

# DATA LOGGERS - HARDWARE

## SL1000 SERIES

8, 16 OR 24 ANALOG INPUTS -

16 BIT A/D CONVERSION -

STORES UP TO 500,000 VALUES -

[www.signatrol.com](http://www.signatrol.com)

ALARM OUTPUT -

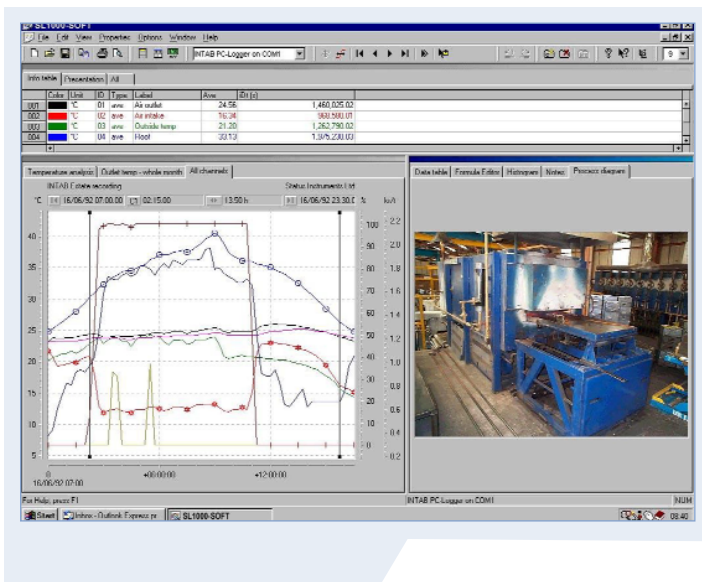
DIGITAL COMMUNICATION -

### INTRODUCTION

The SL1000 series data loggers are 16bit, high performance data loggers. The range consists of two versions, the standard SL1000 with sample rates from 1 second to 1 day and the fast sample rate version with all 8 channels sampled at rates from 1mS to 1 second. The fast logger has 12 bit resolution. Whilst the fast log version is only available in 8 channel format the standard data logger is available with 8, 16 or 24 channels. Each channel can be configured for mA, mV, Volt or thermocouple input. An optional current excitation card is also available if Pt100 sensors are to be used. The software is used to select the input type required. Each data logger is supplied with built in LCD display that allows on the spot fault finding and peace of mind that all is ok before the logging is started. It is a simple case of scrolling through the channels using the up / down keys on the display module.



The SL1000 data loggers are available with two memory options. 512k memory allows 250,000 samples and the 1MB version that will hold 500,000 samples when used in off-line or stand alone mode. Alternatively, the data logger can be used on-line where the readings are stored directly to the hard disk of a computer permanently connected to the data logger.



TYPICAL EXAMPLE OF USING SL1000-SOFTWARE  
(FOR MORE INFORMATION SEE SEPARATE  
SL1000-SOFTWARE DATASHEET)

### ORDER CODE

SL1008	8 Channel 512k memory
SL1008F	8 Channel fast logger
SL1008+	As SL1008 but with 1mb memory
SL1016	16 Channel 512k memory
SL1016+	As above but with 1M memory
SL1024	24 Channel 512k memory
SL1024+	As above but with 1M memory
SL1000-SOFT	See SL1000 Software data sheet

### ORDER CODE EXCITATION BOARDS

SL1000-ACC21	For 8 Pt100's
SL1000-ACC22	For 16 Pt100's
SL1000-ACC23	For 24 Pt100's

**Signatrol.com**  
Data Logging Solutions

Mythe Barns Business Park,  
Tewkesbury, Gloucestershire, GL20 6EA  
Telephone: +44 (0)1684 299 399 Fax: +44 (0)1684 299 375 Email: [sales@signatrol.com](mailto:sales@signatrol.com)

## ANALOG DATA

Measurement Interval

Std Version 1second steps (min 1s)  
Fast log version 1mS to 1 Second  
(All channels sampled within the same interval)

Inputs

Impedance

8, 16 or 24 true differential inputs  
Min 400kW between + and -  
(51W current shunt)

Over-voltage protection

Voltage

Current

T/C - linearization

Resolution

Min 5MW to ground reference  
30V continuous on voltage and input  
 $\pm 10V$ ,  $\pm 1000mV$ ,  $\pm 100mV$ ,  $\pm 50mV$   
 $\pm 20mA$

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

10V range 0.4mV

1V range 40W V

100mV range 4W V

50mV range 2W V

20mA range 1W V

Accuracy (at 25°C)

Voltage

Current

Cold Junction

Temperature Coefficient

$\pm 0.01\%$  to  $\pm 0.04\%$  of FS

$\pm 0.04\%$  of FS

$\pm 0.5^\circ C$

Max 50ppm/ $^\circ C$

## COMPUTER INTERFACE

Standard

Format

Parity

Baud Rate

Protocol

Serial, subset of RS-232  
8bit ASC11, 1 Star bit, 1 Stop bit

None

19200 Baud

ASCII-strings

## MECHANICAL

Length

Width

Height

Weight

Operating Temperature

OPTION: DATA MEMORY

Basic size

Expansion

OPTION: CONSTANT CURRENT SOURCES

Number

Constant Current

Accuracy

Temperature Coefficient

Load

POWER

Mains Adaptor

Voltage

Operating Current

Charging Current

BUILT IN BATTERIES

Charging time

Capacity

315mm

165mm

60mm

1.7 to 2.5kg

-20°C to +60°C

Display + 64kB (stores 32,000 values)

512kB or 1MB

8, 16 or 24 time multiplexed sources

0.500mA

$\pm 0.2\%$  at 25°C  $\pm 10^\circ C$

Max 50ppm/ $^\circ C$

<5kW

12-15VDC

400mA

Max 200mA (Initial)

Max 60mA (trickle charge)

Max. 24 hours with 12VDC mains adaptor

3-500 hours of operation depending on sampling interval  
and which add-ons are present

## MECHANICAL DETAILS

(dimensions in mm)

