

## D230

pH - mV - Ion - Conductivity - TDS - Dissolved oxygen - Temperature



**pH:** 0...14 pH  
**mV:** ±2000 mV  
**Ion:** 0...100 g/l  
**Conductivity:** 0...2000 mS/cm  
**TDS:** 0...100 g/l  
**Dissolved oxygen:** 0...60 mg/l  
**Temperature:** -5...+105°C

**4...28 pH/mV/Ion channels**  
**4...28 conductivity channels**  
**4...28 oxygen channels**  
**4...28 temperature channels**

- **Modular system**

Built in a standard 19" rack and cabinet the central unit accepts up to 7 modules. Different modules can be mixed in one unit.

There are two modules available: with four pH/mV/Ion/O<sub>2</sub> + four temperature channels or with four conductivity/TDS + four temperature channels.

All parameters including set-up, calibration and display are controlled through any computer via a single RS232 connection.

Up to 16 units can be combined with each other to increase the number of channels to a maximum of 448.

- **pH**

One- or two-point calibration.

Selectable resolution from 0.001 pH to 0.1 pH.

Automatic calibration with any of nine pre-programmed and two user specified pH buffers.

- **mV**

Features mV calibration for accurate ORP measurements.

Selectable resolution from 0.1 mV to 1 mV.

- **Ion**

Direct concentration measurement.

Shows concentration in any unit.

Ion mode is easily calibrated with any two standards and a blank correction.

- **Dissolved oxygen**

Selectable resolution from 0.01 mg/l (0.1%) to 0.1 mg/l (1%).

Rapid air calibration, no zero calibration required.

Manual salinity compensation 0-40.

Manual air pressure compensation 800-1200 hPa.

- **Temperature**

Manual or automatic temperature compensation.

Calibrates temperature probe for quality measurements.

- **Conductivity**

One-point calibration.

Use a 1 cm<sup>-1</sup> electrode (standard) to measure from 0.1 µS/cm to 200 mS/cm.

Use a 0.01 cm<sup>-1</sup> electrode to measure from 0.001 µS/cm to 2 mS/cm.

Use a 0.1 cm<sup>-1</sup> electrode to measure from 0.01 µS/cm to 20 mS/cm.

Use a 10 cm<sup>-1</sup> electrode to measure from 1 µS/cm to 2000 mS/cm.

Selectable reference temperature: 20° or 25°C.

Automatic calibration with any of three preprogrammed and three user specified standard solutions.

Accurate low conductivity measurements by eliminating the capacitive component of the electrode and its cable (avoid the use of long cables!).

- **Special features**

Three year warranty.

No electrical interference between electrodes in the same solution.

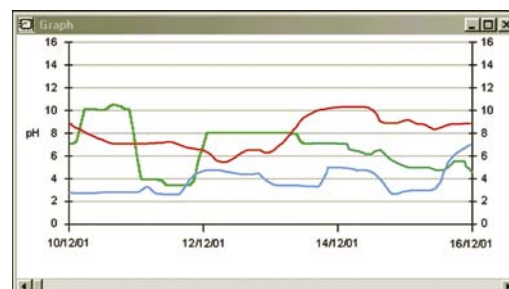
- **Data acquisition**

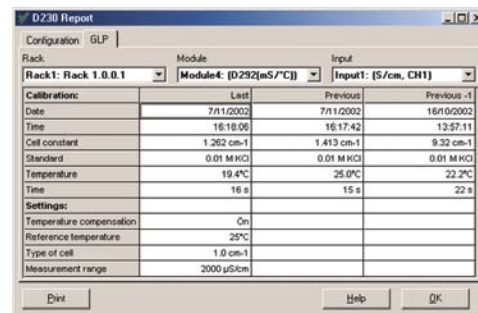
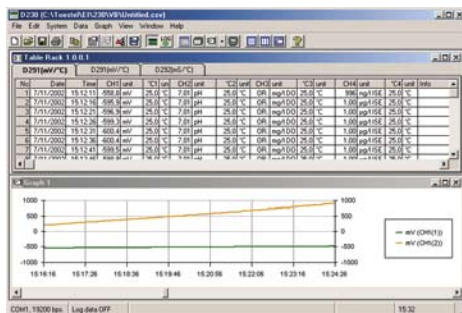
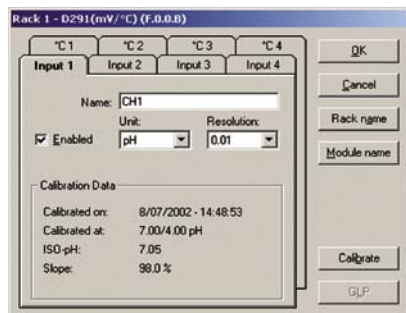
The software package supplied with the D230 is specially designed to control, collect and store data. Runs under Windows™ 2000 or higher.

All channels are processed at the same time, each in its own window.

The software automatically detects the maximum number and type of available channels.

Data is collected on-line at a programmable interval determined by the program (4 s ... 24 h).





• **Table**

Data is always stored in a table.

Each module has its own programmable table containing an unlimited number of lines (maximum depends on available computer memory).

Comments can easily be added to each line in a special information column.

• **Starting**

Data-logging can start/stop automatically or at a programmable date/time.

Data-logging can be stopped or continued at any moment.

• **Files**

All data is saved in a user defined file. Just open the file to view, process or print the stored data.

All measurements are saved in CSV format which is easily transferred into spreadsheets.

• **Graphs**

Graphs are generated using automatic or user defined settings.

The number of visible values can be changed at any time.

Programmable alarm limits for each graph allow to print a report indicating when limits have been exceeded.

Shows statistics about minima, maxima, averages etc...

• **Settings**

Languages: English, Dutch or French.

The style of each window can be set up separately.

Choose fonts, colours etc...

Documented printouts will show:

- file name.
- date and time.
- name of the operator.
- name of the company.
- name of the division.
- optional notes by the operator.

All settings are stored in a configuration file and automatically recalled when opening the program.

• **Functions**

All functions are accessible through the menu.

Only valid options appear in the menu to eliminate set-up errors.

Special buttons, icons and short-keys allow the user to easily access the most useful functions.

The contents of each window can be transferred to other programs by using a copy function.

Tile or cascade the windows and arrange the icons fully automatically or rearrange them manually.

Specifications	D230	
<b>pH</b>	<i>Range</i>	0...14 pH
	<i>Resolution</i>	0.001 pH
	<i>Accuracy</i>	0.1% ± 1 digit
	<i>Calibration</i>	1...2 points
	<i>Buffers</i>	9 pre-programmed 2 user specified
	<i>Temperature compensation</i>	-5...+105 °C
	<i>ISO-pH</i>	6...8 pH
<b>mV</b>	<i>Range</i>	±2000 mV
	<i>Resolution</i>	0.1 mV
<b>ION</b>	<i>Accuracy</i>	0.1% ± 1 digit
	<i>Calibration</i>	1 point
	<i>Range</i>	0.01 ng/l... 100 g/l
	<i>Resolution</i>	3 digits
<b>DISSOLVED OXYGEN</b>	<i>Accuracy</i>	0.5% ± 1 digit
	<i>Calibration</i>	2 points + blank
	<i>Range</i>	0...60 mg/l (0...600%)
	<i>Resolution</i>	0.01 mg/l (0.1%)
	<i>Accuracy</i>	1% ± 1 digit
	<i>Calibration</i>	1 point
	<i>Temperature compensation</i>	0...50 °C
<b>CONDUCTIVITY</b>	<i>Salinity compensation</i>	0...40
	<i>Air pressure compensation</i>	800...1200 hPa
	<i>Range (cc dependent)</i>	0...2000 mS/cm
	<i>Resolution (cc dependent)</i>	0.001 µS/cm
	<i>Accuracy</i>	0.5% f.s. of range
	<i>Calibration</i>	1 point
	<i>Standards</i>	3 pre-programmed 3 user specified
	<i>Cell constant (cc)</i>	0.01/0.1/1/10 cm <sup>-1</sup> ±30%
	<i>Temperature compensation</i>	-5...+105 °C
	<i>Reference temperature</i>	20° or 25 °C
<i>Temperature coefficient</i>	natural waters (EN27888)	
<i>Capacitive compensation</i>	✓	
<b>TDS</b>	<i>Range</i>	0...100 g/l
	<i>Resolution</i>	0.01 mg/l
<b>TEMPERATURE</b>	<i>Range</i>	-5...+105 °C
	<i>Resolution</i>	0.1 °C
	<i>Accuracy</i>	0.3 °C
	<i>Calibration</i>	1 point
<b>CHANNELS</b>	<i>pH/mV/Ion/Dissolved oxygen</i>	4...28
	<i>Conductivity</i>	4...28
	<i>Temperature</i>	4...28
<b>INPUTS</b>	<i>pH/mV/Ion/Dissolved oxygen</i>	BNC, 10 <sup>12</sup> Ω
	<i>Conductivity</i>	BNC
	<i>Temperature</i>	2 banana, for Pt1000
<b>CALIBRATION</b>	<i>GLP</i>	✓
<b>DATA-LOGGING</b>	<i>Data sets</i>	unlimited
	<i>Interval</i>	4 s ... 24 h
<b>SOFTWARE</b>	<i>Languages</i>	EN, NL, FR
<b>SECURITY</b>	<i>Password protection</i>	✓
<b>AMBIENT CONDITIONS</b>	<i>Temperature</i>	0...40 °C
	<i>Humidity</i>	0...95%, non condensing
<b>POWER SUPPLY</b>	<i>Mains</i>	210...250 VAC, 50/60 Hz
<b>DIMENSIONS</b>	<i>WxDxH</i>	48x24x13 cm
<b>WEIGHT</b>	<i>Meter</i>	10 kg

CODE	DESCRIPTION
D230	Data-logger: central unit for 7 modules + software + RS232 cable + mains lead
D291	Module for pH/mV/Ion/O <sub>2</sub> /°C with 4+4 channels
D292	Module for conductivity/TDS/°C with 4+4 channels
D298	Data cable to connect 2 data-loggers with each other (optional)
D299	Blanc frontpanel to cover unused module space (optional)
→ Add a S-sign for 120 VAC versions, e.g.: D230S	
→ Add a U-sign for UK plug versions, e.g.: D230U	