

# Selector Guide

# Source and Measure Products

MODEL	2400 2400-C 2400-LV	2410 2410-C	2420 2420-C	2425 2425-C	2430 2430-C	2440 2440-C
Page	268	268	268	268	268	268
Description	General purpose	High voltage	3 A	High power	Pulse	5 A
Current Source/Sink	•	•	•	•	•	•
Voltage Source/Sink	•	•	•	•	•	•
<b>POWER OUTPUT</b>	22 W	22 W	66 W	110W	1100 W*	55 W
<b>CURRENT CAPABILITY</b>						
Min.	±10 pA	±10 pA	±100 pA	±100 pA	±100 pA	±100 pA
Max	±1.05 A	±1.05 A	±3.15 A	±3.15 A	±10.5 A*	±5.25 A
<b>VOLTAGE CAPABILITY</b>						
Min.	±1 μV	±1 μV	±1 μV	±1 μV	±1 μV	±1 μV
Max.	±21/±210 V	±1100 V	±63 V	±105 V	±105 V	±42 V
<b>OHMS RANGE</b>	<0.2 Ω to >200 MΩ	<0.2 Ω to >200 MΩ	<0.2 Ω to >200 MΩ	<0.2 Ω to >200 MΩ	<0.2 Ω to >200 MΩ	<2.0 Ω to >200 MΩ
<b>BASIC ACCURACY</b>						
I	0.035%	0.035%	0.035%	0.035%	0.035%	0.035%
V	0.015%	0.015%	0.015%	0.015%	0.015%	0.015%
Ω	0.06 %	0.07 %	0.06 %	0.06 %	0.06 %	0.06 %
<b>APPLICATIONS</b>						
	<ul style="list-style-type: none"> <li>Resistive devices</li> <li>Diodes</li> <li>Optoelectronic components</li> <li>IDDDQ testing</li> </ul>	<ul style="list-style-type: none"> <li>Voltage coefficient</li> <li>Varistors</li> <li>High voltage diodes and protection devices</li> <li>Airbag inflators</li> </ul>	<ul style="list-style-type: none"> <li>Power resistors</li> <li>Thermistors</li> <li>Solar cells</li> <li>Batteries</li> <li>Diodes</li> <li>IDDDQ testing</li> </ul>	<ul style="list-style-type: none"> <li>Power semiconductors</li> <li>DC/DC converters</li> <li>High power components</li> <li>IDDDQ testing</li> </ul>	<ul style="list-style-type: none"> <li>High power pulse testing</li> <li>Varistors and other circuit protection devices</li> </ul>	<ul style="list-style-type: none"> <li>5A pump laser diodes</li> </ul>
<b>FEATURE SUMMARY</b>						
Pulse Mode	No	No	No	No	Yes	No
Linear/Log/Custom Sweeps	Yes	Yes	Yes	Yes	Yes	Yes
Embedded Execution	Yes	Yes	Yes	Yes	Yes	Yes
Embedded Scripting	No	No	No	No	No	No
Contact Check	Optional	Optional	Optional	Optional	Optional	Optional
Selectable Front/Rear Inputs	Yes	Yes	Yes	Yes	Yes	Yes
Connections	Banana	Banana	Banana	Banana	Banana	Banana
Limit Inspection	Yes	Yes	Yes	Yes	Yes	Yes
Selectable Output-Off Impedance State	Yes	Yes	Yes	Yes	Yes	Yes
Remote or 4W Voltage Sense	Yes	Yes	Yes	Yes	Yes	Yes
Source Readback	Yes	Yes	Yes	Yes	Yes	Yes
Command Language Protocol	SCPI	SCPI	SCPI	SCPI	SCPI	SCPI
Programming	IEEE-488, RS-232					
Memory/Buffer	5000 point, 2500 point reading buffer					
Trigger	Trigger Link with 6 In/Out					
Guard	Ohms (high current) and cable					
Digital I/O	1 In/4 Out with built-in component handler interfaces.					
Other	5½-digit measure capability. Handler interface. 500μs pass/fail test. Optional contact check capability.					
Compliance	CE, UL	CE	CE	CE	CE	CE

\* In pulse mode.

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2601A 2602A	2611A 2612A	2635A 2636A	6430	4200-SCS	237
252	252	252	276	280, 352	281
Scalable, high throughput	High voltage and pulsed output	Low current and pulsed output	Ultra-low current	Multi-channel I-V characterization	Low current, 1100 V
•	•		•	•	•
•	•		•	•	•
40.4 W/channel	30.3 W/channel	30.3 W/channel	2 W	Up to 96.8 W	11 W
±1 pA	±1 pA	±1 fA	±10 aA**	±10 aA w/preamp**	±100 fA
±3.03 A DC and pulsed/10 A pulsed per channel	±1.5 A DC and pulsed/10 A pulsed per channel	±1.5 A DC and pulsed/10 A pulsed per channel	±105 mA	±1 A w/4210-SMU	±100 mA
±1 μV	±1 μV	±1 μV	±1 μV	±1 μV	±100 μV
±40.4 V/channel	±202 V	±202 V	±210 V	±210 V	±1100 V
			<2.0 Ω to >20 TΩ		
0.02%	0.02%	0.02%	0.035%	0.05 %***	0.05%
0.015%	0.015%	0.015%	0.015%	0.012 %***	0.03%
			0.06 %		
<ul style="list-style-type: none"> <li>• I-V functional test and characterization</li> <li>• Wafer level reliability test</li> <li>• Testing integrated devices such as RFICs, ASICs, SOCs</li> <li>• Testing opto devices such as LEDs, VCSELs, and displays</li> <li>• Testing nano-devices and materials</li> </ul>			<ul style="list-style-type: none"> <li>• Particle beam experiments</li> <li>• SET (single electron transistor) testing</li> <li>• Ultra-high resistance testing (up to 10<sup>15</sup>Ω)</li> <li>• Nano materials testing</li> <li>• Experimental nanostructures</li> </ul>	<ul style="list-style-type: none"> <li>• Semiconductor laser diode DC/CW characterization</li> <li>• DC/CW characterization of transceiver modules</li> <li>• PIN and APD characterization</li> <li>• Carbon nanotube characterization</li> <li>• Materials research</li> <li>• Nanoelectronics</li> </ul>	<ul style="list-style-type: none"> <li>• Semiconductor laser diode DC/CW characterization</li> <li>• DC/CW characterization of transceiver modules</li> <li>• PIN and APD characterization</li> <li>• Carbon nanotube characterization</li> <li>• Materials research</li> <li>• Nanoelectronics</li> </ul>
Yes	Yes	Yes	No	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes (linear/log/pulse, fixed, stair, custom)
Yes	Yes	Yes	Yes	No	No
Yes	Yes	Yes	No	No	No
Yes	Yes	Yes	No	No	No
Rear only	Rear only	Rear only	Rear and Preamp	Rear	Rear only
Screw terminal, adapters for banana and triax	Screw terminal, adapters for banana and triax	Screw terminal, adapters for banana and triax	Triax	Lemo triax, standard triax in Preamp	3-lug triax
Yes	Yes	Yes	Yes	No	No
Yes	Yes	Yes	Yes	No	No
Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	No
ICL	ICL	ICL	SCPI	SCPI in PXCI	DDC
LXI, IEEE-488, RS-232 communication with embedded Test Script Processor (TSP) capability	LXI, IEEE-488, RS-232 communication with embedded Test Script Processor (TSP) capability	LXI, IEEE-488, RS-232 communication with embedded Test Script Processor (TSP) capability	IEEE-488, RS-232	Embedded GUI	IEEE-488
>100,000 rdgs/buffer	>100,000 rdgs/buffer	>100,000 rdgs/buffer	5000 point, 2500 point reading buffer	4096 sample memory per card	1000 pt.
14 digital I/O-trigger lines, 3 TSP-Link trigger lines	14 digital I/O-trigger lines, 3 TSP-Link trigger lines	14 digital I/O-trigger lines, 3 TSP-Link trigger lines	Trigger Link with 6 In/Out	Internal only	In/Out
Cable	Cable	Cable	Ohms (high current) and cable	Cable	Cable
14 digital I/O-trigger lines	14 digital I/O-trigger lines	14 digital I/O-trigger lines	1 In/4 Out with built-in component handler interfaces	N/A	No
Scalable to 64+ channels with TSP-Link™	Scalable to 64+ channels with TSP-Link™	Scalable to 64+ channels with TSP-Link™	5½-digit measure capability. Handler interface. 500μs pass/fail test.	Optimized for front panel operation	
CE, UL	CE, UL	CE, UL	CE	CE	CE

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