



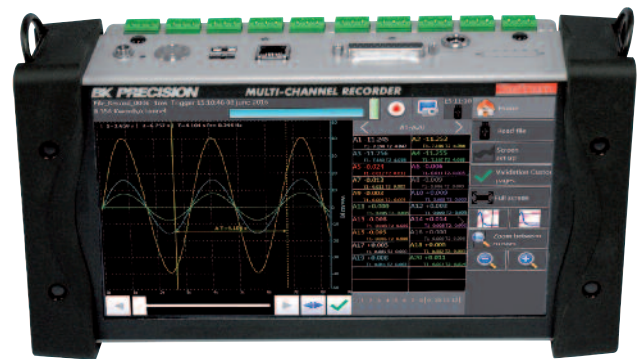
SEFRAM DAS 220

Multi Channel Handheld Recorder

Capabilities

- 10 analogue channels
- Input : voltage, thermocouple, Pt100-1000, 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 & frequencymeter 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 (license free)
- Safety: IEC61010 CAT I 100V

NEW



DAS 220

A multi channel handheld recorder dedicated to process

The new DAS220 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 DAS220 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.

Multiple applications

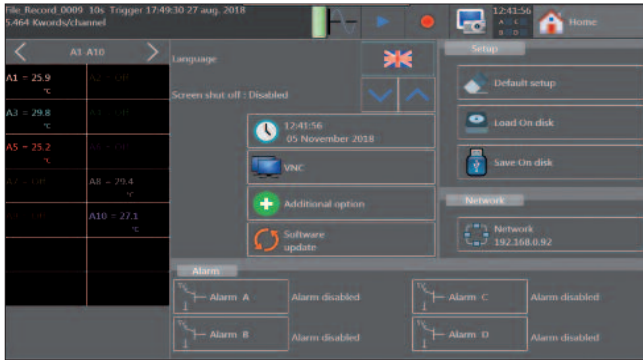
The DAS220 recorder is really a general purpose recorder for process applications:

- 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

	DAS220	DAS220BAT
10 analogue multiplexed channels	●	●
12 logical channels input	●	●
Internal battery (8h autonomy)	-	●
WiFi interface (USB dongle)	option	option





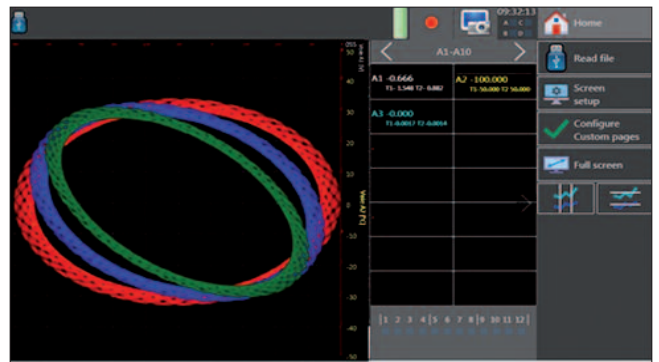
Setup: self-explanatory icons to guide the user

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	
Name	Channel A1	Channel A2	Channel A3	Channel A4	Channel A5	Channel A6	Channel A7	Channel A8	Channel A9	Channel 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
Samp. Period	1 ms	1 ms	1 ms	1 ms	1 ms	1 ms	1 ms	1 ms	1 ms	1 ms	Samp. Period
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

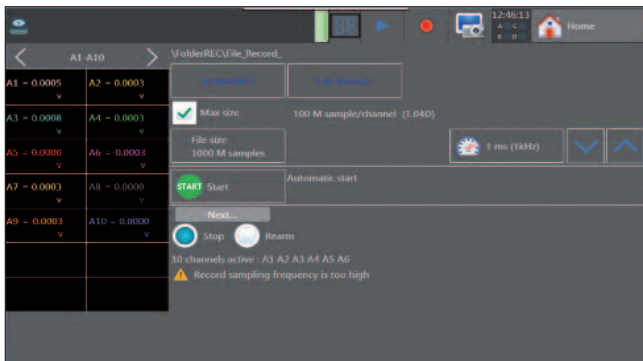
Channels setup: all parameters can be displayed on a single screen

CH	Value	Min	Max	CH	Value	Min	Max
A1	= 0.0008 V	-0.0337	5.0000	A6	= 0.0002 V	-5.0000	0.0011
A2	= 0.0002 V	5.0000	0.0019	A7	= 0.0000 V	5.0000	0.0011
A3	= 0.0003 V	-5.0000	2.0523	A8	= 0.0003 V	-5.0000	2.6462
A4	= 0.0005 V	-5.0000	0.0012	A9	= 0.0008 V	-5.0000	0.0011
A5	= 0.0002 V	-5.0000	2.3338	A10	= 0.0000 V	-5.0000	5.0000

Numerical display of measurements



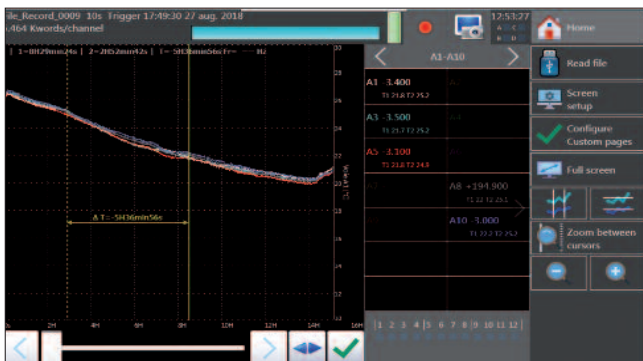
XY mode



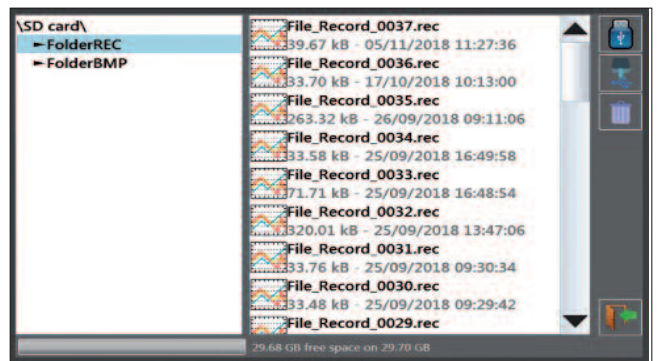
Trigger: multiple choice and combination of threshold, channels and conditions



Math calculation between channels



Measurement display with zoom and cursors



File management with the DAS220

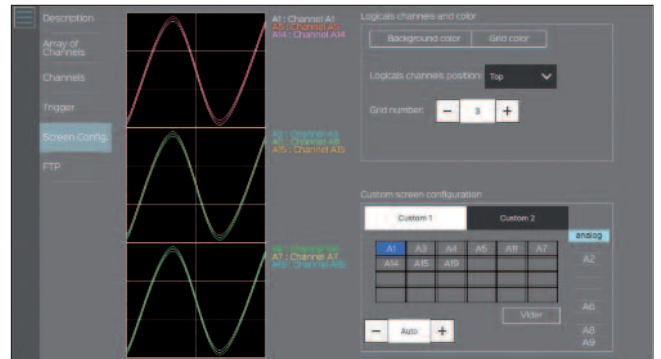
SEFRAM DasLab Software

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

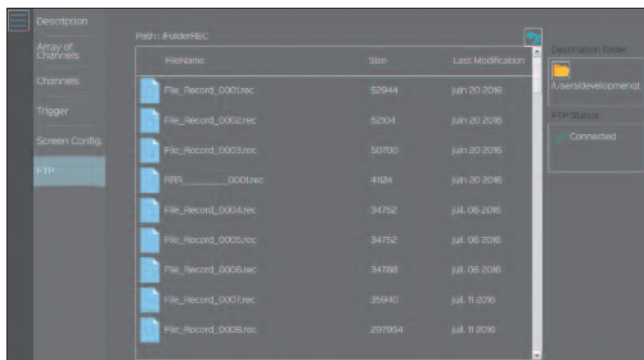
- Managing recorder setup (online & offline)
- Remote setup of the DAS220
- Managing & downloading files (records, setup) from the recorder

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

The link between your DAS220 and your computer can be set up through the Ethernet interface or the WiFi interface (option).



DasLab : Remote setup

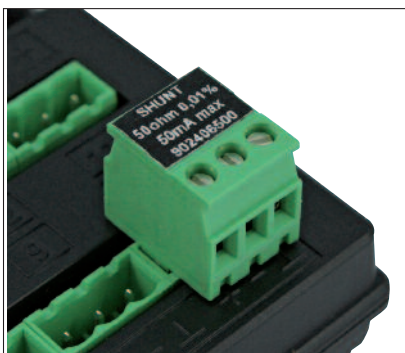


DasLab: files management

Description	On	Channel Name	Accl	Type	Filter	Range	Zero	Position	
Array of Channels				analog					
Channels	A1	Channel A1	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	100 Hz	10 V	0 V	0 %
Trigger	A2	Channel A2	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	100 Hz	10 V	0 V	0 %
Screen Config.	A3	Channel A3	<input checked="" type="checkbox"/>	Strain	<input type="checkbox"/>	100 Hz	10 A	0 A	0 %
FTP	A4	Channel A4	<input checked="" type="checkbox"/>	Resistance	<input type="checkbox"/>	100 Hz	10 Ω	0 Ω	0 %
	A5	Channel A5	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	100 Hz	10 V	0 V	0 %
	A6	Channel A6	<input checked="" type="checkbox"/>	PT1000	<input type="checkbox"/>	100 Hz	10 °C	0 °C	0 %
	A7	Channel A7	<input checked="" type="checkbox"/>	PT100	<input type="checkbox"/>	100 Hz	10 °C	0 °C	0 %
	A8	Channel A8	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	100 Hz	10 V	0 V	0 %
	A9	Channel A9	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	100 Hz	10 V	0 V	0 %
	A10	Channel A10	<input checked="" type="checkbox"/>	Thermocouple	<input type="checkbox"/>	100 Hz	10 °C	0 °C	0 %
	A11	Channel A11	<input checked="" type="checkbox"/>	Tension	<input type="checkbox"/>	100 Hz	10 V	0 V	0 %

DasLab: channels setup

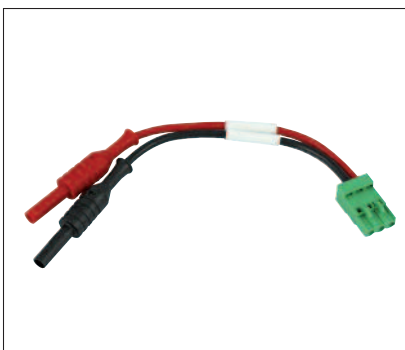
Optional accessories for all uses



P/N: 902406500
Shunt 50 Ohms for current measurements 4-20mA



P/N: 902407000
Cord for logic channels



P/N: 902407100
Connecting cord with female banana plugs



P/N: 902408000
Carrying case for the device and its accessories

TECHNICAL SPECIFICATIONS

Number of channels: 10 channels,

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 wire: 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
 date, delay, threshold, combination
 of thresholds (and/or),
 word on logical channels (and, or, slope, level)
 variable from 0 to 100k samples

Trigger:

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 mâle and cover, connectors, a stylus, a soft wipe, a screwdriver.

For ordering the DAS220 with internal battery: DAS220 BAT

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: 210 x 295 x 105mm
 Weight: 2,5kg
 Safety: Cat I 100V, according to IEC61010-1
 Warranty: 2 years

ACCESSORIES AND OPTIONS

Rugged carrying case: P/N: 902408000
 Wifi option (USB dongle): P/N: 902402000
 12 isolated logical channels : P/N: 984405500
 Logical channels patch cord: P/N: 902407000
 4-20mA / 50 ohms shunt: P/N: 902406500
 19" rackmount kit: P/N: 902209000
 Din mount kit: P/N: 902201000