



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: C303x only
Dissolved oxygen: C302x, C303x only

Two independent channels for all measurements!

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 (E₀) between ±999 mV.

mV

Features mV calibration for accurate ORP measurements.
 Selectable resolution from 0.1 mV to 1 mV.

Ion (C3030, C3031 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.
 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 (C3020, C3021, C3030, C3011 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	CODE	Description
C3010	pH/conductivity meter (USB version) + USB cable	C3011	pH/conductivity meter (Ethernet version) + UTP cable
C3020	pH/conductivity/DO meter (USB version) + USB cable	C3021	pH/conductivity/DO meter (Ethernet version) + UTP cable
C3030	pH/Ion/conductivity/DO meter (USB version) + USB cable	C3031	pH/Ion/conductivity/DO meter (Ethernet version) + UTP cable
C30xxP	Meter kit for pH: meter + pH/ATC electrode SP10T + 2x50 ml buffers (pH 4 and 7) + 50 ml electrolyte (3M KCl)		
C30xxK	Meter kit for conductivity: meter + conductivity/ATC electrode SK10T + 50 ml conductivity standard (0.01 M KCl)		
C30xxZ	Meter kit for oxygen: meter (not C3010 or C3011) + dissolved oxygen electrode SZ10T		
C30xxT	Meter kit complete: meter + pH/ATC electrode SP10T + conductivity/ATC electrode SK10T + 2x50 ml buffers (pH 4 and 7) + 50 ml electrolyte (3M KCl) + 50 ml conductivity standard (0.01 M KCl) (C302x and C303x: + dissolved oxygen electrode SZ10T)		
C30xxX	Meter kit without electrodes: meter + 2x50 ml buffers (pH 4 and 7) + 50 ml electrolyte (3M KCl) + 50 ml conductivity standard (0.01 M KCl)		
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)

Temperature

Reads temperatures with 0.1 °C resolution.

Manual or automatic temperature compensation (O₂: 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.

Outputs

Two versions available:

C3010, C3020, C3030: with USB communication port (galvanically isolated) and RS232 interface.

C3011, C3021, C3031: 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	C30x0 - C30x1	
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%
mV	Zero point (Eo)	±999 mV
	Range	±2000 mV
	Resolution	0.1 mV
	Accuracy	0.1% ± 1 digit
ION (C303x only)	Calibration	1 point
	Range	0.01 ng/l...100 g/l
	Resolution	3 digits
	Accuracy	0.5% ± 1 digit
CONDUCTIVITY	Calibration	2...5 points + blank
	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)
RESISTIVITY	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 (C302x, C303x 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 (C302x, C303x 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
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...



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	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)

Temperature

Reads temperatures with 0.1 °C resolution.

Manual or automatic temperature compensation (O₂: 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.

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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

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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
mV	Slope	80...120%
	Zero point (Eo)	±999 mV
	Range	±2000 mV
	Resolution	0.1 mV
	Accuracy	0.1% ± 1 digit
	Calibration	1 point
	ION (C343x only)	Range
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
TEMPERATURE	Air pressure compensation	600...1300 hPa
	Range	-5...+105 °C
	Resolution	0.1 °C
	Accuracy	0.1 °C
AIR PRESSURE (C342x, C343x only)	Calibration	1 point
	Range	600...1300 hPa
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

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