A — RF Monitoring System**

Models	3126A	3127A
Power Range	300 W to 60 kW using Bird Plug-in Elements*	100 W to 250 kW using Bird Plug-in Elements*
Frequency Range	2 MHz to 1 GHz	
Accuracy	±5% of full scale	
Meter Scales FWD	15, 30, 60 kW	5, 10, 25 kW
Meter Scales RFL	1.5, 3, 6 kW	1, 2.5, 5 kW
Meter Sensitivity	100 µA/3000 Ω	
Alarms	Front panel buzzer and red LED	
Front Panel Controls	Reset push-button, reflected power limit display button, adjust alarm level recessed screw	
Rear Panel Features	FWD/RFL DC signal inputs (BNC), DC power/remote reset connector, DPDT interlock relay connector, fail-safe/nonfail-safe selector, alarm buzzer disable, AC line voltage selector, safety fuses and IEC 320 AC receptacle.	
Cable	Includes two 25 ft. DC cables	
AC Power	115/230 V, 50/60 Hz @ 0.125 A max.	
DC Power	9 to 16 V @ 1 A max.	
Finish	Gray powder coat	
Nominal Size	19" W x 5 7/32" H x 3 3/4" D (483 mm x 133 mm x 95 mm)	
Weight	5 lbs. (2.28 kg)	
Required Products	Line Section: 1 5/8", 3 1/8", 4 1/16", 6 1/8" from page 20	
	Elements (pages 35-36): Two from Tables 1 5/8 B, 3 1/8 B, 4 1/16 B, or 6 1/8 B.	Elements (pages 35-36): Two from Tables 1 5/8 A, 3 1/8 A, 4 1/16 A, or 6 1/8 A.
	Cable: If length other than 25 ft. is desired, order two BNC (M) cables from page 38	

