- **Compact DC Power**
  Uses less rack space compared to other DC supplies of similar power level.

- **5 to 15 KW & Beyond**
  Modular design supports 5, 10 and 15 kW versions. Higher output using parallel operation of multiple chassis.

- **Protection Modes**
  User selectable constant voltage trip or constant current modes.

- **Built-in Measurements**
  Voltage, current and power readback capability standard.

- **Transient Programming**
  User defined output sequence programming from the front panel.

- **Standard RS-232C Interface and Optional GPIB.**
  Instrument drivers and software support for easy system integration.

Compact Power

The KDC Series packs up to 15 kW of DC power in a 5.25" (3U) chassis. Despite the high power density of the design, the KDC Series provides a low noise, stable output. The DC voltage ranges are 30 V to 600 Vdc, which supports a wide range of applications.

The KDC Series comes with an RS-232 as the standard remote programming interface. The IEEE-488/GPIB & isolated analog interfaces are optional. The KDC Series continuously measures output voltage, current, peak current, and power.

Advanced Control

The KDC Series has three operational modes: constant voltage, constant current and constant power. The constant voltage and constant current modes can be configured for voltage fold back or shutdown when the programmed current limit set point is reached.

The transient program function allows users to define up to 100 output sequences. Each sequence can contain up to six parameters. Parameters include: voltage set point, slew rate, current set point, dwell time, and trigger. A graphical user interface is included with each KDC Series Power Supply. This powerful interface software allows users to generate automated test routines in minutes. .

Applications

The advanced features and capabilities of the KDC Series make the power supply suitable for challenging test applications such as: fuel testing, super capacitor characterization, and other high technology applications.

The availability of RS-232, GPIB/IEEE-488, and isolated analog interfaces make the KDC easy to integrate into ATE and other automated systems. The KDC Series is designed to accept 208, 400 and 480V line-to-line AC inputs.

KDC Series - Controller Capabilities

All KDC Series Power Supplies use an advanced DSP based controller with a menu driven user interface. This controller provides capabilities not typically found in most DC supplies.

Output Sequencing: Time driven output changes can be programmed, stored and executed under program control. Events include steps, sweeps, drops and surges of voltage and/or current. This allows a variety of power conditions and DC tests to be set up and executed from the front panel. Multiple sequences can be stored in nonvolatile memory for quick recall.

Parallel Mode: Multiple KDC units can be combined to provide high output current capability using a master/auxiliary combination.

Output Impedance: A programmable output impedance function allows simulation of DC source impedance as a function of load conditions.

Remote Control: The included KDC GUI program provides easy access to these and other KDC controller capabilities using a Windows PC with the standard RS-232C or the optional IEEE-488/GPIB interface.
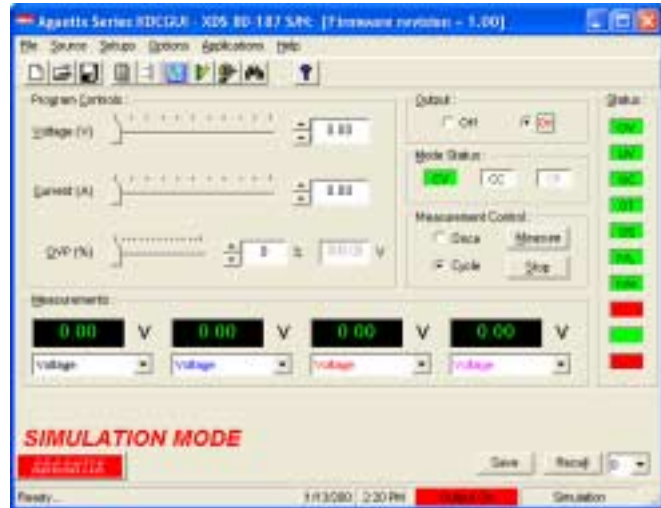
Graphical user interface DC supply control program.

KDC Series - Models[1]

Model	Output Voltage	Current	RMS Noise	Model	Output Voltage	Current	RMS Noise
KDC 30-167	0-30	0-167	15mv	KDC 150-33	0-150	0-33	25mv
KDC 30-333	0-30	0-333	15mv	KDC 150-66	0-150	0-66	25mv
KDC 30-500	0-30	0-500	15mv	KDC 150-100	0-150	0-100	25mv
KDC 40-125	0-40	0-125	15mv	KDC 300-17	0-300	0-17	100mv
KDC 40-250	0-40	0-250	15mv	KDC 300-33	0-300	0-33	100mv
KDC 40-375	0-40	0-375	15mv	KDC 300-50	0-300	0-50	100mv
KDC 50-100	0-50	0-100	15mv	KDC 400-12	0-400	0-12.5	100mv
KDC 50-200	0-50	0-200	15mv	KDC 400-25	0-400	0-25	100mv
KDC 50-300	0-50	0-300	15mv	KDC 400-37	0-400	0-37	100mv
KDC 80-62	0-80	0-62	25mv	KDC 600-8	0-600	0-8	250mv
KDC 80-125	0-80	0-125	25mv	KDC 600-17	0-600	0-17	250mv
KDC 80-187	0-80	0-187	25mv	KDC 600-25	0-600	0-25	250mv
KDC 100-50	0-100	0-50	25mv				
KDC 100-100	0-100	0-100	25mv				
KDC 100-150	0-100	0-150	25mv				

Note 1: Contact factory for availability of models with output voltage ranges not listed here.

Electrical

Output
Power

Maximum	5, 10 or 15 KW

Voltage

Line Regulation:	< 0.1% of Range
Load Regulation:	< 0.1% of Range
Accuracy:	± 0.05% Setting + 0.1% Range
Transient Response:	Voltage will recover to within 2% of voltage range within 2 msec for a 30 % load step.
Stability:	± 0.05% of max. rating per 8 hours after 30 mins. warm-up at fixed line, load and temperature.

Current

Line Regulation:	< 0.1% of Range
Load Regulation:	< 0.1% of Range
Accuracy:	± 0.05% Setting + 0.1% Range
Stability:	± 0.05% of setting after 8 hour warm-up at fixed line, load and temperature.

Input

Voltage:	208 - 10 % to 230 +10% VAC
	400 ± 10 % VAC
	480 ± 10 % VAC
	All inputs are L-L, 3 phase, 3-wire plus safety ground. Input rating must be specified at time or order.
Current RMS:	Typical RMS current per phase at low line input voltage.

Power Level			
Vlow	5 kW	10 kW	15 kW
187 V:	27 A	54 A	81 A
360 V:	15 A	30 A	45 A
432 V:	12 A	24 A	36 A

Power Factor:	> 0.65
Efficiency:	> 85 % at full load.

Measurements

Voltage

Accuracy:	0.05% + 0.1% Full Scale
Resolution:	0.025% Full Scale

Current

Accuracy:	0.1% + 0.2% Full Scale
Resolution:	0.025% Full Scale

Power

Accuracy:	0.2% + 0.3% Full Scale
Resolution:	0.05% Full Scale

Protection

Over temperature, short circuit, over current protection, open sense.

Controls and Indicator

Controls

Dual digitally encoded rotary knobs, Function keys, Output on/off, Power on/off

Indicators

Display:	Alphanumeric LCD, dual line.
LED's for:	Output on/off, CC mode, CV mode, CP mode and Remote.

Remote Control

A standard RS-232C is included with all KDC Series DC Power Supplies. An optional GPIB/IEEE-488 with an isolated analog interface is available as well.

RS-232C / RS-485 - Standard

9 pin D-shell connector, 115200 baud max., SCPI syntax.

-IF Option:

IEEE-488 Interface

IEEE-488 (GPIB) talker listener.

Subset:	AH1, C0, DC1, DT1, L3, PP0, RL2, SH1, SR1, T6
	IEEE-488.2 SCPI syntax

Isolated Analog Interface:

Voltage Control:	0-10 VDC, 0-5 VDC or R for 0-100% range
Current Control:	0-10 VDC, 0-5 VDC or R for 0-100% range
I/O Connectors:	Analog I/O, 15 Pin D-sub, isolated
	Auxiliary I/IO, 9 Pin D-sub, non-isolated
Functions:	Remote output on/off
	Trigger input
	Function strobe out
	Volt monitor out
	Current monitor out

Environmental

Temperature Coefficient

Voltage set point:	0.02%/°C of V Range
Current set point:	0.03%/°C of I Range

Ambient Temperature

Operating:	0° to 40° C / 32° to 104° F
Storage:	-40° to 75° C / -40° to 167° F

Humidity

Operating:	0 to 80% RH, non condensing

Cooling

Forced air, front intake, rear exhaust.

Mechanical

Dimensions

Height:	5.25" / 133.35 mm
Width:	19" / 482.6 mm
Depth:	22.19" / 563.3 mm excl. bus bars and cover
	24.74" / 628.4 mm incl. bus bars and cover

Weight

	15 KW	10 KW	5KW
Net:	84 lbs.	70 lbs.	56 lbs.
	38.1 Kg	32 Kg	25.4 Kg
Shipping (approx.):	110 lbs.	96 lbs.	82 lbs.
	50 Kg	44 Kg	37.2 Kg

Rack Mounting

Unit must be supported by shelf or brackets when mounted in 19" cabinet. No provisions for rack slides are made on the instrument.

Ordering Information

Model

All KDC Series model numbers specify voltage and current range.

KDC VVV-CCC-LLL-XX.

VVV = Voltage

CCC = Current

LLL = Input Line Voltage

XX = Options

Refer to table shown for model numbers and configurations.

Supplied with

User manual and programming manual on CD ROM.

Windows GUI software on CD ROM.

RS-232C serial cable.

Options

-IF	GPIB / IEEE-488 interface and analog remote voltage programming option.
-400	400-440 Volt line to line, three phase AC input option.
-480	432-528 Volt line to line, three phase AC input option.

Ordering Examples:

Model	Description
KDC 50-200-208	Output voltage 50 Vdc, maximum current is 200 Adc, line input is 208 V line to line, three phase. Includes standard RS-232C remote interface.
KDC 80-187-400-IF	Output voltage 80 Vdc, maximum current is 187 Adc, line input is 400 V line to line, three phase. Includes optional IEEE/RS-232C and analog interfaces.

XDS Series Products

For applications requiring only basic controller functions but similar power levels and voltage ranges as the KDC Series, refer to the Argantix XDS Series.

5 Year Warranty