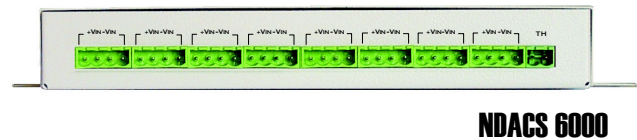


NDACS 6000 Series Data Logger & Acquisition System

- ▶ 8 Multi-function Analogue Channels
- ▶ Integrated Web Server
- ▶ Internet Upgradable Software Features
- ▶ Auto-calibration Using Own Internal Reference
- ▶ Onboard Real-time Clock
- ▶ Integral Signal Conditioning
- ▶ 1000V Isolation
- ▶ Ethernet-TCP/IP- RS232 - Modbus Connectivity
- ▶ 250,000 Sample Readings Stored
- ▶ 24 Bit 100 Hz/Channel Operation
- ▶ Fully Programmable
- ▶ Real-time Data Acquisition & Logging Capability
- ▶ Full OPC Server Support



New Network Connectivity

The NDACS 6000 brings new levels of flexibility for developing accurate, reliable and very cost effective solutions in a wide variety of SCADA, DCS, control and instrumentation environments. Ethernet TCP/IP or standard RS232 communications means that NDACS 6000 integrates directly into most current monitoring and SCADA systems and opens up connectivity possibilities which were previously difficult with third party I/O devices.

Flexibility

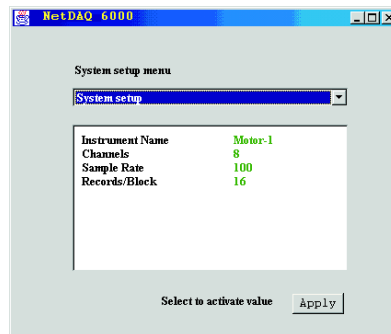
NDACS 6000 can be considered one of the most flexible low cost instruments on the market today. Not only can you read and store data from a wide range of sensors and send this information out in real-time, but you can also simultaneously control other third party instruments using one of the programmable serial ports. Plus you can use the NDACS to convert serial data to Ethernet.

Communication Opportunities

The NDACS 6000 brings new levels of communication flexibility unheard of in low cost distributed data acquisition systems. The instrument is supplied with a 10BaseT Ethernet RS232 serial port as standard. The instrument can be connected directly to many local area networks and modems. Using Ethernet TCP/IP or serial port communications enables full Modbus support to be carried out. The NDACS integrates directly into most SCADA and DCS systems.

Internet Upgradeable Features

The NDACS 6000 is a fully featured Internet ready product designed to operate on the internet or local intranet networks. You can upload new programs and features and undertake hardware diagnostics remotely from your desk no matter where the instruments have been deployed. Custom software can be seamlessly installed and maintained in a large number of instruments.



High Resolution Measurements

The NDACS uses a 24 Bit ADC for all data acquisition operations. Combined with its low noise sensor pre-amplifiers input noise below 1uV can be achieved. The low electrical noise ensures that applications, such as structural monitoring with load cells and strain gauges, and temperature monitoring with thermocouples and RTDs, achieve results you expect from systems costing many times this unit's price.

Reduced cabling costs

NDACS 6000 can be installed right at the point of measurement. This has the advantage of reducing cable pickup noise and expensive cabling installation costs.

Signal Inputs

Multifunction channels handle virtually any analog or digital signal input without the need for any external signal conditioning. Direct connection is supplied for a range of signals, such as voltage, current 4-20mA, thermocouple with integral CJC, resistance, RTD sensors, strain gauges, load cells and logic status levels. Each analogue input has a sample rate following digital filter so your signals are cleanly and accurately recorded without any need for drift throughout the lifetime of the instrument.

Portable Acquisition

By connecting the NDACS to your portable computer using a standard Ethernet cross over cable you can get high quality data at the full bandwidth without any need for a hub making the unit ideal for field and portable acquisitions. You can also leave the instrument deployed and collect data at your convenience.

Data Logging Operations

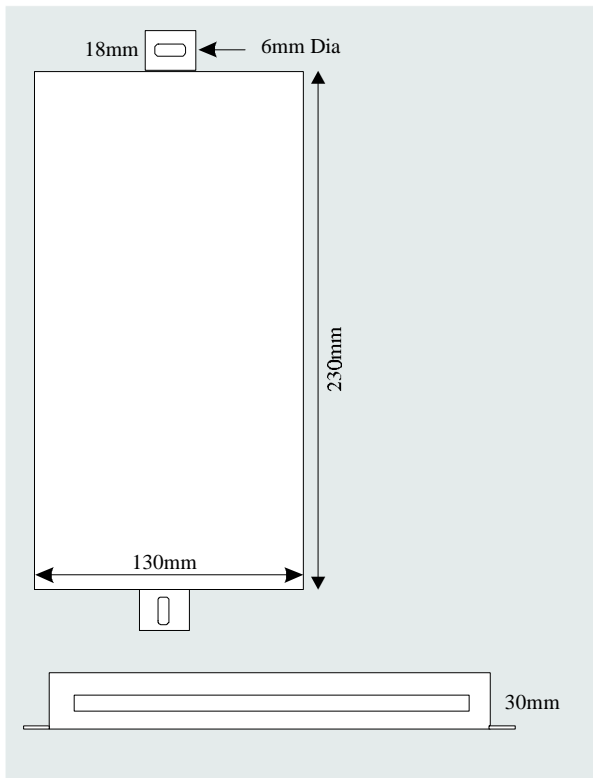
Unlike most acquisition systems the NDACS 6000 operates as a stand-alone data logger as well as a real time Ethernet data acquisition system. You can configure the instrument to record data continuously, carry out event logging with data trigger options and undertake control operations.

Remote Deployment

The NDACS can be connected directly to a modem for remote field applications. Data can be logged automatically when the unit is deployed as a stand-alone logger and later downloaded at your convenience.

Portable Measurement

The NDACS 6000 can be connected directly to your laptop PC using a standard Ethernet printer UTP (cross over cable) to get instant, high quality I/O with no interface cards. It is ideal for local and field deployed applications



Processor

Memory

ADC Resolution

Communications

Ethernet

Serial port

Number of Analogue Inputs:

Number Digital I/O:

Isolation:

Power Requirement:

Sample rate:

(Software selectable)

Overload protection

Measurement

Channel configuration

Voltage DC

Current DC

Resistance (2-3 terminal)

Strain Gauges

Status/Digital I/O levels

Thermocouple types

Cold junction correction

Resistance thermometer (RTD)

Excitation Supply

Connectors

32 Bit 150 MIPS

4 Mb Flash

24 Bit

10BaseT port

RS232 Port - to 156Kb

8

4

1000 V

10 W Max

100 Hz/channel 8 channel

200 Hz/channel 4 channel

400 Hz/channel 2 channel

1 KHz 1 channel

25V continuous

By software for each channel

± 2.5mV to 5V, software selectable

4-20 mA, Any by external shunt

0 - 1 MΩ

half and full bridge. 120/350

Ohm gauges

TTL non-isolated

Rising/falling edge detect

B,E,J,K,N,T,R,S

Internally processed by software

PT100 2 or 3 wire

2.5V, 20mA per channel

Screw terminator to accept

2.5 mm² cable

Industrial Applications

There are many applications for which the 6000 can be deployed:

- ▶ Engine Test Bed Monitoring
- ▶ Process Measurement & Control
- ▶ Boiler Temperature Monitoring
- ▶ Climate Control
- ▶ Event Monitoring
- ▶ Remote Field Monitoring And Reports
- ▶ Structural Monitoring
- ▶ Shock Analysis
- ▶ Seismic Recording

Applications Software

The NDACS is fully supported for a wide range of applications packages such as:

DASYLab

Labview

Excel

HP-VEE

Wonderware

Citek

Wiscon

Intellution ifix

Data can be passed to any Windows application software that supports Windows DLL calls. Examples shown in the user manual demonstrate how this simple task can be undertaken in a range packages such as Microsoft Excel. Using a spreadsheet you can create some very cost effective logging and analysis application

In order to ensure compatibility to many modern SCADA and control systems, the NDACS can act as an OPC server allowing units to be directly added to 3rd party applications without the need for expensive softw development. Simply connect the unit into your network and take data directly into your applications package.

Instrument Configuration

The NDACS 6000 can be configured and real-time data observed using your favourite web browser, or for Windows applications by the standard driver provided with each unit. The standard Windows driver supplied with all of our units offers multi-user multi-instrument operations. Many users can read and process data simultaneously yet independently of each other. A password protected operating environment is used to limit access to the instruments. Only users who need to be able to alter systems operations can do so. While the are doing so other people can only read the data.

User Programs

The NDACS is programmable as it allows custom user software to be installed. User software can be created to provide online processing such as advanced digital filtering, custom sensor linearisation, alarm monitoring and control of external instrumentation. User programs can be created using the industry standard C language. You can even configure the web server software to show your own customised pages.