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Data Sheet

August 14, 2026

AMETEK / ELGAR / CALIFORNIA INSTRUMENTS

Ametek / Elgar / California Instruments 1503L-3P AC Power Supply

The Ametek/Elgar/California Instruments 1503L-3P is a precision AC power supply designed for a wide range of testing and power applications. It delivers stable and accurate AC power, ideal for simulating various grid conditions and testing electronic devices. This unit is engineered for reliability and precise control, making it suitable for both laboratory and industrial environments.



MODEL

**Ametek / Elgar /
California
Instruments
1503L-3P**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

1503L-3P

LISTING

[https://aumictechlabs.c
om/products/1503l-3p-
3/](https://aumictechlabs.com/products/1503l-3p-3/)

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek/Elgar/California Instruments 1503L-3P is a programmable AC power supply delivering 1500 VA (1667 VA at 35°C ambient) with selectable single or three-phase output. It generates sinusoidal waveforms from 17 Hz to 5 kHz with voltage ranges of 0–135 VAC or 0–270 VAC (L-N) and output current up to 4.1 A rms in three-phase mode. The unit operates from 115/230 VAC single-phase input and supports constant voltage, constant current, and constant power modes with $\pm 0.5\%$ accuracy on both voltage and current. An integrated programmable controller

(standard with -P option) enables IEEE-488 bus control, ATLAS-based programming, and automated transient generation. Total harmonic distortion stays below 0.5%, and comprehensive readback includes RMS voltage and current, power, apparent power, power factor, frequency, and phase measurements via digital LCD display. Technical Specifications Power Rating: 1500 VA (1667 VA at 35°C ambient) Input: 115/230 VAC, single-phase, 47–440 Hz Output Voltage: 0–135 VAC or 0–270 VAC (L-N); selectable via MODE option Output Current (135 V, 3-phase): 4.1 A rms, 9.3 A peak (repetitive), 10 A peak (non-repetitive inrush) Output Frequency: 17 Hz to 5 kHz (45 Hz to 2 kHz with -3P controller); 45 Hz to 5 kHz alternate range Waveform: Sinusoidal Total Harmonic Distortion: < 0.5% Voltage Accuracy: $\pm 0.5\%$ Current Accuracy: $\pm 0.5\%$ Power Factor Range: 0 to 1 Dimensions: 19" W $\times$ 7" H $\times$ 22" D Weight: 45 lbs Key Features Selectable 1 or 3 phase output without rewiring (MODE option) Programmable controller with IEEE-488 bus control and RS232/VXI/MXI translator compatibility Abbreviated Plain English and ATLAS-based programming Constant voltage, constant current, and constant power operating modes Programmable transients over time or cycles Automatic remote calibration and comprehensive self-tests Real-time readback of voltage, current, power, apparent power, power factor, frequency, and phase Front panel control with knobs, buttons, and digital display Optional Features -AX Option: Isolated 26 VAC regulated output ($\pm 2\%$ accuracy, 3 A rms capacity, 360/440 Hz) and 5 VAC unregulated output ($\pm 5\%$ accuracy) for auxiliary supply applications Applications Power conditioning verification, electronic device performance testing across variable line conditions, three-phase load simulation, and transient response analysis.

1503L3P Characteristics / Specifications

PARAMETER	VALUE
Instrument Family	Sorensen Elgar 1503L-3P
Phases	3
Output Type	AC voltage three phase
Frequency Coverage Class	45 to 500 Hz or 400 Hz class by configuration
Voltage Ranges Class	dual range low/high Vac class
VA Rating Class	1500 VA class three phase configuration
Metering	voltage current frequency per phase class
Form Factor	rack mount
AC Input	mains powered three phase or single phase class by option
Regulation Class	specified on datasheet
Distortion Class	low THD class
Remote Programming Class	analog/digital options on family
Protection	overcurrent overtemperature class
Operating Temperature Class	laboratory/ATE
Series Family	Elgar/Sorensen 1503L
Sense	remote sense class
Current Limit	yes class
Phase Balance Class	specified on three phase sources
Output On Control	yes class
Manufacturer	per instrument faceplate branding
Documentation Basis	OEM datasheet or operating manual family
Specification Ambient Class	23 C class unless otherwise stated
Operating temperature	Class: laboratory/ATE

1503L3P Specifications

PARAMETER	VALUE
Applications	Three-phase avionics and industrial AC power simulation, 400 Hz three-phase testing, and multi-phase product margin testing.
Adjustable voltage and frequency class	Avionics 400 Hz support class
Technical Specifications	Instrument Family: Sorensen Elgar 1503L-3P

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: laboratory/ATE
Operating Temperature	Class: laboratory/ATE
Operating Temperature Class	laboratory/ATE
Series Family	Elgar/Sorensen 1503L
Sense	remote sense class
Current Limit	yes class
Phase Balance Class	specified on three phase sources
Output On Control	yes class
Manufacturer	per instrument faceplate branding
Documentation Basis	OEM datasheet or operating manual family
Specification Ambient Class	23 C class unless otherwise stated Notes Identity and family capability rows from Sorensen/Elgar 1503L-3P literature. Confirm exact per-phase VA voltage and frequency limits on the faceplate and manual.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Output Type	AC voltage three phase
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Voltage Ranges Class	dual range low/high Vac class
VA Rating Class	1500 VA class three phase configuration
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Identity and family capability rows from Sorensen/Elgar 1503L-3P literature. Confirm exact per-phase VA voltage and frequency limits on the faceplate and manual.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.