INSTRUMENT DATA SHEET

DAQ-JACK™

KDAQ200+

USB-enabled data acquisition with built-in programmable power supply

KAMAN
PRECISION PRODUCTS

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DAQ-JACK DATA SHEET

KDAQ200+

FEATURES

- USB-powered programmable bipolar DC output for powering analog instrumentation
- Two high-resolution ADC input channels
- Configurable digital filtering
- One Type K thermocouple input
- One configurable digital 3.3V I/O bit
- One 12-bit analog output (0 - 3V)
- Simple user interface for application-specific programming
- Includes PC data logging and custom setup software
- Small 3.15 x 2.125 x 0.91" package

THE PLUS IN THE KDAQ200+

In many test applications, it can take more time to collect, connect, and set up the sensors and DAQ system than it does to actually run the test. Kaman's design objective was to create a simple easy-to-use DAQ that would reduce set up time.

The easy implementation of a USB device is not unique in the DAQ world. What puts the plus in the DAQ-JACK is the built-in programmable power supply. KDAQ200+ takes power from the USB port on a PC or laptop and supplies the sensor with regulated DC power, eliminating the need for a separate DC power source.

But we didn't stop with the power supply. As virtually every sensor is influenced by temperature fluctuations, Kaman has built in a type-K thermocouple jack. The thermocouple output is displayed on the strip chart, and data logged with the analog inputs.

EASY SETUP

For quick and easy testing, the KDAQ200+ is unbeatable. The DAQ-JACK software loads onto your PC, laptop, or notebook computer, so setup is simple.

1. Wire the sensor I/O to the supplied multi-pin connector.
2. Connect the DAQ-JACK to the laptop with the supplied USB cable.
3. Run the DAQ-JACK program, set the power supply voltage to the level required by the sensor, and turn on the power.
4. Adjust the software settings to fit your particular application requirements.

SYSTEM COMPONENTS

Included with each DAQ-JACK KDAQ200+ are:

- DAQ-JACK module
- 3-foot USB cable
- Mating 10-pin I/O connector
- DAQ-JACK software

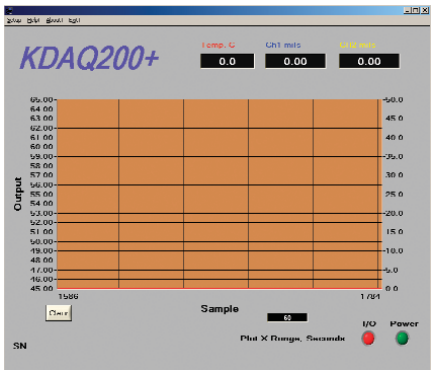
Typical system setup includes the KDAQ200+, Kaman KD-2306 sensor and electronics, PC, and appropriate USB cabling.

KDAQ200+

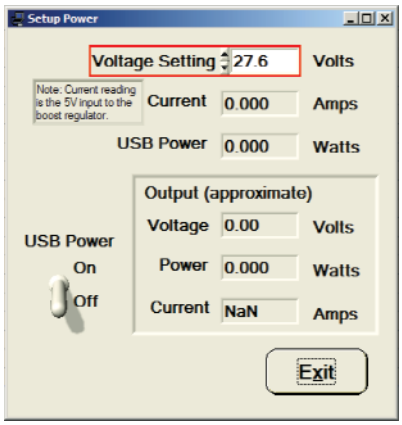
SOFTWARE FEATURES

- > Strip chart display with auto scaling
- > Easy-to-use setup screens
- > Thermocouple calibration
- > Input scaling
- > Digital filtering
- > Data logging

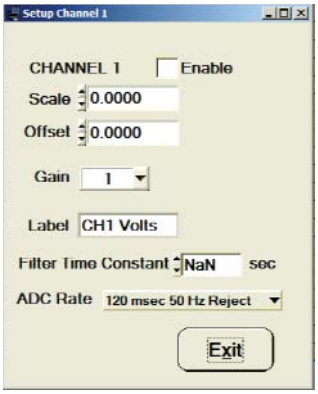
With just a few quick easy screens, you are ready to take data. A complete user guide outlining all the features of the software is available in the help menu



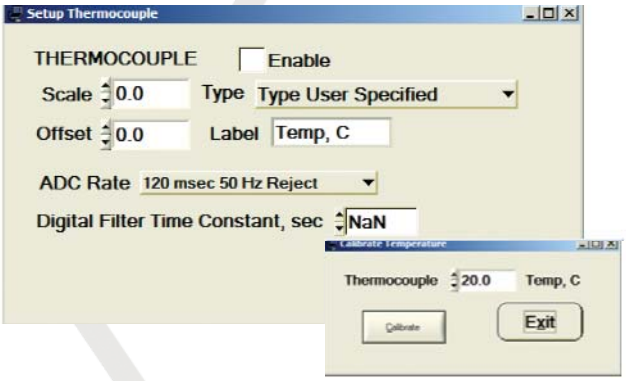
The main screen displays both analog inputs and the thermocouple temperature. You configure it to display raw voltage or sensor units.



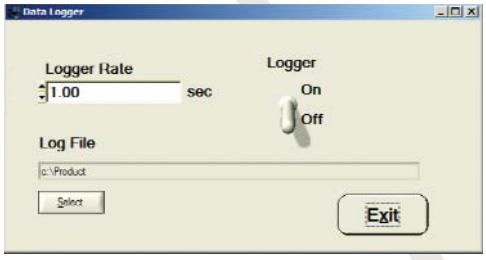
Set up the power supply.



Set up the analog input channels



Set up the thermocouple and calibrate



Set up the data logging rate and log file

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KDAQ200+

SPECIFICATIONS

PARAMETER	SPECIFICATION	COMMENTS
USB Input	USB 2.0 500mA	Must be powered hub if used
Analog-to-digital converter inputs	24 bit ADC	Configurable gain
Usable range	±18V	Output can be calibrated for greater accuracy by user
Absolute maximum input	±30V	If inputs above 18V readings on other channels become innaccurate
Resolution	‹100uV RMS	With 0.1 second ADC sample time – better with additional digital filtering
Input impedance	50k ohms	Input circuitry for bipolar inputs, output of instrumentation must be able sink a small amount (100uA) of current
Thermocouple input*	K type standard	Other types can be plugged in with less accuracy. Software contains polynomials for J, K, T types
Power supply output	Programmable ±5 to ±24V	Negative supply is unregulated and will vary more with no load. Positive supply must have a load.
Power supply current	1.5W total power	1.5W maximum. For example, can use only +15V@100mA, or ±15V@50mA
Digital filter	Single pole IIR filter	Software configurable
DAC output	0 - 3.3V, 12 bits	Output may not go all the way to 3.3V. Typical 3.2V maximum
I/O bit	3.3V	Configurable for input or output
Sample rate – embedded	4 milliseconds per enabled channel minimum	Overall sample rate depends on number of enabled channels and ADC rates
Sample rate – PC	0.1 sec	Minimum
Software requirements	Windows 2000 Service Pack 3 or later	Comes with driver so that a simple terminal interface can be used

** Thermocouple not included* *Specifications Subject to Change without Notice*