C3010 • C3020 • C3030 *pH - mV - Ion - Conductivity - Resistivity - Salinity - TDS - Dissolved oxygen - Air pressure - Temperature*

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

(C303x only)
(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 (Eo) 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	
C3010	pH/conductivity meter (USB version) + USB cable	**C3011**	pH/conductivity meter (Ethernet version)
C3020	pH/conductivity/DO meter (USB version) + USB cable	**C3021**	pH/conductivity/DO meter (Ethernet version)
C3030	pH/Ion/conductivity/DO meter (USB version) + USB cable	**C3031**	pH/Ion/conductivity/DO meter (Ethernet version)
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)		

➔ *Add a $-sign for US plug versions, e.g.: C3020P$,* ➔ *Add a U-sign for UK plug versions, e.g.: C3020PU*

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.

  Low voltage DC input for e.g. a mains adaptor.
- ***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%
	Zero point (Eo)	±999 mV
mV	*Range*	±2000 mV
	Resolution	0.1 mV
	Accuracy	0.1% ± 1 digit
	Calibration	1 point
ION *(C303x 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 *(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 *(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
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
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 accessories, electrodes, calibration solutions... on pages xx

C3410 • C3420 • C3430

Four-pole versions of models C3010, C3020, C3030

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

(C343x only)
(C342x, C343x 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 (Eo) between ±999 mV.
- ***mV***
  Features mV calibration for accurate ORP measurements.
  Selectable resolution from 0.1 mV to 1 mV.
- ***Ion*** *(C3430, C3411 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 from 0.01 µS/cm to 200 mS/cm 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, C3411 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)
C3420	pH/conductivity/DO meter (USB version) + USB cable	**C3421**	pH/conductivity/DO meter (Ethernet version)
C3430	pH/Ion/conductivity/DO meter (USB version) + USB cable	**C3431**	pH/Ion/conductivity/DO meter (Ethernet version)
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)		
SH300	Flexible electrode holder (optional)		
A4800	Wall mounting kit (optional)		
A4049	Car adaptor, 12 V (optional)		

➔ *Add a $-sign for US plug versions, e.g.: C3420$,* ➔ *Add a U-sign for UK plug versions, e.g.: C3420U*

- ***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.

  Low voltage DC input for e.g. a mains adaptor.
- ***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.

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- ***Special features***
  Two-way communication with a computer using USB, Ethernet or RS232.

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  Three year warranty.
- ***GLP***
  All procedures for a "Good Laboratory Practice" are on board.
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Specifications		C34x0 - C34x1
pH	*Range*	-2...+16 pH
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	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
	Four-pole conductivity cell	DIN-8
	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
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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