California Instruments Compact i/iX Series

Precision Programmable AC Source

750–2250 VA

150–300 V

10–40 A

~	115	208	230

ETHERNET USB GPIB RS232 LXI

- 750 VA to 2250 VA of AC Output Power
- Combines AC/DC source and power analyzer
- Harmonic analysis of Voltage and Current
- AC, DC and AC+DC Output Modes
- Multiple Chassis Configurations
- Powerful output transient generation
- High Crest Factor Capability
- Arbitrary & harmonic waveform generation
- Single and Three Phase models available

The Compact iX Series represents a new generation of AC/DC power sources that address the increasing demands on test equipment to perform additional functions at a lower cost. By combining a flexible AC/DC power source with a high performance power analyzer, the Compact iX Series is capable of handling complex applications that have traditionally required multiple systems.

The sleek integrated approach of the Compact iX Series avoids cable clutter that is commonly found in test systems. All connections are made internally and the need for digital multimeters, power harmonics analyzers, and current shunts or clamps is eliminated.

Since many components in the Compact iX Series are shared between the AC/DC source and the power analyzer, the total cost of the integrated system is less than the typical cost of a multiple unit system.

For less demanding applications, the Compact i Series provides similar output and transient capabilities as the Compact iX Series, as well as basic power measurements.

Easy To Use Local Controls

Both the Compact i and iX Series are microprocessor controlled and can be operated from an easy to use front panel keypad. Functions are grouped logically and are directly accessible from the keypad. This eliminates the need to search through various levels of menus and/or soft keys. A large analog control knob can be used to quickly slew output parameters. This knob is controlled by a dynamic rate change algorithm that combines the benefits of precise control over small parameter changes with quick sweeps through the entire range.

Applications

With precise output regulation and accuracy, the compact i/iX series AC and DC sources address many application areas for AC and DC power testing. The i/iX also provides a high load current capability, multi or single phase output modes, and built-in power analyzer measurements. Additional features including line distortion simulation (LDS) and arbitrary waveform generation address requirements for product quality and regulatory compliance testing.

Product Evaluation and Test

Increasingly, manufacturers of electronic equipment and appliances are required to fully evaluate and test their products over a wide range of input line conditions. The built-in output transient generation and readback measurement capability offers the convenience of an easy to use and integrated test system.

Avionics

With an output frequency range to 1000 Hz, at up to 150 VRMS, the Compact i/iX Series is well suited for aerospace applications. Precise frequency control and accurate load regulation are key requirements in these applications. The standard USB (or optional GPIB / LAN) control interface and SCPI command language provide for easy integration into existing ATE systems. Since the Compact i/iX Series can eliminate the need for several additional pieces of test equipment and only occupies 3.5 inches of rack space (2U), saving both cost and space. Instrument drivers for popular programming environments such as National Instruments LabView, DO-160, ABD-0100, MIL-STD-704A-F, A350, AIRB, AMD and Boeing B787 are available to speed up system integration.

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AMETEK®
PROGRAMMABLE POWER

Compact i/iX Series : Product Specifications

Input			
Model	751i/iX (1 Phase Output)	1501i/iX (1 Phase Output)	2253i/iX (1 or 3 Phase Output)
Voltage	115Vrms +/- 10% or 230Vrms +/- 10%	115Vrms +/- 10% or 230Vrms +/- 10%	115V, 1Ø input = 1500VA out 230V, 1Ø input = 2250VA out
Current	<8.5 Arms @ 115 V <4.4 Arms @ 230 V	<17 Arms @ 115 V <8.8 Arms @ 230 V	<20 Arms @ 115 V <15 Arms @ 230 V
Frequency	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz
Power Factor	0.97 (typical @ full load)	0.97 (typical @ full load)	0.98 (typical @ full load)
Efficiency	80%	80%	77%
AC Output			
Voltage	Hi : 0 - 300Vrms Low : 0 - 150Vrms	Hi : 0 - 300Vrms Low : 0 - 150Vrms	Hi : 0 - 300Vrms Low : 0 - 150Vrms
Max. Current	Hi : 3.25Arms Low : 6.5Arms	Hi : 6.5Arms Low : 13Arms	Hi : 3.25Arms (per phase) Low : 6.5Arms (per phase)
Peak Current	Hi : 10 A Peak Low : 20 A Peak	Hi : 20 A Peak Low : 40 A Peak	Hi : 10 A Peak (per phase) Low : 20 A Peak (per phase)
AC Power	750VA	1500VA	750VA (per phase)
Phase Output	1	1	3/1[1,2]
Distortion	< 1% THD	< 1% THD	< 1% THD

[1] With -MODE Option [2] Single Phase with "Mode" Option

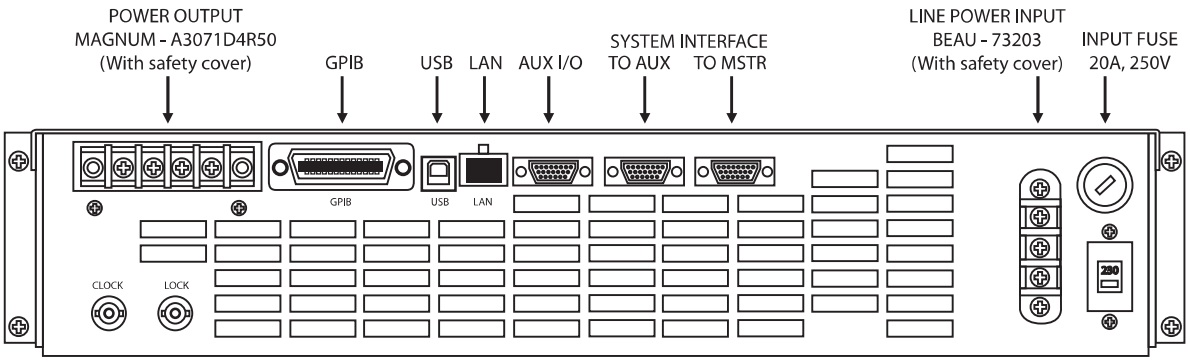
DC Output			
Voltage	Hi : 0 - 400Vdc Low : 0 - 200Vdc	Hi :0 - 400Vdc Low : 0 - 200Vdc	Hi : 0 - 400Vdc Low : 0 - 200Vdc
Max. Current	Hi : 1.63Adc max Low : 3.25Adc max	Hi : 3.25Adc max Low : 6.50Adc max	Hi : 1.63Adc (per phase) Low : 3.25Adc (per phase)
DC Power	500W	1000W	500W (per output)
Voltage Accuracy/Programming Resolution (AC/DC)			
Accuracy (ALC mode ON)	0.1% FS (from 5V to FS)	0.1% FS (from 5V to FS)	0.1% FS (from 5V to FS)
Programming Resolution	0.1V	0.1V	0.1V
Frequency			
Range	16 – 1000Hz	16 – 1000Hz	16 – 1000Hz
Resolution	0.01 Hz (16 – 81.91 Hz), 0.1 Hz (82.0 – 819.1 Hz) 1 Hz (820– 1000 Hz)	0.01 Hz (16 – 81.91 Hz), 0.1 Hz (82.0 – 819.1 Hz) 1 Hz (820– 1000 Hz)	0.01 Hz (16 – 81.91 Hz), 0.1 Hz (82.0 – 819.1 Hz) 1 Hz (820– 1000 Hz)
Accuracy	0.025%	0.025%	0.025%
Measurements			
Voltage Accuracy	V: 0.1% FS	V: 0.1% FS	V: 0.1% FS
Current Accuracy	C: 0.5% FS	C: 0.5% FS	C: 0.5% FS
Mechanical Specifications			
Dimensions	H: 3.5" (89mm) W: 19" (483mm) D: 23" (584mm)	H: 3.5" (89mm) W: 19" (483mm) D: 23" (584mm)	H: 5.25" (133mm) W: 19" (483mm) D: 23" (584mm)
Weight	30 lbs (25kg)	37 lbs (30kg)	58 lbs (26kg)
Operating Temperature	0-40°C	0-40°C	0-40°C
Interfaces			
USB	Standard	Standard	Standard
GPIB	Option (i) Std (iX)	Option (i) Std (iX)	Option (i) Std (iX)
LAN	Option (iX)	Option (iX)	Option (iX)
RS232	N/A	N/A	Standard

Options	
-LF	Limits maximum frequency to 500Hz -- 2253 i/iX only
-FC	Modifies output frequency control to ± 0.25%
-LKM	Clock/Lock Master
-LKS	Clock/Lock Auxiliary
-MODE	Allows all three amplifier outputs to be combined on phase A output terminal. No external switching or reconnection to the load is required (2253 i/iX only).
-RMS	Rackmount Slides
-RPF	Remote programming frequency (0-10 V DC).
-RPV	Remote programming voltage (0-10 V DC).
-WHM	Watt-hour measurement.
Controller Options	
-ABL	ABLE Command (Emulates Elgar SL - PIP 9012 Functions)
-EXS	External Sync Input. (Excludes LKS & RPF)
-LAN	LXI Ethernet LAN Inter face (RJ45 Connector) (iX Only)
Avionics Test Routine Options	
-ABD	Airbus Directive 0100.1.8 tests.
-AMD	Airbus AMD-24C Test
-A350	Airbus Test Software
-AIRB	Airbus ABD0100.1.8, AMD 24 and A350 combination test software suite
-B787	Boeing 787B3-0147 tests.
-704	Mil Std 704D/E test firmware
-704F	Mil Std 704 Revision A-F test firmware/software.
-160	RTCA/DO-160D/E and EUROCAE test firmware. Refer to -160 option data sheet for details.
* Note Reference the Avionics Test User Manual P/N 4994-971 for a complete listing of performance capabilities.	

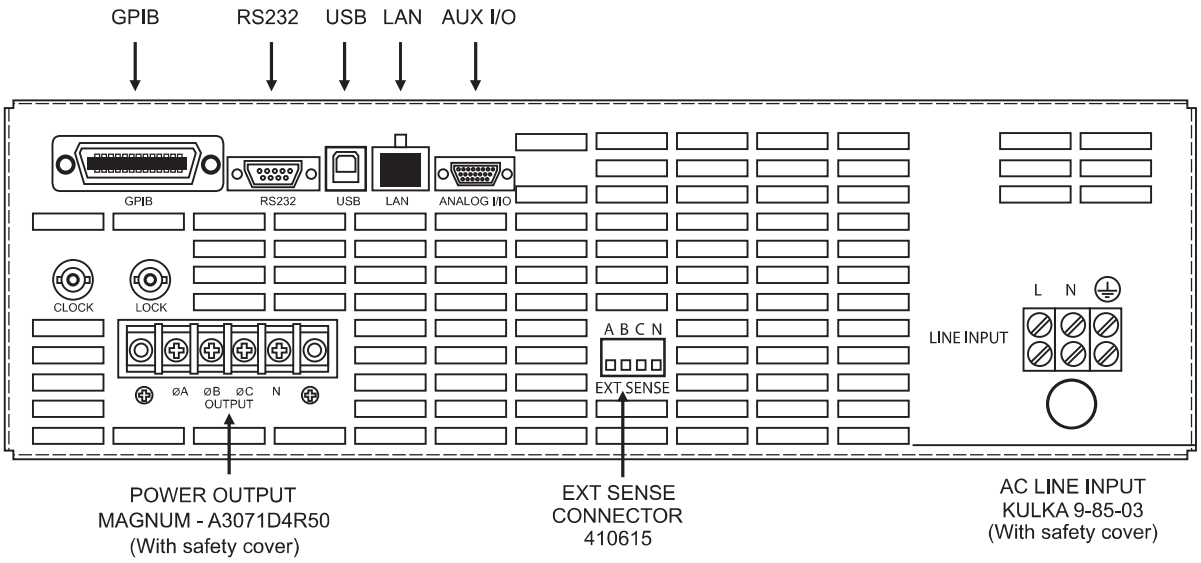
Feature Comparison		
Model	i	iX
AC Mode	x	x
DC Mode	x	x
AC+DC Mode		x
Transient Programming	x	x
Arbitrary Waveforms		x
Measurements	x	x
Harmonic Measurements		x
Waveform Acquisition		x

Compact i/iX Series : Product Diagram

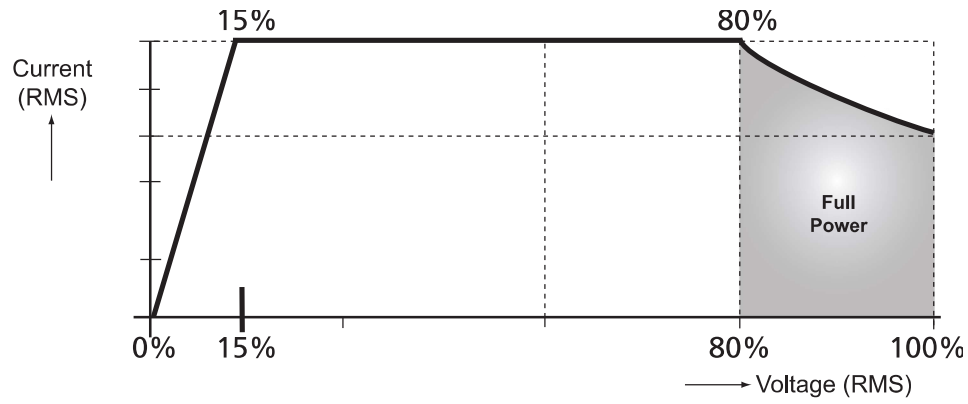
Compact 750/1501 i/iX Rear Panel



Compact 2253 i/iX Rear Panel



Constant Power Chart



Note: Constant power mode provides increased current at reduced voltage. Maximum available current shown.