DEVAR Inc.

* AUTOMATIC SAMPLING INTERVAL

* MULTI-FUNCTION INPUT
(TEMP., D.C. VOLTS, 4-20mA)

* AUTOMATIC SCALING

*SIGNAL TOTALIZATION

TIME EXTENSION RECORDING

Whether the Smart Chart II Logger records for an hour, a week or a year, the completed recording is at a sampling interval that is appropriate for the length of the recording session. Initially the logger samples every 0.879 seconds. In 2 hours, its memory is full. It then doubles its sampling interval and continues recording; after 4 hours its memory is full again, at a sampling interval of 1.76 seconds. Each time its memory fills up, the logger doubles its sampling interval and repeats the process. Sampling intervals corresponding to various lengths of recording sessions are given below.

SAMPLING INTERVALS		
Sampling Interval	**Samples Per Hour**	**Through A Period Of**
0.88 seconds	4,096	2 hours
1.76 seconds	2,048	4 hours
3.52 seconds	1,024	8 hours
7.03 seconds	512	16 hours
14.06 seconds	256	32 hours
0.47 minute	128	2.66 days
0.94 minute	64	5.33 days
1.88 minutes	32	10.8 days
3.75 minutes	16	3.02 weeks
7.5 minutes	8	6.1 weeks
15 minutes	4	12 weeks
30 minutes	2	5.63 mos
1 hour	1	11.2 mos

MULTI-FUNCTION INPUT

The SCII records temperature, either with its internal thermistor or with an optional temperature cable. The temperature cable is needed for recording rapidly-changing temperatures, surface temperatures, and temperatures outside of the operating range of the SCII. Alternatively, the logger can record DC voltage, DC current and contact status. It is not necessary to specify the recording function in advance; you specify it when downloading to your computer.

AUTOMATIC SCALING

Automatic scaling permits the SCII to operate over wide ranges of signal level in DC voltage and DC current. The logger starts recording at its lowest scale range and rescales each time the signal exceeds the scale range. Automatic scaling also functions when the SCII is recording temperature; it allows the logger's 256 steps of resolution to be used to maximum advantage. When recording temperature, the scale range is determined by the maximum temperature recorded, and the resolution is best at the top of the range. Consequently, if recording is taking place in a freezer, resolution is good at the low temperatures, while if recording is taking place at room temperature, resolution is good in that range but coarse if the logger is subsequently exposed to low temperatures. The SCII initially scales itself on its first reading. It is limited to four changes of scale after that reading.

Signal totalization is provided for your FLOW signals along with the feature of logging data of any non-linear signal by characterizing with the use of a 17 segment "strapping" table.

HOST-COMPUTER SOFTWARE

The host-computer software produces a clear, well-formatted-presentation-quality graph. The vertical grid lines fall on major time increments. A zoom function permits the user to examine details in the record and select a portion of the graph for display. The graph includes the logger's serial number, complete date and time information, title provided by the user, sample rate, min/max and avg. signal readings, and online signal reading. The finished graph can be printed or exported to other software using the Windows ® clipboard function. The data may be saved onto a disk and imported into common spreadsheet programs.

SPECIFICATIONS MODEL SCII-8K

INPUT
a. Temperature: Recording via internal thermistor
b. D.C.Voltage: 0 to 27 VDC via plug-in cable
c. D.C. Current: 4-20mA via plug-in cable

TEMPERATURE
a. Resolution: 0.3ºC or better when range of recorded
                  temperature is 25ºC or less

b. Accuracy: 0 to 70ºC: +/- 0.5ºC +/- one step of
                  resolution at 25ºC: +/- 0.3ºC

VOLTAGE
a. Input Impedance of Voltage Input:
   100k Ohms, biased to 1.25 Volts

b. Resolution: 0.4% of scale

c. Accuracy: +/- 1% of scale +/- 30mV

MEMORY
8K EEPROM

SAMPLING INTERVAL
Initially 0.879 second, doubles repeatedly as recording
progresses

BATTERY
3 V CR2032 lithium coin cell, provides one year of
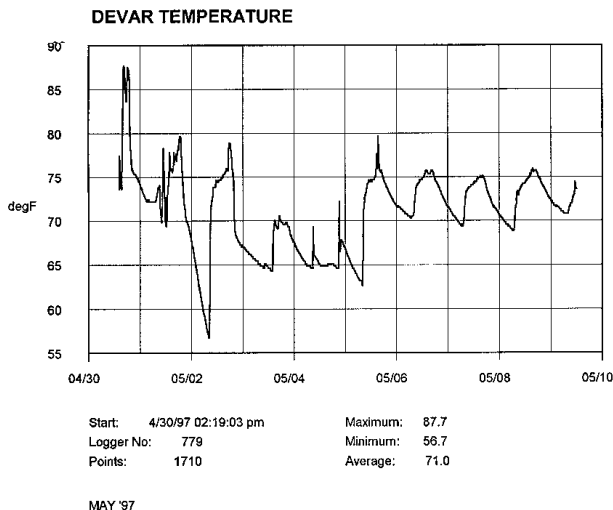continuous recording

SIZE, WEIGHT
2 1/4 in. by 1 1/2 in. by 13/16 in., 1 oz.

HARDWARE REQUIREMENTS
IBM PC or compatible computer running MS Windows ®
with an unused serial port and 0.5 megabytes of free hard-
disk space.

Specifications subject to change without notice.

DEVAR TEMPERATURE

Start: 4/30/97 02:19:03 pm	Maximum: 87.7
Logger No: 779	Minimum: 56.7
Points: 1710	Average: 71.0

MAY '97

BULLETIN 990018-0003 5/01

OPERATIONS

The operation of the SCII-8K is controlled by a button on its
label. The mode of operation is indicated by a light to the left
of the button.

There are three modes of operation: RECORD, STANDBY
AND SLEEP.

RECORD is entered from SLEEP by a press of the button;
the light makes double blinks to indicate that the logger is
recording.

STANDBY is entered from RECORD by a press of the
button; it is indicated by single blinks of the light. In the
STANDBY mode the logger does not record; it keeps time
and retains data for later downloading to the computer.

SLEEP is entered from RECORD or STANDBY by along (two
second or more) press of the button. In the SLEEP mode, the
logger is inactive and its light does not blink.

Data can be downloaded from the logger only when it is in
the RECORD or STANDBY modes. (Refer to the HELP file
for instructions on recovering data in the event that the logger
is inadvertently put to sleep).

ORDERING INFORMATION

MODEL NO.	DESCRIPTION
SCII-8K	Basic multi-function data logger (8K memory)
SC-C-T	Temperature input cable, 2 ft., +/-0.2ºC Accuracy (-20 to 80ºC)
SC-C-V	Voltage input cable, 1 ft.
SC-C-I	Current input cable (4-20mA)
SC-S-I	MS Windows ® software and 9 pin RS232 cable.
SC-8K-SK	Starter kit (includes 4 items above)

Additional Input Cables:

SC-C-HT	Hi temp.input cable,2 ft.(25° to 140ºC)
SC-C-LT	Lo temp input cable,2 ft.(-55° to 25ºC)

DEVAR Inc.

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