

# C.A 1821 / C.A 1822 / C.A 1823

## Logger contact thermometers



### ***Versatility and high performance for temperature measurements***

J, K, T, N, E, R and S thermocouples (C.A 1821 & C.A 1822)

Pt100 and Pt1000 resistance probes (C.A 1823)

Compact and magnetized for fixed or portable use

Recording of up to 1 million points

Alarms and recording triggered on alarms

Battery life of up to 3 years



*Measure up*



# Logger contact thermometers

Ingress protection: IP54 casing

Wide backlit display

Very simple portable use  
1 key = 1 function!

USB and Bluetooth communication  
for data transfers and configuration of recording



**ALARM:** alarm thresholds can be set using the software  
Visual alert on the product in the event of overruns  
Recording can be triggered on alarm thresholds



Standard "compensated miniature female" connectors (C.A 1821 and C.A 1822)

Multifix-compatible magnetized product



Shockproof sheath available as an accessory



Long battery life:  
up to 1,000 hrs (portable mode)  
3 years for recording (15-minute measurement interval)

C.A 1821



C.A 1822



C.A 1823



|                             | Thermocouple thermometer                                                                                                                                                                                                                                                                                                                                                                                                                  | Thermocouple thermometer          | Resistance thermometer                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------|
|                             | J, K, T, N, E, R, S<br>1 channel                                                                                                                                                                                                                                                                                                                                                                                                          | J, K, T, N, E, R, S<br>2 channels | Pt100, Pt1000<br>1 channel                     |
| Measurement range           | J - 210 to + 1,200 °C -346 to + 2,192 °F<br>K - 200 to + 1,372 °C -328 to + 2,501 °F<br>T - 250 to + 400 °C -418 to + 752 °F<br>N - 200 to + 1,300 °C -328 to + 2,372 °F<br>E - 150 to + 950 °C -238 to + 1,742 °F<br>R 0 to + 1,767 °C 32 to + 3,212 °F<br>S 0 to + 1,767 °C 32 to + 3,212 °F                                                                                                                                            |                                   | - 100 to + 400°C<br>-148 to + 752°F            |
| Resolution                  | Display in °C: $\varnothing < 1,000\text{ °C} : 0.1\text{ °C}$ and $\varnothing \geq 1,000\text{ °C} : 1\text{ °C}$<br>Display in °F: $\varnothing < 1,000\text{ °F} : 0.1\text{ °F}$ and $\varnothing \geq 1,000\text{ °F} : 1\text{ °F}$                                                                                                                                                                                                |                                   | Display in °C : 0.1°C<br>Display in °F : 0.1°F |
| Intrinsic uncertainty in °C | (J, K, T, N, E)<br>$\varnothing \leq - 100\text{ °C} \pm (0.2\% \text{ Reading} + 0.6\text{ °C})$<br>$- 100\text{ °C} < \varnothing \leq + 100\text{ °C} \pm (0.15\% \text{ R} + 0.6\text{ °C})$<br>$+ 100\text{ °C} < \varnothing \pm (0.1\% \text{ R} + 0.6\text{ °C})$<br>(R, S)<br>$\varnothing \leq + 100\text{ °C} \pm (0.15\% \text{ R} + 1.0\text{ °C})$<br>$+ 100\text{ °C} < \varnothing \pm (0.1\% \text{ R} + 1.0\text{ °C})$ |                                   | $\pm (0.4\% \text{ R} + 0.3\text{ °C})$        |

## FUNCTIONS

|                          |                                                                                                                                                                                                                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recording                | <b>Manual start/stop on the product</b><br>Short press on MEM: spot recording / Long press on REC: recording at the rate of the current mode<br><b>Programmed recording</b><br>Start date, recording rate (interval from 1 minute to 2 hours) and end date can be customized with the PC software |
| Alarms                   | Alarm thresholds set using the software. Visual alert on the product in the event of an overrun<br>Recording can be triggered on alarm thresholds                                                                                                                                                 |
| Data storage             | More than 1 million points                                                                                                                                                                                                                                                                        |
| Min-Max-Hold             | Yes                                                                                                                                                                                                                                                                                               |
| Differential measurement | C.A 1822 only                                                                                                                                                                                                                                                                                     |
| Units                    | °C or °F                                                                                                                                                                                                                                                                                          |
| Backlighting             | Yes                                                                                                                                                                                                                                                                                               |
| Automatic power off      | Yes (configurable)                                                                                                                                                                                                                                                                                |

## POWER SUPPLY

|              |                                                                                                                                             |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Type         | 3 x 1.5V AA / LR6 alkaline batteries<br>Mains connection possible with the mains / micro USB adapter proposed as an accessory               |
| Battery life | C.A 1821 & C.A 1822: 1,000 hrs (portable mode) C.A 1823 : 800 hrs (portable mode)<br>3 years for recording (15-minute measurement interval) |

## PHYSICAL SPECIFICATIONS

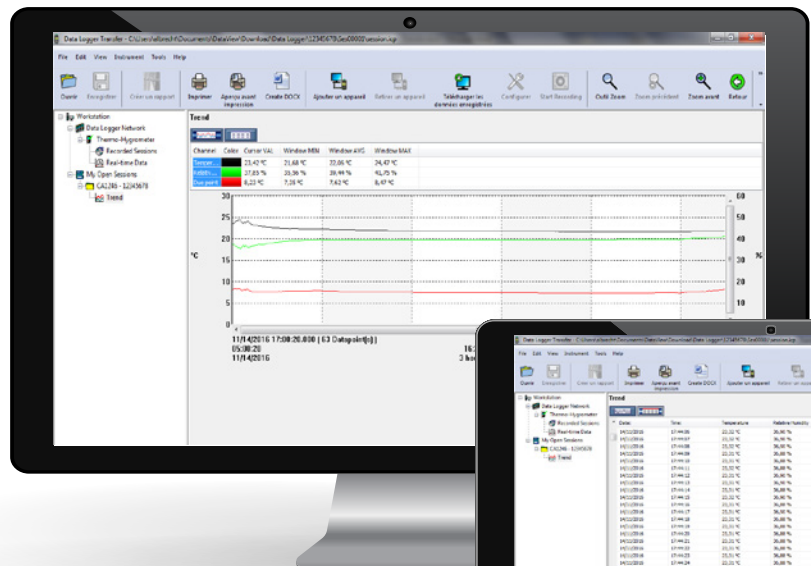
|                         |                                                                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interfaces              | 2 possible communication modes: Bluetooth and USB                                                                                                                        |
| Fixations               | Casing equipped with a magnet, a wall-mount system and a slot for suspension of the product.<br>Compatible with the Multifix accessory. Sheath available as an accessory |
| Connections             | C.A 1821 and 1822: compensated miniature female connectors<br>C.A 1823: 3-point flat connector                                                                           |
| Dimensions / weight     | 150 x 72 x 32 mm / 260 g with batteries                                                                                                                                  |
| Ingress protection      | IP54 casing                                                                                                                                                              |
| Product operating range | Temperature from -10 to +60 °C / Humidity from 10 to 90 %RH                                                                                                              |
| Standards               | IEC61010-1 / IEC 61326-1                                                                                                                                                 |

## GENERAL SPECIFICATIONS

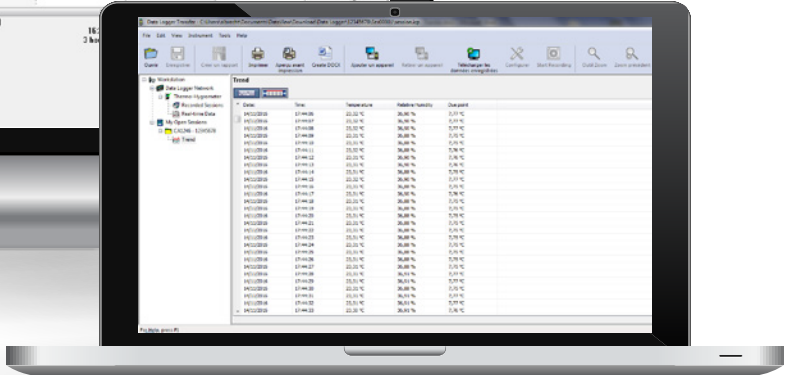
|                                                    |                                                                                                                                                                                                      |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Windows Data Logger<br>Transfer software functions | Real-time mode<br>Automatic report generation in Word format<br>Data format compatible with the Dataview software<br>Graph or value-table presentation<br>Data export in graph or Excel table format |
| Warranty                                           | 2 years                                                                                                                                                                                              |

# Data processing software

## Data Logger Transfer, the software for analysing your data



**Download and display of the data stored in memory**  
**Display in table or graph form**



**Configuration of the instruments connected**  
**Programming of recordings and alarms**  
**Data capture and display in real time**



**Bluetooth®**

**USB**  
UNIVERSAL SERIAL BUS



**CHAUVIN ARNOUX**  
CHAUVIN ARNOUX GROUP

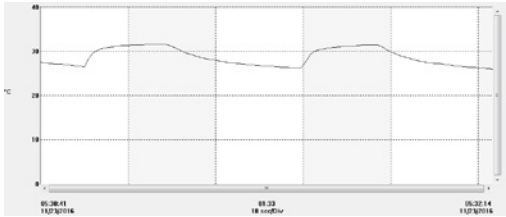
**Session:** Loc  
**Location:** Par  
**Inst. Model:** C.A  
**Inst Serial:** A06  
**Inst Name:** Ch

**Operator**  
Operator: Ma  
Company: CA  
Address: 190

**Location:** 750  
**Phone #:** 01 4  
**Fax #:**  
**Email:**

**Instrument:** CA 1821  
**Emplacement:** Local 1  
**Début:** 23/11/2016 09:30:00  
**Fin:** 23/11/2016 09:56:00  
**Nombre enregistrements:** 15

| Statistiques | Date       | Heure    | V1 [°C] | V2 [] | V3 [] |
|--------------|------------|----------|---------|-------|-------|
| Moyenne      | 09/09/2014 | 09:30:00 | 36      |       |       |
| Min          | 09/09/2014 | 09:30:00 | 30      |       |       |
| Max          | 09/09/2014 | 09:40:00 | 50      |       |       |
| Données      | 09/09/2014 | 09:30:00 | 30      |       |       |
| 01           | 09/09/2014 | 09:31:00 | 32      |       |       |
| 02           | 09/09/2014 | 09:32:00 | 35      |       |       |
| 03           | 09/09/2014 | 09:33:00 | 36      |       |       |
| 04           | 09/09/2014 | 09:34:00 | 40      |       |       |
| 05           | 09/09/2014 | 09:35:00 | 40      |       |       |
| 06           | 09/09/2014 | 09:36:00 | 42      |       |       |
| 07           | 09/09/2014 | 09:37:00 | 50      |       |       |
| 08           | 09/09/2014 | 09:40:00 | 45      |       |       |
| 09           | 09/09/2014 | 09:41:00 | 41      |       |       |
| 10           | 09/09/2014 | 09:42:00 | 31      |       |       |
| 11           | 09/09/2014 | 09:42:30 | 31      |       |       |
| 12           | 09/09/2014 | 09:42:50 | 32      |       |       |
| 13           | 09/09/2014 | 09:44:00 | 33      |       |       |
| 14           | 09/09/2014 | 09:45:00 | 32      |       |       |
| 15           | 09/09/2014 | 09:46:00 | 45      |       |       |
| 16           | 09/09/2014 | 09:47:00 | 41      |       |       |
| 17           | 09/09/2014 | 09:48:00 | 31      |       |       |
| 18           | 09/09/2014 | 09:49:00 | 31      |       |       |
| 19           | 09/09/2014 | 09:50:00 | 32      |       |       |
| 20           | 09/09/2014 | 09:51:00 | 33      |       |       |
| 21           | 09/09/2014 | 09:52:00 | 32      |       |       |
| 22           | 09/09/2014 | 09:53:00 | 33      |       |       |
| 23           | 09/09/2014 | 09:54:00 | 32      |       |       |
| 24           | 09/09/2014 | 09:55:00 | 33      |       |       |
| 25           | 09/09/2014 | 09:56:00 | 32      |       |       |
| 26           | 09/09/2014 | 09:56:00 | 32      |       |       |



Automatic report generation

Exportable in Word format

This simplifies printing and archiving

### ADDITIONAL INFORMATION

Export into an Excel spreadsheet or a jpeg file  
Export of measurement data into DataView (\*.dvh files)  
Multilingual software

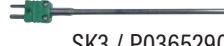
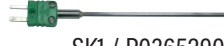
### Minimum configuration:

- Windows 7 (32/64 bits)
- 2 GB RAM
- 200 MB disk space

Windows® is a registered trademark of Microsoft®.

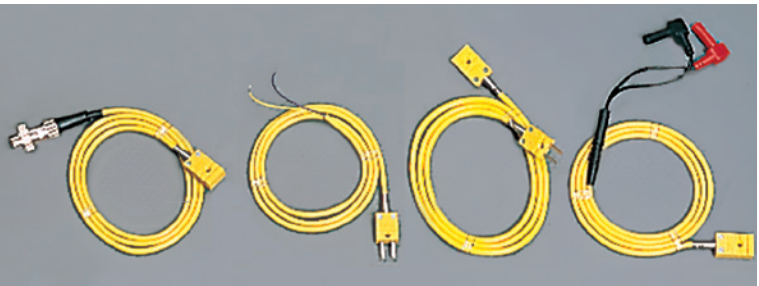
To obtain this application software  
Visit our website at  
[www.chauvin-arnoux.com](http://www.chauvin-arnoux.com)

K THERMOCOUPLE

| Models                                                                                               | Description                                                                  | Measurement range | Tolerance class | 63% response time                    | Plunger diameter                 | Plunger length |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------|-----------------|--------------------------------------|----------------------------------|----------------|
|  SK 20 / P01655010  | Flexible general-purpose sensor made of inconel 600                          | -50°C to 450°C    | Class 1         | 1 second                             | 1.5 mm                           | 1 m            |
|  SK13 / P03652918   | General-purpose sensor with stainless-steel sheath                           | -50°C to 1100°C   | Class 2         | 12 seconds                           | 3 mm                             | 30 cm          |
|  SK3 / P03652903    | Semi-rigid general-purpose sensor with stainless-steel sheath                | -50°C to 1000°C   | Class 2         | 6 seconds                            | 4 mm                             | 50 cm          |
|  SK2 / P03652902    | Bendable general-purpose sensor with stainless-steel sheath                  | -50°C to 1000°C   | Class 2         | 2 seconds                            | 2 mm                             | 1 m            |
|  SK6 / P03652906    | Flexible sensor not suitable for liquids                                     | -50°C to 285°C    | Class 2         | 1 second with contact<br>3 s ambient | 1 mm                             | 1 m            |
|  SK7 / P03652907    | Air sensor for ambient measurements                                          | -50°C to 250°C    | Class 2         | 5 seconds                            | 5 mm                             | 15 cm          |
|  SK17 / P03652921 | Air sensor for ambient measurements with handle and spiral cable             | -50°C to 600°C    | Class 2         | 5 seconds                            | 6 mm                             | 13 cm          |
|  SK1 / P03652901  | Needle sensor for penetration with stainless-steel sheath                    | -50°C to 800°C    | Class 2         | 1 second                             | 3 mm                             | 15 cm          |
|  SK11 / P03652917 | Needle sensor for penetration with handle and stainless-steel sheath         | 50°C to 600°C     | Class 2         | 12 seconds                           | 3 mm                             | 13 cm          |
|  SK4 / P03652904  | Sheathed surface sensor with stainless-steel sensing element and Teflon base | 0°C to 250°C      | Class 2         | 1 second                             | 5 mm                             | 15 cm          |
|  SK14 / P03652919 | Elbowed surface sensor                                                       | -50°C to 450°C    | Class 2         | 8 seconds                            | 6 mm                             | 13 cm          |
|  SK5 / P03652905  | Surface sensor with spring                                                   | -50°C to 500°C    | Class 2         | 1 second                             | 5 mm, diameter in contact 8.5 mm | 15 cm          |
|  SK15 / P03652920 | Surface sensor with spring and handle                                        | -50°C to 900°C    | Class 2         | 2 seconds                            | 8 mm                             | 13 cm          |
|  SK8 / P03652908  | Pipe sensor                                                                  | -50°C to 140°C    | Class 2         | 10 s on stainless-steel pipe Ø 12mm  | 90 mm                            | 32 cm          |
|  SK19 / P03652922 | Magnetic sensor with magnet for flat metal surfaces.                         | -50°C to 200°C    | Class 2         | 7 seconds                            | 4 mm                             | 1 m            |

Class 1: -40 °C... +375 °C: ± 1.5°C / +375 °C...+1,000°C : ± 0.004 x t°C · Class 2 : -40 °C... +333 °C : ± 2.5°C / +333 °C...+1,200°C : ± 0.0075 x t°C  
Standard compensated miniature male 2-pole connector / Spiral cable: 45 cm to 1 m

EXTENSIONS FOR THERMOCOUPLES



| Models | CK3                                          | CK2  | CK1    | CK4 |
|--------|----------------------------------------------|------|--------|-----|
|        | Description                                  | Ø    | Length |     |
| CK1    | Terminated by male plug / female plug        | 4 mm | 1 m    |     |
| CK2    | Terminated by male plug / 2 bare wires       | 4 mm | 1 m    |     |
| CK3    | Terminated by 5-pin DIN plug / female socket | 4 mm | 1 m    |     |
| CK4    | Terminated by 2 banana plugs / female socket | 4 mm | 1 m    |     |

Temperature withstand of extensions: -40 °C to +100 °C



PT100 Ω TEMPERATURE SENSORS

| Models                                                                                                 | Description                                        | Measurement range | Tolerance class | 63% response time | Plunger diameter | Plunger length |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------|-----------------|-------------------|------------------|----------------|
|  SP14 / P01655020 | General-purpose sensor with stainless-steel sheath | -40 to 450°C      | Class A         | 7 seconds         | 3 mm             | 20 cm          |
|  SP10 / P03652712 | Surface sensor with spring                         | -50°C to 200°C    | Class B         | 6 seconds         | 5 mm             | 13 cm          |
|  SP11 / P03652713 | Stainless-steel needle sensor for penetration      | -100°C to 600°C   | Class B         | 7 seconds         | 3 mm             | 13 cm          |
|  SP12 / P03652714 | Air sensor                                         | -100°C to 600°C   | Class B         | 5 seconds         | 5 mm             | 13 cm          |
|  SP13 / P03652715 | Stainless-steel sensor for immersion               | -100°C to 600°C   | Class B         | 7 seconds         | 3 mm             | 13 cm          |

Class A: 0.15°C + 0.002 x [t]°C  
Class B: 0.3°C + 0.005 x [t]°C Miniature flat-pin connector, 3 poles · Spiral cable: 45 cm to 1 m



Standard state at delivery:



**Bag, 3 x 1.5 V AA alkaline batteries, USB cable, test report and quick start-up guide** (Complete user manual and Data Logger Transfer software available from the Chauvin Arnoux website)

#### TO ORDER

**C.A 1821 Single-channel thermocouple thermometer** ..... P01654821

**C.A 1822 Two-channel thermocouple thermometer** ..... P01654822

**C.A 1823 Single-channel resistance thermometer** ..... P01654823

### Accessories / Replacement parts

## K THERMOCOUPLE SENSORS

|            |           |             |           |             |           |
|------------|-----------|-------------|-----------|-------------|-----------|
| SK 1 ..... | P03652901 | SK 6 .....  | P03652906 | SK 14 ..... | P03652919 |
| SK 2 ..... | P03652902 | SK 7 .....  | P03652907 | SK 15 ..... | P03652920 |
| SK 3 ..... | P03652903 | SK 8 .....  | P03652908 | SK 17 ..... | P03652921 |
| SK 4 ..... | P03652904 | SK 11 ..... | P03652917 | SK 19 ..... | P03652922 |
| SK 5 ..... | P03652905 | SK 13 ..... | P03652918 | SK 20 ..... | P01655010 |

## EXTENSIONS FOR THERMOCOUPLES

|            |           |            |           |
|------------|-----------|------------|-----------|
| CK 1 ..... | P03652909 | CK 3 ..... | P03652913 |
| CK 2 ..... | P03652910 | CK 4 ..... | P03652914 |

## PT100 Ω TEMPERATURE SENSORS

|             |           |             |           |
|-------------|-----------|-------------|-----------|
| SP 10 ..... | P03652712 | SP 12 ..... | P03652714 |
| SP 11 ..... | P03652713 | SP 13 ..... | P03652715 |
|             |           | SP 14 ..... | P01655020 |

Handle for K TC extension ..... P03652912  
 Connector for K thermocouple ..... P03652925  
 Shockproof sheath + Multifix ..... P01654252  
 Multifix ..... P01102100Z  
 Mains adapter ..... P01651023

Bag ..... P01298075  
 Metal case ..... P01298071  
 Dataview software ..... P01102095  
 Bluetooth BLE / USB modem for PC ..... P01654253  
 4 x AA/LR6 NiMH Batteries + Battery charger ..... HX0053

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