Sefram

8416

A Powerful Data Acquisition System. No Other Recorder Compares.

The 8416 recorder, with a large TFT colour screen, is the ideal tool to measure, record and analyse signals up to 30 kHz. To suit your various applications, you can easily define programmable parameters to trigger and record data only when you need it.

Its large capacity memory (up to 16 Mwords) allows long term recording of high-speed data. The 8416 includes also RS 232 or IEEE* interfaces for direct connection to your computer.

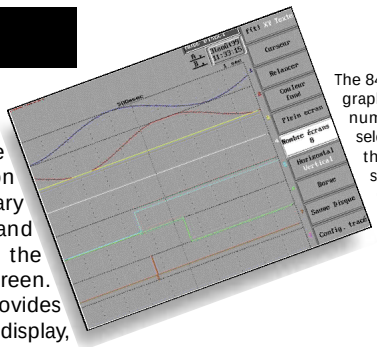
IEC 1010, CAT.III, 600 V

- 4, 8, 12 or 16 channels + 16 logic channels
- Large back lit TFT colour screen providing excellent quality real-time graphical display, even in difficult or remote conditions (control rooms,etc.).
- Integrated thermal printer (270 mm width), with F(t), XY or text modes
- 16 thresholds to define the triggering of the acquisition or the operation of the alarms (2 contacts)
- Transient Capture with a max. sampling frequency of 250 kS/s per channel
- Sophisticated calculation functions and mathematical combinations of channels
- Large capacity memory (up to 16 Mwords*), in segments of up to 128 blocks
- Data and configuration storage on floppy disk (3”1/2) or PCMCIA card* or direct transfer to a PC via RS 232 and IEEE 488* interfaces
- Meets stringent industrial environment safety standards
- Windows™- based acquisition Software* for complete data analysis, reporting and storage in popular file formats.

* optional

Ease-of-use

The 8416 recorder is designed for ease of use in a wide range of applications. The simple control keys are conveniently grouped and located on the front of the instrument. The rotary encoder simplifies the selection and modification of values, as well as the positioning of cursors on the screen. Large back lit TFT colour screen provides excellent quality real-time graphical display, even in difficult conditions.



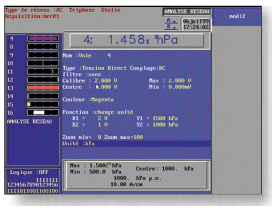
The 8416 displays waveforms in graphic modes (f(t) or XY) or numerical values. You can select the background colour, the number of displays and switch to full-screen display. Cursors make measure - ments even easier.

Up to 16 channels and integrated universal inputs

The 8416 recorder can be configured with either 4, 8, 12 or 16 universal measurement channels; together with 16 “logic” channels. For ease of use, the 8416 incorporates universal measurement inputs. It is the ideal instrument for measuring inputs of DC voltage, RMS voltage, current (with shunts) and temperature using a Pt 100 probe or thermocouples.

Sefram INSTRUMENTS & SYSTEMES

For more information on Sefram products or services, please contact our local distributor or us on **+33.4.77.59.36.81** or **+33.4.77.59.36.80**



Example : modification of the unit into hPa, for barometric pressure measurements.

You can easily execute various calculation functions. You can, for example, automatocally convert measurements into a defined unit.
Mathematical functions can also be carried out between channels (addition, substraction, division and multiplication)

Highly flexible printing

The built-in printer uses thermal recording paper with a 270 mm width. To suit your specific and various applications, you can configure and select all printing's parameters , like plotting mode (f(t) or text), paper speed (1 mm/h to 200 mm/s), number of traces (up to 16) or grid pattern...

For all channels, you can add annotations, specifying the date, the time, the paper speed, the channels names,... It makes your chart record more complete and useful.

SEFRAM 8416

Channels	4, 8, 12 or 16 and 16 logic channels
Voltage Inputs	1 mV to 1000 VDC/ 200 mV to 500 VAC$_{RMS}$*
Current Inputs	with shunts*
Temp. Inputs	thermocouples (J, K, T, S, B, E, N, W5) and Pt 100
Resolution	14 bits
Sampling Freq.	250 kHz/ channel max.
Memory	2 Mwords (16 Mwords*), in segments of up to 128 blocks
Triggering	pos. or neg. edge, window, slope , 16 triggers
Bandwidth	30 kHz
Filters	analog (10/ 100 Hz; 1/ 10 kHz) digital (1 Hz, 10 sec., 1/ 10 min.)
Input Impedance	25 MΩ min. range ≤2 V; 2 MΩ range >2 V
Paper width	270 mm
Paper speed	1 mm/h to 200 mm/s (direct mode) 1 mm/h to 50 mm/s (mixed mode)
Math. functions	+, -, x, ÷ (between channels)
Calculation	on a channel
Storage	floppy disk (3"1/2), PCMCIA card*(40, 63 or 520 MB)
Interfaces	RS 232, IEEE*
Display	Backlight LCD screen (10"4), TFT colour or B&W
Power supply	110/ 220 V
Dim. & Weight	407 x 350 x 160 mm & approx. 10 kg
Warranty	1 year

Supplied with a paper roll, 2 banana plugs per input, a DIN PT 100 per input, a RS 232 connector, a power cord and a user's manual.

* optional

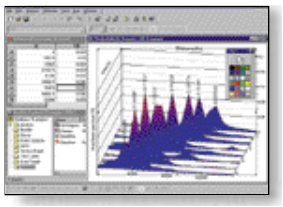
➲ Add value to your recorder by using our accessories. See page 10.

Convenient Data Storage and off-line Analysis

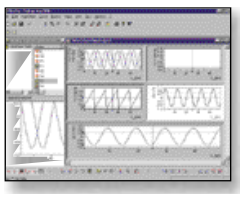
The 8416 has its own PC compatible floppy disk drive to store data and configurations. As an option, you can also integrate a PCMCIA card (type III) or a hard disk (up to 520 MB). It makes data processing easier and quicker.

An RS 232 interface is provided as standard equipment, which can be used to transfer waveform data directly to a computer.

Save time and increase productivity



Flex.Pro is a powerful software with high performance analysis functions, perfect graphic possibilities and impressively easy operation.
You can import data from various sources, analyse them with a wide choice of methods, publish them in documents, visualize them in two or three dimensional diagrams...



With Flex.Pro software for Windows™, you achieve your goal quickly.

For more specifications, see page 10

IEC 1010 Safe Design

Sefram is commited to providing users of Sefram instruments with high-quality equipment they can use and trust in today's industrial test environment, where voltage and current values are particularly high. To insure safety to users, the 8416 recorder meets IEC 1010 requirements (CAT.III, 600 V).

What are the requirements to meet IEC 1010, 600 V CAT.III?

The IEC 1010-1 standard defines four installation categories (I to IV) depending where the equipment is connected to the electrical supply system. Two criteria- installation category and voltage- classify an instrument's capability to resist transient voltages.

The tests for different categories are as follows :

CAT.II 600 V	4000 V peak transient from a 12 ohms source
CAT.II 1000 V	6000 V peak transient from a 12 ohms source
CAT.III 600 V	6000 V peak transient from a 2 ohms source
CAT.III 1000V	8000 V peak transient from a 2 ohms source