

The SIREC process recorder.  
Innovative. Flexible. Communicative.



# sirec

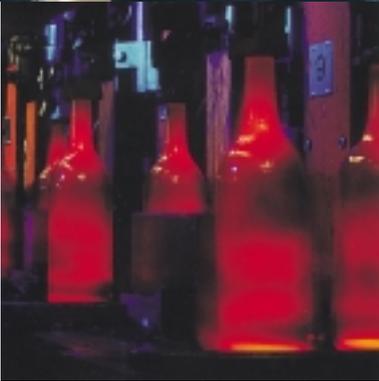


**SIEMENS**

# Solutions from chart recorders to display recorders. Competence from a single source.

The more complex industrial processes are, the more stringent the demands on visualization and analysis. Regardless of whether only one or a whole series of different measuring and recording tasks are involved, the SIREC family of process recorders provides state-of-the-art digital and analog solutions that are economical, sector-specific and future-oriented.





## SIREC process recorders. At home in many industries.

You will find typical applications for SIREC recorders in all areas of process engineering, in the power generation and power distribution industry, and in the food and beverage industry. Whether for continuous monitoring of process variables, plant maintenance, process optimization, or troubleshooting: SIREC recorders are always the first choice.

The entire SIREC product line, dotted-line recorders, continuous-line recorders and display recorders, fulfill all requirements for most all industries, including Water & Waste-Water, Power, Pulp & Paper, chemical, Pharmaceutical and Food & Beverage.

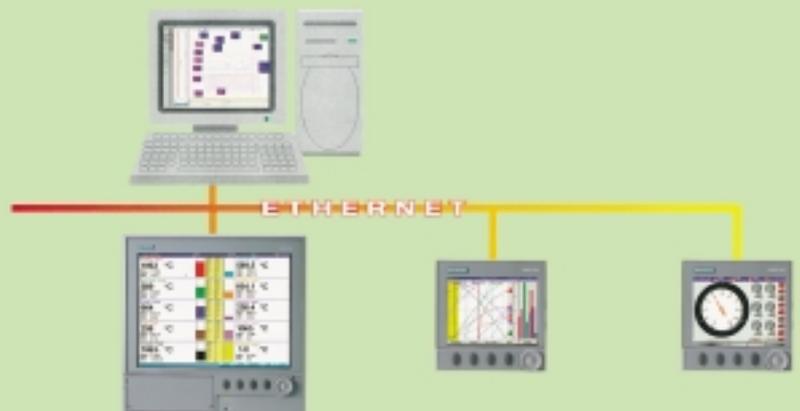
With the capability for remote diagnostics via Ethernet, the SIREC D recorder is the ideal solution for many tasks related to environmental protection. In research and development, its short measuring cycles are the basis for a wide variety of uses.

Even more efficient, even more flexible, even more communicative: the trend in process visualization and analysis is clearly towards display recorders such as SIREC DS, SIREC DM and SIREC DH because of their easy data handling, flexible storage capabilities, long-term archiving and high-speed detection of critical operating conditions. But what is truly innovative is networking over the Internet or Ethernet.

## The new display recorders. For multifunctional use.

SIREC DM  
SIREC DS  
SIREC DH

Standard on all SIREC D recorders is an Ethernet interface for real-time communication via Internet or Intranet, making every display recorder accessible from any desktop via PC, no matter where you are. Even service personnel may have direct online access to every display recorder, allowing more rationalized maintenance and lower costs.

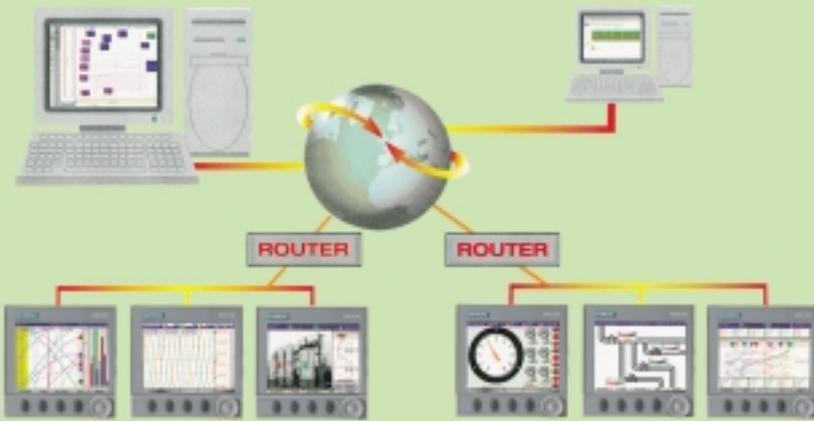


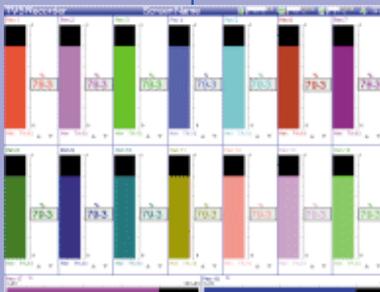
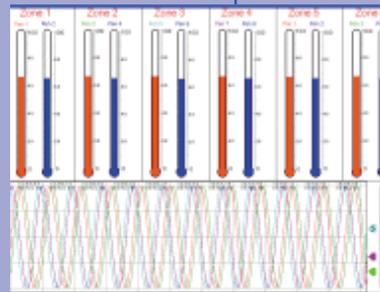
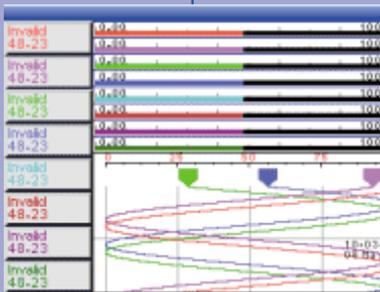
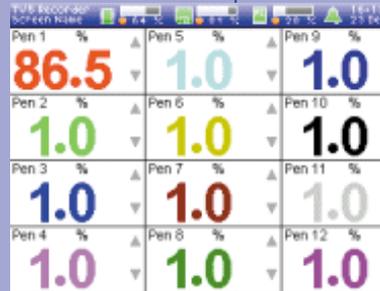
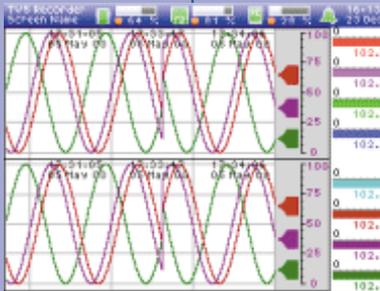
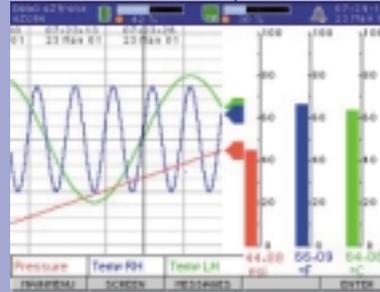
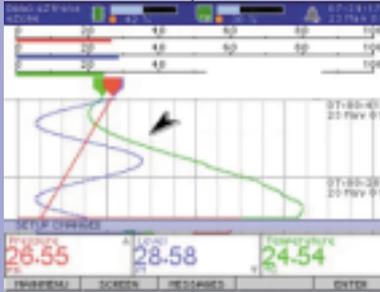
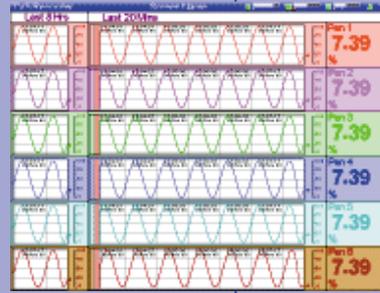
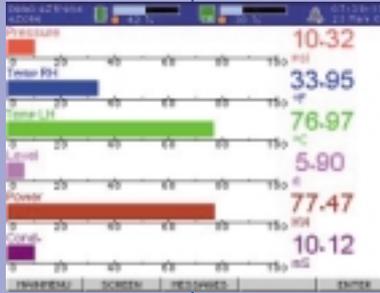
### A new quality

The innovative display recorders stand for a new quality in the acquisition, display, storage, communication, archiving and analysis of process data. Based on format, performance and price, the right display recorder is always available for a wide variety of applications. In addition, the TCP/IP protocol, in conjunction with high-performance software packages, guarantees integrated networking capabilities for all display recorders.

### Concentrating on the essentials

SIREC D's mainstays are the monitoring and analysis of plant processes. Standard or customized application-related displays enable safe, reliable monitoring of the process, allowing the operator to concentrate on the essentials, such as bar charts for actual-value monitoring and/or trend curves for tracing the chronology of process variables. The use of data analysis as platform for preventive measures considerably increases the availability of individual processes.





# The new multifunctional display recorders for worldwide data interchange.

Versatility is the most characteristic feature of the digital SIREC devices. Depending on the requirements, they are available in 6, 12 and 32 channel versions and record signals from analog and binary inputs. Thanks to the accuracy of the input measurement, SIREC D can be used for precision alarm control and processing, but also for extended mathematical operations. Every device is multifunctional, and can be used as recorder, indicating instrument or alarm printer. A customized combination of these three functions is selected by the user according to requirement and shown on the display. The bright, high-resolution TFT color display is wonderfully clear and easy to read.

## Data integrity on an everyday basis

All stored data are encrypted, and are thus fully protected against misuse. Multistage, selective password protection and a logbook function register every incidence

of operator intervention and effectively combat manipulation of your measuring data, ensuring reproducibility of all electronic recordings while also complying fully with the requirements of the United States signature laws regarding such recordings.

## Alarm messages via e-mail

Thanks to excellent menu guidance with multifunction wheel and softkeys, the operator has all functions in view at all times. And SIREC D is open: the Web server function allows you to communicate via LAN or Internet with PCs or handhelds with WAP capability, making it possible to send alarm and event messages around the globe in the form of e-mails and to rationalize data interchange.

## The SIREC D software packages are efficient and application-oriented.

You have optional access to different powerful software packages for parameterizing, evaluating and archiving:

**SIREC D-Viewer** for offline data analysis of stored data for displaying, exporting and printing measured values data (included as part of the standard package).

**SIREC D-Manager Pro** for device configuration as well as visualization, archiving and data transfer in standard formats.

**SIREC D-Server** for connecting any number of display recorders. Communication is via RS 485 or Ethernet using the TCP/IP protocol, and enables real-time display of the alarm messages sent via e-mail.

**SIREC D-Designer** for customized, application-related displays for SIREC DM and SIREC DH. SIREC D-Designer allows display combinations, which can include bar charts, trend curves, digital displays, bit maps and digital images.

SIREC DM  
SIREC DS  
SIREC DH

# Display recorders of the new generation

What the new digital SIREC D family has to offer is in every way both future-oriented and user-oriented. One example: the measured values data can be stored in Fuzzy Logging Mode if required. This technology makes it possible to attain a high level of data compression without compromising data integrity. Put in more concrete terms, this means that more than ten times as much data can be stored on a single storage medium as is the case on standard graphics recorders.

This example is representative of many others. The most important features of the SIREC D recorders at a glance:

## The low-cost SIREC DS

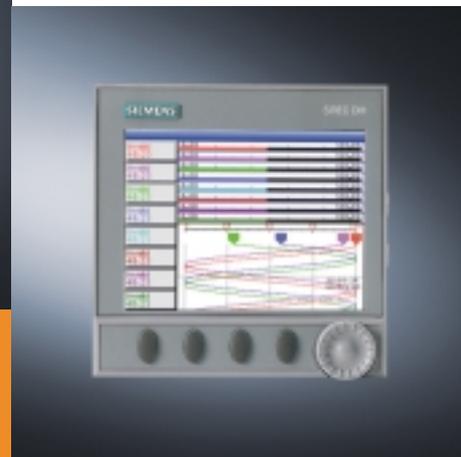
- A maximum of 6 universal inputs (16 bits; 0.015%)
  - As many as 2 binary inputs and 6 relay outputs
  - Front format 144 mm x 144 mm, 5" color LC display
  - Speeds from 1 to 1200 mm/h
  - Storage rate and storage method separately selectable for each channel
  - User-friendly operation via selector switches and softkeys
  - Sampling rate: 100 msec for all channels
  - Fast start: data are recorded 10 sec after the unit is switched on
  - 2 MB internal RAM memory
  - Integration and Totalization
  - Interface: Ethernet TCP/IP
- Data storage on 1.44 MB disk
  - Replay function on the recorder can be activated immediately on-line
  - Configuration on the recorder or via SIREC D Manager Pro software
  - Data analysis with SIREC D's Manager Pro/Server Pro software
  - High level of data compression (10:1) through the use of Fuzzy Mode
  - Power supply 90 to 250V AC or 24V DC
  - Password protection on four levels
  - High level of data integrity: event list documents every incidence of operator intervention on the recorder

SIREC DM  
SIREC DS  
SIREC DH



### The flexible SIREC DM and the supermodel SIREC DH

- A maximum of 16(DM)/32(DH) universal inputs with an accuracy of  $\pm 0.02\%$
- As many as 16 binary inputs and up to 16 binary outputs
- Front format 144 mm x 144 mm; 5.5" color TFT display, SIREC DM
- Front format 300 mm x 300 mm; 12.1" color TFT display, SIREC DH
- Recording speeds: 1 mm/h to 12,000 mm/h
- Storage rate and storage method can be selected separately for each channel
- User-friendly operation via rotary button and softkeys
- High-speed sampling of inputs: on average 200ms
- Fast start: Data are recorded 10 sec after the recorder is turned on
- 4/8 MB internal RAM memory
- Mathematical functions + event marking
- Ethernet interfaces are standard equipment, RS 485 Modbus RTU, interface for bar code reader
- Data storage on 120 MB Super-disk (compatible with 3.5" floppy disk) or 100 MB ZIP drive and PCMCIA cards with a storage capacity of 8 MB until 1 GB hard disk
- Replay function on the recorder can be activated immediately on-line
- Configuration on the recorder or via SIREC D Manager Pro software
- Data analysis with SIREC D Manager Pro/Server Pro software
- High level of data compression (10:1) through use of Fuzzy Mode
- 4 analog outputs
- Power supply 90 to 264V AC or 24V DC
- Password protection on four levels
- High level of data integrity: Event list documents every incidence of operator intervention on the recorder



Precision and speed for recording and processing measuring signals, sector-specific applications, sophisticated monitoring protocols and dialog capability via interfaces, features that are standard on all SIREC paper recorders.

## SIREC chart recorders. Reliable, field-tested and accurate.

No matter how special your measuring tasks may be, SIREC has the right chart recorder for you: sensibly graduated in performance and including everything from simple low-cost units to high-performance units and everything in between. As user, you profit through shorter delivery times and easy installation.

On request, we provide turnkey units ready for immediate operation. Thanks to "plug & play", your SIREC recorder is ready to go as soon as you plug it in.

Suitable SIPROM software, which executes under Windows, enables user-friendly custom configuring of your measuring station and setting of the recorder.

### **Continuous-line recorder, dotted-line recorder, or a hybrid, it's your choice.**

SIREC continuous-line recorders are the best choice for quickly-changing measured variables such as current, voltage or pressure.

SIREC dotted-line recorders are the recorders of choice for measuring of slowly-changing variables such as temperature, pH value or level. These recorders are of a user-friendly design, with backlit display and wide reading angle.

The hybrid recorder is faster than dotted-line recorders or plotters. It can do virtually anything, with a

continuous-line recorder can do, but has a larger number of channels, making it the most economical solution for the output of large amounts of text and tables.

The right chart recorder for every job: the product palette at a glance:

### **The low-cost dotted-line recorder with 6 channels: SIREC P/PA**

- 6 channels
- Input signals DC U/I, TC, RTD, R (freely adaptable by user)
- Measuring cycle: 640 ms for all channels
- Limit-value monitoring
- With or without alphanumerics
- Recordings with fiber-tip pen head, 6 colors
- Dot connection system
- Event selection
- Real-time calendar clock
- PC interface

### **The low-cost unit with front-panel PC interface: SIREC L/LA**

- 1, 2, 3 analog channels, 2 digital channels
- Measured variables (freely adaptable by user)
- Measuring cycle 150/300 ms
- L: without alphanumerics:
  - Input signals DC U/I, TC, RTD, R
- LA: with alphanumerics:
  - Input signals DC U/I, TC, RTD, R
  - Blank paper possible
  - Limit value lines
- Limit-value monitoring
- Event selection
- Settings on front panel; lever and PC interface

### **The versatile recorder with mathematical functions: SIREC PU**

- 6 analog channels, 2 digital channels without time delay
- Input signals DC U/I, TC
- Measuring cycle 300/500 ms
- Backlit display
- Limit-value monitoring
- Alphanumerics
- Recording with fiber-tip pen head, 6 colors, dot connection system
- Event selection
- Real-time calendar clock
- Recording paper: roll or fan-fold paper possible, blank paper
- Summer/Winter switchover
- Settings on front panel; lever and PC interface or infrared remote control
- Mathematical functions



All measured values are recorded on tape at the same time: Variograph 3521

- 3, 6 analog and 6 digital measuring channels without time-delay
- Measuring cycle 120/1500 ms
- Can also be used as continuous-line recorder, output cycle is adapted to the rate of change
- Intermediate buffer for measured values, thus no loss of data when paper must be changed or when tables are being output
- Universal measuring modules
- Alphanumerics for date, time, channel identification, message text and scale printout
- Recording with fiber-tip pen head, 6 colors
- Alarm link
- Zooming and zoning
- Display: digital, analog, hybrid
- Interfaces: RS 232 / RS 485
- Settings on front panel; lever, interface or infrared remote control

Clear, easy-to-read measured-value representation thanks to greater recording width: Variograph 3590

- 3, 6 analog channels and 6 digital channels or up to 12 analog channels
- Measured variables DC U/I, TC, RTD, R
- Measuring cycle: 120/1500 ms
- Can also be used as continuous-line recorder, output cycle is adapted to the rate of change
- Intermediate buffer for measured values, thus no loss of data when paper has to be changed or tables are being output
- Universal measuring modules
- Alphanumerics for date, time, channel identification, message text, alarms, text and scale printout
- Recording with fiber-tip pen head, 6 colors
- Alarm link
- Zooming and zoning
- Display: digital, analog, hybrid
- Interfaces: RS 232 / RS 485
- Settings on front panel; lever, interface or infrared remote control

High-speed recorder with high measured-value resolution: Variograph 3560

- 3, 6 analog channels and 6 digital channels or up to 12 analog channels
- Measured variables DC U/I, TC, RTD, R
- Measuring cycle 120/3000 ms
- Can also be used as continuous-line recorder, output cycle is adapted to rate of change
- Intermediate buffer for measured values, thus no loss of data when paper has to be changed or tables are being output
- Alphanumerics for date, time, channel identification, message text, alarms, text and scale printout
- Recording with fiber-tip pen head, 6 colors
- Alarm link
- Zooming and zoning
- Display: digital, analog, hybrid
- Interfaces: RS 232 / RS 485
- Settings on front panel; lever, interface or infrared remote control
- Recording paper: roll
- Summer/Winter switchover
- IP 54 protection
- Recording width: 210 mm



# More information? Get it quick by fax!

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Yes, I'm curious to know more  
about SIREC process recorders.  
Please send me detailed  
information:

About digital recorder(s):

- SIREC DS
- SIREC DM
- SIREC DH

About analog recorder(s):

- SIREC P/PA
- SIREC L/LA
- SIREC PU
- Variograph

Name

Company

Dept.

ZIP/City

Street Address

Tel. (direct dial)

Fax

Date

Siemens AG  
Automation and Drives (A&D)  
Process Instrumentation and Analytics  
D-76181 Karlsruhe  
Tel. +49 (721) 5 95-69 97  
Fax +49 (721) 5 95-22 39