Highly Accurate, Fully Configurable Electronic DC Load

DL Series Electronic DC Load

Vitrek's Electronic DC Load

Provides High Accuracy

Measurements of Voltage &

Current with the Features and

Industry's Easiest-To-Use configurations to meet yo market today is easier to be set up for your next te ensures that all loading a test that

Extremely Flexible in a generating kW, W, mW or μW loading. Whether you are performing tests for LED drivers, batteries or battery chargers, the DL Series is the right choice for these applications.

Maximum Accuracy — Maximum Features - The unit is fully featured with transient and wide band non-linear loading capabilities along with the additional feature of sweep capability. The DL Series Electronic Load provides high accuracy measurements (± 0.05%) of voltage and current with sweep steps as short as 20μs and pulsed loading up to 100 kHz. Units are fully configurable for loading riding and falling edge controls and soft-start capabilities. The DL Series provides excellent transient performance in timing and waveshape with the ability for the user to view the current and voltage waveforms using the internal scope. The device provides fully protected short loading with automatic current and power limiting.

Unequaled Visibility of Test Results - The DL Series provides graphical X/Y plotting of V vs I and V vs P characteristics using swept loading. In addition, the unit has a historical data logging capability, both graphical and numerical for additional test analysis and evaluation.

Flexible Integration in a Compact Package - The DL Series is just 5" high, 8.5" wide and 13" deep, allowing easy integration into any test bench. The unit provides a variety of interfaces including LAN, USB Device & Host and Digital I/O. In addition, multiple units may be used in parallel for static higher power and current loading. No other manufacturer offers more features than Vitrek — at a price that easily fits in your budget.

DL Series Electronic DC Load Models

DL115:	150V/21A/125W DC Load with 3.6kW/32A transient capacity
DL215:	150V/42A/250W DC Load with 7.25kW/65A transient capacity
DL515:	150V/84A/500W DC Load with 14.5kW/130A transient capacity
DL150:	500V/21A/125W DC Load with 2.4kW/32A transient capacity
DL250:	500V/42A/250W DC Load with 4.8kW/65A transient capacity
DL550:	500V/84A/500W DC Load with 9.6kW/130A transient capacity
RM-DL:	Rack Mount Option

Quality and Reliability

Vitrek, founded in 1990, is the premier source of precision power testing and measuring equipment for industrial and consumer product development and manufacturing. Vitrek's sophisticated technology provides companies the edge in design verification and product manufacturability.

Specifications are subject to change without notice. Please visit
www.vitrek.com for full specifications and ordering information.

30
Years Industry
EXPERTISE

DL Series
Highly Accurate, Fully Configurable Electronic DC Load

VITREK DC ELECTRONIC LOAD

DL515

Test Like You
MEAN IT

CONDENSED FEATURES & BENEFITS

> Easy-to-use color touchscreen for quick setup, measurement configuration, channel selection and use.

> High Accuracy measurements (0.05%) of voltage and current within pulses or sweep steps as short as 20µs.

> Generates kW, mW or µW loading. >20:1 higher and >1000:1 lower loading capability range than most presently available DC loads.

> Fully featured with transient and non-linear loading capabilities ranging from 125 to 500 watts with the additional feature of sweep capability.

> Wide bandwidth non-linear loading modes.

> Arbitrary loading sequence with up to 100 steps to simulate virtually any "real-world" loading.

> High speed pulsed loading up to 100kHz.

> Rack mount option available.

> Fully configurable loading rising and falling edge controls and soft-start capability.

> Excellent transient performance in timing and waveshape with the ability for the user to view the current and voltage waveforms using the internal scope.

> Fully protected short loading, with automated current and power timing.

> Comprehensive self-test gives assurance that all loading and measurement circuitry is properly functioning.

> Unique graphical X/Y plotting of V vs I and V vs P characteristics using swept loading.

> Unique historical data logging capability, both graphical and numerical.

> Fully featured with transient and non-linear loading capabilities with the additional feature of sweep capability.

> Leading accuracy typically >10:1 better than other units at lower loading levels and >2:1 better at high loading levels, with ISO17025 traceability also available.

> Displayed Results Include:

- 'Real-time' results - numerically represented measured actual applied voltage and actual loading current, and the computed load power and resistance or conductance.

- Pulse results - numerically represented measured actual applied voltage and actual loading current within a pulse, and the computed load power and resistance or conductance.

- OCP or OPP result - numerically represented maximum current and power achieved prior to the voltage dropping below a set voltage.

- Battery test - numerically represented accumulated A.Hr and W.Hr, as accumulated since the operation was started with automatic stop at ending voltage.

- Historical data logging - graphically represented measured actual applied voltage and the actual loading current and the computed load power with down to 1ms resolution and a long-term maximum.

- Oscilloscope - graphically represented up to 400kSPS sampled applied voltage and loading current.

- XY Plot - graphically represented V vs A/W plot of swept measurement results.

For complete specifications visit www.vitrek.com.

DL SERIES ORDERING INFORMATION

PART #	DESCRIPTION
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RM-DL	Rack Mount Option

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REV 12/19

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www.valuetronics.com

		DL115	DL150	DL215	DL250	DL515	DL550
VOLTAGE							
Input Voltage		0-150V	0-500V	0-150V	0-500V	0-150V	0-500V
Voltage Measurement Accuracy		0.04%+1mV					
Voltage (CV) Loading		Full range of voltages, user configurable resistance from 1mΩ upwards					
CV Loading Accuracy		0.04%+1mV					
Sense Loading		Nominally 923kΩ, automatically included in all measurement results and all loading except open					
CURRENT							
Min. Current		10µA	60µA	20µA	120µA	50µA	250µA
Max. Current	>1s	21A		42A		84A	
	100ms	30A		60A		120A	
	<10ms	30A		60A		120A	
Current (CC) Accuracy		0.05%+5µA	0.05%+30µA	0.05%+10µA	0.05%+60µA	0.05%+25µA	0.05%+125µA
POWER							
Max. Power	>1s	125W		250W		500W	
	100ms	160W		320W		640W	
	10ms	380W	325W	760W	650W	1.5kW	1.3kW
	1ms	1.15kW	950W	2.3kW	1.9kW	4.6kW	3.8kW
	<100µs	3.6kW	2.4kW	7.2kW	4.8kW	14.4kW	9.6kW
Power (CW) Accuracy		0.075%+25µW	0.075%+150µW	0.075%+50µW	0.075%+300µW	0.075%+125µW	0.075%+625µW
RESISTANCE							
Resistive Loading		42mΩ-900kΩ	90mΩ-900kΩ	21mΩ-700kΩ	45mΩ-700kΩ	10.5mΩ-500kΩ	25mΩ-500kΩ
Resistive (CR) Accuracy		0.1%					
Capacitive Loading		0.3µF					
LOADING MODES and TIMING							
Loading Modes (Level A and Level B)		Open or Short Basic (CV+CR+CC+CW in any combination), single or arbitrary sequence (up to 100 independent steps) V-I Table Lookup (interpolated, up to 100 points) Linear or logarithmic swept current or power, up to 500 steps, P1->P2 or P1->P2->P1 OCP or OPP Test (automatically terminated current or power sweep)					
Loading Timing Modes		Continuous Level A or B (any combination of the above modes) Pulsed A/B (any combination of the above modes except OCP or OPP) Interleaved A/B (any combination of the above modes except OCP or OPP)					
Load Timing		Continuous, or 5µs to 10000s pulsed/stepped					
Non-linear Loading Bandwidth		Typically >35kHz with ability to reduce bandwidth					

Physical

Size:	5in high x 8.5in wide x 13in deep
Weight:	Approx. 8lb (unpacked, without external power supply).
Power:	External 12Vdc, 60VA power brick
Display:	5in diagonal, 800x480 pixel color LCD with touchscreen.
Adjustment Wheel:	Indented encoder provided on front panel allowing for the "live" adjustment of the loading levels or timings.
Rack Mounting:	Rack mounts kits available for mounting one or two units in a 19in wide rack.
Terminals:	Front: Sheathed banana 4mm sockets, suitable for up to 30A continuous loading. Rear: Approx. 1in square x 0.06in blade type terminals (fully specified). Safety cover provided. Voltage Sense: wire entry sprung sockets in rear panel

Environmental

Warm Up Time:	20 seconds
Full Specifications:	15 minutes
Temperature:	Operating: 0 to +40C, at 10 to 80%RH (non-condensing) Automatically reduces loading if overheating detected.
Storage:	-20C to +70C, at 5 to 95%RH (non-condensing)
Altitude:	0 to 2000m ASL
Cooling:	Variable speed forced air. Intake vents on both sides and in the bottom, exhaust vents in the rear. Specifications valid with any one set of intake vents impeded. At least 6 inches of clear space must be provided behind the rear panel and two inches on the side of intake vents.

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REV 12/19

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MADE IN USA

ACCREDITED
Calibration Laboratory
Cert # 3678.01

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