

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 |

⚡ GPIB RS232

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
- 1ø to 3ø Power
- 1ø to 3ø VA
- 1ø to 3ø 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

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AMETEK®
PROGRAMMABLE POWER

TW Series : Product Specifications

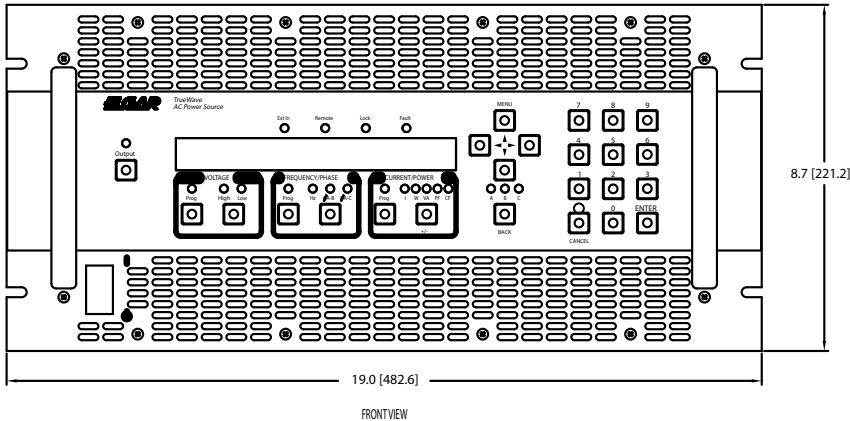
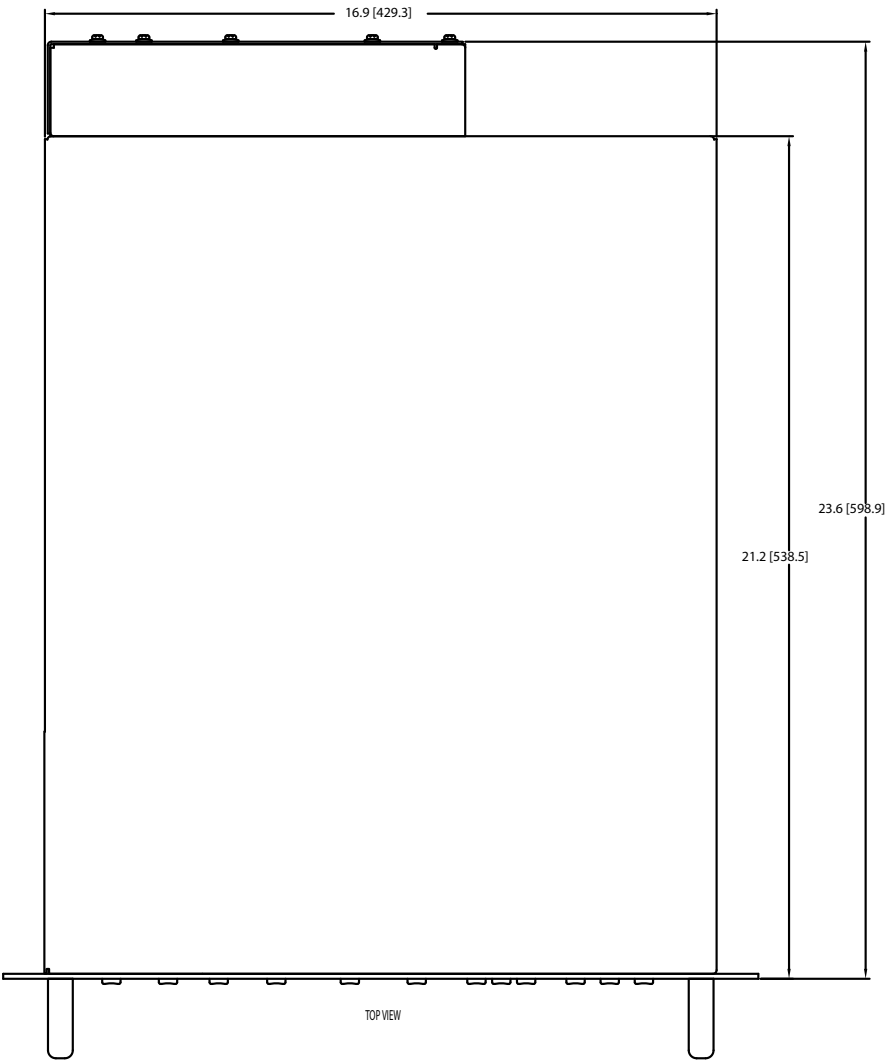
| Common | |
|---------------------------------------|--|
| Standard Features | 1ø to 3ø programmable (TW 5250 only) WaveForm trigger output (1 M Load Drive) SYNC OUT |
| Programmed Settings | The Sync out selections are: Even Cycle A phase (on) None (off) When change in programmed parameters occur (event) 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, 3ø 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 | ±0.1% of full scale over 24 hours at constant line, load and temperature |
| Line Regulation | 0.05% of full scale for a ± 10% change in line voltages |
| Load Regulation | 0.15% of full scale |
| Voltage Accuracy | ± 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: ±1° |
| Phase Angle Resolution | 0.1° |
| Remote Output Voltage Sense | 5 Vrms total lead drop, max |

TW Series : Product Specifications

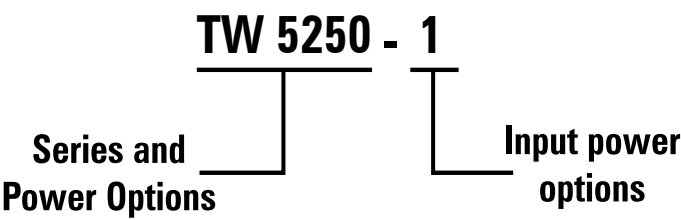
1750–22200 VA

| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><p>TW/SW Operating Area per 1850VA Module</p><table><caption>TW/SW Operating Area per 1850VA Module</caption><thead><tr><th>RMS Voltage (V)</th><th>Low Range RMS Current (A)</th><th>High Range RMS Current (A)</th></tr></thead><tbody><tr><td>115V</td><td>16.0A</td><td>8.0A</td></tr><tr><td>156V</td><td>11.8A</td><td>8.0A</td></tr><tr><td>230V</td><td>-</td><td>8.0A</td></tr><tr><td>312V</td><td>-</td><td>5.9A</td></tr></tbody></table></div><div><p>TW/SW Operating Area per 1750VA Module</p><table><caption>TW/SW Operating Area per 1750VA Module</caption><thead><tr><th>RMS Voltage (V)</th><th>Low Range RMS Current (A)</th><th>High Range RMS Current (A)</th></tr></thead><tbody><tr><td>115V</td><td>13.0A</td><td>6.5A</td></tr><tr><td>156V</td><td>11.2A</td><td>6.5A</td></tr><tr><td>230V</td><td>-</td><td>6.5A</td></tr><tr><td>312V</td><td>-</td><td>5.6A</td></tr></tbody></table></div></div> | | RMS Voltage (V) | Low Range RMS Current (A) | High Range RMS Current (A) | 115V | 16.0A | 8.0A | 156V | 11.8A | 8.0A | 230V | - | 8.0A | 312V | - | 5.9A | RMS Voltage (V) | Low Range RMS Current (A) | High Range RMS Current (A) | 115V | 13.0A | 6.5A | 156V | 11.2A | 6.5A | 230V | - | 6.5A | 312V | - | 5.6A |
| RMS Voltage (V) | Low Range RMS Current (A) | High Range RMS Current (A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115V | 16.0A | 8.0A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 156V | 11.8A | 8.0A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 230V | - | 8.0A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 312V | - | 5.9A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RMS Voltage (V) | Low Range RMS Current (A) | High Range RMS Current (A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115V | 13.0A | 6.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 156V | 11.2A | 6.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 230V | - | 6.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 312V | - | 5.6A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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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Notes

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