

Elgar TrueWave Series

1750–22200 VA

Avionics and Commercial Applications

156–312 V

- IEC Flicker Test Capable
- Field Parallel Configurable
- 3 phase output from a single unit
- Low Harmonic Distortion
- DC Output



6.5–192 A



208

230

400



230



The Elgar TrueWave (TW) is designed for testing today's complex electronics, including avionics and commercial applications requiring DC and sine wave testing. The TW is ideal for testing electronic equipment for compliance to new European Standards such as harmonics.

Measurement that can be made:

- Peak Inrush Current
- Phase to Neutral rms Output Voltages
- Phase to Phase rms Output Voltages
- rms Output Currents
- Peak Current
- Output Frequency
- 1 ϕ to 3 ϕ Power
- 1 ϕ to 3 ϕ VA
- 1 ϕ to 3 ϕ VA
- Output Phase Angles Relative to Phase A

Other applications include:

- Test environments that require field configurable parallel operation
- Testing for real world DC single or polyphase AC power conditions
- Automatic Test Equipment
- General AC and DC Avionics Testing
- Power Supply testing for AC-DC, DC-DC converters and UPS's
- Testing to European Standards including EN 61000-3-2
- AC Ballast testing (IES LM-41-1985)
- Field configurable parallel operation up to 8 units

AMETEK
Programmable Power
 9250 Brown Deer Road
 San Diego, CA 92121-2267
 USA



TW Series : Product Specifications

Common	
Standard Features	1 ϕ to 3 ϕ programmable (TW 5250 only) WaveForm trigger output (1 M Load Drive) SYNC OUT
Programmed Settings	The Sync out selections are: Even Cycle A phase (on) None (off) When change in programmed parameters occur (event) External Summing Node 0 to 5 Vrms provides 0 to 100% output
Interface	IEEE-488.2 interface and RS-232
Protocol	SCPI protocol
Certifications	CE marked and FCC compliant
Calibration Interval	1 year
Input	
Voltage Ranges	Factory configured 187 to 264 Vrms, 3 ϕ L-L (3 wire). A chassis ground is also required.
Power Factor	0.6 (0.99 with input PFC option, 0.35 for European rectifier input)
Frequency Range	47 to 63 Hz
Efficiency	70% min, at full load
Ride Through	3 ms, min for rectifier input; 10 ms, min, with PFC option
Output	
Power	1750 VA, 3500 VA or 5250 VA
Phase	1750 VA, 1 phase; 3500 VA, 1 or 2 phase; 5250 VA, 1, 2 or 3 phase
AC Output Voltage	0 to 156 Vrms L-N low range 0 to 312 Vrms L-N high range
DC Output Voltage	0 to 207V low range 0 to 414V high range
Current Per Phase	13A to 135V in 156V range; 6.5A to 270V in 312V range (per 1750 VA module); 16A to 115V in low range; 8A to 230V in high range (per 1850Va module)
Power Factor of Load	0 lagging to 0 leading
Crest Factor	4.0 (peak output current to rms output current)
Frequency Range	45 Hz to 500 Hz
Max Total Harmonic Distortion	0.3% max (Full Linear Load or No Load)
AC Noise Level	60 dB rms below full output voltage
Amplitude Stability With Remote Sense	$\pm 0.1\%$ of full scale over 24 hours at constant line, load and temperature
Line Regulation	0.05% of full scale for a $\pm 10\%$ change in line voltages
Load Regulation	0.15% of full scale
Voltage Accuracy	$\pm 0.1\%$ of full scale
Voltage Resolution	0.03% of full scale
Frequency Resolution	0.1 Hz
Phase Accuracy	Phase-to-Phase Balanced Linear Resistive Load: $\pm 1^\circ$
Phase Angle Resolution	0.1 $^\circ$
Remote Output Voltage Sense	5 Vrms total lead drop, max

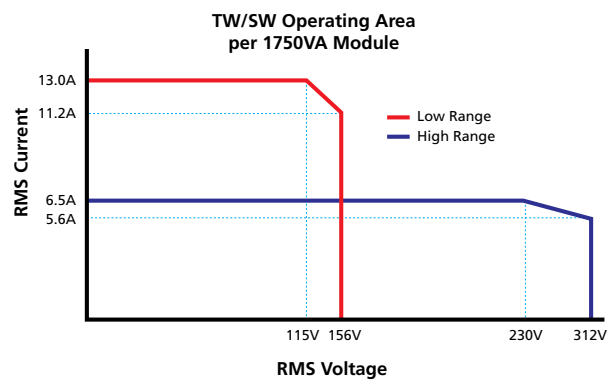
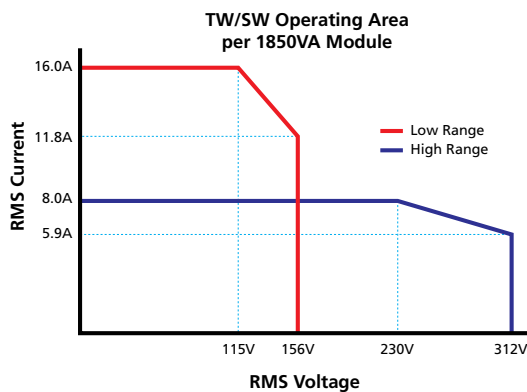
Environmental	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Cooling	Air is drawn in primarily from the front, but also from the top, bottom, and sides and exhausted through the rear.
Humidity (Non-condensing)	0 to 85%, 31°C (88°F); derate to 50% at 40°C (104°F)
Altitude	Operating 6,500 ft. Non-operating 40,000 ft

Physical	
Dimensions	Width: 19" (483 mm) Height: 8.75" (222 mm) Depth: 24.1" (613 mm)
Weight	TW 1750 - 60 lbs. (27.3 kg), TW 3500 - 83 lbs. (37.7 kg), TW 5250 - 108 lbs. (49 kg)
Shipping Weight - US	TW 1750 - 130 lbs. (59 kg), TW 3500 - 153 lbs. (69.5 kg), TW 5250 - 178 lbs. (80.9 kg)

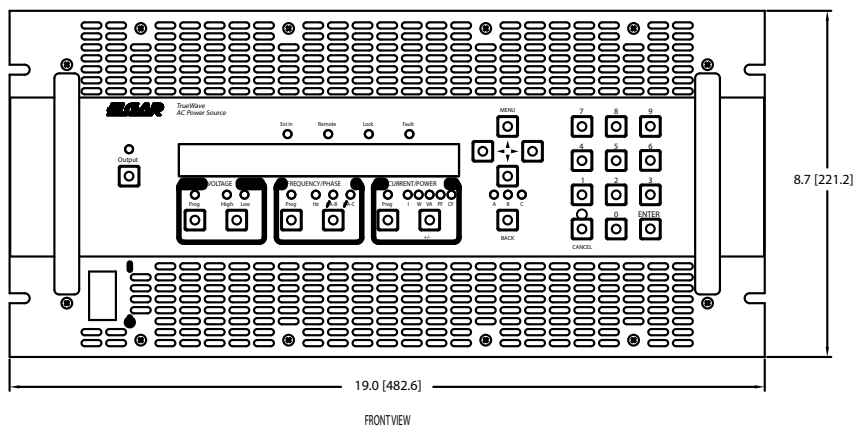
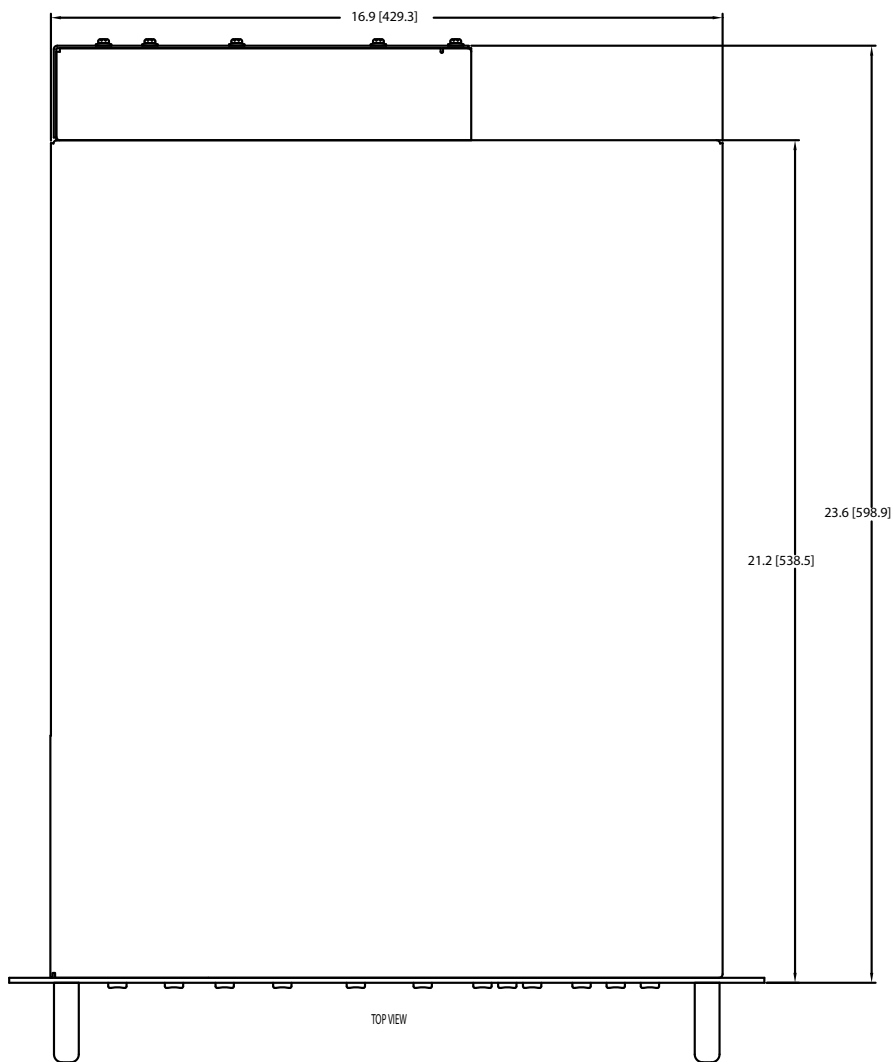
Measurement Accuracy All at 25° ± 5°C	
Power	2.5% of full scale
Voltage	0.3% of full scale + 0.2% of reading
Shipping Weight	12.7 lbs. (5.8 kg)
Current	0.3% of full scale + 0.5% of reading
Apparent Power	2.5% for output > 200 VA
Frequency	0.25%
Phase	0.5°

Protection And Safety	
Overvoltage Shutdown	Programmable for 20V to 255V peak, 156V range; 40V to 510V peak, 312V range
Programmable Current Limit Shutdown	Settable to 1% of range (0.5A to 13A for 156V range; 0.5A to 6.5A for 312V range)
Programmable Current Limit with Timed Shutdown	Settable to 1% for range; the timeout is settable from 10 ms to 10s
Programmable Constant Current	Settable to 1% of range (0.5A to 13A for 156V range; 0.5A to 6.5A for 312V range). For all current accuracies, add ± 1.5% / kHz above 500 Hz. For paralleled amplifiers, add ± 1%.
Over temperature Shutdown	Automatic, not programmable

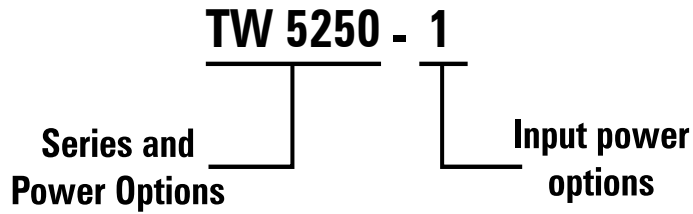
Operating Area



TW Series : Product Diagram



Model Number Description



Options and Accessories

-1	187-264 Vrms (L-L), 3-wire
-2	342-457 Vrms (L-L), 4-wire
-3	PFC 187-264 Vrms (L-L), 3-wire
-4	PFC 342-457 Vrms (L-L), 4-wire
5161608-01	Paralleling Kit (1 required for each additional TW in parallel)
A162000-01	Rackmount Kit
990-323-90	L Brackets (2 Required)
Certificate of Calibration	

Ordering Information

Model Number	Output Power Rating
TW 1750	1750 VA
TW 1850	1850 VA
TW 3500	3500 VA
TW 5250	5250 VA
TW 5550	5550 VA

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