

C.

DEVAR Inc.

TM

R

SMART CHART PAPERLESS RECORDER



The Model 8100 SMART CHART Paperless Data Recorder - It's portable, quick, accurate and clean. Your data is vital, whether monitoring an ongoing process, or working on research. DEVAR has designed SMART CHART to assure that your data is accurately logged and stored in the measurement units you need.

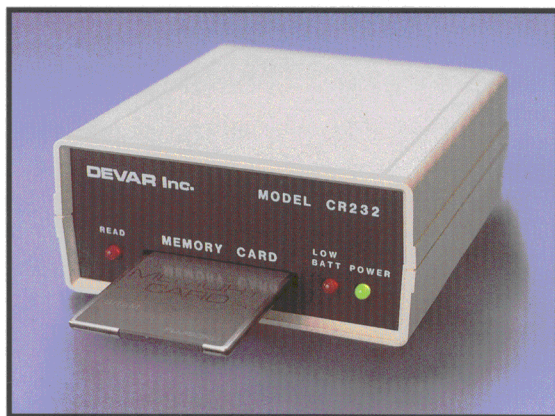
SMART CHART provides continuous monitoring on 8 isolated input channels for up to 3.5 years. Data on voltage, current, temperature, fluid, gas, pH, level and mechanical speed can be monitored and instantaneously displayed on SMART CHART's LCD graphic screen. Data is displayed and recorded in engineering units that are programmed via the function keypad. (Typical units are RPM, pH, PSI, °F, %, etc.) A dot matrix screen displays your data in graphic (bar or line) as well as digital format. As the screen is filled, data is recorded internally on 64K of internal memory.

Data can be transferred at any time to a removable and reusable memory card. (See below) The memory card provides permanent storage or can be downloaded to an IBM® PC compatible for analysis, using popular spreadsheet software, or for hard copy printout. Past data can be reviewed at any time while recording, by simply scrolling back to the point you wish to view. Any two input channels can be displayed simultaneously on the screen providing more versatile monitoring.



SMART CHART'S FEATURES MAKE IT A SMART CHOICE

- 0.1% Electronic Recorder
- Up to 8 Channels
- Paperless
- High / Low Alarms
- Portable or Panel Mount
- 8-Digit Signal Totalization
- 32,000 Datapoints per Channel
- Battery or AC Operation
- Transmitter Power Supply
- 125mS Sample Rate
- Variable Recording Interval (0.25 sec. to 1 hr.)



Memory Card Reader downloads
SMART CHART data to IBM® PC

SMART CHART™

Performs Perfectly In Many Applications



pH ANALYSIS

In the laboratory or in the field, pH electrodes can be connected directly to SMART CHART. 0.00 to 14.00 pH or any range can be monitored and recorded. This application is useful in food, chemical and pharmaceutical processing. Out-flow effluent and cooling water, as well as environmental sites can also be effectively measured. Manual or automatic temperature compensation may be selected. A variety of DEVAR self-cleaning electrodes are available.

TEMPERATURE MONITORING

Thermocouples and RTD's (Resistance Temperature Detectors) connect directly into the SMART CHART. Temperatures can be monitored in almost any environment. Applications include process temperature, test cells, injection molding machine operations, turbine bearing temperatures, many laboratory requirements, building maintenance and HVAC.

MOTOR LOAD/CURRENT/VOLTAGE MONITORING

An increase of current drain in vital motors, pumps and turbines can result in equipment loss and expensive downtime. With clamp-on current transformers, measuring up to 500 Amps, SMART CHART monitors loads and allows quick comparison of historic and real protection for your valuable equipment.

CONTINUOUS LEVEL MONITORING OF TANKS/WELLS/BINS

Using level monitoring sensors, tank leaks, well levels, unwarranted discharges and excessive flow rates can be detected. SMART CHART also records level activity to document trends. In addition, SMART CHART's internal alarm feature can warn operators of high or low levels or even activate pumps or valves (hi and low alarms are available for each input).

POWER/UTILITY SURGE MONITORING

Measurement of voltage or current surges can provide important data in determining causes of spurious outages or damage to sensitive instruments or computers. SMART CHART's portability allows you to place it in the field, "where the action is" or mount it at your distribution station panel board.

OTHER SMART CHART APPLICATIONS INCLUDE:

- Power Utility Service Monitoring
- Fiber-Free Clean Room Installations
- Speed and Non-Contact, Infra-red Temperature Monitoring
- Strain Gage Measurements
- Wind Tunnel Tests
- Digitally Stored, Tamper-Proof Data Gathering for Municipal Agencies
- Universal Tool for Plant Maintenance, Instrument and Control Departments, Production Monitoring, Critical Test Cell Data Collection, Portable Vehicle Data Monitoring and Many Specialized Assemblies for OEM Applications.

SMART CHART™ TECHNICAL DATA

GENERAL

Overall Accuracy	0.1% of span
Linearity Accuracy	+/-0.1°C (T/C & RTD inputs)
Resolution	12 bit
Sample Rate	Every 125 ms
Operating temperature	0 to 50°C
Storage temperature	-20 to +70°C
General Dimensions	6 5/16"H x 9 13/16"W x 11 1/2"D
Panel Cut Out	6 1/6"H x 9 9/16"W
Housing	Steel, textured enamel finish, portable/panel mount
Weight	12.9 lbs.
Power requirements	115 or 220 VAC, 50/60Hz, 8.2VA 2 Chan., 15VA 8 Chan.
External Battery	9 to 16 VDC
Communications Port	RS 232

INPUT

No. of inputs	1, 2, 4, 6 or 8
Input Isolation	500 VRMS
Standard inputs	-T 4/20mA (5 Ohms, 0.1 V drop), 0/1VDC, 0/5VDC, 1/5VDC, 0/10VDC, mV, Thermocouple -R Strain gage, Potentiometer, R.T.D.
Input Impedance	>15M Ohms
Nonstandard inputs	(see options)
Output power	+24VDC @ 160mA to power eight external transmitters

MEMORY

RAM	32,000 data points per channel (64K bytes)
Recording time	32,000 x recording interval 9.0 hrs. for 1 sec recording interval 22.2 days for 1 min. recording interval 111 days for 5 min. recording interval 3.6 years for 1 hour recording interval
Memory Card	64K to 512K bytes

BATTERY

RAM	
Type	Lithium (AA size)
Working voltage	3.5VDC
Capacity	1800 mA/HR
Battery life	3 yrs. 2 channel
Main	
Type	Sealed lead acid, rechargeable,
Working voltage	12 VDC @ 4AH
Battery life	14 hrs. fully charged (2 chan.) 7.5 hrs. fully charged (8 chan.)
Memory Card	
Type	Lithium,
Working voltage	3.5 VDC,
Capacity	165mAH
Battery life	4 yrs. (128 Kbyte card) (Replaceable w/o loss of data)

DISPLAY

Type of display	Supertwist dot matrix LCD (100 x 64 dots)
Display area	3.5" x 2.25"
Vertical resolution	Graph 64 dots (1.56% of span)
Horizontal resolution	Graph 1 dot/recording interval

CONFIGURATION

User Password	4 digits (factory set, active or inactive via switch setting)
Date	MM/DD/YY
Time (Military)	Hour:Minute:Second
Recording interval	0.25 sec. min.; 1 hr. max.
Recording method	Average, Peak, Valley, All
No. of inputs	1 through 8
ID Code	6 characters (alpha/numeric)
Input type STD.	T/C types, J,K,E,T,R,S,C,N mV, mA,DCV,DCI
Input display range	4 digit (-9999 to +9999)
Calibration	Apply min & max input signal to recorder for autocalibration
Engineering unit	3 characters max., (GPM, PSI...)
Alarm Status	One high, one low, settable anywhere across span, contacts opt.

OPTIONS

- R	mA, Resistance, RTD, S.G. Pot.
- 14I	AC Current Input
- 14E	AC Voltage Input
- 16	Frequency Input 50K Hz, max.
- 18	Pneumatic Input
- 65pH	pH Input
- 65R	Oxidation reduction potential
- P	Panel mount
- RA	19" rack mount adapter
- CR232	Memory Card Reader
- mc256	Memory Card 256 Kbytes 4 input
- mc512	Memory Card 512 Kbytes 6 & 8 input
- E30	Relay Output, SPDT, 3 Amp

ACCESSORIES

- MD301	AC Current Probe 500 Amps AC
- NE4	NEMA 4 Enclosure Watertight
- CS	Soft-sided carrying case
- HCS	Hard (rugged) carrying case
- Model 720	Submersible Pressure Transducer

DEVAR Inc.

706 Bostwick Avenue
Bridgeport, CT 06605
Phone: 203-368-6751
Fax: 203-368-3747
www.devarinc.com
devarinc@worldnet.att.net