C3050 • C3051

rH_2 - pH - mV - Conductivity - Resistivity - Salinity - TDS - µW - Temperature

rH_2:	0...42 rH_2
pH:	-2...+16 pH
mV:	±2000 mV
Conductivity:	0...2000 mS/cm
Resistivity:	0...200 MΩ.cm
Salinity:	0.0...70.0
TDS:	0...100 g/l
µW:	0...400000 µW
Temperature:	-5...+105°C

Three independent channels for all measurements ! (conductivity: only 2 channels)

- ***rH_2***
  Bio-electronic multimeter for the study of the biological water quality or illnesses in body fluids according to Vincent's method.
- ***pH***
  Multi-point (1...5) calibration for more linearity.
  Selectable resolution from 0.001 pH to 0.1 pH.
  Automatic calibration with any of eleven pre-programmed and five user specified pH buffers. ***Create your own buffer/temperature tables!***
  Accepts pH electrodes with any zero point (Eo) between ±999 mV.
- ***mV***
  Features mV calibration for accurate ORP measurements.
  Selectable resolution from 0.1 mV to 1 mV.
  Can also show mV referred to the standard hydrogen electrode.
- ***Conductivity***
  Multi-point (1...3) calibration for more linearity.
  An electrode with a typical cell constant of 1 cm^{-1} (standard) permits to measure from 0.01 µS/cm to 200 mS/cm in five ranges.
  An electrode with a typical cell constant of 0.1 cm^{-1} permits to measure from 0.001 µS/cm to 20 mS/cm in five ranges.
  An electrode with a typical cell constant of 10 cm^{-1} permits to measure from 0.1 µS/cm to 2000 mS/cm in five ranges.
  Automatically selects correct range and frequency.
  Selectable reference temperature: 20° or 25°C.
  Automatic calibration with any of three preprogrammed and three user specified standard solutions. ***Create your own standard/temperature tables!***
  Accurate low conductivity measurements by eliminating the capacitive component of the electrode and its cable (avoid the use of long cables!).
- ***µW***
  Calculates the resistance (Ω) and the quantification of Vincent (µW).
- ***Temperature***
  Manual or automatic temperature compensation.
  Calibrates temperature probe for quality measurements.

CODE	DESCRIPTION
C3050	Meter only (USB version) + USB cable
C3051	Meter only (Ethernet version)
C3050T	Meter kit complete: C3050 + pH/ORP electrode SP35B + conductivity electrode SK20T+ 2x50 ml buffers (pH 4 and 7) + 50 ml conductivity standard (0.01 M KCl) + 50 ml electrolyte (3M KCl) + 50 ml redox standard (358 mV) + flexible electrode holder SH300
A4800	Wall mounting kit (optional)
A4049	Car adaptor, 12 V (optional)
➔ Add a $-sign for US plug versions, e.g.: C3050$, ➔ Add a U-sign for UK plug versions, e.g.: C3050U	

- ***Inputs***
  Two inputs for pH, mV or conductivity + corresponding temperature and reference inputs.

  One extra input for pH or mV + corresponding temperature and reference input.

  Low voltage DC input for e.g. a mains adaptor.
- ***Outputs***
  Two versions available:

  C3050: with USB communication port and RS232 interface.

  C3051: with Ethernet communication port and RS232 interface.
- ***Data-logging***
  Up to 12000 data sets can be stored manually or at a programmable interval.

  Allows to mix data from all ranges in the same table.

  Download **free data acquisition software** from *www.consort.be* to view, store and edit the measurements in your computer.
- ***Cabinet***
  Robust dust and splash-proof cabinet.

  An optional wall mounting kit allows to fix the meter to any wall making more space available on the desk.
- ***Display***
  A large bright LCD screen with white backlight enables to view all channels individually or simultaneously.

  Stability indicator prompts the user when readings should be taken.

  Hold function allows to freeze the display for convenient reading or recording.

  The interactive LCD screen provides step by step instructions in the language of your choice (English, Dutch, French, German).

  Real-time clock displays time and date.

  Shows a GLP report on the LCD screen.
- ***Special features***
  Two-way communication with a computer using USB or RS232.

  Can be programmed to continue automatically with the measurements or data-logging after a power failure.

  Password protection prevents any unauthorised modification of the instrument's settings.

  No electrical interference between pH/ORP and conductivity electrodes in the same solution.

  Optional 12 V car adaptor.

  Three year warranty.
- ***GLP***
  All procedures for a "Good Laboratory Practice" are on board.
- ***Pre-programmed standards***

  pH buffers: 1.68, 2.00, 4.00, 4.01, 6.87, 7.00, 9.18, 9.21, 10.01, 12.00, 12.45 (at 25°C).

  Conductivity: 1413 µS/cm, 12.88 mS/cm, 111.8 mS/cm (at 25°C).

Electrodes supplied with kit versions

SP35B
- pH + ORP
- Glass body, 1 m cable
- 0...14 pH, 0...±2000 mV
- Single junction, refillable

SK20T
- Conductivity + ATC
- Glass body, 1 m cable
- 1 cm^{-1}, 0...110°C
- Dual graphite plates

Specifications		C3050 - C3051
pH	*Range*	-2...+16 pH
	Resolution	0.001 pH
	Accuracy	0.1% ± 1 digit
	Calibration	1...5 points
	Buffers	11 pre-programmed 5 user specified
	Temperature compensation	-5...+105°C
	ISO-pH	6...8 pH
	Slope	80...120%
	Zero point (Eo)	±999 mV
mV	*Range*	±2000 mV
	Resolution	0.1 mV
	Accuracy	0.1% ± 1 digit
	Calibration	1 point
rH_2	*Range*	0...42 rH_2
	Resolution	0.01 rH_2
	Accuracy	0.1% ± 1 digit
CONDUCTIVITY	*Range (cc dependent)*	0...2000 mS/cm
	Resolution (cc dependent)	0.001 µS/cm
	Accuracy	0.5% f.s. of range
	Calibration	1...3 points
	Standards	3 pre-programmed 3 user specified
	Cell constant (cc)	0.07...13 cm^{-1}
	Temperature compensation	-5...+105°C
	Reference temperature	20° or 25°C
	Temperature coefficient	natural waters (EN27888)
	Range lock	✓
	Capacitive compensation	✓
RESISTIVITY	*Range*	0...200 MΩ.cm
	Resolution	1 Ω.cm
SALINITY	*Range*	0...70
	Reference temperature	15°C
TDS	*Range*	0...100 g/l
	Resolution	0.01 mg/l
µW	*Range*	0...400000 µW
TEMPERATURE	*Range*	-5...+105°C
	Resolution	0.1°C
	Accuracy	0.1°C
	Calibration	1 point
CHANNELS	*Measurement*	3 (conductivity: 2)
	Temperature	3
INPUTS	*Measurement*	3 BNC, 10^{12} Ω
	Temperature	3x2 banana, for Pt1000
CALIBRATION	*Reminder*	0...999 h
	GLP	✓
DISPLAY	*LCD*	240x64 pixels
	White backlight	✓
	Hold function	✓
	Selectable resolution	✓
	Real time clock	✓
COMMUNICATION	*Interface with computer*	USB
	RS232, baud rate	1200...115200 b/s
DATA-LOGGING	*Data sets*	12000 + °C/date/time
	Modes	all
	Manual or timed	✓
	Interval	1...9999 s
SECURITY	*Identification number*	✓
	Password protection	✓
AMBIENT CONDITIONS	*Temperature*	0...40°C
	Humidity	0...95%, non condensing
POWER SUPPLY	*Mains*	100...240 VAC, 50/60 Hz
	Low voltage	9...15 VDC
DIMENSIONS	*WxDxH*	26x18x9 cm
WEIGHT	*Meter*	1 kg

rH_2

The rH_2 is a measurement for the level of electronic exchanges between water and dissolved ions. It enables to study incomplete, indeterminate and very diluted aqueous redox solutions.