

Selector Guide Programmable DC Power Supplies

Single-Channel Power Supplies

Multi-Channel Power Supplies

Model	2200-20-5	2200-30-5	2200-32-3	2200-60-2	2200-72-1	2220-30-1, 2220J-30-1	2230-30-1, 2230J-30-1
Number of Channels	1	1	1	1	1	2	3
Power Output	100 W	150 W	96 W	150 W	86 W	90 W	120 W
Voltage Output	0 to 20 V	0 to 30 V	0 to 32 V	0 to 60 V	0 to 72 V	Ch. 1 and 2: 0 to 30 V	Ch. 1 and 2: 0 to 30 V Ch. 3: 0 to 6 V
Current Output	0 to 5 A	0 to 5 A	0 to 3 A	0 to 2.5 A	0 to 1.2 A	Ch. 1 and 2: 0 to 1.5 A	Ch. 1 and 2: 0 to 1.5 A Ch. 3: 0 to 5 A
Operating Mode	CV/CC*	CV/CC*	CV/CC*	CV/CC*	CV/CC*	CV/CC*	CV/CC*
Setting and Readback Resolution:							
Voltage	1 mV	1 mV	1 mV	1 mV	1 mV	1 mV	1 mV
Current	0.1 mA	0.1 mA	0.1 mA	0.1 mA	0.1 mA	1 mA	1 mA
Basic Accuracy:							
Voltage	±0.03%	±0.03%	±0.03%	±0.03%	±0.03%	±0.03%	±0.03%
Current	±0.05%	±0.05%	±0.05%	±0.05%	±0.05%	±0.1%	±0.1%
Features:							
Programming	IEEE-488 and USB	IEEE-488 and USB	IEEE-488 and USB	IEEE-488 and USB	IEEE-488 and USB	USB	USB
Remote Sense	Yes	Yes	Yes	Yes	Yes	Yes	Yes
External Trigger	Yes	Yes	Yes	Yes	Yes	No	No
Front and Rear Connectors	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Setup Storage	40 locations	40 locations	40 locations	40 locations	40 locations	30 locations	30 locations
List Mode	7 lists, 80 steps/list	7 lists, 80 steps/list	7 lists, 80 steps/list	7 lists, 80 steps/list	7 lists, 80 steps/list	No	No
Track Mode	No	No	No	No	No	Yes	Yes
Output Timer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Password Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Remote Inhibit	Yes	Yes	Yes	Yes	Yes	No	No
Discrete Fault Indication	Yes	Yes	Yes	Yes	Yes	No	No
Approvals	CSA/CE	CSA/CE	CSA/CE	CSA/CE	CSA/CE	CSA/CE	CSA/CE

*CV is Constant Voltage mode and CC is Constant Current mode

Selector Guide Specialized DC Power Supplies

Fast Transient Response, Battery Simulating Power Supplies

High Voltage Supply

Model	2302	2303	2303-PJ	2304A	2306	2306-PJ	2306-VS	2308	248
No. of Channels	1	1	1	1	2	2	2	2	1
Power Output	60W maximum, function of V; optimized for maximum current at low V	45 W	45 W	100 W	50W maximum, function of V and power consumed by other channel; optimized for maximum current at low V	50W maximum, function of V and power consumed by other channel; optimized for maximum current at low V	50W maximum, function of V and power consumed by other channel; optimized for maximum current at low V	50W maximum, function of V and power consumed by other channel; optimized for maximum current at low V	25 W
Voltage Output	0–15 V	0–15 V	0–15 V	0–20 V	0–15 V	0–15 V	0–15 V	0–15 V	0–±5000 V
Maximum Continuous Current Output	5 A @ 4 V	5 A @ 9 V	5 A @ 9 V	5 A @ 20 V	5 A @ 4 V	5 A @ 4 V	5 A @ 4 V	5 A @ 4 V	5 mA
Variable Resistance Output	0–1 Ω 10 mΩ resolution				0–1 Ω 10 mΩ resolution (in channel 1)	0–1 Ω 10 mΩ resolution (in channel 1)	0–1 Ω 10 mΩ resolution (in channel 1)	0–1 Ω 10 mΩ resolution (in channel 1)	
Current Sink Capacity	3 A	2 A	2 A	3 A	3 A	3 A	3 A	3 A	
DC Current Measurement Sensitivity	100 nA	100 nA	10 μA	100 nA	100 nA	10 μA (Ch. 1) 100 nA (Ch. 2)	100 nA	100 nA	
Dynamic Current Measurement	5 A range: 33 μs–833 ms integration times	5 A range: 33 μs–833 ms integration times	500 mA and 5 A ranges: 33 μs–833 ms integration times	5 A range: 33 μs–833 ms integration times	5 A range: 33 μs–833 ms integration times	500 mA and 5 A ranges: 33 μs–833 ms integration times	5 A range: 33 μs–833 ms integration times	5 A, 500 mA, 50mA and 5mA ranges: 33 μs–833 ms integration times	
External Triggering for Voltage Outputs and Current Measurement	No	No	No	No	No	No	Yes	No	No
Accuracy									
V	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.01%
I	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.01%
Features:									
Programming	IEEE-488 included	IEEE-488 included	IEEE-488 included	IEEE-488 included	IEEE-488 included	IEEE-488 included	IEEE-488 included	IEEE-488 included	IEEE-488 included
Open Sense Lead Detection	Yes				Yes	Yes	Yes	Yes	No
DVM	Yes	Yes	Yes	Yes	Yes, 1 per channel	Yes, 1 per channel	Yes, 1 per channel	Yes, on channel 2	No
Analog Output								1 analog output	
Relay Control Port	4	1	1	2	4	4	No	4	No
Remote Display Module	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
CE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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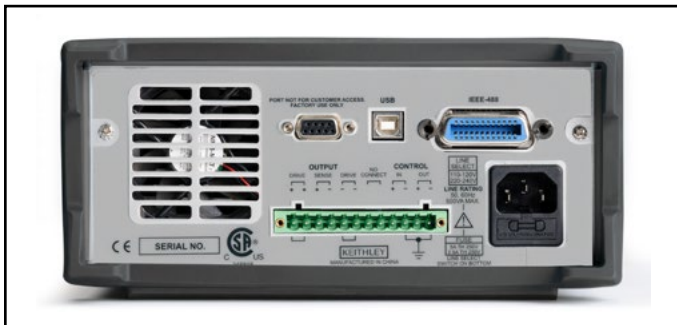
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Series 2200

Single-Channel Programmable DC Power Supplies

Series 2200 specifications

	2200-20-5	2200-30-5	2200-32-3	2200-60-2	2200-72-1
DC OUTPUT RATING					
Voltage	0 to 20 V	0 to 30 V	0 to 32 V	0 to 60 V	0 to 72 V
Current	0 to 5 A	0 to 5 A	0 to 3 A	0 to 2.5 A	0 to 1.2 A
MAXIMUM POWER	100 W	150 W	96 W	150 W	86 W
LOAD REGULATION					
Voltage	<0.01% + 2 mV	<0.01% + 2 mV	<0.01% + 2 mV	<0.01% + 2 mV	<0.01% + 2 mV
Current	<0.05% + 0.1 mA	<0.05% + 1.5 mA	<0.05% + 0.1 mA	<0.05% + 0.5 mA	<0.05% + 0.5 mA
LINE REGULATION					
Voltage	< 0.01% + 1 mV	<0.01% + 1 mV	<0.01% + 1 mV	<0.01% + 2 mV	<0.01% + 1 mV
Current	<0.05% + 0.1 mA	<0.05% + 0.1 mA	<0.05% + 0.1 mA	<0.05% + 0.05 mA	<0.05% + 0.1 mA
RIPPLE AND NOISE (20 Hz to 7 MHz)					
Voltage	<1 mV _{RMS} <3 mV _{P-P}	<1 mV _{RMS} <4 mV _{P-P}	<1 mV _{RMS} <4 mV _{P-P}	<1 mV _{RMS} <5 mV _{P-P}	<1 mV _{RMS} <3 mV _{P-P}
Current	<3 mA _{RMS}	<4 mA _{RMS}	<3 mA _{RMS}	<3 mA _{RMS}	<3 mA _{RMS}
SETTING RESOLUTION					
Voltage	1 mV	1 mV	1 mV	1 mV	1 mV
Current	0.1 mA	0.1 mA	0.1 mA	0.1 mA	0.1 mA
SETTING ACCURACY (using remote sense, 25°C ± 5°C)					
Voltage	±0.03% + 3 mV	±0.03% + 3 mV	±0.03% + 3 mV	±0.03% + 6 mV	±0.03% + 6 mV
Current	±0.05% + 2 mA	±0.05% + 2.5 mA	±0.05% + 2 mA	±0.05% + 1.5 mA	±0.05% + 1 mA
READBACK RESOLUTION					
Voltage	1 mV	1 mV	1 mV	1 mV	1 mV
Current	0.1 mA	0.1 mA	0.1 mA	0.1 mA	0.1 mA
READBACK ACCURACY (25°C ± 5°C)					
Voltage	0.02% + 3 mV	±0.02% + 2.5 mV	±0.02% + 3 mV	±0.02% + 6 mV	±0.02% + 5 mV
Current	±0.05% + 2 mA	±0.05% + 2.5 mA	±0.05% + 2 mA	±0.05% + 1.5 mA	±0.05% + 1 mA
VOLTAGE TRANSIENT RESPONSE – SETTLING TIME					
Load Change	<400 μs to within 75 mV following a change from 0.1 A to 1 A				
Setting Change	Rising	<35 ms from beginning of excursion to within 75 mV of terminal value following a change from 1 V to 11 V with a 1 A load (Note: Specification does not include command decode time)			
	Falling	<35 ms from beginning of excursion to within 75 mV of terminal value following a change from 11 V to 1 V with a 1 A load (Note: Specification does not include command decode time)			
OVERVOLTAGE PROTECTION					
Range (typical)	1 V to 19 V	1 V to 29 V	1 V to 31 V	1 V to 59 V	1 V to 71 V
Accuracy	±0.5% + 0.5 V	±0.5% + 0.5 V	±0.5% + 0.5 V	±0.5% + 0.5 V	±0.5% + 0.5 V
Response Time (typical)	<10 ms	<10 ms	<10 ms	<10 ms	<10 ms



Series 2200 rear panel.

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