

2. Specifications

Specifications shown are valid over an ambient temperature range of $25 \pm 5^\circ \text{C}$ and apply after a 30 minute warm-up time. Unless otherwise noted, all specifications are per phase for sine wave output into a resistive load. For three phase configurations or mode of operation, all specifications are for Line to Neutral (L-N) and phase angle specifications are valid under balanced load conditions only.

Specifications for 2253i models are identical to those for the 2253iX except where noted.

2.1 Electrical

2.1.1 Input

Parameter	Specification
Line Voltage: (single phase, 2 wire + ground (PE))	115 to 230 VAC $\pm 10\%$
Line VA:	2940 VA / 2850 W
Line Current at nominal input voltage:	< 20 Arms @ 115V and 1500 VA output (Note: Max. AC input current limited to 20 Arms. Breaker may trip above 1500 VA output power) < 15 Arms @ 230V and 2250 VA output
Line Current at low line input voltage, full power:	< 20 Arms @ 103.5V (Derated output power) < 17 Arms @ 207V (Full output power)
Line Frequency:	47-63 Hz
Efficiency:	77 % (typical @ full load)
Power Factor:	0.98 (typical @ full load)
Inrush Current:	< 160 Apk for less than 2 ms at 230V + 10% AC input < 80 Apk for less than 2 ms at 115V + 10% AC input
Hold-Up Time:	> 10 ms
Isolation Voltage:	1350 VAC input to output 1350 VAC input to chassis

2.1.2 Output

Output Parameter	Specification	
Model	2253i	2253iX
Modes	AC, DC	AC, DC, AC+DC
No of Outputs	3 standard 1 or 3 with –MODE option	
Voltage		
Ranges (L-N):		
AC, AC+DC Mode		
Low Vrange:	0 - 150 Vrms	
High Vrange:	0 - 300 Vrms	
DC Mode		
Low Vrange:	0 - 200 Vdc	
High Vrange:	0 - 400 Vdc	
Programming Resolution:	0.1 V	
Accuracy: (ALC mode ON)	0.1% FS ¹ (from 5V to FS ¹)	
Distortion THD ² :	< 1 % 16 - 1000 Hz (harmonics and noise to 300 kHz)	
Load Regulation: (ALC mode ON)	0.1 % FS ¹ (At external sense connection with ext sense mode programmed.)	
Voltage Sense modes:	Internal External	
External Sense	Up to 3 % of set voltage can be dropped across each load lead.	
Line Regulation:	0.02% for 10% input line change	
DC Offset Voltage: (In AC mode)	< 20.0 mV	
Output Noise: (20 kHz to 1 MHz, full R load)	< 100 mV _{RMS} – 150V / 200V Range < 200 mV _{RMS} – 300V / 400V Range	
Output Coupling	Direct coupled	
Output Impedance (Z) (@ max current)	Z = Vrange * 0.001 / I _{load}	
Current (with 200 – 230 VAC line input)		
Output Mode	3 Phase	1 Phase (-Mode)
AC Mode		
High Voltage range	2.5 Arms @ 300 V 3.25 Arms @ 230 V	7.5 Arms @ 300 V 9.74 Arms @ 230 V
Low Voltage range	5.0 Arms @ 150 V 6.5 Arms @ 115 V	15.0 Arms @ 150 V 19.5 Arms @ 115 V

¹ FS (Full Scale) refers to highest available range, e.g. 300Vac in AC mode, 400Vdc in DC mode.

² The distortion specification applies at 77% voltage range, max current and resistive load conditions.

Output Parameter	Specification	
	6.5 Arms @ 115 V	19.5 Arms @ 115 V
DC Mode		
High Voltage range	1.25 Adc @ 400 V 1.63 Adc @ 300 V	3.75 Adc @ 400 V 4.88 Adc @ 300 V
Low Voltage range	2.5 Adc @ 200 V 3.25 Adc @ 150 V	7.5 Adc @ 200 V 9.74 Adc @ 150 V
AC+DC Mode		
High Voltage range	1.25 Arms @ 300 V 1.63 Arms @ 230 V	3.75 Arms @ 300 V 4.88 Arms @ 230 V
Low Voltage range	2.5 Arms @ 150 V 3.25 Arms @ 115 V	7.5 Arms @ 150 V 9.74 Arms @ 115 V
Current Limit mode	Programmable, CC or CV mode	
<p>Note: Constant power mode allows higher current at reduced voltage. Maximum current available at 77% of voltage range. See Figure 2-1 through Figure 2-6 for voltage versus current profiles by model and voltage range.</p> <p>Note: Full power output available only when using 208-230 AC nominal input line. For 100-115V AC input operation, maximum output power and current are limited by maximum input current of 20 A.</p>		
Maximum AC Peak Current		
Model	3 Phase	1 Phase (-Mode)
AC mode, High Vrange AC mode, Low Vrange	10 Apk 20 Apk	30 Apk 60 Apk
Crest Factor AC Current		
Maximum CF at full scale voltage rms current	4:1	
Power		
Model	3 Phase	1 Phase (-Mode)
AC Mode (208 – 230V nominal AC input)	750 VA	2250 VA
AC Mode (100-115V nominal AC input)	500 VA	1500 VA
DC Mode	500 W	1500 W
AC+DC Mode	375 VA	1125 VA
Frequency		
Range:	16 Hz - 1000 Hz	
Resolution ¹ :	0.01 Hz 0.1 Hz 1 Hz	< 81.91 Hz > 82.0 to 819.1 Hz > 819 Hz]
Accuracy:	± 0.025 %	
Temp. Coefficient	± 5 ppm of value / °C	
Stability:	± 15 ppm of value	

¹ Programming resolution reduced if –LKM/-LKS option is installed. See paragraph 2.8.

Note: *All output specifications apply below the Current / Voltage rating line shown in the V/I rating charts of section 2.1.2.1 through 2.1.2.3. Data is shown for three-phase mode. For –MODE option, multiply current by 3.*

2.1.2.1 Voltage versus Current Rating Charts – AC Mode – 230V AC input

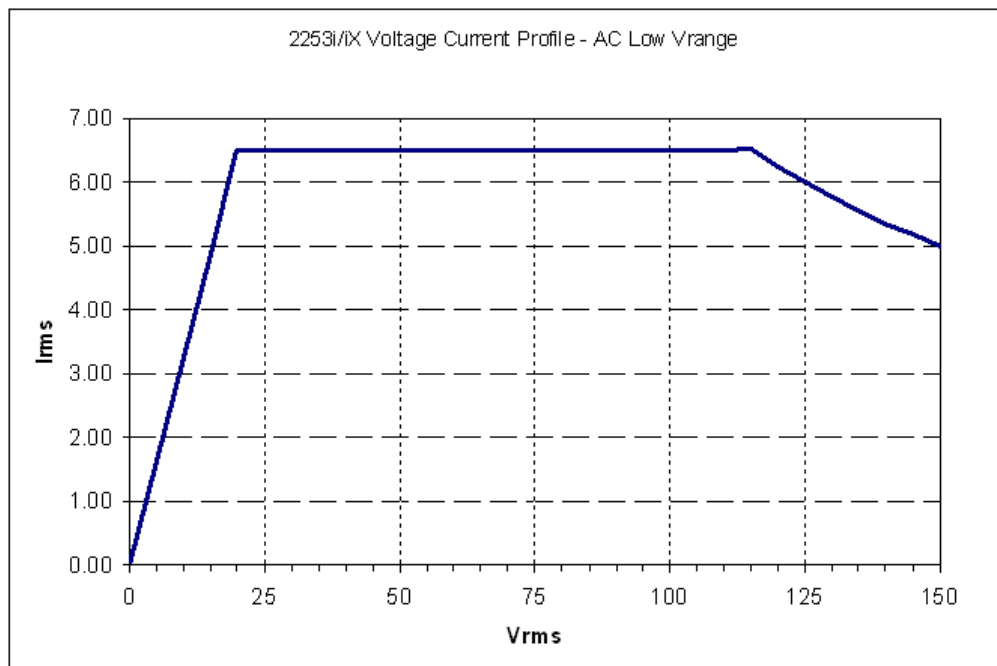


Figure 2-1: 2253i / iX Voltage / Current Rating Chart for 150V AC Range per phase – 230Vac in.

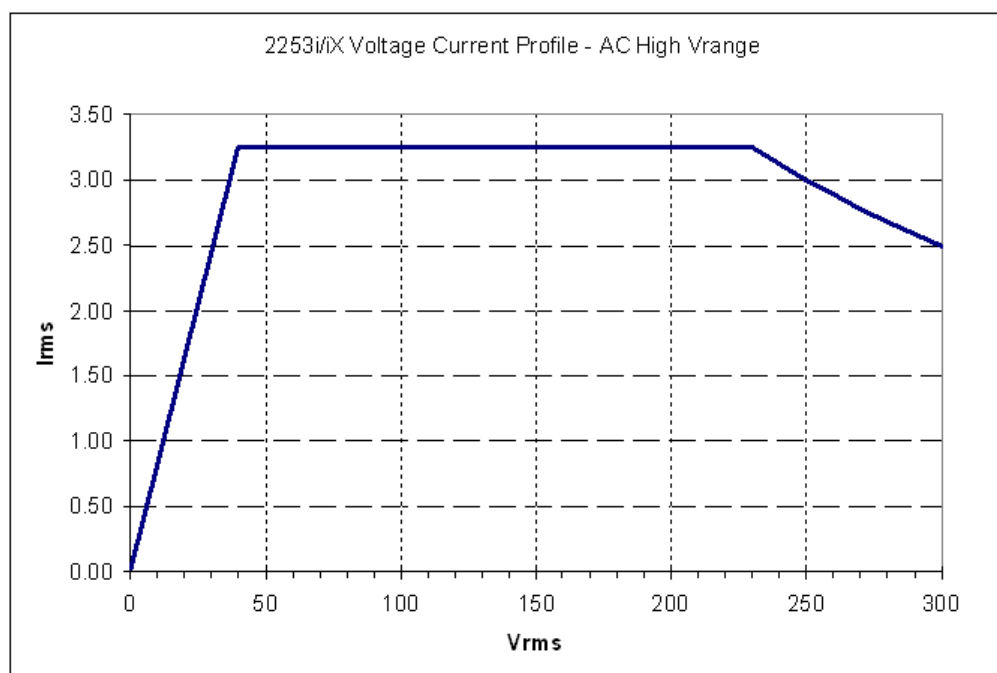


Figure 2-2: 2253i / iX Voltage / Current Rating Chart for 300V AC Range per phase – 230Vac in.

2.1.2.2 Voltage versus Current Rating Charts – AC Mode – 115V AC input

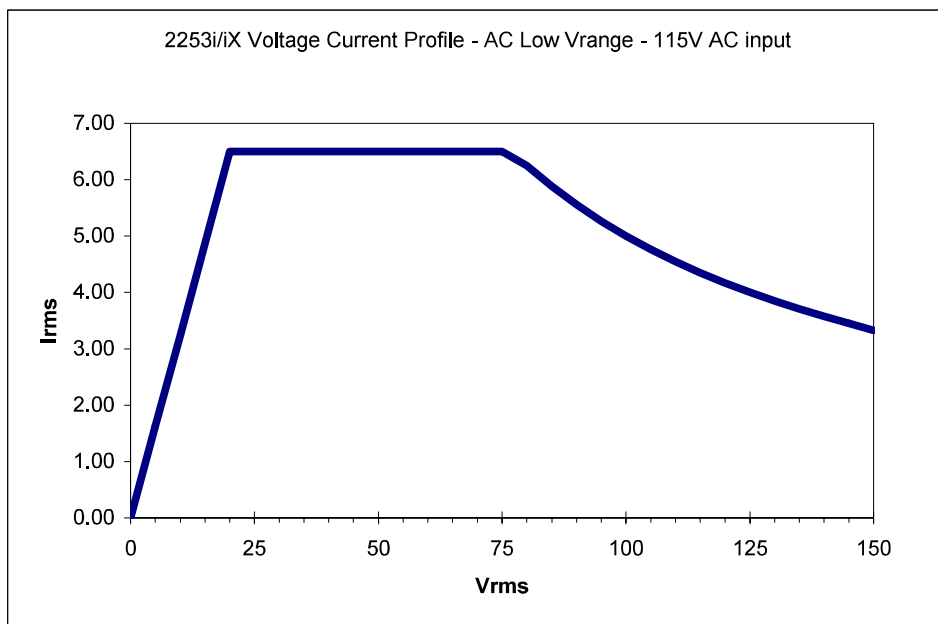


Figure 2-3: 2253i / iX Voltage / Current Rating Chart for 150V AC Range per phase – 115Vac in

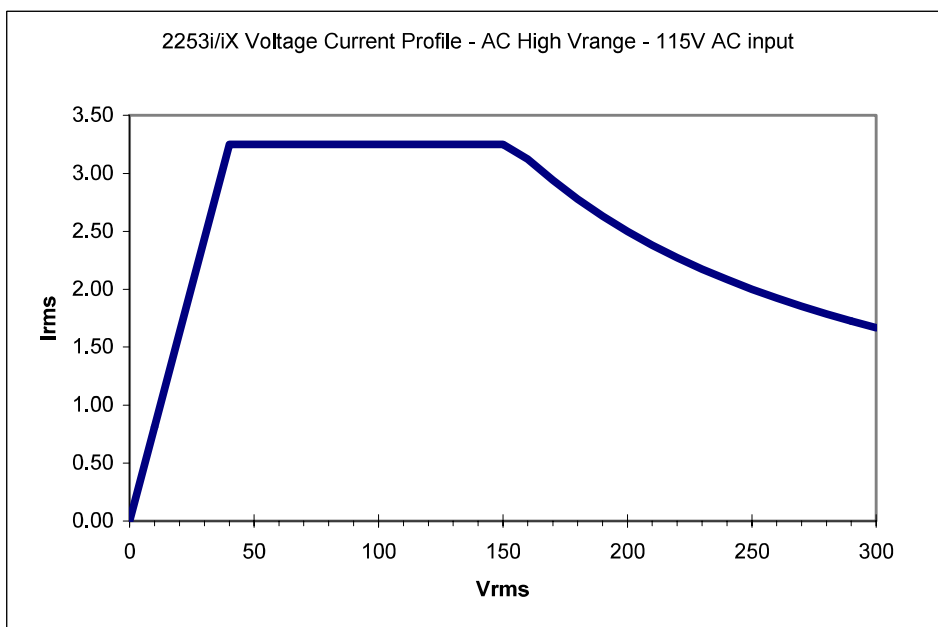


Figure 2-4: 2253i / iX Voltage / Current Rating Chart for 300V AC Range per phase – 115Vac in

2.1.2.3 Voltage versus Current Rating Charts – DC Mode

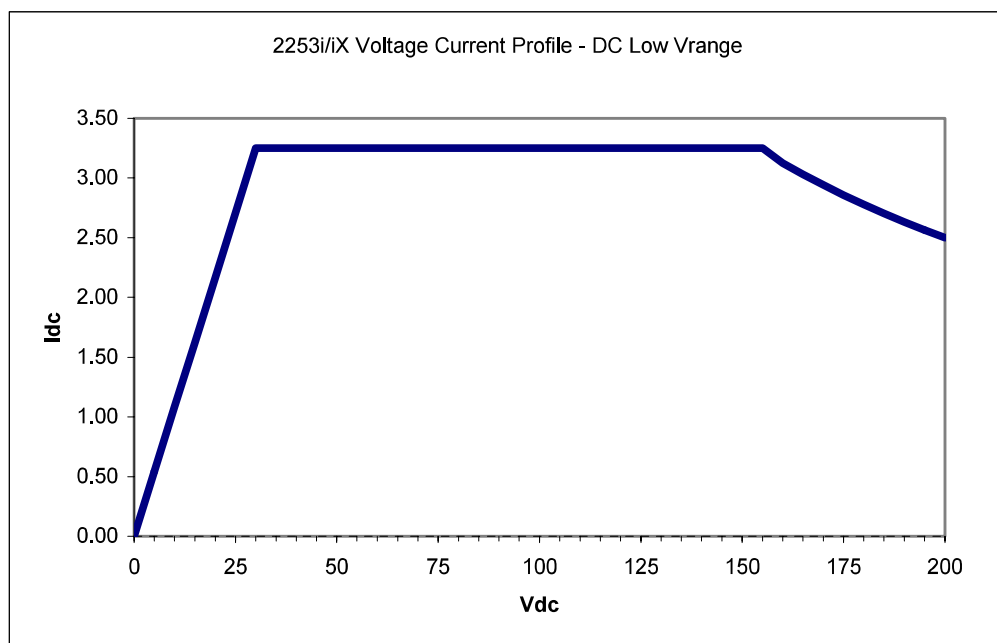


Figure 2-5: 2253i / iX Voltage / Current Rating Chart for 200V DC Range per phase.

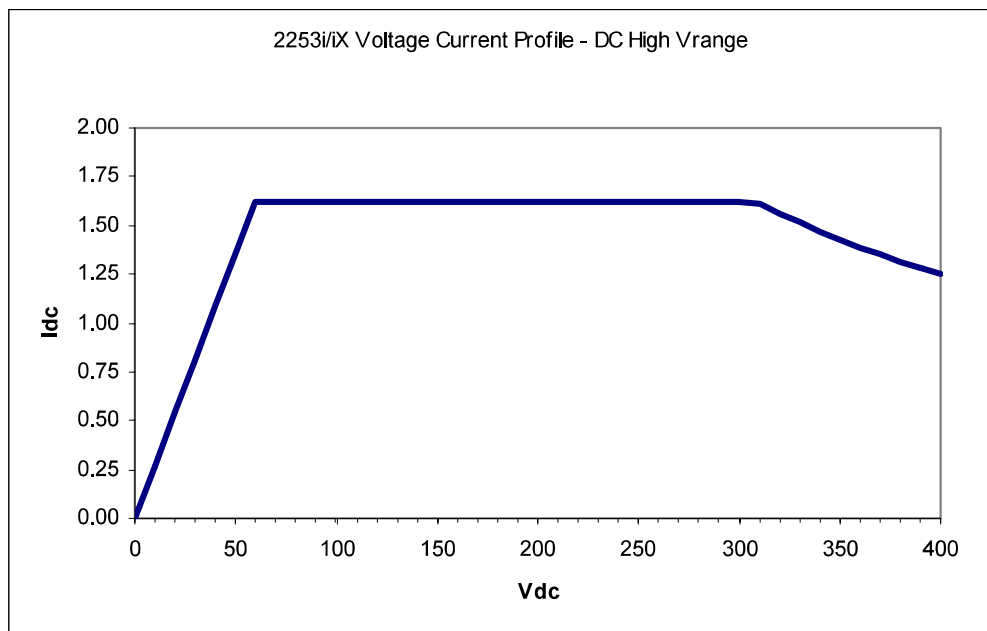


Figure 2-6: 2253i / iX Voltage / Current Rating Chart for 400V DC Range per phase.

2.1.3 Measurements

Measurement specifications apply to single chassis AC sources. See notes for other models and configurations.

Parameter	Range	Accuracy (\pm % FS)	Resolution
Frequency ¹	16.00-1000.0 Hz	0.1 %	0.01 Hz to 81.91 Hz 0.1 Hz to 819.1 Hz 1 Hz > 819.1 Hz
Voltage	0 - 400 Volts	0.1 %	0.01 Volt
Phase angle	0 – 360°	0.5°	0.1°
Current	0 – 15 Amps	0.5 %	0.001 Amp
Peak Current	0 - 60 Amps	0.5 %	0.001 Amp
Crest Factor	1.00 –10.00	1.5 %	0.01
VA Power	0 - 4 KVA	0.5 %	1 VA
Real Power	0 - 4 KW	0.5 %	1 W
Power Factor	0.00 - 1.00	1 %	0.01
<p><i>Note: Accuracy specifications are valid above 100 counts. For multi-chassis configurations, Current and Power range and accuracy specifications are times the number of chassis.</i></p> <p><i>Note: Frequency measurement specification valid for output > 20 Vrms.</i></p> <p><i>Note: Crest Factor accuracy applies for Irms > 50% of max.</i></p> <p><i>Note: Power Factor accuracy applies for PF > 0.5 and VA > 50% of max.</i></p>			

2.1.4 Harmonic Measurements

Harmonic measurement specifications apply to 2253iX model AC sources only.

Parameter	Range	Accuracy (\pm % FS)	Resolution
Frequency fundamental	16.00 - 81.91 Hz 82.0 - 819.1 Hz > 819.1 Hz	0.1%	0.01 Hz 0.1 Hz 1 Hz
Frequency harmonics	16.00 Hz – 48 kHz	0.5%	0.1 Hz
Phase	-180° – 180°	2° + 5°/kHz	0.1°
Voltage			
Fundamental	0 - 400 Volts	0.5%	0.01V
Harmonic 2 - 50		0.5% + 0.5%/kHz	0.01V
Current ²			
Fundamental	0 - 15 Amps	0.5%	0.01A
Harmonic 3 - 50		0.5% + 0.5%/kHz	0.01A
<p><i>Note: For multi-chassis configurations, current accuracy specifications are times the number of chassis.</i></p>			

¹ Frequency measurement specifications valid with output voltage of 20Vrms or higher. If output relay is open, frequency measurement will return 0.0 Hz.

² Second current harmonic measurement value not included.

2.1.5 System Specification

Controller Features	Specification
Trigger Input:	External trigger source input. Requires TTL level input signal. Triggers on negative edge. Response time 80 - 100 μ s.
Function Strobe:	Logic output, active low. Pulse width > 400 μ s. Function strobe is generated on any voltage or frequency program change or output relay open/close. (Mutually exclusive with Trigger Out.)
Trigger Out:	Logic output, active low. Pulse width > 400 μ s. Trigger out is generated based on user programmed transient trigger list. (Mutually exclusive with Function Strobe.)
Non volatile memory storage:	16 complete instrument setups and transient lists, 100 events per list. 50 User defined waveforms.
Waveforms	i Series: Sine. iX Series: Sine, square, clipped, user defined (50 waveforms)
Transients	Voltage: drop, step, sag, surge, sweep Frequency: step, sag, surge, sweep Voltage and Frequency: step, sweep
Current Limit Modes:	Two selectable modes of operation: 1. Constant current mode (voltage folds back with automatic recovery) 2. Constant voltage mode with output relay trip-off (Output relay opens).
Control Interfaces	Note: Only one of the serial interfaces (USB, RS232 or LAN) can be active at the same time. (Mutually exclusive).
USB	Standard USB 2.0 peripheral. Data transfer rate: 460,800 bps Syntax: SCPI Note: Use of the USB port to control more than one power source from a single PC is not recommended, as communication may not be reliable. Use GPIB interface for multiple power source control.
RS232	Standard RS232 interface. Data transfer rate: 9600 to 115,200 bps Format: 8 data, 1 start, 1 stop, no parity. Syntax: SCPI
IEEE-488	AH1, DC1, DT1, L3, RL2, SH1, SR1, T6 IEEE 488.2 and SCPI Response time is 10 ms (typical) (Requires –GPIB option on 2253i)
LAN / Ethernet	RJ45 Connector, 10BaseT, 100BaseT or 1000BaseT, Data transfer rate: 460,800 bps Protocol: TCP/IP. (–LAN Option on 2253iX only. RS232 interface is disabled with –LAN option)

2.1.6 Unit Protection

Parameter	Specification
Input Over current:	Input Circuit Breaker. This breaker protects the equipment and is also used to turn the unit on or off.. AC input connection should be made per local electrical code.
Input Over voltage Transients:	Surge protection to withstand EN50082-1 (IEC 801-4, 5) levels.
Output Over current:	Adjustable level constant current mode with programmable set point.
Output Short Circuit:	Peak and RMS current limit.
Over temperature:	Automatic shutdown.

2.2 Mechanical

Parameter	Specification									
Dimensions:	Height: 5.25 inches (13.3 cm) Depth: 23 inches (58.4 cm) Width: 19 inches (48.3 cm) <i>All dimensions are per chassis. For /2 model configurations, multiply height by 2 for total height. Width includes integrated front panel rack mount ears.</i>									
Equipment Rack depth requirement	25 inches (63.5 cm)									
Rack slide mount	The rack mount slide (-RMS option) mounting holes centerlines on the side of the power source are 2.30 inches / 58.4 mm above the bottom edge of the front panel.									
Unit Weight:	Net: 58 lbs / 26 Kg <i>approximately</i> Shipping: 76 lbs / 35 Kg <i>approximately</i>									
Material:	Steel chassis with aluminum top cover									
Finish:	Powder coated external surfaces, color medium gray.									
Cooling:	Fan cooled with air intake on the sides and front, and exhaust to the rear. Variable speed fan control.									
Acoustic Noise (Supplemental specification)	Measured at 1 m distance: <table><tr><td><u>Fan speed:</u></td><td><u>Low power mode</u></td><td><u>Full power mode</u></td></tr><tr><td>Front of unit:</td><td>41 dBA</td><td>51 dBA</td></tr><tr><td>Rear of unit:</td><td>43 dBA</td><td>56 dBA</td></tr></table>	<u>Fan speed:</u>	<u>Low power mode</u>	<u>Full power mode</u>	Front of unit:	41 dBA	51 dBA	Rear of unit:	43 dBA	56 dBA
<u>Fan speed:</u>	<u>Low power mode</u>	<u>Full power mode</u>								
Front of unit:	41 dBA	51 dBA								
Rear of unit:	43 dBA	56 dBA								
Internal Construction:	Modular sub assemblies.									
Rear Panel Connections:	(See section 3 for description of connections) <ul style="list-style-type: none">AC input screw terminal block.AC output screw terminal strip.External sense connector.USB, RS232, GPIB (option on i), LAN (option on iX)Auxiliary I/O									

2.3 Environmental

Parameter	Specification
Operating Temp:	0° to +40° C, full power. +32° to +104° F, full power.
Storage Temp:	-40° to +85 °C. -40° to +185° F.
Altitude:	< 2000 meters < 6000 feet
Relative Humidity:	0-80 % RAH, non-condensing maximum for temperatures up to 31°C decreasing linearly to 50% at 40°C.
Operating Environment	Indoors Use Only. Ground benign.
Vibration:	Designed to meet NSTA project 1A transportation levels.
Shock:	Designed to meet NSTA project 1A transportation levels.

2.4 Front Panel Controls, Indicators and Display

Controls:	
Shuttle knob:	The rotating knob may be used to adjust settings while in the SET menu. In all other menus, the shuttle may be used to change parameter values and settings.
Up/down arrow keys:	A set of up and down arrow keys is used to move the cursor position in all menus. This allows quick selection of the desired function or parameter.
Function keys:	<p>ON/OFF key for output relay control.</p> <p>PHASE This key allows selection of an individual phase or all three phases.</p> <p>SET key will show output voltage and frequency setting.</p> <p>MEAS key displays the measurement screens. Measure key will display measurement values for selected phase or phase A if all three phases are selected.</p> <p>MENU key selects main menu.</p> <p>BACK key is used to back up to previous screen or erase the last digit entered. This key also serves as a "GOTO LOCAL" key when the unit is in remote.</p>
Keypad:	A numeric keypad contains numbers 0 through 9 as well as up and down arrow keys, an Enter key, decimal point and polarity change (+/-) key. The up and down arrow keys are used to move the cursor position in all menus. This allows quick selection of the desired function or parameter.
Indicators and Display:	
Status indicators:	<p>Status indicators inform the user of important power source conditions:</p> <p>The Hi Range indicator is lit any time the unit is switched to the high voltage range.</p> <p>The Overtemp LED illuminates when internal heat sink temperatures are too high.</p> <p>The Overcurrent LED indicates that maximum programmed current limit is being drawn at the output.</p> <p>The Remote LED informs the user that the unit is under remote control.</p> <p>The Output indicator is on when the power source output relays are closed.</p> <p>The Phase A, B, C indicators illuminate when either phase A, B, C or all 3 phases are selected using the PHASE button.</p>
LCD character display:	High contrast backlit LCD display. An adjustable viewing angle makes it easy to read from all practical locations.

2.5 Special Features

Controller Features	
Controller:	Programmable controller front panel assembly.
Mode	Available single-phase mode option (-MODE) allows the output of all three amplifiers to be combined on phase A output terminal. No external switching or reconnection to the load is required.
Output Relay:	Standard output relay feature to isolate power source from the load. Each phase and the neutral (common) output is disconnected when the output relay opens.
Output On/Off:	The output relay can be used to quickly disconnect the load. A yellow status indicator displays the status of the output relay.
External Trigger Output or Function Strobe	<p>An external TTL output is available which may be used to trigger other equipment. The TTL output can be controlled by the transient programming system. This requires the trigger mode to be set to EXT (factory default). This can only be done over the computer interface using the OUTP:TTLT:MODE TRIG command.</p> <p>It can also be configured to generate an output pulse any time the voltage, frequency, current limit or phase programming is updated. This requires the trigger mode to be set to FSTR. This can only be done over the computer interface using the OUTP:TTLT:MODE FSTR command. This mode is compatible with the CI Lx/Ls Series.</p> <p>The Trigger Output (Trig Out) / Function Strobe is an active low TTL signal with a duration of no less than 400 us.</p>
Clock and Lock Mode	Enables two or more independent iX power systems to be phase synchronized to each other. One system (-LKM) acts as the master, the other(s) (-LKS) as auxiliaries. The -LKS units are synced to the -LKM unit. Refer to section 3.9 for details on Clock and Lock mode.
Trigger Input	A TTL input signal may be used as a trigger source for output changes programmed on the AC power source transient system. This requires the trigger source to be set to EXT. This can only be done via one of the computer interfaces. An external trigger source may be used to control the execution of output sequences that have been pre-programmed into the power source transient system. Refer to i/iX Series Programming Manual (6005-961) for details.

2.6 Available Options – i Series

Interface Options	
-GPIB	GPIB Remote control interface. This option is not field installable and must be specified at the time of original unit order.
Misc. Options	
-ABL	Atlas Based Language Extension. The ABLE command language provides bus compatibility with 9012 PIP controllers.
-EXT	External Signal Input. This option allows a 0-5Vrms AC signal to be used as the oscillator signal. In this mode, the AC power source acts as an AC amplifier. No programmable current limit is available and the output frequency of 1000 Hz should not be exceeded. Mutually exclusive with –RPF and –RPV options.
-MODE	Mode option allows all three amplifier outputs to be combined on phase A output terminal. No external switching or reconnection to the load is required.
-RMS	Set of 2 Rack mount slides. (Left and Right) Recommended to mount chassis in 19-inch instrument cabinet.
-RPV	Remote programming voltage. DC voltage input 0 to 10 VDC for 0 to full-scale output voltage programming.
-RPF	Remote programming frequency. DC voltage input 0 to 10 VDC or 0 to 5 VDC for 0 to 800 Hz output frequency programming. Input impedance is 20 Kohm (RPF10) or 10 Kohm (RPF5). This option is mutually exclusive with the –LKS option.
-WHM	Watt-hour measurement option.

2.7 Available Options – iX Series

Interface Options	
-LAN	Ethernet LAN interface connection. RJ45 connector. This option is not field installable and must be specified at the time of original unit order. Note: The RS232 interface is disabled if –LAN option is specified.
Test Options	
-160	RTCA/DO-160 Revision D and E, EuroCAE test firmware. Revision E requires use of iXCGui software (included).
-704	Mil-Std 704 Revision D and E test firmware. Revision A, B, C and F requires use of iXCGui software (included).
-704F	Mil-Std 704 Revisions A through F test firmware.
-A350	Airbus A350 / ABD0100.1.8.1 test software. Requires use of iXCGui software (included).
-ABD	Airbus ABD0100.1.8 test software. Requires use of iXCGui software (included).
-AMD	Airbus A400M Directive AMD24 test software. Requires use of iXCGui software (included).
-B787	Boeing B787-0147 test software. Requires use of iXCGui software (included).
Misc. Options	
-ABL	Atlas Based Language Extension. The ABLE command language provides bus compatibility with 9012 PIP controllers.
-EXS	External Sync Input. This option changes the external trigger input to an external sync input. The output frequency will be synced to the square wave TTL level sync signal provided.
-EXT	External Signal Input. This option allows a 0-5Vrms AC signal to be used as the oscillator signal. In this mode, the AC power source acts as an AC amplifier. No programmable current limit is available and the output frequency of 1000 Hz should not be exceeded. Mutually exclusive with –RPF and –RPV options.
-LKM	Clock and Lock Master. Enables synchronizing outputs of two iX AC sources. This mode supports a frequency range of 16 to 819 Hz. The –LKM applies to the master unit. This option is not field installable and must be specified at the time of original unit order.
-LKS	Clock and Lock Auxiliary. See -LKM for details. The –LKS applies to the auxiliary unit. (See Notes, see section 3.9.) This option is not field installable and must be specified at the time of original unit order. This option is mutually exclusive with the –RPF option.
-MODE	Mode option allows all three amplifier phase outputs to be combined on phase A output terminal. No external switching or reconnection to the load is required.
-RMS	Set of 2 Rack mount slides. (Left and Right) Recommended to mount chassis in 19-inch instrument cabinet.
-RPV	Remote programming voltage. DC voltage input 0 to 10 VDC for 0 to full-scale output voltage programming. Mutually exclusive with –EXT option.
-RPF	Remote programming frequency. DC voltage input 0 to 10 VDC or 0 to 5 VDC for 0 to 800 Hz output frequency programming. Input impedance is

	20 KOhm. This option is mutually exclusive with the –LKS and –EXT option.
–WHM	Watt-hour measurement option.

2.8 EXT Option - Supplemental Specifications

When the EXT option is installed, the amplifier is used in an open loop mode and none of the regular compact iX Series output specifications apply. This option also precludes the presence of the –RPV and –RPF option.

An external signal input is provided for each phase. The phase A EXT input pins is also used on the Auxiliary I/O connector for the RPVA option so the RPV and EXT options are mutually exclusive. The voltage reference (VOLT REF) on the CONTROL screen of the power source controller must be set to EXT to use this feature. See section 8.4 for EXT option operating instructions.

Parameter	Supplemental Specification
Input:	Isolated inputs, RPVA, EXTB, EXTC to analog common inputs on DB15 Auxiliary I/O (J18)
Level	0 – 5 Vrms / -7.5 Vpk to +7.5 Vpk max. for 0 to 300Vrms. (Gain = 35.6 dB) Voltage range is fixed to 300V AC range.
Impedance	< 4 KOhm
Output:	0 – 300 Vac RMS
Allowable Frequency:	
Range	16 – 1000 Hz
Frequency Response	See Figure 2-7.
Phase	Phase offsets determined by provided external signal inputs A, B, C.

2.8.1 Typical Frequency Response – EXT Option

Typical performance for EXT option models in the 300VAC range operating at 230Vrms. EXT is calibrated at 60 Hz.

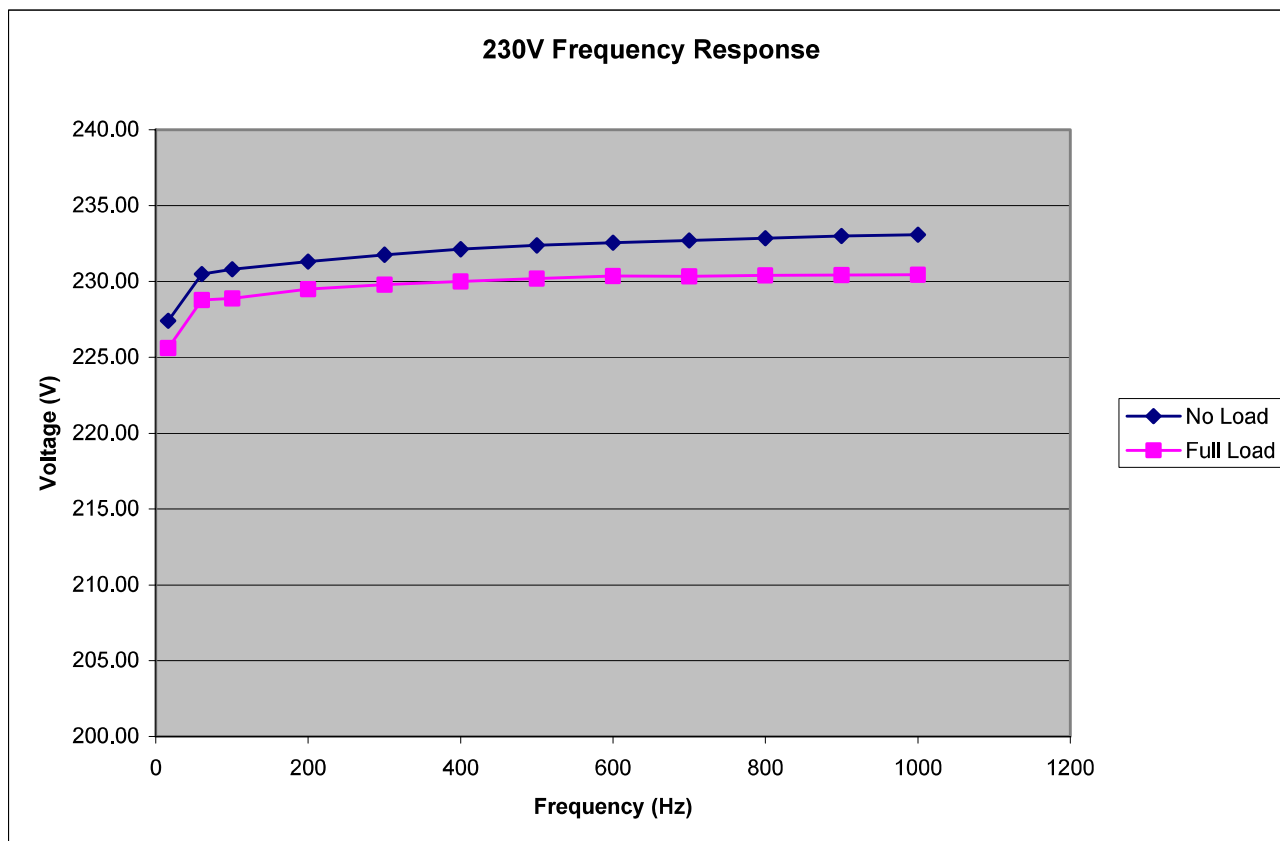


Figure 2-7: EXT Option Frequency response 300VAC Range.

2.9 LKM / LKS Options - Supplemental Specifications

The Clock and Lock option enables two or more independent 22531iX power systems to be phase synchronized to each other. One system (-LKM) acts as the master, the other(s) (-LKS) as auxiliaries. The -LKS units are synced to the -LKM unit. Refer to section 3.9 for details on Clock and Lock mode.

The following supplemental specifications apply when the 2253iX is configured with the Clock and Lock option. (-LKM or -LKS).

Parameter	Supplemental Specification
Voltage:	
Voltage Distortion	Standard specifications apply.
Frequency:	
Range	16 – 819 Hz
Resolution	0.1 Hz
Accuracy	$\pm 0.025\%$

2.10 RPF Option - Supplemental Specifications

The -RPF option allows an external DC reference to be used to program the output frequency. The following supplemental specifications apply when the 2253i/iX is configured with the remote programming frequency option. (-RPF).

Note that loss of input signal while in RPF mode could result in a DC output from the AC source even though it is in AC mode. If this is potentially damaging to the EUT, care should be taken to always have a minimum input signal level. See section 3.7.4 for RPF input connection.

Parameter	Supplemental Specification
Voltage: Input	0 to 5 Vdc or 0 to 10 Vdc for 0 – 800 Hz output.
Voltage Distortion	Standard specifications apply.
Frequency: -RPF Range	0 – 819 Hz for 0 to 10 Vdc input.
Resolution	0.1 Hz
Accuracy	$\pm 1\%$

2.11 WHM Option - Supplemental Specification

The following measurement accuracy specifications apply to the Watt Hour meter mode of operation:

Parameter	Specification
Watt-Hour	
Range:	0 – 999,999.9 WH
Resolution:	0.1 WH
Accuracy:	0.5% R +10 WH
Etime	
Range:	0:00:00 to 9999:59:59
Resolution:	1 sec
Accuracy:	0.025 %

2.12 Supplemental Specifications

Supplemental specifications are provided for reference only and are not guaranteed. Data is based on typical performance of a Compact i/iX series power source but not verified on each unit produced as part of California Instruments acceptance test.

Results on individual units may vary from the data provided here.

2.12.1 Output

Output Parameter	Specification
Frequency response:	See Figure 2-8
Max. Voltage slew:	4V/ μ s, measured step response into resistive load, 10% to 90 % full-scale voltage.
Load Transient response	
No load to full load:	Voltage recovers to within 2% in less than 2 ms
Full load to no load:	Voltage recovers to within 2% in less than 2 ms
Load Regulation response in ALC mode	< 300 ms
Load Regulation: (ALC mode OFF)	< 3 % FS ¹

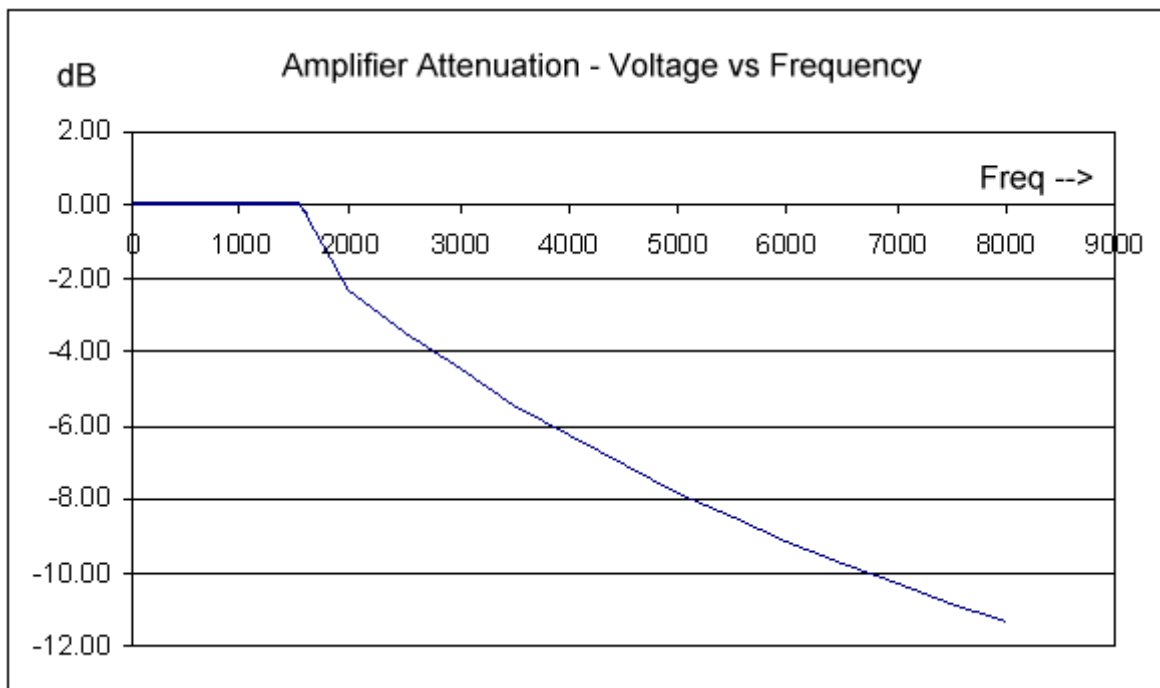


Figure 2-8: Typical frequency response, low Vrange, ALC off.

¹ FS (Full Scale) refers to highest available range, e.g. 300Vac in AC mode, 400Vdc in DC mode.

2.12.2 Remote Programming

Output Parameter	Specification
Bus command response time:	< 20 ms
Ext. Trigger response time	< 50 us