C3410 • C3420 • C3430

Multi-parameter analysers

pH:	-2...+16 pH
mV:	±2000 mV
Ion:	0.01 ng/l...100 g/l
Conductivity:	0...2000 mS/cm
Resistivity:	0...200 MΩ.cm
Salinity:	0.0...70.0
TDS:	0...100 g/l
Dissolved oxygen:	0...60 mg/l
	0...600%
Air pressure:	600...1300 hPa
Temperature:	-5...+105°C

Ion: C343x only
Dissolved oxygen: C342x, C343x only

Two independent channels for all measurements!

Accepts also 4-pole conductivity electrodes!

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.

Ion *(C3430, C3431 only)*

Direct concentration measurement.

Multi-point (2...5) calibration and an additional blank correction for measuring low concentrations.

Conductivity

Multi-point (1...3) calibration for more linearity.

The 4-pole design reduces considerably the problems of polarisation and fouling. By utilising four electrodes, no current flows through the measuring circuit. The AC-current is only applied to the outer pair of rings allowing the inner pair of electrodes to measure the voltage without any polarisation effects. **A 4-pole electrode permits to measure with the highest degree of accuracy and linearity.**

An electrode with a typical cell constant of 1 cm^{-1} 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/temp. tables!***

Allows to lock the initial conductivity range to avoid non-linear titration curves.

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

Dissolved oxygen *(C3420, C3421, C3430, C3431 only)*

Operates with a galvanic dissolved oxygen electrode requiring no polarisation time and no zero calibration.

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

Automatic air pressure compensation 600-1300 hPa.

CODE	DESCRIPTION		
C3410	pH/conductivity meter (USB version) + USB cable	**C3411**	pH/conductivity meter (Ethernet version) + UTP cable
C3420	pH/conductivity/DO meter (USB version) + USB cable	**C3421**	pH/conductivity/DO meter (Ethernet version) + UTP cable
C3430	pH/Ion/conductivity/DO meter (USB version) + USB cable	**C3431**	pH/Ion/conductivity/DO meter (Ethernet version) + UTP cable
C34xxX	Meter kit without electrodes: meter + 2x50 ml buffers (pH 4 and 7) + 50 ml electrolyte (3M KCl) + 50 ml conductivity standards (0.01 M KCl) + UTP cable		
SH300	Flexible electrode holder (optional)		
A4800	Wall mounting kit (optional)		
A4049	Car adaptor, 12 V (optional)		

➔ **Supplied with a mains adaptor (100...240 VAC, EU/US)**

(Add a UK-sign for UK plug versions, e.g.: C3050-UK) (Add a CH-sign for Swiss plug versions, e.g.: C3050-CH)

Consort • Tel: (+32) (0)14 41 12 79 • Fax: (+32) (0)14 42 91 79 • E-mail: sales@consort.be

Temperature

Reads temperatures with 0.1°C resolution.

Manual or automatic temperature compensation (O_2: 0...50°C).

Calibrates temperature probe for quality measurements.

Inputs

Two inputs for pH, mV, Ion, dissolved oxygen or conductivity + corresponding temperature and reference inputs.

Two extra DIN-8 connectors for 4-pole conductivity electrodes with built-in Pt1000.

Outputs

Two versions available:

C3410, C3420, C3430: with USB communication port (galvanically isolated) and RS232 interface.

C3411, C3421, C3431: with Ethernet communication port and RS232 interface.

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.

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.

Special features

Two-way communication with a computer using USB, Ethernet 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/Ion 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).

SPECIFICATIONS		C34x0 - C34x1
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
ION *(C343x only)*	*Range*	0.01 ng/l...100 g/l
	Resolution	3 digits
	Accuracy	0.5% ± 1 digit
	Calibration	2...5 points + blank
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*	0.0...70.0
	Reference temperature	15°C
TDS	*Range*	0...100 g/l
	Resolution	0.01 mg/l
DISSOLVED OXYGEN *(C342x, C343x only)*	*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	600...1300 hPa
TEMPERATURE	*Range*	-5...+105°C
	Resolution	0.1°C
	Accuracy	0.1°C
	Calibration	1 point
AIR PRESSURE *(C342x, C343x only)*	*Range*	600...1300 hPa
	Calibration	1 point
CHANNELS	*Measurement*	2
	Temperature	2
INPUTS	*Measurement*	2 BNC, 10^{12} Ω
	Temperature	2x2 banana, for Pt1000
	Four-pole conductivity cell	2 DIN-8
CALIBRATION	*Reminder*	0...999 h
	GLP	✓
DISPLAY	*LCD*	240x64 pixels
	White backlight	✓
	Hold function	✓
	Selectable resolution	✓
	Real time clock	✓
COMMUNICATION	*Interface with computer*	USB or Ethernet
	RS232, baud rate	1200...115200 b/s
	Printer	✓
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

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