

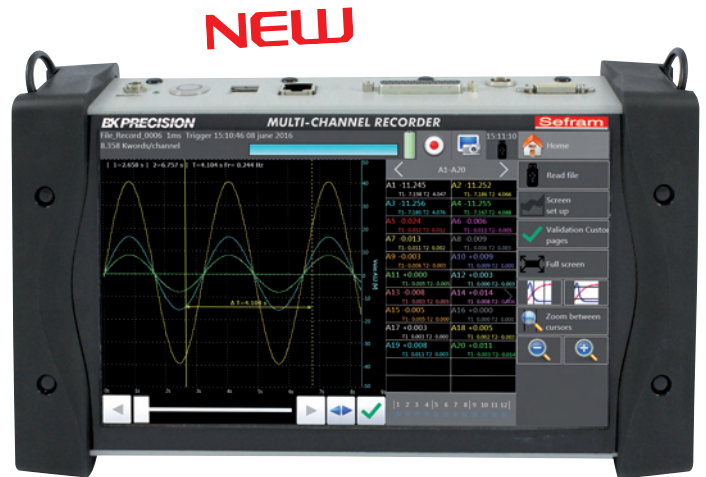


SEFRAM DAS 240

Multi Channel Handheld Recorder

Capabilities

- 20 to 200 analogue channels
- Input: voltage, thermocouple, Pt100-Pt1000, current (with optional adapter), resistance
- Voltage: from 1mV to 200V ($\pm 100V$)
- Temperature: thermocouples (all types), Pt100-Pt1000 (2 or 3 wires)
- 16 Bit vertical resolution
- Max sampling rate: 1ms (1kHz)
- 12 logical channels
- 4 alarms (output)
- 4 logical function input with counter & frequency meter capability
- 10" TFT panoramic touch screen
- Internal hard drive: 32 Gb
- Interfaces: USB, Ethernet, Wifi (option)
- Lithium-ion battery (factory option): 15h autonomy
- DasLab software (licence free)
- Safety: IEC 61010 CAT I 100V
- LabView® driver
- Supplied with calibration report



DAS 240

A multi channel handheld recorder dedicated to process

The new DAS240 recorder has been designed to measure all parameters you can find in a process: voltage measurements, measurements on sensors (0-10V), temperature measurements (thermocouple, Pt100-Pt1000), current measurements (with optional shunt), resistance measurement, counter, frequency. You can view directly the results of measurements (graphs, numerical values) and memorize your results in the recorder memory or in a USB memory stick. The data transfer and data processing can be done later with a personal computer using the licence free DasLab software.

User-friendly interface

The DAS240 is equipped with a panoramic 10" touch screen: the user interface becomes absolutely interactive. The icons and symbols used makes the browsing very easy and will save your time.

A modular solution

The DAS240 is supplied with 20 analogue channels, but you can add 180 analogue channels, by steps of 20. All modules (20 channels) are strictly identical and can perform the same measurements (voltage, temperature, resistance, current).



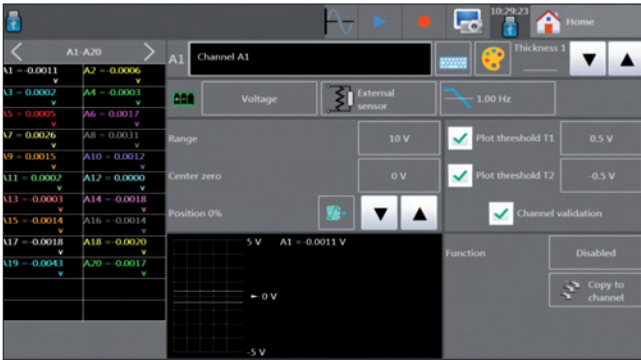
Multiple applications

The DAS240 recorder is really a general purpose recorder for process applications:

- multi channel temperature monitoring and recording
- 0-10V sensors monitoring and recording
- voltage measurements
- pulse counting
- 4-20mA measurement and monitoring (with optional shunt).

Selection guide

	DAS240	DAS240BAT
20 analogue multiplexed channels	●	●
12 logical channels input	●	●
Internal battery (15h autonomy)	-	●
20 channels module	option	option
WiFi interface (USB dongle)	option	option



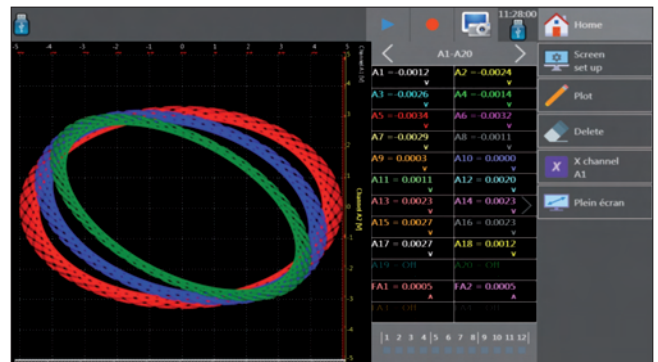
Setup: self-explanatory icons to guide the user

Name	Vole A1	Vole A2	Vole A3	Vole A4	Vole A5	Vole A6	Vole A7	Vole A8	Vole A9	Vole A10	Name
Type	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Voltage	Type
Filter	Without filter	Without filter	Without filter	Without filter	Without filter	Without filter	Without filter	Without filter	Without filter	Without filter	Filter
Function	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled	Function
Range	10 V	10 V	10 V	10 V	10 V	10 V	10 V	10 V	10 V	10 V	Range
Center zero	0 V	0 V	0 V	0 V	0 V	0 V	0 V	0 V	0 V	0 V	Center zero
Max.	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	Max.
Min.	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	-5 V	Min.
Threshold T1	0.5 V	0.5 V	0.5 V	0.5 V	0.5 V	0.5 V	0.5 V	0.5 V	0.5 V	0.5 V	Threshold T1
Threshold T2	-0.5 V	-0.5 V	-0.5 V	-0.5 V	-0.5 V	-0.5 V	-0.5 V	-0.5 V	-0.5 V	-0.5 V	Threshold T2

Channels setup: all parameters can be displayed on a single screen

Channel	Value	Min	Max
Channel A1	0.0024	-0.0058	0.0050
Channel A2	0.0024	-5.0000	0.0040
Channel A3	0.0017	-5.0000	0.0038
Channel A4	0.0015	-5.0000	0.0035
Channel A5	0.0005	-5.0000	0.0035
Channel A6	-0.0003	-5.0000	0.0040
Channel A7	-0.0014	-5.0000	0.0047
Channel A8	-0.0024	-5.0000	0.0038
Channel A9	0.0017	-5.0000	0.0038
Channel A10	-0.0029	-5.0000	-0.0035
Channel A11	0.0040	-5.0000	0.0046
Channel A12	0.0021	-5.0000	0.0035
Channel A13	-0.0017	-5.0000	0.0040
Channel A14	-0.0024	-5.0000	0.0040
Channel A15	0.0014	-5.0000	0.0038
Channel A16	0.0014	-5.0000	0.0040
Channel A17	0.0005	-5.0000	0.0040
Channel A18	0.0008	-5.0000	0.0040

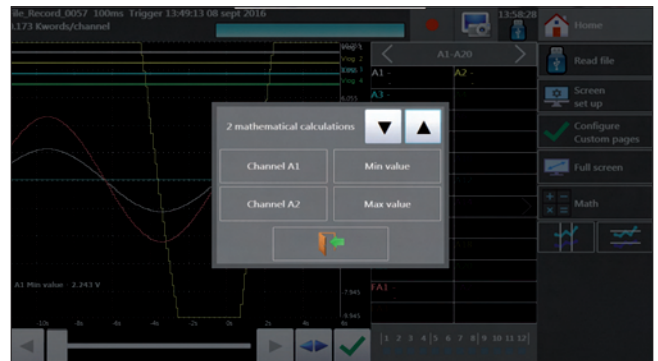
Numerical display of measurements



XY mode



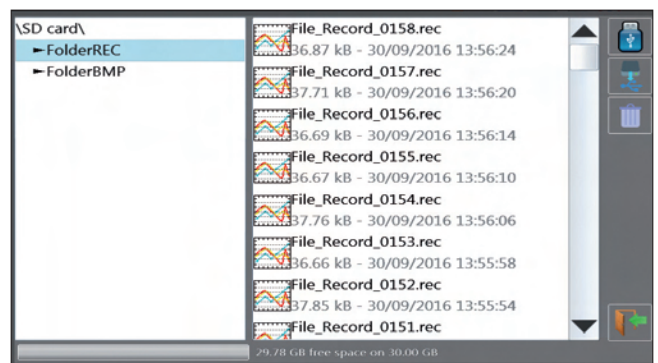
Trigger: multiple choice and combination of threshold, channels and conditions



Math calculation between channels



Measurement display with zoom and cursors



File management with the DAS240

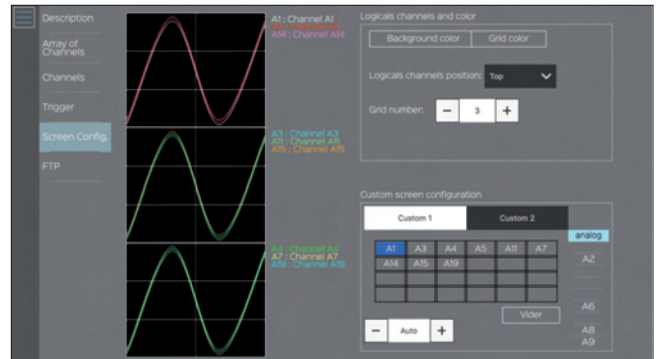
SEFRAM DasLab Software

The new DasLab software for PC (under Windows) is suitable for:

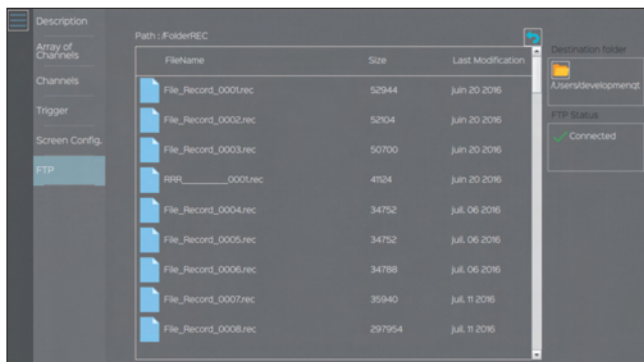
- Managing recorder setup (online & offline)
- Remote setup of the DAS240
- Managing & downloading files (records, setup) from the recorder

DasLab is a licence free software and can be downloaded from Sefram website.

The link between your DAS240 and your computer can be set up through the Ethernet interface or the Wifi interface (option).



DasLab : Remote setup



DasLab: files management

Description	CH	Channel Name	Acqf	Type	Filter	Range	Zero	Position
Array of Channels				analog				
Channels	A1	Channel A1	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	1.00 Hz	10 V	0 V
	A2	Channel A2	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	1.00 Hz	10 V	0 V
Trigger	A3	Channel A3	<input checked="" type="checkbox"/>	Shunt	<input type="checkbox"/>	1.00 Hz	10 A	0 A
Screen Config.	A4	Channel A4	<input checked="" type="checkbox"/>	Resistance	<input type="checkbox"/>	1.00 Hz	10 Ω	0 Ω
FTP	A5	Channel A5	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	1.00 Hz	10 V	0 V
	A6	Channel A6	<input checked="" type="checkbox"/>	PT1000	<input type="checkbox"/>	1.00 Hz	10 °C	0 °C
	A7	Channel A7	<input checked="" type="checkbox"/>	PT100	<input type="checkbox"/>	1.00 Hz	10 °C	0 °C
	A8	Channel A8	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	1.00 Hz	10 V	0 V
	A9	Channel A9	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	1.00 Hz	10 V	0 V
	A10	Channel A10	<input checked="" type="checkbox"/>	Thermocouple	<input type="checkbox"/>	1.00 Hz	10 °C	0 °C
	A11	Channel A11	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	1.00 Hz	10 V	0 V

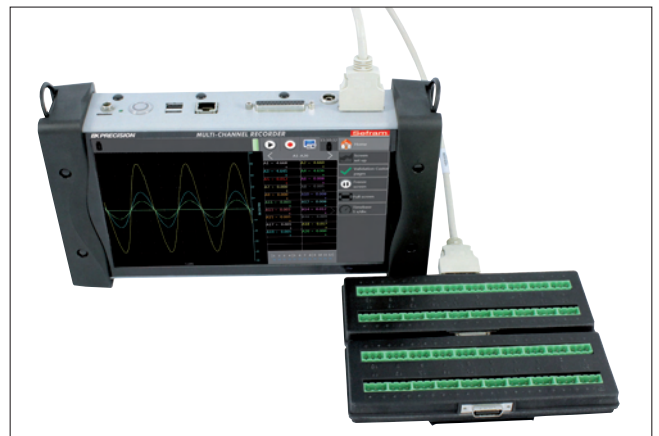
DasLab: channels setup

DAS 240: a flexible solution with the optional 20 channels modules

Your applications needs more measurement channels? The DAS240 is a flexible and scalable system! Supplied with 20 measurement channels, you can add up to 180 channels, by increment of 20, for reaching a total of 200 channels. The 20 channels modules (P/N: 902401000) are all versatile: you can measure voltage, temperature with thermocouples, Pt100-1000 and are supplied with fast connectors and a mechanical system to fix them together.



20 channels module (P/N: 902401000)



DAS240 equipped with 40 channels

TECHNICAL SPECIFICATIONS

Number of channels: 20 channels, expandable to 200 with optional 20 channels modules

INPUT SPECIFICATIONS

DC Voltage
Ranges: 1mV ($\pm 0,5mV$) to 200V ($\pm 100V$)
Maximum input voltage: 100V DC
Accuracy: 0,1% of the full scale $\pm 10\mu V$

TEMPERATURE WITH THERMOCOUPLES

Sensors	Range
Couple J	-210°C to 1200°C
Couple K	-250°C to 1370°C
Couple T	-200°C to 400°C
Couple S	-50°C to 1760°C
Couple B	200°C to 1820°C
Couple E	-250°C to 1000°C
Couple N	-250°C to 1300°C
Couple C	0°C to 2320°C
Couple L	-200°C to 900°C

Cold junction compensation: $\pm 0,5^\circ C$

TEMPERATURE WITH Pt100 - Pt1000

Current: 1mA (Pt100) & 100 μA (Pt1000)
Range: -200°C to 850°C
Measurements: 2 and 3 wires
Accuracy (at 20°C): 0,3°C $\pm 0,1\%$ of reading
Compensated resistance with 2 wires: 30 ohms max.
Compensated resistance with 3 wires: 50 ohms max

RESISTANCE

Ranges: 1k Ω and 10k Ω
Accuracy: 1 Ω (range 1k Ω) and 10 Ω (range 10k Ω)

ACQUISITION - SAMPLING

Resolution: 16 bit
Acquisition system: scanner, one sample per channel
Sampling rate: 1ms to 20mn for $V > 50mV$
 2ms to 20mn for $V \leq 50mV$, thermocouples & Pt100-Pt1000
Trigger: date, delay, threshold, combination of thresholds (and/or), word on logical channels (and, or, slope, level) variable from 0 to 100k samples
Pre-trigger :

ADDITIONAL I/O

Logical channels
Number: 12
Maximum permitted voltage: 24V Cat I
Input impedance: 4,7k Ω
Sampling rate: 1ms max.

LOGICAL FUNCTION INPUT

Number of channels: 4 (K1 to K4)
Maximum permitted voltage: 24V Cat I
Input impedance: 4,7k Ω
Sampling rate: 1ms max.
Pulse counter: 0 to 10000000
Frequency measurement: 1Hz to 10kHz

ALARMS (OUTPUT)

Number: 4 alarms (A, B, C, D)
Output level: 0-5V

Supplied with: a main adaptor 100/240V, manual (CD-ROM), 1 male connector with 25 pins male and cover, 1 cable (70cm) for measurement module connection, 1 measurement module (20 channels) with connectors, a stylus, a soft wipe, a screwdriver.

INTERNAL STORAGE

Internal flash drive size: 32Gb min
Maximum file size: 2Gb

INTERFACES

USB: 2 x USB type A
Ethernet: 10/100base-T with RJ45 socket
Wifi: with optional USB dongle

GENERAL SPECIFICATIONS

Display: 10" TFT touch screen LCD, backlighted, 1024 x 600 dots
Power supply: 15V / 4A max with main adapter (100/240VAC)
Battery: factory option, non removable, Lithium-ion
Autonomy with battery: 15h with standby mode, 10h without stand-by mode
Operating temperature: 0°C to 40°C, 80% RH (no condensation)
Storage temperature: -20°C to 60°C
Dimensions: 66 x 298 x 176mm
Weight: 1,5kg
Safety: Cat I 100V, according to IEC61010-1
Warranty: 2 years

ACCESSORIES AND OPTIONS

- 902401000: 20 channels module
- 902408000: Rugged carrying case
- 902402000: Wifi option (USB dongle)
- 984405500: 12 isolated logical channels board
- 902407000: Logical channels patch cord
- 902406500: 4-20mA / 50 ohms shunt
- 902409000: 19" rackmount kit.



DasLab software and the LabView® driver can be downloaded from our website: www.sefram.fr



FTDAS240A01 - Specifications can be updated without notice

For assistance and ordering



32, rue Edouard Martel - BP55- 42009 - St Etienne - cedex 2
 Tél. +33 (0) 4.77.59.01.01
 Fax. +33 (0) 4.77.57.23.23
 Web : www.sefram.fr - e-mail : sales@sefram.fr