Elgar ContinuousWave Series

Pure Sinewave, Low Power AC Source

800–2500 VA

135–310 V

2.6–18.6 A

~	115	208	230

GPIB RS232

- Low THD and AC noise
- Advanced Measurement Available
- Wide range PFC Input
- Field Parallel Configurable
- Multiple Units Configurable for Multi-Phase Operation

The Elgar ContinuousWave (CW) Series of AC power sources provides clean single phase power at an impressive price/performance ratio. These compact switch mode sources come in two series, manual (CW-M) or programmable (CW-P) with standard IEEE-488.2 and RS-232 control. Both series have three power levels, 800 VA, 1250 VA and 2500 VA. The 800 and 1250 VA models are 2U (3.5") high and allow the unit under test to be connected to the front or rear panel. The 2500 VA model is 3U (5.25") high with rear panel output connections. All models can be operated in a benchtop or rackmount configuration.

The front panels have two bright four digit, seven segment displays. Power Factor Corrected (PFC) universal input voltage allows maximum power to be delivered from an AC outlet without the user selecting the range. Fully rated current is delivered for either output voltage range of 135 VAC or 270 VAC over a standard frequency range of 45 to 500 Hz. Both series can be paralleled to provide extra power.

A separate output-on switch controls power to the load. Remote voltage sense is standard. Transformer coupled output is protected against overvoltage and overcurrent. The unit is also protected against over temperature conditions. A two-speed fan results in quieter operation at lower power levels. All models are CE marked.

Applications for the CW Series include:

•Testing for real world sine wave power conditions
•400 Hz testing for avionics equipment
•50/60 Hz margin testing
•Ballast testing
•Components testing
•Power supply testing for AC to DC converters

Manual CW Features And Benefits

The manual series front panel knobs (10 turn potentiometers) allow quick adjustment of voltage, current and frequency settings. Frequency and voltage can be programmed remotely using a 0 to 5V analog signal. LED's indicate: output-on, voltage or current mode operation, fault and slave modes. Models can also be paralleled in the field or configured for three phase operation using a factory supplied cable. Current shutdown or foldback modes can be selected from a rear panel switch.

Programmable CW Features And Benefits

Front panel encoder knobs allow programming of voltage, current and frequency settings. Programmed or measured values can be viewed on the two LED displays through push button selection. Menu push buttons enable setting system configuration including parallel or three phase operation. This menu also allows setting current shutdown or foldback modes. Remote IEEE-488.2 and RS-232 control interfaces are standard. LEDs indicate: high or low range output voltage, measure or program mode, voltage or current mode operation and output-on. LED's indicate menu/status, remote control, lockout and fault conditions. Digital Signal Processing (DSP) based measurements include voltage, current (amperes, peak amperes, crest factor), power (watts, VA and power factor) and frequency.

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AMETEK® PROGRAMMABLE POWER

CW Series : Product Specifications

Input						
Model	CW 801M	CW 1251M	CW 2501M	CW 801P	CW 1251 P	CW 2501 P
Power	800 VA	1250 VA	2500 VA	800 VA	1250 VA	2500 VA
Voltage	90 - 264 VAC	103 - 264 VAC	180 - 264 VAC	90 - 264 VAC	103 - 264 VAC	180 - 264 VAC
Current	13 ARMS max	18.5 ARMS max	19.5 ARMS max	13 ARMS max	18.5 ARMS max	19.5 ARMS max
Frequency	47 to 63 Hz					
Phases	single-phase					
Power Factor	>0.99 typical at full load nominal line					
Efficiency	>73% typical at full load					

Output						
Model	CW 801M	CW 1251M	CW 2501M	CW 801P	CW 1251 P	CW 2501 P
Power	800 VA	1250 VA	2500 VA	800 VA	1250 VA	2500 VA
Voltage						
Voltage ranges	0 to 135 Vrms, 0 to 270 Vrms, user selectable					
Accuracy (>5VAC)	± 1% of range			±0.1% of range <100 Hz, ± 0.2% of range >100 Hz		
Resolution	0.1 Vrms					
Total harmonic distortion	0.65% typical <100Hz add 0.5%/100 Hz above 100 Hz					
AC noise level (typical)	<50 mVRMS	<50 mVRMS	<100 mVRMS	<50 mVRMS	<50 mVRMS	<100 mVRMS
Amplitude stability[1]	±0.1% of full scale			±0.05% of full scale		
Load regulation	±0.1% of full scale voltage for a full resistive load to no load (<10 mVRMS typical, measured at point of sense)					
Line regulation	±0.1% of full scale voltage for a ±10% line change from nominal line voltage (<5 mVRMS typical, measured at point of sense)					
Remote voltage sense	5 Vrms total lead voltage drop					
Current						
135VAC Range	6.0 ARMS	9.4 ARMS	18.6 ARMS	6.0 ARMS	9.4 ARMS	18.6 ARMS
270VAC Range	3.0 ARMS	4.7 ARMS	9.3 ARMS	3.0 ARMS	4.7 ARMS	9.3 ARMS
Accuracy	± 0.5% typical			± 0.5% max		
Resolution	0.1 ARMS			0.01 ARMS		
Frequency range						
Range	45 to 500 Hz			45 to 500 Hz, 45 to 1000 Hz (option)		
Accuracy	±0.5% typical			±0.02% max		
Resolution	0.1 Hz			0.1 Hz, 0.01 Hz for remote programming		
Phase	All models single phase output. Multi-phase system configuration with Digital Expansion Cable					
Power factor of load	0 lag to 0 lead					

Physical						
Model	CW 801M	CW 1251M	CW 2501M	CW 801P	CW 1251 P	CW 2501 P
Height	3.5 in.	3.5 in.	5.25 in.	3.5 in.	3.5 in.	5.25 in.
Width	19 in.	19 in.	19 in.	19 in.	19 in.	19 in.
Depth	20.07 in.	20.07 in.	20.07 in.	20.07 in.	20.07 in.	20.07 in.
Weight	48 lbs (22 kg)	53 lbs (24 kg)	86 lbs (39 kg)	48 lbs (22 kg)	53 lbs (24 kg)	86 lbs (39 kg)
Shipping Weight	56 lbs (25 kg)	61 lbs (28 kg)	94 lbs (43 kg)	56 lbs (25 kg)	61 lbs (28 kg)	94 lbs (43 kg)

Environmental	
Operating Temperature	0 to 40°C
Storage Temperature	-40 to +70°C
Humidity Range	0 to 85% at 25°C derate to 50% at 40°C (non condensing)
Altitude	Operating full power available up to 6,000 feet, non operating to 40,000 feet
Cooling	Dual fan speed with side air intake, exhaust to rear

General	
Regulatory compliance	CE Mark

Measurements						
Model	CW 801M	CW 1251M	CW 2501M	CW 801P	CW 1251 P	CW 2501 P
Power	800 VA	1250 VA	2500 VA	800 VA	1250 VA	2500 VA
Voltage						
Range	0 to 270 Vrms			0 to 270 Vrms, 0 to 310VRMS (option)		
Accuracy[2] (VAC >5V)	± 1% of full range			±0.1% of range <100 Hz, ± 0.2% of range>100 Hz, ± 0.3% of range>500 Hz (option)		
Resolution	0.1 Vrms			0.1 Vrms		
Current[3]						
Range	0 - 6.0 ARMS	0 - 9.4 ARMS	0 - 18.6 ARMS	0 - 6.0 ARMS	0 - 9.4 ARMS	0 - 18.6 ARMS
Accuracy	±2% of range for linear loads with current >0.2A, > 0.4A for 2500 VA			±0.5% of range for linear loads		
Resolution	0.1 ARMS			0.01 ARMS		
Peak Current[3]						
Range	-	-	-	0 to 25 A	0 to 35 A	0 to 70 A
Accuracy	-	-	-	±1% of range		
Resolution	-	-	-	0.1 A		
Frequency						
Range	45 to 500 Hz			45 to 500 Hz, 45 to 1000 Hz (option)		
Accuracy	±0.5% typical			±0.02% max		
Resolution of display	0.1 Hz			0.1 Hz		

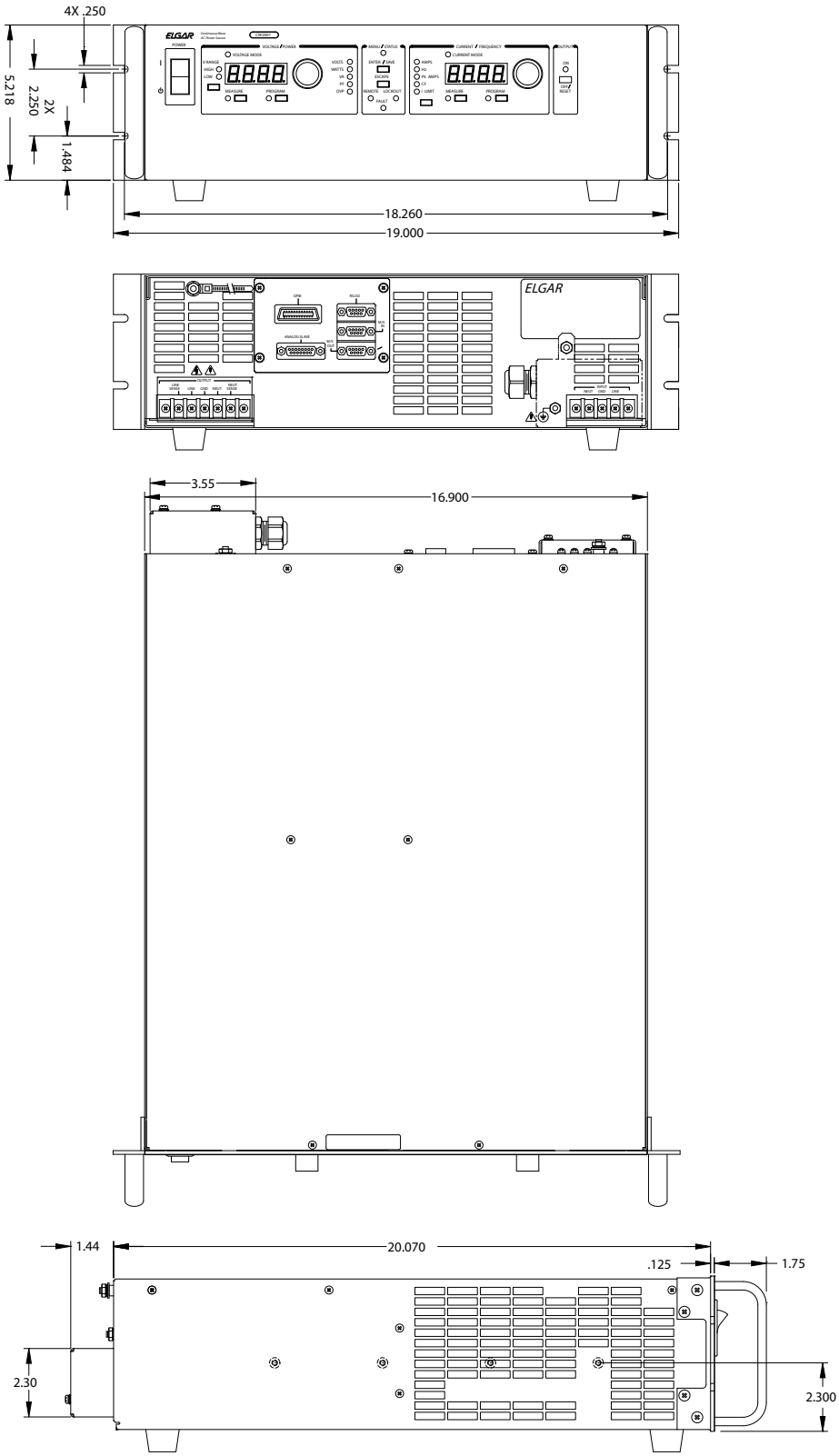
Measurements			
Model	CW 801 P	CW 1251 P	CW 2501 P
Power	800 VA	1250 VA	2500 VA
Power[3]			
Range	0 - 800 W	0 - 1250 W	0 - 2500 W
Accuracy	±2% of range for linear loads		
Resolution	1 W		
Apparent Power[3]			
Range	0 to 800 VA	0 to 1250 VA	0 to 2500 VA
Accuracy	±2% of range for linear loads		
Resolution	1 VA		
Power Factor[3]			
Range	0 to 1		
Accuracy	±4% of range for linear loads		
Resolution	0.01		
Crest Factor			
Range	0 to 3.5		
Accuracy	±5% of range		
Resolution	0.01		
Phase			
Range	-359 to +359 degrees. Positive indicates time lag from reference		
Accuracy	Within 100 microseconds of equivalent angle		
Resolution	1 degree		

[1] *Over 8 hours at constant line, load and temperature after 15-minute warm-up typical*

[2] *Typical values measured at point of sense*

[3] *In a parallel system (for programmable units only), the current/power displayed on the master unit is the sum of all units in the system*

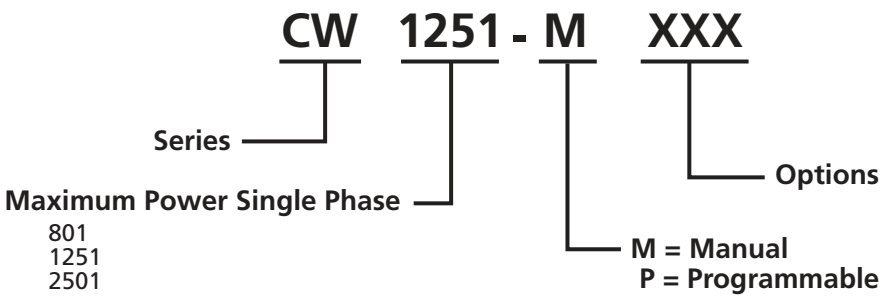
CW Series : Product Diagram



CW 2501

Dimensions are in inches

Model Number Description



Options and Accessories

H: Expanded frequency range 45 to 1000 Hz (CWP only)
L: Locking knobs (front panel potentiometers) (CW-M only)
S: Sync In/Out (clock/lock) (standard on CW-P)
V: 0-155V/0-310V Output (CW-P only)
-108: 200V/400V Output for (CW 801P Only)
Certificate of Calibration (CW-P only)
Rack Slide Kit: Elgar Part No. K161570-01
Multi-Unit Cable: Elgar Part No. 890-497-40
Digital Expansion Cable: Elgar Part No. 890-499-00 (CW-P only) Required to parallel or configure a 3ø system

Notes