



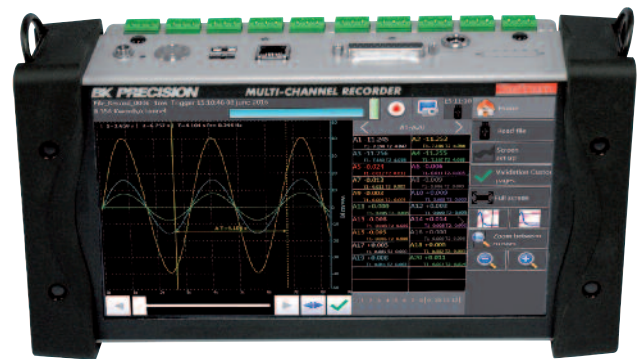
# SEFRAM DAS 220

## 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

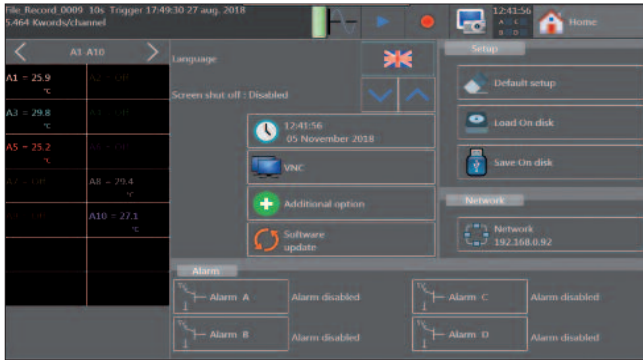
The DAS220 recorder is really a general purpose recorder for process applications:

- 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





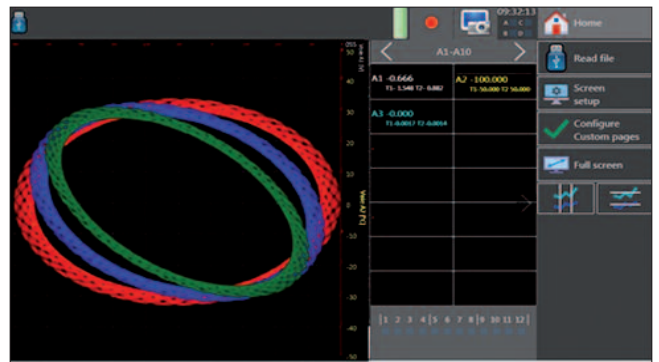
Setup: self-explanatory icons to guide the user

	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

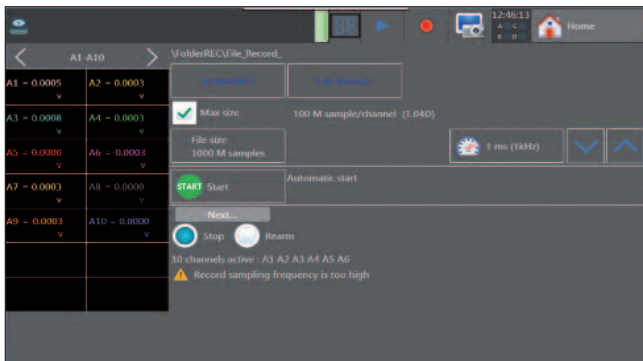
Channels setup: all parameters can be displayed on a single screen

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

Numerical display of measurements



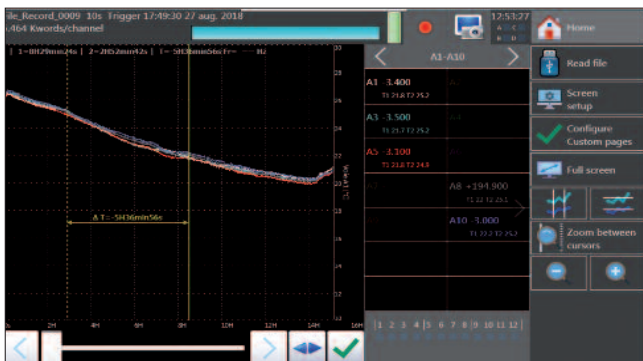
XY mode



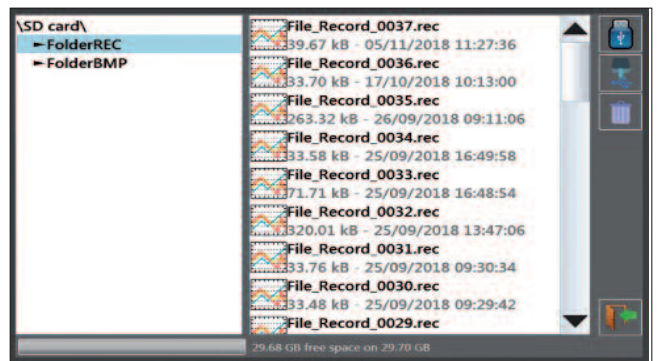
Trigger: multiple choice and combination of threshold, channels and conditions



Math calculation between channels



Measurement display with zoom and cursors



File management with the DAS220

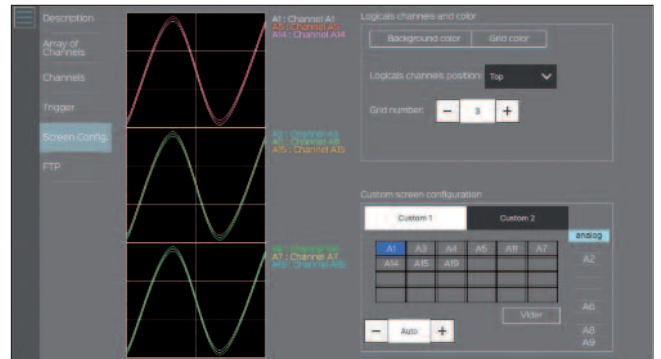
## SEFRAM DasLab Software

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

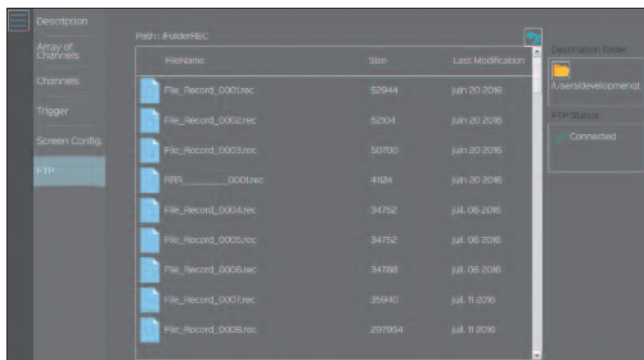
- Managing recorder setup (online & offline)
- Remote setup of the DAS220
- Managing & downloading files (records, setup) from the recorder

**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

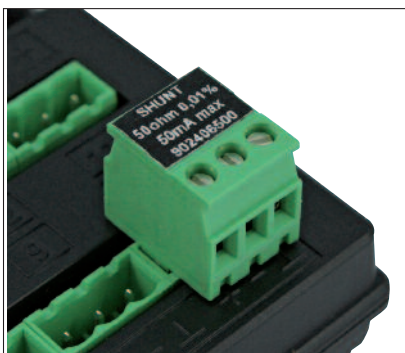


DasLab: files management

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

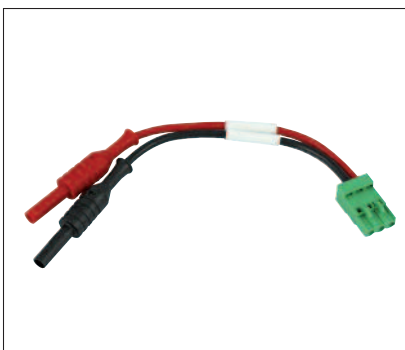
## Optional accessories for all uses



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 $\mu A$  (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 $\Omega$  and 10k $\Omega$   
**Accuracy:** 1 $\Omega$  (range 1k $\Omega$ ) and 10 $\Omega$  (range 10k $\Omega$ )

**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 $\Omega$   
**Sampling rate:** 1ms max.

**LOGICAL FUNCTION INPUT**
**Number of channels:** 4 (K1 to K4)  
**Maximum permitted voltage:** 24V Cat I  
**Input impedance:** 4,7k $\Omega$   
**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.

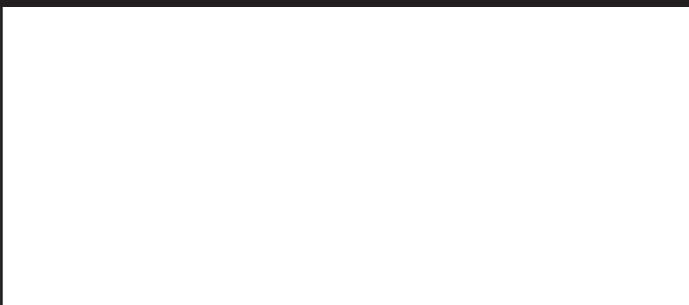
**For ordering the DAS220 with internal battery: DAS220 BAT**
**INTERNAL STORAGE**
**Internal flash drive size:** 32GB min  
**Maximum file size:** 2GB

**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 15h with standby mode, 10h without stand-by mode  
**Autonomy with battery:**  
**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

FTDAS220A00 - Specifications can be updated without notice


**For assistance and ordering**



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