Laboratory conductivity meter

CA 10141E

Laboratory conductivity meter

✓ Compatible with **Regressi**, **Graph2D** and **DLT** via **USB port**

✓ Compatible with **CAEx interfaces** via the **analogue outputs**

✓ Storage of **100,000** measurements

✓ Ideal for **fixed and mobile measurements**

✓ **Rugged** and **modern**

TARGET MARKET

Education: priority market

Secondary education: mainly high schools. For the general and technological/scientific sections (e.g. STL, STI2D, ST2S). May also be proposed in middle schools.

Higher education: Universities (Bachelor's, Master), IUT (BUT) technological colleges, high schools (CPGE and BTS), Engineering schools. In general terms, any establishments proposing a scientific syllabus such as Chemistry, Physics, Life Sciences, Biology, Biotechnologies, Engineering, Health, Pharmacy, Environment, Agri-food, etc.

Conductivity meters are used during **Practical Exercises**. In these Practicals, the students perform scientific experiments.

Analogue outputs: enable connection to CA Ex (Computer Assisted Experimentation) interfaces. A CAEx interface is a unit connected to a PC and to sensors (pH-meter, conductivity meter, thermometer, oxygen analyser, etc.). These allow users to acquire and process the experimental data. They are sometimes accompanied by specific software which create a virtual laboratory for the student.

Regressi and Graph2D: educational software. In particular, they can be used to acquire and process experimental data. The pH-meter can be hooked up to these software products (1 at a time!) which record the values measured. Students can then process these values (as a curve, for example).

Data Logger Transfer (DLT): can be used to recover the saved measurements, configure the instrument and program the recordings.

Any activities not requiring the industrial range's IP 67 protection: secondary market

Academic research laboratories
Public and industrial R&D laboratories
Regulatory test laboratories

Sectors: agri-food, environment, agriculture, drinking water, chemicals industry, cosmetics, biotechnology, etc.

TARGET USERS

Teachers, students, researchers, engineers, technicians, chemists, etc.

COMPETITIVE ADVANTAGES

✓ Compatible with **Regressi** and **Graph2D** via **USB** port.

✓ Compatible with **CAEx** interfaces via the **analogue outputs**.

✓ Compatible with **Data Logger Transfer** (programmable recordings).

✓ Automatic or manual storage of **100,000 time/date-stamped measurements**.

✓ Micro USB port for **transfer onto computer**.

✓ Extra-wide multi-display **LCD screen**: clear display for easy reading of values.

Laboratory conductivity meter

- ✓ **Guided calibration** (1 point) with a **customizable** list of buffer solutions.
- ✓ **Shockproof** sheath, **backlighting**.
- ✓ Made in **France**, **eco-design**.

SPECIFICATIONS

Conductivity	Measurement range	0.050 µS/cm to 200.0 mS/cm
	Resolution (R)	1 nS/cm to 100 µS/cm (depends on range)
	Intrinsic uncertainty*	± 1% r** ± R
TDS	Measurement range	0.001 mg/l to 200.0 g/l
	Resolution (R)	1 µg/l to 100 mg/l (depends on range)
	Intrinsic uncertainty	± 1% r ± R
Resistivity	Measurement range	2 Ω.cm to 4999 kΩ.cm
	Resolution (R)	1 mΩ.cm to 1 kΩ.cm (depends on range)
	Intrinsic uncertainty	± 1% r ± R
Salinity	Measurement range	2.0 to 42.0 psu
	Resolution (R)	0.1 psu
	Intrinsic uncertainty	± 0.5% r ± R
Temperature	Measurement range	-10 to 120 °C / 14 to 248.0 °F
	Resolution (R)	0.1 °C / 0.1 °F
	Intrinsic uncertainty	± 0.4°C / ± 0.7 °F
	Tref available	20/25°C (68/77°F)
Calibration	1 point, 6 predefined conductivity references modifiable by the user	
T°C compensation	Automatic (ATC) or manual (MTC), -10 to 120°C / 14 to 248 °F	
Temperature correction	Linear, non-linear, no correction	
Probe	**NOT SUPPLIED**	
Data storage	100,000 measurements	
Batteries / Battery life	4 x 1.5 V AA or LR6 alkaline batteries / ~200h use	
Sensors input	BNC (conductivity cell) Jack (Pt1000 temperature probe)	
Communication interface	Type-B micro-USB (also used for power supply) Analogue outputs for conductivity/TDS/salinity/resistivity and temperature (3 x 4 mm banana)	
Dimensions (with sheath)	211x127x54 mm	
Weight	600 g (with batteries)	
Environmental conditions	Storage: -20 to +70°C Operation: -10 to +55 °C	
Warranty	3 years	

**The intrinsic uncertainties on the measurements are indicated for the instrument alone.*

***r : % of reading*

STATE AT DELIVERY

The **CA 10141E conductivity meter** is delivered in a cardboard box with:

1) 1 protective sheath mounted on the instrument
2) 4 x AA or LR6 alkaline batteries
3) 1 USB-mains adapter
4) 1 USB – micro USB cable
5) Bilingual Quick Start Guide
6) Verification certificate

The cells and probes are not supplied with the instrument.

TO ORDER

CA 10141E laboratory conductivity meter……P01710021

Accessories

Glass/platinum conductivity cell ……..BCP4-BNC
PVC/platinum conductivity cell……..XCP4-BNC
Temperature sensor (Pt1000)……...P01710070
1408 µS/cm conductivity reference solution ……P01700118*
147 µS/cm conductivity reference solution, 125 mL ……..P01700117*
12.85 mS/cm conductivity reference solution, 125 mL……..P01700119**
KCl 1mol/L conductivity reference solution, 125 mL…….……P01700116
Set of 3 plastic beakers.....……..P01710056

Replacement parts

Shockproof sheath.....P01710050
USB-µUSB cable & mains adapter …P01654023

**delivered with a quality certificate guaranteeing traceability to the NIST (National Institute of Standards and Technology, USA) reference materials*

*** delivered with a quality certificate guaranteeing traceability to the OIML (Organisation Internationale de Métrologie Légale) reference materials*