

Power Key Card Option

POWER, HARMONICS, & WAVEFORM STORAGE

- ✓ Uses KeyCards for Versatility
- ✓ 8 Channels, 4 Voltage, 4 Current
- ✓ Up to the 50th Harmonic Voltage & Current
- ✓ Weather-Proof Case (IPX4)
- ✓ KVAR, KW, KVA, PF for each Phase
- ✓ Waveform Recording
- ✓ RAM Card Memory to 2 Meg.
- ✓ Data Trend Analysis Software
- ✓ Current Clamps from 5A to 3000A
- ✓ Field Programmable
- ✓ Field Readout of Recorded Values



The Ultimate Field Logger

When configured with the *Power KeyCard*, the *InterLogger* becomes a comprehensive, full-featured power logger in a rugged compact case. It is perfectly suited for field use, weighing in at just 5½ kg. It's powered from the lines it is measuring and backed up by a 3 amp/hour sealed lead-acid battery.

All setup information (such as the number of phases, storage interval, etc.) can be entered directly from the logger keypad. This means you don't need to go back to the lab or carry around a computer to set up an *InterLogger*; simply set it up in the field.

Once the survey has started, you can use the *InterLogger's* front panel display to look at the real-time values of most measured data, as well as statistical information (including survey minimums and maximums). Think of it — a wealth of data at your fingertips right there in the field without having to download. You only have to download when you know that your survey contains the data that you're looking for.

Harmonic Analysis

A modern power concern that's becoming increasingly apparent is harmonic distortion of the fundamental waveshape. Motor drives, computers, and various industrial processes all contribute to the harmonic problem. The *InterLogger Power KeyCard* measures the odd and even harmonics up to the 50th to cover the vast majority of harmonic problems.

Harmonics can be identified in the field by reading the Total Harmonic Distortion data (THD) from the logger display.

Measured Data

The *InterLogger Power KeyCard* provides a wealth of data including voltage and current for a fourth channel. (this is normally used for monitoring the neutral conductor). *For a complete list of all the measured and calculated data, please see the reverse side of this data sheet.*

Logger Memory

Main memory is provided by an external SRAM memory card or an internal 128K RAM chip. Memory size is selectable by the user and may be ordered up to 2 megabytes or as little as 128K, allowing you to tailor memory to *your* needs. The memory card allows you to download the logger either conventionally through the RS232 port, or by loading data from the memory card directly into the computer via a PCMCIA slot or a card reader. You can leave the logger where it is and take back the memory card to the lab for analysis. **Memory cards** — the ultimate in convenience.

InterLogger & KeyCards

KeyCards are special memory cards that contain the firmware to reprogram your *InterLogger* into many different recorders. Plug in the *Power KeyCard* and the *InterLogger* becomes a power logger. Plug in the *Voltage KeyCard* and you have a fully configured voltage

logger. The *Current Inrush KeyCard* turns your *InterLogger* into a cycle-by-cycle RMS current and voltage recorder. Northwood is constantly developing new KeyCards to make your *InterLogger* the most versatile recorder you've ever owned.

Data Trend™ Software

Data Trend™ software for Windows is the easiest point and shoot software tool available. Display up to *nine traces in the same graph window* (great for comparing waveforms). Want to take a closer look at a waveform or graph? It's easy with Data Trend™. Simply drag the cursors to frame the area of interest and hit the ZOOM button. Data Trend™ allows you to zoom in or out to any level you want on both the X-axis (time) and the Y-axis (volts, amps, power, etc.). For every graph or waveform, there is a corresponding data table. Since this is a Windows program, all graphs can be printed in colour on colour printers.

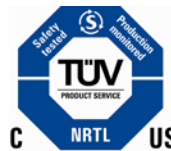
Waveform Analysis

Snapshots of both the voltage and current waveforms are available on the same basis as the storage of the harmonic data.

This allows the user to compare these waveforms as an aid in determining the likely source of the harmonics.

INTERLOGGER Power Specifications

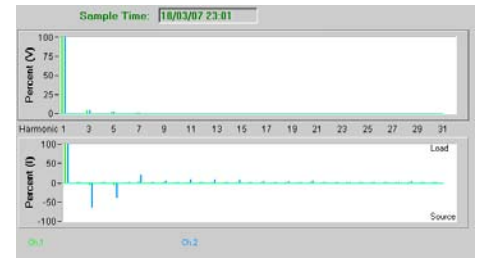
Specifications		
Measurement Lines	102W, 103W, 303W, 304W, 2½ E	
Measurements	<ul style="list-style-type: none"> Instantaneous Minimum/Maximum and Average Values for up to 4 Currents and Voltages. Average Value for Frequency, Effective Power, Reactive Power, Apparent Power, and signed Power Factor for up to 3 Channels. Instantaneous Values for THD (V), THD (I), Harmonic Components up to 50th (I & V), and Waveform Storage (I & V) for 4 Channels. Demand Graphical and Tabular analysis of all data including Angular Magnitude calculations for Current and Voltage harmonics. 	
Measurement Ranges	Voltage	240/600 VAC+ 25% Over-Range
	Current	1 VAC Fixed Range (5A - 3000A Clamps Available)
	Frequency	45-65 Hz - Autosensing
CT/PT Ratios	Adjustable to 50,000:1	
Accuracy	Voltage	½% rdg. ±1 LSD
	Current	½% rdg. ±1 LSD (Plus Clamp Error)
	Power	½% rdg. ±1 LSD (Plus Clamp Error)
Sample Rate	128 Samples/Cycle	
Memory	<ul style="list-style-type: none"> RAM Card Storage up to 2 Mbytes Survey Length is automatically assigned depending on memory size, storage rate, and selected parameters 	
Display	2x20 Characters, Alphanumeric	
Communications	USB Isolated COM Interface and/or via PCMCIA port	
Power	External 100-240VAC to 9VDC or 6-volt internal rechargeable battery during a power failure. Max.4.5W while charging the battery.	
Operating Temperature	-20°C to 50°C (0°F to 125°F)	
Operating Humidity	0 to 90% non-condensing	
Physical Characteristics	W x L x H	9¾" x 10¾" x 7" (25 cm. x 27 cm. x 18 cm.)
	Weight	11.2 lbs. (5 kg.)
Software Requirements	Data Trend for Windows version 2.0 or later, Pentium class PC compatible, Windows 95 or better, 4 Mb of hard disk space, VGA display, mouse and 1 free serial port.	
IP Rating	IPX4	
Approval	600V CAT IV (Measurement category IV is for measurements Performed at the source of the low-voltage installation). Certificate No.: U8 11 07 77478001 Test report No.: 240-1008716-000	



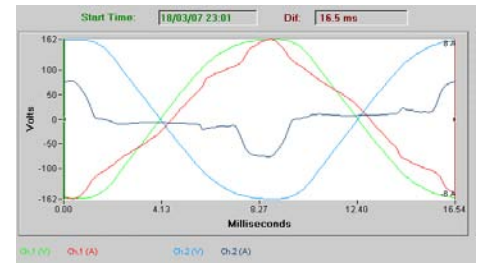
Specifications subject to change without notice.

Data Trend™ Graphs

Below are just a few of the graphs you'll get from the InterLogger Power KeyCard and Data Trend™

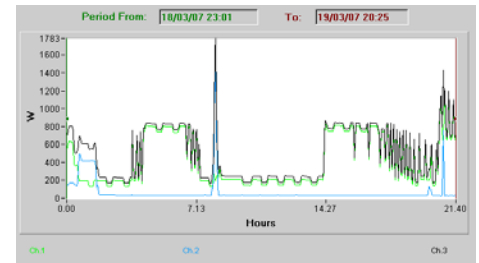


Harmonic Amplitude Data (Screen 1 of 2)
Detailed harmonic strength information including direction of harmonic components can be displayed.



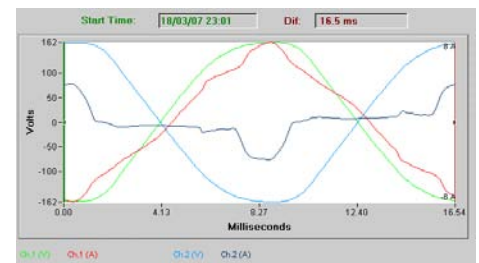
Average RMS Voltage and Current

Current and voltage trends are displayed on one screen for at-a-glance troubleshooting.



Effective Power

True RMS power measurements for single through 3 phase systems can easily be viewed. Full vertical and horizontal scaling is supported.



Waveform Display

Wave shapes for voltage and current can be displayed and analyzed. Tabular view of data is also available.

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