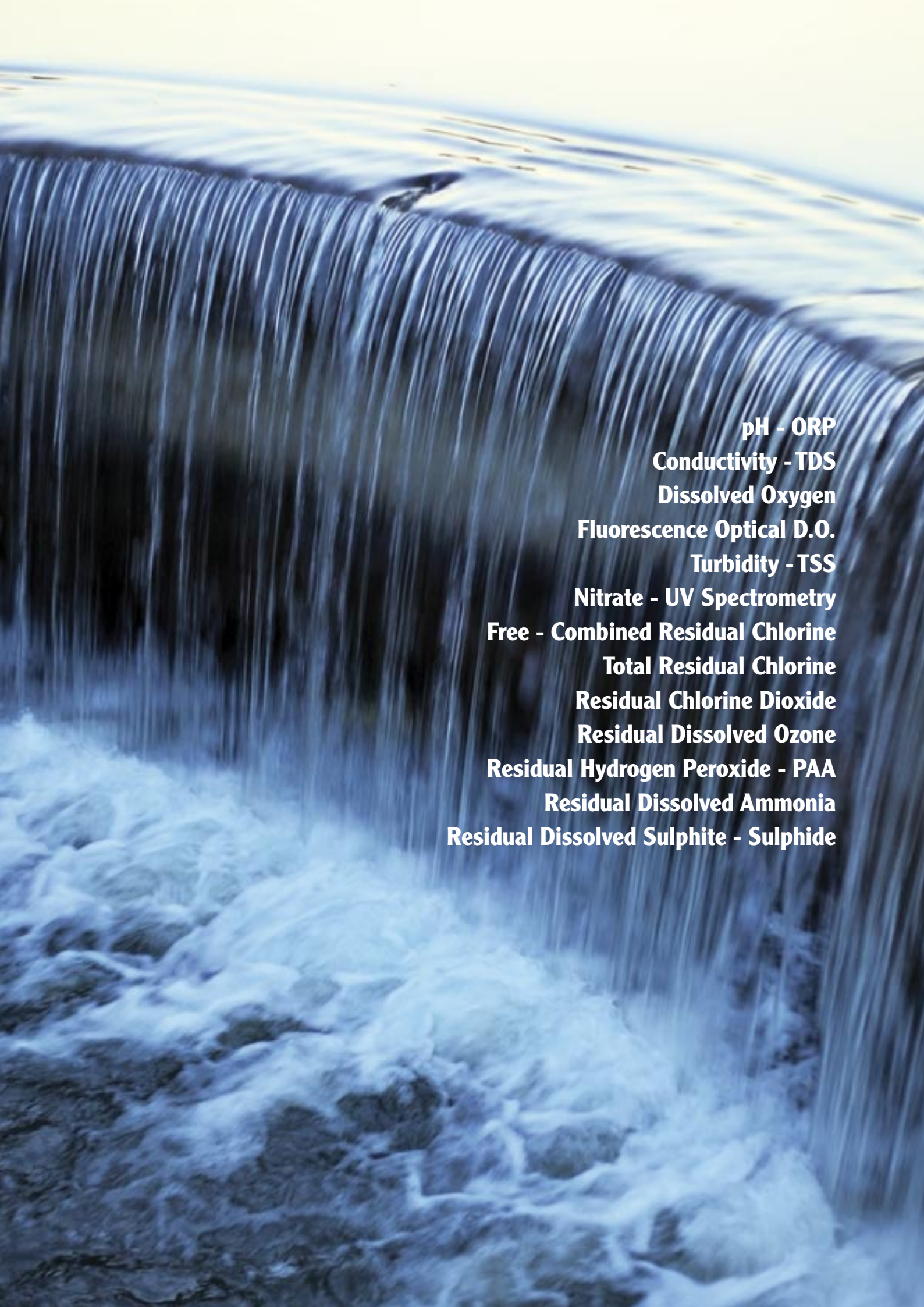
B&C electronics

# Liquid Analyzers & Sensors



pH - ORP
Conductivity - TDS
Dissolved Oxygen
Fluorescence Optical D.O.
Turbidity - TSS
Nitrate - UV Spectrometry
Free - Combined Residual Chlorine
Total Residual Chlorine
Residual Chlorine Dioxide
Residual Dissolved Ozone
Residual Hydrogen Peroxide - PAA
Residual Dissolved Ammonia
Residual Dissolved Sulphite - Sulphide

**B&C Electronics srl** was founded in 1974 with the goal of manufacturing reliable equipment for water analysis and for industrial process control. Since the beginning, the Company had a constant growth in both products manufacturing and Customer Satisfaction, and it soon became able to fulfill the requests of both a national and international marketplace.

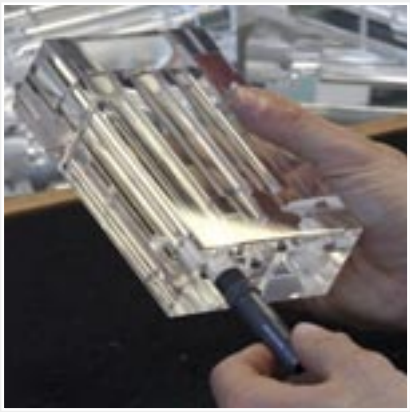
In 1998, the company was certified **ISO 9001** by CISQ – IQNET.
Total Quality and the EFQM model of excellence have been the leading elements of the B&C Electronics' Quality System ever since.
Today, the products range is second to none, and the Company is among the leading manufacturers of liquid analyzers and sensors worldwide.

Our goal is to meet the implicit demand of each Customer, and this is why we address all of our energy toward Customer Satisfaction. Being a Certified Company, we strive to be competitive and to assure each Customer of our product's reliability. We believe that Quality is not an option nor a luxury, but rather an investment aimed at having more and more satisfied Customers, who know that B&C Electronics guarantees quality and reliability.

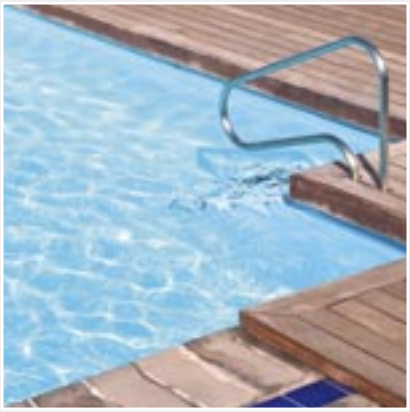
Total Quality is a concrete and daily effort toward a "continuous improvement".
For this, our Quality system includes every aspect and every department of the B&C Electronics:

- R&D constantly develops and updates our products by focusing its attention on quality, reliability, functionality, ease of use and cost.
- Manufacturing is monitored throughout all steps and is accompanied by documentation for traceability.
- All products are tested and factory calibrated before shipment.
- A free of charge Technical Support telephone service is available to all Customers.
- Our Staff is regularly trained during periodicals meetings performed in order to maintain the quality of our production process and the sales of our products.
- The numerous data collected by our system allow us to monitor the objectives set by all Company's departments, which also include Purchasing, Shipping and Accounting.

During its 40 years of business, B&C Electronics has built strong partnerships with international Distributors and Agents. The Italian Headquarter sells all over the world, but it also relays on the precious help and assistance of its global partners.
Local dealers and Customers are present on all 5 continents and their major countries.



# Applications



B&C Electronics products work in specific industries and cover many applications.
The technology used assists many companies to operate in the most effective and efficient ways.
This saves the user money and time to concentrate on their raw strengths.

The technical features of our Sensors and the performance of most of the Analyzers make them very flexible and they can be used even for highly customized applications, with destination to the OEM market.

The long experience of our Staff on specific chemical and physical applications, and the knowledge of electrochemical water treatment and industrial processes in general, provide to our customers a valid technical and commercial support for choosing the right product for their needs.

The technical development and the continuous improvement required by our Quality System drives us to constantly expand the application possibilities of our instrumentation.

Starting from pH, ORP and Conductivity we developed great experience in liquid analyzers, allowing us to later diversify into several different models of equipment with a wide range of sensors and electrodes.
In recent years, we completed a whole series of analyzers and sensors, for disinfection and control of primary and waste water.

Aquaculture
Biotechnology
Chemical Industry
Drinking Water
Electroplating
Environmental Monitoring
Fertirrigation
Food and Beverage
Geology
Laboratory
Paper and Pulp
Pharmaceutical
Printing Industry
Security
Surfaces Treatment
Swimming Pools
Textile Industry
Underground Water
University and Research
Water Treatment

# 6587 Series

## Single/Multiparameter IP65 Wall Mount Controllers

ABS watertight enclosure, with Polycarbonate front panel
Inputs from analog sensors, digital and 4…20 mA probes
Graphic backlit display
RS 485 - Modbus communication

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** pH -ORP - Conductivity - Temperature - Res. Chlorine - D.Ozone |
| Chlorine dioxide - Inputs +/- 4…20 mA |
| Two set-point relays On-Off, PID (PWM - PFM) functions |
| Alarm relay, adjustable high-low points and delay - AutoClean relay |
| Dual analog output, fully selectable 0/4…20 mA and programmable |
| **Power supply:** 85 - 264 Vac - Optional 9 - 36 Vdc or 24 Vac |
| **Dimensions:** 256 x 213 x 74 mm |

# 7685 Series

## Panel Mount Controllers 96x96

The most complete and performing Analyzers Series
Wide range of parameters and functionality available
High reliability and precision, easy to use in all applications
One of the best performance/price ratio on the marketplace

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** pH - ORP - Conductivity - D.Oxygen - Res. Chlorine - D.Ozone |
| Chlorine dioxide - Turbidity - Dissolved Sulphite/Sulphide |
| Two set-point relays On-Off, PWM - PFM functions |
| Alarm relay, adjustable high-low points and delay - AutoClean relay |
| **Power supply:** 110/220 Vac |
| **Dimensions:** 96 x 96 x 155 mm |

# 7635 Series

## Low Cost Panel Mount Controllers 96x96

Aluminium enclosure, only 95 mm depth
Red LED display with high visibility
High reliability and precision, easy to use in all applications
Sliding short messages on the display

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** pH - ORP - Conductivity - D.Oxygen - Res.Chlorine - D.Ozone |
| **Other Inputs:** +/- 4…20 mA signals |
| Two set-point relays On-Off |
| Alarm relay, adjustable high-low points and delay |
| **Power supply:** 85 - 264 Vac - Optional 9 - 36 Vdc or 24 Vac |
| **Dimensions:** 96 x 96 x 95 mm |

# 7687 Series

## Single/Multiparameter IP65 Wall Mount Controllers

Waterproof keyboard front panel, aluminum enclosure
High reliability and precision, easy to use in all applications
Graphic backlit display
RS 485 - Modbus communication

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** pH - ORP - Conductivity - D.Oxygen - Res. Chlorine - D.Ozone |
| Chlorine dioxide - Turbidity - Dissolved Sulphite/Sulphide - In +/- 4…20 mA |
| Two set-point relays On-Off, PID (PWM - PFM) functions |
| Alarm relay, adjustable high-low points and delay – AutoClean relay |
| Dual analog output, fully selectable 0/4…20 mA and programmable |
| **Power supply:** 85 - 264 Vac - Optional 9 - 36 Vdc or 24 Vac |
| **Dimensions:** 96 x 96 x 95 mm |

# 3436 Series

## Digital Rail Din Controllers

Compact size, modular and easy to use instruments
High reliability, low installation costs
Automatic or manual Temperature compensation RTD Pt100
Alphanumeric LCD display - Detachable terminal blocks

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** pH - ORP - Conductivity - TDS - Temperature - Chlorine - D.Ozone |
| Analog out 4…20 mA isolated - Digital out RS 485 isolated ASCII - Modbus |
| **Isolation:** 1000 V input to output |
| **Power supply:** 9 - 36 Vdc |
| **Dimensions:** 71 x 95 x 58 mm (4 modules) |

# 7335 Series

## Low Cost Panel Mount Controllers 96x48

Aluminum enclosure, only 95 mm depth
Red LED display with high visibility
High reliability and precision, easy to use in all applications
Sliding short messages on the display

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** pH - ORP - Conductivity - D.Oxygen - Res.Chlorine - D.Ozone |
| **Other Inputs:** +/- 4…20 mA signals |
| Two set-point relays On-Off |
| Alarm relay, adjustable high-low points and delay |
| **Power supply:** 85 - 264 Vac - Optional 9 - 36 Vdc or 24 Vac |
| **Dimensions:** 96 x 48 x 95 mm |

# 3630 Series
## Rail-Din Transmitters

Two wire 4…20 mA operation
Isolated current loop output
Automatic or manual Temperature compensation RTD Pt100
LCD display - Detachable terminal blocks

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** pH - ORP - Conductivity - D.Oxygen - Res.Chlorine - D.Ozone |
| **Isolation:** 500 V input to output |
| **Power supply:** 10 - 30 Vdc |
| **Dimensions:** 105 x 95 x 58 mm (6 modules) |
| **Weight:** 200 g |

# 135 Series
## Handheld Meters

Microprocessor based, small dimensions, long battery life
Logging up to 100 measures
Alphanumeric LCD display
High accuracy and reliability

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **pH range:** - 1,00 / 15,00 |
| **ORP range:** -1200 / 1200 mV |
| **Conductivity range:** from 20,00 µS to 200,0 mS with 5 scales |
| **TDS range:** from 10,00 ppm to 100,0 ppt with 5 scales |
| **Temperature range:** -10,0 / 110,0 °C and 32,0 / 212,0 °F |

# On-line Analyzers
## Chemistry Module - ISE - Polarographic

Based on 7685 and 7687 Series microprocessor Controllers
Gas-Phase, Ion Specific, Polarographic membranes technology
AutoCal features for ISE analyzers
High performance/price ratio on the marketplace

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Total Chlorine gas-phase scales:** 2,000 / 20,00 ppm $Cl_2$ |
| **Total Chlorine Wet Iodometric scales:** 2,000 / 20,00 / 200,0 ppm $Cl_2$ |
| **Sulphite / Sulphide gas-phase scales:** 2,000 / 20,00 ppm $SO_3^-$ / $S_2^-$ |
| **ISE Electrodes:** $NO_3^-$ / $NH_4^+$ / $Cl^-$ / $F^-$ / $Ca^{2+}$ / $Ca^{2+}$ $Mg^{2+}$ |
| **Power supply:** 110/220 Vac |

# 8000 Series
## Multi Parameter Probes

Environmental and Industrial unattended continuous monitoring
Models with built-in data logger and rechargeable batteries
Depth to 350 meters - OEM models for external data loggers
Digital communication with ASCII or Modbus protocol

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **STD measures:** Level - Temperature - Conductivity - pH - ORP - D.Oxygen |
| **Optional measures:** Turbidity - ISE Chloride - ISE Ammonium - ISE Nitrate |
| **Power supply:** Internal 2,7 - 4,8 Vdc – External 12 Vdc max. 60 mA |
| **Dimensions:** length 510 mm diameter 70 mm or 44,5 mm |
| **Weight:** 2 Kg max. |

# Digital-Analog Probes
## 4…20 mA – RS 485 - Modbus RTU

All-in-one devices for easy single or multiple installations
Programming and configuration by RS 485 / USB interface
For submersible application, with built-in AutoClean system
For in-line application, with fixed cable or 7-pin DL connector

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Measures:** Conductivity – TDS – Turbidity – S.Solids – Optical D.Oxygen |
| **Power supply:** 9 - 36 Vdc |
| **Body material:** PVC and PVDF |
| **Protection:** IP68 |
| **Cable:** standard length 10 m (max. 100 m) |

# UV Probes
## Nitrate – Nitric Nitrogen

Wide bandwidth spectrometric analyzer
Built-in 4…20 mA – RS 485 output isolated
Optical path with fully AutoClean features
Automatic sample Turbidity and Organics compensation

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **($NO_2^-$) ($NO_3^-$) – N scales:** 2,50 / 25,0 / 250 mg/l |
| **$NO_3^-$ scales:** 10,00 / 100,0 / 1.000 mg/l |
| **Sensitivity:** 0,01 mg/l |
| **Lamp lifetime:** 2.000 / 720.000 hours |
| **Power supply:** 11 - 36 Vdc |

# pH/ORP/ISE Sensors

## Wide Range of Glass & Epoxy Body

Based on Sealed "gel" double junction reference technology
Model resistant to wide range of Temperature - 20 °C to 125 °C
Steam sterilizable and autoclavable for Biotechnologies
Customized models for Retrofit or special applications

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Length:** 110 mm standard |
| **Diameter:** 12 mm standard |
| **Fixed cable length:** 1,5 m with BNC or 9 m without connector |
| **Detachable lead connectors:** DL / S7 / S8 (PG 13.5) |
| **In-Line application up to 10 BAR** |

# E.Conductivity Probes

## Two and Four Electrodes

PVC, PP, PVDF, PEEK, PES and Stainless Steel body materials
Models for high temperature up to 125 °C
R.O. and ultrapure water applications
Demi and Ion Exchange plants manufacturing

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Cell constant:** from K = 0,01 to 10 $cm^{-1}$ |
| **Built-in RTD sensors:** Pt 100 / Pt 1000 / NTC 10K |
| **Process connection:** threaded ½" - 1" BSP - ½" BSP - ¾" MNPT |
| **Process connection:** conical DIN 11851-52 |
| **Process connection:** sanitary Tri-Clamp 2" |

# E.Conductivity Probes

## Toroidal

PVC-C and PVDF body materials
All-in-one devices with built-in Transmitter 4…20 mA – 2 wire
Suitable for severe and harsh applications
Special design for multi-points Cooling Towers monitoring

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Cell constant:** K = 1 $cm^{-1}$ with local amplifier |
| **Cell constant:** K = 7 $cm^{-1}$ without local amplifier |
| **Built-in RTD sensors:** Pt 100 |
| **Process connection:** threaded 1 ½" MNPT - BSP 40 mm pitch 1,5 |
| **Process connection:** conical DIN 11851-52 |

# Turbidity-TSS Probes

## Nephelometric - AutoClean

PVC and PVDF body materials
Amplified signals output dedicated to 7685 Series Controllers
For submersible application, with built-in AutoClean system
For in-line application, 7-pin DL connector

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Turbidity scales:** 4,000 / 40,00 / 400,0 / 4000 NTU |
| **Optical:** Infrared ISO 7027 or Tungsten solid state lamp USEPA 180.1 |
| **Diagnostic:** for empty cell and dirty lens checking |
| **AutoClean source:** external clean compressed air, max. 3 BAR |
| **Cable length:** standard 10 m - 30 m (optional up to 100 m) |

# $Cl_2$ / $ClO_2$ / $DO_3$ / $H_2O_2$

## Potentiostatic - Polarographic

Glass, Epoxy and PVDF body materials
Specific membranes / electrolyte for high selective measures
Free residual Chlorine and Combined residual Chlorine models
Overflow or In-Line measurements without chemicals addition

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Built-in RTD sensors:** Pt 100 |
| **Fixed cable length:** 3 m without connector |
| **Detachable lead cable length:** 7,5 m multi wire |
| **Potentiostatic dimensions:** length 110 mm diameter 12 mm |
| **Polarographic dimensions:** length 60 mm diameter 33 mm (wetted parts) |

# D.Oxygen Probes

## Optical - Membraned - AutoClean

PVC and PVDF body materials
Amplified signals output dedicated to 7685 Series Controllers
Galvanic and Polarographic membraned models
Optical with Fluorescence Quenching Technology
For submersible and in-line applications

| MAIN TECHNICAL SPECIFICATIONS |
|---|
| **Built-in RTD sensors:** Pt 100 |
| Replaceable membranes and sensing elements |
| **AutoClean source:** external clean compressed air, max. 3 BAR |
| **Detachable lead cable length:** 7,5 m multi wire |
| **Fixed cable length:** standard 10 m (optional up to 100 m) |

# Ten good reasons to choose B&C Electronics Products and Services.

Quality Products
Qualified Customer Service
Stability in the Market Place for 40 years
Continuous and innovative R&D
Reliable Products and 5 Years Warranty
Experienced Technical Support
Extensive Quality Control
Fast Delivery
Competitive Prices
Private Label and Custom Products

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