

# Argantix KDC Series

5–15 kW

## Overview

30–600 V

- **High Precision Power**  
Very high precision, very low noise, excellent dynamics
- **5 to 15 kW And Beyond**  
Modular construction supports 5, 10 and 15 kW versions. Higher output using parallel operation of multiple KDC units.
- **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 RS232C Interface and optional GPIB.**  
Instrument drivers and software support for easy system integration.



8–500 A



208

400

480



### Compact Power

The KDC Series packs up to 15 kW of DC power into a small rack mount chassis. Despite the high power density of this design, the KDC Series provides low noise, stable output.

A full set of measurements is built-in to provide instant feedback on EUT load characteristics.

The KDC Series offers all the basic DC power supply capabilities needed for a wide range of applications and provides cost effective alternative to larger and more expensive products typically used for these applications.

### Easy To Use Controls

Simple menu driven operation and familiar rotary controls for setting voltage and current ensures that the KDC Series Power Supplies are easy to operate. All front panel controls including the rotary knobs are digitally encoded for long lasting, trouble free operation. The voltage and current control knobs can be used to quickly slew output parameters.

The intuitive front panel controls allow for easy operation of the supply by both novice and experienced users alike.

### Applications

With excellent output regulation and accuracy, the KDC Series DC Power Supplies support a wide variety of DC power applications. Examples include communications, semiconductors, automotive, information technology and industrial. The standard RS232C serial interface supports remote control of all power supply functions and measurements and allows for easy integration into ATE systems. Use of standard SCPI command language syntax and instrument drivers for popular programming environments further ease system integration. An optional GPIB/analog interface is available as well.

### 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 non-volatile memory for quick recall. Parallel Mode: Several 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 KDCGUI program provides easy access to these and other KDC controller capabilities using a Windows PC with the standard RS232C or the optional IEEE-488/GPIB interface.

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**AMETEK**  
PROGRAMMABLE POWER

# KDC Series : Specifications

## Output

Power: Maximum 5, 10 or 15 KW  
 Voltage: Line Regulation: < 0.1% of Range  
 Load Regulation: < 0.1% of Range  
 Accuracy:  $\pm 0.05\%$  Setting + 0.1% Range  
 Transient Response: Voltage will recover to within 2% of voltage range within 2 msec for a 30 % load step.  
 Stability:  $\pm 0.05\%$  of max. rating per 8 hours after 30 mins warmup at fixed line, load and temperature.

## Current

Line Regulation: < 0.1% of Range  
 Load Regulation: < 0.1% of Range  
 Accuracy:  $\pm 0.05\%$  Setting + 0.1% Range  
 Stability:  $\pm 0.05\%$  of setting after 8 hour warmup at fixed line, load and temperature.

## Input

Voltage: 208 - 10 % to 230 + 10% VAC  
 400  $\pm$  10 % VAC  
 480  $\pm$  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 Factor: > 0.65  
 Efficiency: > 85 % at full load.

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

## 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 RS232C is included with all KDC Series DC Power Supplies. An optional GPIB/IEEE-488 with analog RPV (0-10 VDC) input is available as well.

## RS232C / RS485 - 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

## 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/O, 9 Pin D-sub nonisolated.

## 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, side and top 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 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.

RS232C serial cable.

### Options

-IF GPIB / IEEE-488 interface and analog remote voltage programming 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 RS232C 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/RS232 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.

KDC Series - Models <sup>1</sup>				
Model	Output			RMS Noise & Ripple (Typ.)
	KW	Volts	Amps	
KDC 30-167	5	30	166.7	15 mV
KDC 30-333	10	30	333.3	15 mV
KDC 30-500	15	30	500	15 mV
KDC 50-100	5	50	100	15 mV
KDC 50-200	10	50	200	15 mV
KDC 50-300	15	50	300	15 mV
KDC 80-62	5	80	62.5	25 mV
KDC 80-125	10	80	125	25 mV
KDC 80-187	15	80	187.5	25 mV
KDC 100-50	5	100	50	25 mV
KDC 100-100	10	100	100	25 mV
KDC 100-150	15	100	150	25 mV
KDC 150-33	5	150	33.3	25 mV
KDC 150-66	10	150	66.7	25 mV
KDC 150-100	15	150	100	25 mV
KDC 300-17	5	300	16.7	100 mV
KDC 300-33	10	300	33.3	100 mV
KDC 300-50	15	300	50	100 mV
KDC 600-8	5	600	8.3	250 mV
KDC 600-17	10	600	16.7	250 mV
KDC 600-25	15	600	25	250 mV

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

