HL-1 HyperLogger™ Data Logger

Features

- Field expandable inputs to 24 analog or 48 digital
- Read serial data with optional interface module
- Battery or AC operation
- Speeds to 150 samples/second
- Five programmable alarms standard
- Full differential inputs (optional isolated inputs)
- Input option: Thermocouples, Vdc, Adc, Serial data, RTDs, Hz, more
- 13 bit ADC (12bit – bipolar)
- Landline, cellular, RF or Ethernet communication links
- Program with HyperWare-icon based software
- Removable PCMCIA memory option
- Made in the U.S.A.

The Authority in Unrestricted Data Logging

HyperLogger™ Data Logger

The HyperLogger™ portable data logging system is a self-contained instrument capable of recording data from 4 to 24 analog or 48 digital channels. The included D cells (6) provide approximately 4 weeks of operation. Field-expandable with optional Interface Modules the HyperLogger is an excellent data collection instrument for practically any application.

The HyperLogger consists of the System Base and up to 6 User-specified plug-in Interface Modules, HyperWare™ Windows™ based software, and any additional User-specified accessories. Interface modules are described on a separate sheet. Included in each System Base is a Digital Input (Event or Counter input), two alarm relay outputs, three TTL level digital alarm outputs, and a Cold Junction Compensation sensor for thermocouple measurements.

The HyperLogger System is housed in a latching, weatherproof enclosure containing the system microprocessor, data storage memory, Analog to Digital converter, 2 line x 16 character liquid crystal display, batteries, input\output terminal strip and six interface ports that accommodate a variety of HyperLogger Interface Modules and accessories.

Circuit design incorporates low-power CMOS circuitry for extensive energy conservation. Additionally, low-voltage external power can be directly connected to the HyperLogger. In the event of external power failure, the HyperLogger will automatically transfer to the internal batteries for uninterrupted logging.

User Interface

The HyperLogger front panel includes User control buttons for Enable, Stop, System Status display, Power, and Output Alarm Relay override. A two-line LCD provides for real-time data display of actual and calculated input signal readings, system status, and display of User programmed alarm messages. Front panel LEDs can be User programmed for status and alarming applications.

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HL-1

Modular I/O: Six interface ports, provide up to 24 analog and/or 48 digital channels. Each port can accept Interface Modules ranging from four channel `Universal' Interface Modules (field configurable for 6 thermocouple types or 15 ranges of VDC or ADC) to a family of other modules for frequency, event, RTD, thermistor, counter I/O and modules for removable PCMCIA Data Memory modules and modem modules. Analog Interface Modules with full differential inputs, software programmable gain and configuration, included front-end completion circuitry and rugged suppression protection circuitry insure reliable accurate signal conditioning. An optional Programmable Interface Module easily configures to any of a number of serial bus interfaces to read data from Modbus, CAN bus, SDI-12 or serial output transducers sources.

Easy to Program: The HyperLogger is programmed via Windows based HyperWare. Simple to complex programming is readily implemented by developing the program on the PC by dragging and dropping icons and interconnections. Alarming, conditional logging, algebraic data manipulation, statistical calculations, time integral and non-linear polynomial calculations, and a multitude of other functions are all within the capability of the HyperNet visual programming software.

Wiring: Input and Output wiring is handled with the Terminal Strip Adapter (TSA) which allows for mass connection and disconnection of wiring, while maintaining the integrity of the sealed enclosure. Through the use of the TSA, a HyperLogger can be quickly disconnected from its associated I/O wiring harness, moved to another site and reconnected to a new set of I/O wiring without the hassles of discrete wiring connections and requisite wire marking.

Specifications

Data Storage Memory: Battery backed up SRAM. Apx. 40,000 samples internal, to 600,000 samples with optional PCMCIA removable memory card

Data Memory Backup: Lithium cell, 1 year @ 25C

Memory Utilization: User programmable; Stop when Full or Rotary (FIFO) memory

A/D Converter: 12 bit plus sign (13 bit) SAR converter, 18 bit for HLIM-7 Interface Module

A/D Converter Accuracy: +/- 0.1% RDG + 1 bit

Sampling Throughput Rate: 150+ Samples/Sec., rate varies with number and type of channels and programmed signal processing

Interface Module Ports: 6 ports for plug-in Interface Modules and special function modules (modem, PCMCIA)

Digital Port: Integral General Purpose Digital Input channel. Programmable for Event or high-speed Counter. Contact closure or driven input

Outputs: 2 low-voltage N/O relays; 500mA rated: S/W controlled 3 Digital (0/5 Vdc), Current Ltd., Software controlled 5Vdc regulated output, 125 mA current limited

Display: Two line, 16 character per line LCD.

Clock: Date and Time, 24 hour, battery backed up.

Glitch Recovery: Hardware watchdog reset followed by software restart of last operation.

Power Consumption: 9 VDC nominal. Apx. 3mA between readings; apx. 50mA during readings; provided by 6 internal D-cells.

External Power (optional): 9-16 VDC, 10-20 VAC from any semi-regulated external source. Transzorb protected.

Enviromental Mechanical Specifications

Operating Temperature: -10 to 60C (14 to 140F).

Storage Temperature: -30 to 70C (-22 to 158F)

Relative Humidity: 90% non-condensing

Enclosure: Gasketed rain-proof plastic, supplied with liquid-tight wiring fittings and I/O Wiring Plate (NEMA 4x Equiv)

Dimensions / Weight: 10.5"W x 14"H x 6.5"D / 10 lbs with batteries

Shock and Vibration: Capable of withstanding the shock and vibration encountered in normal commercial shipping and handling.

Ordering Information: Specify HL-1 and desired Interface Modules and accessories. System Base (HL-1) is supplied with HyperWare software, HLIM-1 four channel input module, RS-232 cables, DB-9 and DB-25 RS-232 adapters, batteries, 120VAC/12VDC wall power adapter, wiring fittings, and manual.

Contact Logic Beach for configuration assistance.

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