D230   Multi-parameter data-logger

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_2 + 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^{-1} electrode (standard) to measure from 0.1 µS/cm to 200 mS/cm.

Use a 0.01 cm^{-1} electrode to measure from 0.001 µS/cm to 2 mS/cm.
Use a 0.1 cm^{-1} electrode to measure from 0.01 µS/cm to 20 mS/cm.
Use a 10 cm^{-1} 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.

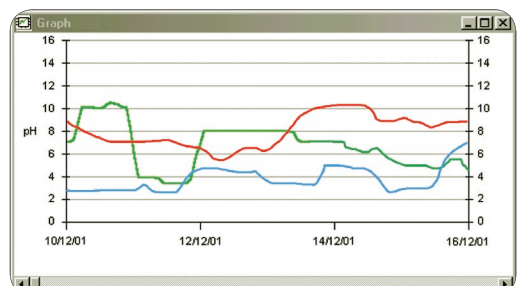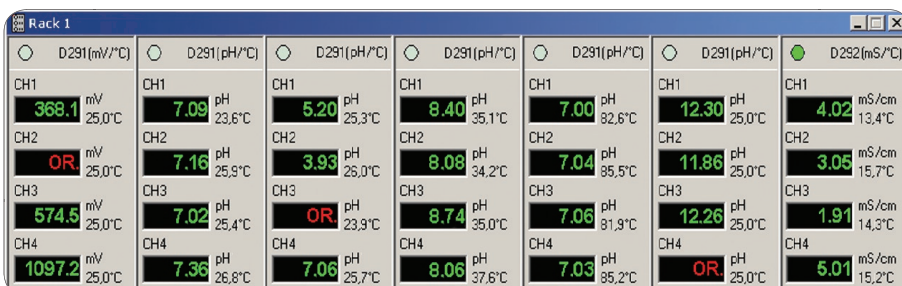No electrical interference between electrodes in the same solution.
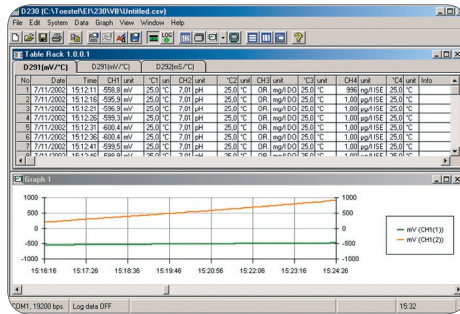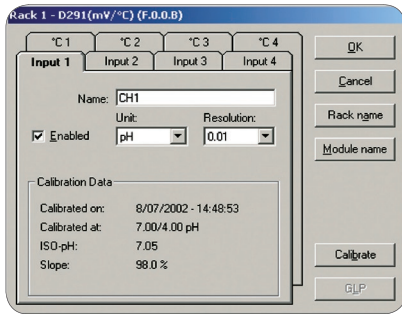
Data acquisition

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 un-limited 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 trans-ferred 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 automati-cally or rearrange them manually.

CODE	DESCRIPTION
D230	Data-logger: central unit for 7 modules + software + RS232 cable
D291	Module for pH/mV/Ion/O_2/°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)

➔ **Supplied with a european mains cord**

(Add a US-sign for US plug 120 VAC versions, e.g.: D230-US)
(Add a UK-sign for UK plug versions, e.g.: D230-UK)
(Add a CH-sign for Swiss plug versions, e.g.: D230-CH)

SPECIFICATIONS		D230
pH	Range	0...14 pH
	Resolution	0.001 pH
	Accuracy	0.1% ± 1 digit
	Calibration	1...2 points
	Buffers	9 pre-programmed 2 user specified
	Temperature compensation	-5...+105°C
	ISO-pH	6...8 pH
	Slope	80...120%
mV	Range	±2000 mV
	Resolution	0.1 mV
	Accuracy	0.1% ± 1 digit
	Calibration	1 point
ION	Range	0.01 ng/l...100 g/l
	Resolution	3 digits
	Accuracy	0.5% ± 1 digit
	Calibration	2 points + blank
DISSOLVED OXYGEN	Range	0...60 mg/l (0...600%)
	Resolution	0.01 mg/l (0.1%)
	Accuracy	1% ± 1 digit
	Calibration	1 point
	Temperature compensation	0...50°C
	Salinity compensation	0...40
	Air pressure compensation	800...1200 hPa
CONDUCTIVITY	Range (cc dependent)	0...2000 mS/cm
	Resolution (cc dependent)	0.001 µS/cm
	Accuracy	0.5% f.s. of range
	Calibration	1 point
	Standards	3 pre-programmed 3 user specified
	Cell constant (cc)	0.01/0.1/1/10 cm^{-1} ±30%
	Temperature compensation	-5...+105°C
	Reference temperature	20° or 25°C
	Temperature coefficient	natural waters (EN27888)
	Capacitive compensation	✓
TDS	Range	0...100 g/l
	Resolution	0.01 mg/l
TEMPERATURE	Range	-5...+105°C
	Resolution	0.1°C
	Accuracy	0.3°C
	Calibration	1 point
CHANNELS	pH/mV/Ion/Dissolved oxygen	4...28
	Conductivity	4...28
	Temperature	4...28
INPUTS	pH/mV/Ion/Dissolved oxygen	BNC, 10^{12} Ω
	Conductivity	BNC
	Temperature	2 banana, for Pt1000
CALIBRATION	GLP	✓
DATA-LOGGING	Data sets	unlimited
	Interval	4 s ... 24 h
SOFTWARE	Languages	EN, NL, FR
SECURITY	Password protection	✓
AMBIENT CONDITIONS	Temperature	0...40°C
	Humidity	0...95%, non condensing
POWER SUPPLY	Mains	210...250 VAC, 50/60 Hz
DIMENSIONS	WxDxH	48x24x13 cm
WEIGHT	Meter	10 kg

➔ **You will find ordering codes and descriptions of electrodes, calibration solutions, accessories... on pages 19...**

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