BA-ENVIRO

Online Wet Chemistry Analyzer

Analyzer Methods

- Titration
- Colorimetric
- Ion-Selective

Application Areas

- Drinking water
- Boiler feed waste
- Cooling water
- Waste water
- Process water
- Surface water

Introduction

The Online Wet Chemistry Analyzer is a single parameter versatile, robust suitable for analysis of water, wastewater & Process liquids.

For each application & measuring range the most suitable methodology is applied in **BA-Enviro**. With its excellent product performance, reliable online application experience and a common user interface reduces training efforts. Automatic cleaning between samples eliminates cross-contamination. All of this adds up to improved performance in any process.

The Advantage

- **Automatic Calibration/ Validation/ Cleaning (Application Dependent)**
- **Automatic High sensitivity and Selectivity**
- **Higher measuring ranges possible by using Dilution**
- **Multiple streams analysis (optionally)**
- **Increased lifespan by adopting corrosion resistant material**
- **Solid state Data logger with storage capacity of up to 10,000 results**
- **Large (7.1” Color LCD Display)**
- **Low reagent consumption**
- **Factory configured, tested & calibration**

Parameter

- Acetic Acid
- Acidity
- Alkalinity
- Aluminium
- Ammonia
- Ammonia
- Boron
- Bromide
- Calcium
- Chlorine Free
- Chlorine Total
- Chlorine Dioxide
- Chromium III
- Chromium VI
- Chromium Total
- Chloride
- Chloride
- Copper
- Cyanide
- Cyanide Total
- COD_{cr}
- COD_{Mn}
- COD_{cr}+Ammonia
- Fluoride
- Hardness
- Hydrazine
- HCl
- HF
- H_2O_2
- ClO^-
- Iron
- Lactic acid
- Manganese
- Nickel
- Nitrate
- Nitrite
- HNO_3
- Nitrogen Total
- Phenol
- H_3PO_4
- Phosphorus Total
- PO_4^{3-}
- Silica
- Sodium
- NaOH
- Sulphate
- Sulphide
- Sulphite
- Sulphuric acid
- Thiocyanate
- Total Acid
- Total Alkalinity
- Total Nitrate (TN)
- TMAH
- Urea
- Zinc

Specification

General Specifications	
Parameters	As listed below or customized on request
Measuring ranges	µg/L to g/L
Analysis Method	- Titration - Colorimetric - Ion-Selective
Inaccuracy	1 - 5% of Full scale (Application dependent)
Resolution	0-0.01 mg/l (depending upon the parameter and the range)
Repeatability	1 - 5% of Full scale (Application dependent)
Cycle Time	1 cycle: 08 - 30 minutes (Application dependent)
Display	7.1" LCD Colour touch screen/ 10 " (optional)
Communication & Controls	
Data logging	Available up to 10,000
Analog outputs	Max. 8 AO (4-20 mA) max 500 ohm load
Analog inputs (Programmable)	Max 8 x AI
Digital Inputs (Programmable)	Max 12 x DI (Poten free)
Digital Outputs (Programmable)	Max. 8 x DO (Poten free) - Malfunctioning Alarm - Result Alarm - Ext. control; Pump, value or light etc.
Modbus/RS485	Optional
Analyzer Cabinet	
IP Ratings	Cabinet - IP 55 (Other options available)
Cabinet material	ABS / Polycarbonate (Stainless steel on request)
Dimensions	600mm X 500mm X 200mm (H X W X D)
Weight	Appox. 15 kg (w/o reagents)

Utilities & Environment	
Power	115 / 230 VAC, 50-60Hz
Instrument Air	Dry & oil free, up to 3 bar
Demin water	For Cleaning, rinsing & Dilution (if required)
Drain	Atmospheric pressure, vented
Ambient Temp.	5 °C - 35 °C, 95% RH (Non condensing)
Reagent Temp.	Reagent Temp.
Sample Pressure	Atmospheric
Sample flow rate	10 - 40 ml per minute
Options	
Filtration	Self-cleaning filtration (different pore sizes)
Dilution	Internal Sample Dilution for high measuring ranges
Reagent Level Detection	For reagent containers, early Alarm of reagents qty.
Multiplexer for Multi streams	Stream Selector (build in program (2- 4 streams)

Ordering information

BA-ENV	-X1	-X2	-X3	-X4	-X5	-X6

-X1	-D7: 7.1" LCD Colour touch screen
	-D10: 10" LCD Colour touch screen
-X2	-CM: Modbus
	-CRS: RS485
-X3	- : None
	-DM: Require Demin water
-X4	-CB : ABS / Polycarbonate cabin
	-CBSS : Stainless steel cabin
-X5	-Parameter : In parameter list
-X6	-Range : Following application
Please contact factory for other cable length	

Online Universal Controller

BAC LH-D6901

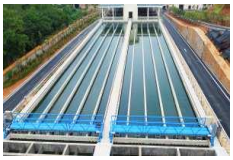
Introduction

This instrument is an intelligent online controller, which is widely used in water quality detection in sewage plants, waterworks, water stations, surface water and other fields, as well as electronic, electroplating, printing and dyeing, chemistry, food, pharmaceutical and other process fields, meet the needs of water quality detection; Adopting digital and modular design, different functions are completed by various unique modules. Built-in more than 20 kinds of sensors, which can be combined at will, and reserved powerful expansion functions.

Application


Aquaculture


Sewage treatment


Waterworks


Environmental monitoring


Plant sewage


Surface water

Technical Data

	Specifications
Working voltage	AC 90~220V、50/60Hz
Instrument size	100*100*150mm
Screen size	80*80mm
Hole size	93*93mm
Weight	0.56Kg
IP grade	IP65
Ambient Temperature	10-40℃

Feature

High definition color touch screen

Strong expansibility and practicability

Multiple output modes

IP65 waterproof

High and low alarm

Customization services

Chinese and English interface

Remote communication

History record

Brasten Engineering & Service Co., Ltd.
254 Soi Onnuch 40, Sukhumvit 77, Bangkok-10250, Thailand
Tel.: (662) 730 6500 Fax: (662) 730 6505
E-mail: info@brasten.com Website: www.brasten.com

BRASTEN®

Online Intelligent Turbidity Sensor

BAS-LH-DZ09

Product Introduction

The online turbidity electrode adopts 90-degree scattered light method and uses a near-infrared light source to eliminate chromaticity interference and meets the ISO7027 standard.The LED emits a near-infrared beam to the sample at a certain angle.The beam will emit scattering when it hits the suspended matter in the sample during transmission.The detector set at 90% of the incident light receives the scattered light.The concentration of suspended matter in the sample is the intensity of the scattered light is directly proportional, so that the concentration of suspended matter in the sample and the turbidity can be calculated by measuring the intensity of the scattered light.

Features

- Can be used for low turbidity detection. (<1NTU, with flow slot).
- Comes with intelligent device with automatic cleaning function.
- Built-in temperature sensor with temperature compensation function makes measurement more accurate.
- Support MODBUS / RS485 4-20mA current interface output to facilitate system integration.

Operating temperature	5 ~ 40℃
Deepest depth	Underwater 6M
Digital interface	MODBUS/RS485
Analog interface	4-20mA
Powered by	12VDC±20%

Calibration	One point or two point
Protection class	IP68
Installation method	Flow tank installation or Submerged installation
Size	Φ54X150mm

Model	LH-DZ09-200	LH-DZ09-1000	LH-DZ09-3000
Measuring range	0-200	0-1000	0-3000
Resolution	0.01,1	0.1,1	0.1,1
Indication error	≤5NTU, ≤±0.3NTU; ＞5NTU, ≤±6%	≤10NTU, ≤±0.5NTU ; ＞10NTU, ≤±8%	≤10NTU, ≤±0.5NTU ; ＞10NTU, ≤±8%

Constant Pressure Residual Chlorine Detection Module

BAS-LH-DL06

Product Introduction

Constant pressure residual chlorine detection module includes pH electrode, residual chlorine electrode (platinum electrode, titanium electrode), installation backplane, flow meter and controller.

Technical Specification	
Test Item	Residual chlorine, pH, temperature, flow rate
Measuring Range	Residual Chlorine: 0~3mg/L
	pH: 0~14
	Temperature: 0~60℃
	Flow rate: 16~40L/H
Accuracy	Residual Chlorine: 0.01~0.2:±0.02mg/L; 0.21~3.00mg/L; ±0.1mg/L or 5%, whichever is greater
	pH: ±0.1
	Temperature: ±0.5℃
	Flow rate: ±5%
Resolution	Residual Chlorine: 0.01 mg/l
	Current: 0.01 A
	pH: 0.01
	Temperature: 0.1 ℃
	Flow rate: 1L/H
Temperature element	NTC 10K
Flow rate requirement	16~40L/H, 20L/H optimal
Power	0.5W
Power supply	12~24VDC, standard 5m shielded cable, length OEM available
Data output	RS-485/MODBUS-RTU protocol
IP grade	BNC and flow meter interface: Ip65; Other interfaces and structural parts: IP68
Main material	PMMA/PC/PTFE/glass/titanium/platinum/304 stainless steel/silicone O-ring
Installation	Backplane installation

Features

Exclusive for running water testing

Self-cleaning function

Save water& environmental protection

Easy to maintain

BAS-SMART MV7

Electrochemical Ion Sensors

commitment to excellence

Technical Datasheet

Your trusted global industrial partner since 1990
ISO 9001:2015 certified

The Advantage

- **Sensor consists of a measuring electrode** smart signal processing module (SSP), housing and cable
- **Robust ion selective electrode sensors**
- **Reference & Temperature electrodes** are integrated into one probe
- **Digital smart sensor**: calibration and history data are stored in sensor, plug and play operation
- **Offers quick time response**, minimal flow dependence and low power consumption
- **Fully compatible with PC software ViewTM** for easy setup and data logging
- **Cartridge replacement** is simple and may be performed by the end-user in the field

Introduction

Ion selective electrodes are not limited to laboratory use; some are suitable for continuous online measurement. BRASTEN offers Specific Ion Electrode cartridges to measure ammonium, bromide, calcium, chloride, cupric, cyanide, fluoride, Nitrate, Potassium, Silver, Sodium and Sulfide ions. Specific Ion electrodes measure the activity (concentration) of the ion in solution, the “free” ion, not a complexed version. Cyanide, Fluoride and Sulfide ions only exist in a specific pH range as free ions and outside this pH range some percentage of the total concentration is complexed as H(X) which is not seen by the sensor. These measurements can be pH compensated using the dual channel C22 Controller with a pH sensor to determine the total ion concentration. Most ion sensors are subject to interfering ion errors. A positive interferences caused by similar ions in the solution. Consult with the factory on all new installations to determine the suitability of the measurement.

Application Areas

• Industrial Wastewater	• Municipal & Sewage Wastewater	• Drinking Water
• Surface Water Monitoring	• Sanitation Network	• Seawater

Measuring Parameters and Performance

Parameters		Range@25°C	OperateTemp.	Repeatability	pH Demand
Ammonia	NH_3	0.01 to 17,000 ppm	0 to 50°C	±2%	＞11
Ammonium	NH_{4+}	0.02 to 18,000 ppm	0 to 40°C	±2%	2 to 7
Bromine	Br_-	0.2 to 79,900 ppm	0 to 80°C	±2%	4 to 10
Divalent Cadmium	Cd_{2+}	0.0 to 11,200 ppm	0 to 80°C	±4%	2 to 8
Calcium	Ca_{2+}	0.02 to 40,000 ppm	0 to 50°C	±4%	2 to 8
Carbon Dioxide	CO_2	4.4 to 440 ppm	0 to 50°C	±2%	4.8 to 5.2
Chloride	Cl_-	1.8 to 35,500 ppm	0 to 50°C	±2%	2 to 12
Copper	Cu_{2+}	0.064 to 6,450 ppm	0 to 80°C	±4%	2 to 12
Cyanide	CN_-	0.2 to 260 ppm	0 to 80°C	±2%	10 to 14
Fluoride	F_+	0.02 to 2000ppm	0 to 50°C	±4%	5 to 8
Iodide	I_-	0.0064 to 127,000 ppm	0 to 80°C	±2%	0 to 14
Lead	Pb_{2+}	0.2 to 20,700 ppm	0 to 80°C	±4%	4 to 7
Nitrate	NO_{3-}	0.4 to 62,000ppm	0 to 40°C	±2%	2.5 to 11
Potassium	K_+	0.04 to 39,000ppm	0 to 40°C	±2%	2 to 12
Silver	Ag_+	0.01 to 107,900ppm	0 to 80°C	±2%	2 to 12
Sodium	Na_+	0.1 to 23,000ppm	0 to 80°C	±2%	>9
Sulfur	S_{2-}	0.003 to 32,100ppm	0 to 80°C	±4%	>11

Specification

Components	Measurement, reference, and temperature electrodes, housing and cable
Accuracy	±2%
Resolution	Better than 4%
Respond time	T90<10s
Electrode life	6-12 months, depend on actualapplication
Operate Pressure	Max 0.5bar
Operate Temp.	Depend on parameter
Storage temperature	-15 to 65°C
Power supply	24VDC, the maximum consumption 0.5W, provided by BAC
Interface	RS485 Modbus RTU
Material	Glass, PVC, PVDF,316SS, Titanium (Option)
IP Rating	IP68
Weight	0.85kg, for dual electrodes
Dimension	Dia. 1” × 12” (Ø25.4 mm × 304.8 mm) standard, additional lengths are optional

Specification

The proper installation and calibration of an analytical loop can make or break a successful measurement. Using the flow of the sample in an insertion application to maximize the cleaning potential can be as simple changing the size of the Pipe Tee, changing the insertion depth or using an Delta-Phase Flow Cell with a spray cleaning port in the most troublesome applications. Spray Cleaning heads are also available for immersion applications where the sample velocity is much lower and fouling is more common. Valve retractable units allow the sensor to be removed, serviced and installed without shutting down the sample flow in a pipe or emptying a tank.

A compression gland fitting seals the sensor into a ball valve, loosening the gland fitting allows the sensor to be retracted through the ball valve which is then closed, isolating the process solution, before removing the sensor for service. Materials of construction for the Valves, Glands, Flanges and Immersion Assemblies vary from PVC, PVDF and polypropylene plastics to 316 SS, Titanium and Hastelloy C-22. Contact our application specialists for the most cost effective solution to your application.

Standard Warranty

Standard warranty is 12 months from the date of commissioning & limited to maximum of 15 months from the date of shipment of the analyzer system

Sales & Service Support

- Factory Acceptance Test (FAT)
- Site Acceptance Test (SAT)
- Site Commissioning
- After Sales Service backup
- Guaranteed spares parts availability for maximum 10 years of instrument life.

Ordering information

MV7	-X1	-X2	-X3	-X4

-X1	- Measuring Parameter
-X2	- : Immersion or insertion, with 3/4" NPT or 1-1/2" NPT
	-R: Insertion with 1-1/2" standard or optional 1" NPT Retractor Assembly
-X3	- : Standard PVC
	-S: 316LStainless Steel
	-T: Titanium
	-P: PVDF
-X4	- : Standard 12", Length of Housing
	X17: 17"
	X21: 21"(for other lengths, consult BRASTEN)
-X5	-C10: 10 ft. Cable
	-C20: 20 ft. Cable
	-C30: 30 ft. Cable
Please contact factory for other cable length	

USA Office
Brasten America Corporation
2323 Still Water Dr., Mesquite, Tx 75181, USA
E-mail: admin@brasten.us

ASIA Region
Brasten Engineering & Service Co. Ltd.
254 Soi Onnuch 40, Sukhumvit 77, Bangkok-10250, Thailand
Tel.: (662) 730 6500 Fax: (662) 730 6505
E-mail: info@brasten.com Website: www.brasten.com

BRASTEN®
commitment to excellence

BA-ENVIRO

Online Wet Chemistry Analyzer

Your Trusted Global Industrial Partner Since 1990
ISO 9001:2015 Certified

The Advantage

- Automatic Calibration/ Validation/Cleaning (Application Dependent)
- Automatic High sensitivity and Selectivity
- Higher measuring ranges possible by using Dilution
- Multiple streams analysis (optionally)
- Increased lifespan by adopting corrosion resistant material
- Solid state Data logger with storage capacity of up to 10,000 results
- Large (7.1" Color LCD Display)
- Low reagent consumption
- Factory configured, tested & calibration

Introduction

The Online Wet Chemistry Analyzer is a single parameter versatile, robust suitable for analysis of water, wastewater & Process liquids.

For each application & measuring range the most suitable methodology is applied in BA Enviro. The Online Wet Chemistry Analyzer is a single parameter versatile, robust suitable for analysis of water, wastewater & Process liquids.

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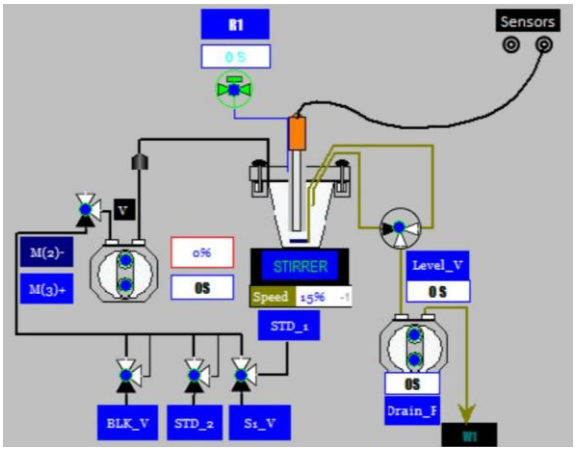
Analyzer Configuration



Analyzer Methods

- Titration
- Colorimetric
- Ion-Selective

Application Areas

• Drinking water	• Boiler feed water	• Cooling water
• Waste water	• Process water	• Surface water

Specification

General Specifications	
Parameters	As listed below or customized on request
Measuring ranges	µg/L to g/L
Analysis Method	- Titration - Colorimetric - Ion -Selective
Inaccuracy	1 - 5% of Full scale (Application dependent)
Repeatability	1 - 5% of Full scale (Application dependent)
Cycle Time	1 cycle: 08 - 30 minutes (Application dependent)
Display	7.1" LCD Colour touch screen/ 10 " (optional)
Communication & Controls	
Data logging	Available up to 10,000
Analog outputs	Max. 8 AO (4 -20 mA) max 500 ohm load
Analog inputs (Programmable)	Max 8 x AI
Digital Inputs (Programmable)	Max 12 x DI (Poten free)
Digital Outputs (Programmable)	Max. 8 x DO (Poten free) - Malfunctioning Alarm - Result Alarm - Ext. control; Pump, value or light etc.
Modbus/RS485	Optional

Utilities & Environment	
Power	115 / 230 VAC, 50 -60Hz
Instrument Air	Dry & oil free, up to 3 bar
Demin water	For Cleaning, rinsing & Dilution (if required)
Drain	Atmospheric pressure, vented
Ambient Temp.	5 °C - 35 °C, 95% RH (Non condensing)
Reagent Temp.	Reagent Temp.
Sample Pressure	Atmospheric
Sample flow rate	10 - 40 ml per minute
Analyzer Cabinet	
IP Ratings	Cabinet - IP 55 (Other options available)
Cabinet material	ABS / Polycarbonate (Stainless steel on request)
Dimensions	600mm X 500mm X 200mm (H X W X D)
Weight	Appox. 15 kg (w/o reagents)
Options	
Filtration	Self-cleaning filtration (different pore sizes)
Dilution	Internal Sample Dilution for high measuring ranges
Reagent Level Detection	For reagent containers, early Alarm of reagents qty.
Multiplexer for Multi streams	Stream Selector (build in program (2 - 4 streams)

Parameter List

Parameter	Measuring range	Methodology
Acetic Acid	Up to 2000 mg/l	Titration
Acidity	Up to 5000 mg/l	Titration
Alkalinity	Up to 5000 mg/l	Titration
Aluminum	Up to 300 ug/l	Colorimetric
Ammonia	0 – 2.5 mg/l	Colorimetric
Ammonia	0 – 1000 mg/l	Ion-Selective
Boron	0 – 1 mg/l	Colorimetric
Bromide	0.5 – 5 mg/l	Colorimetric
Calcium	1 – 1000 mg/l	Ion-Selective
Chlorine Free	0 – 5 mg/l	Colorimetric
Chlorine Total	0 – 5 mg/l	Colorimetric
Chlorine Dioxide	0 – 5 mg/l	Colorimetric
Chromium III	0 – 1 mg/l	Colorimetric
Chromium VI	0 – 500 ug/l	Colorimetric
Chromium Total	0 – 2 mg/l	Colorimetric
Chloride	Up to 1000 mg/l	Ion-Selective
Chloride	Up to 50 mg/l	Colorimetric, Ion-Selective
Cyanide	0 – 5 mg/l	Colorimetric, Ion-Selective
Cyanide Total	0 – 5 mg/l	Colorimetric
Chemical Oxygen Demand (CODcr)	Up to 1500 mg/l	Titration, Colorimetric
Chemical Oxygen Demand (CODMn)	Up to 200 mg/l	Titration
Chemical Oxygen Demand (CODcr +Ammonia)	CODcr : 0 -1000 mg/l, NH3: 0 – 10 mg/l	Colorimetric
Fluoride	Up to 1000 mg/l	Ion-Selective
Hardness	Up to 1000 mg/l	Ion-Selective
Hydrazine	0 – 500 ug/L	Colorimetric
Hydrochloric acid	Up to 5000 mg/l	Titration
Hydrogen fluoride	Up to 5000 mg/l	Titration

Parameter	Measuring range	Methodology
Hydrogen peroxide	0 – 2.5 mg/l	Colorimetric
Hypochlorite	Up to 1000 mg/l	Titration
Iron	Up to 5 mg/l	Colorimetric
Lactic acid	Up to 5000 mg/l	Titration
Manganese	0 – 5 ug/l	Colorimetric
Nickel	0 – 500 mg/l	Colorimetric
Nitrate	0 - 1 – 20 mg/l	Colorimetric
Nitrite	0 – 0.2 – 20 mg/l	Colorimetric
Nitric Acid	Up to 5000 mg/l	Titration
Nitrogen Total	0 – 20 mg/l	Colorimetric
Phenol	0 – 5 mg/l	Colorimetric
Phosphoric Acid	Up to 5000 mg/l	Titration
Phosphorus Total	0 – 20 mg/l	Colorimetric
Phosphate	0 – 15 mg/l	Colorimetric
Silica	0 - 5 – 5 mg/l	Colorimetric
Sodium	0 – 0.1 – 10 mg/l	Ion-Selective
Sodium hydroxide	Up to 5000 mg/l	Titration
Sulphate	0 – 20 - 200 mg/l	Colorimetric
Sulphide	0 – 2.5 mg/l	Colorimetric
Sulphite	0 – 20 mg/l	Colorimetric
Sulphuric acid	Up to 5000 mg/l	Titration
Thiocyanate	0 – 500 ug/l	Colorimetric
Total Acid	Up to 5000 mg/l	Titration
Total Alkalinity	Up to 5000 mg/l	Ion-Selective
Total Nitrate (TN)	Up to 20 mg/l	Colorimetric
TMAH	Up to 5000 mg/l	Titration
Urea	0 – 250 mg/l	Colorimetric
Zinc	0 – 2 mg/l	Colorimetric

Standard Warranty

Standard warranty is 12 months from the date of commissioning & limited to maximum of 15 months from the date of shipment of the analyzer system

Sales & Service Support

- Factory Acceptance Test (FAT)
- Site Acceptance Test (SAT)
- SiteCommissioning
- After Sales Service backup
- Guaranteed spares parts availability for maximum 10 years of instrument life.

Total P and Total N Series

Filed(s): Drinking water, Surface water

Ordering information

BA - ENV	-X1	-X2	-X3	-X4	-X5	-X6

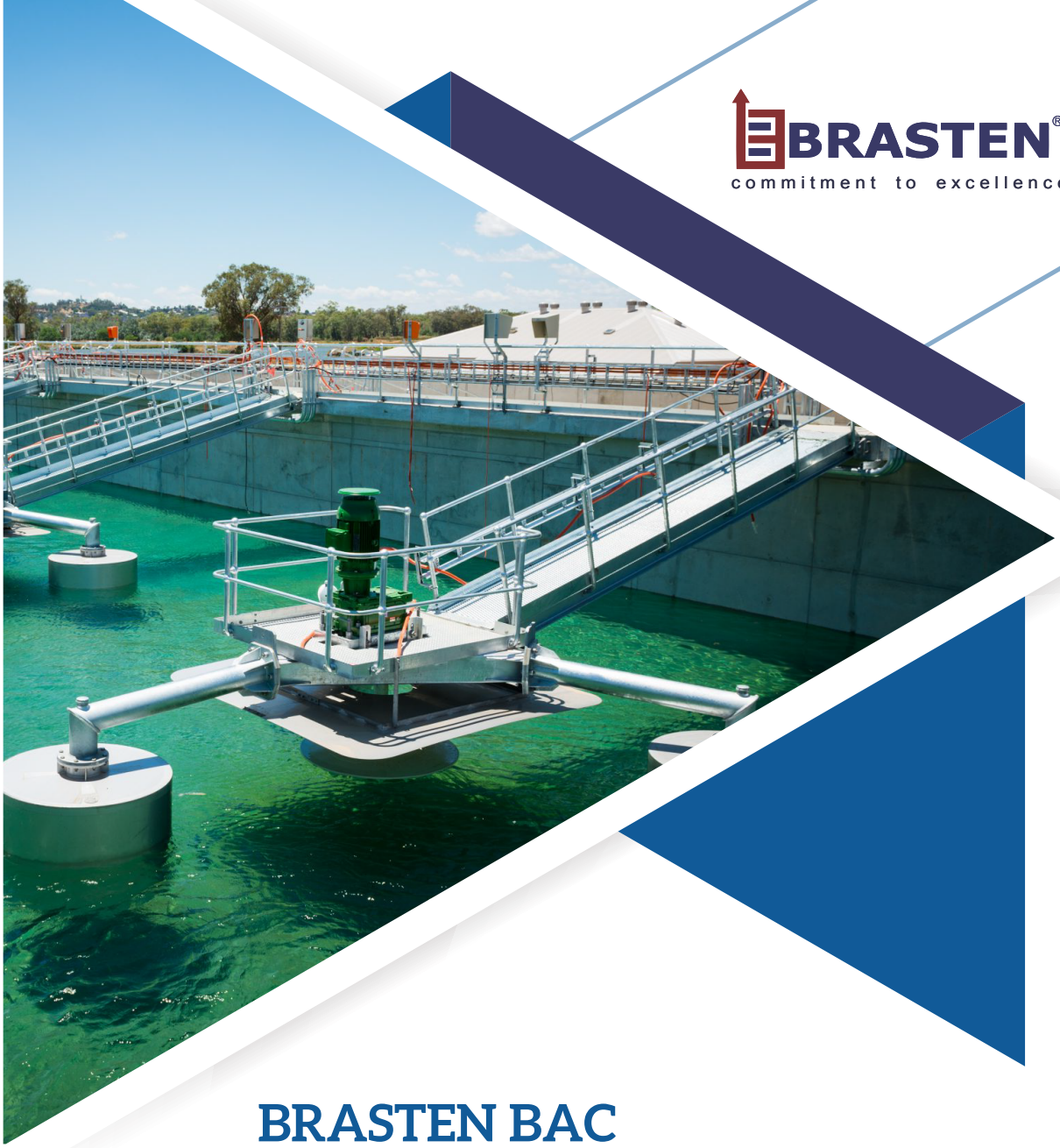
-X1	-D7: 7.1" LCD Colour touch screen
	-D10: 10" LCD Colour touch screen
-X2	-CM: Modbus
	-CRS: RS485
-X3	- : None
	-DM: Require Demin water
-X4	-CB : ABS / Polycarbonate cabin
	-CBSS : Stainless steel cabin
-X5	-Parameter : In parameter list
-X6	-Range : Following application
Please contact factory for other cable length	

General Specifications	
Parameters	Total Phosphorus(TP) and Total Nitrogen(TN)
Analysis Method	Colorimetric
Conform with	TP : *Standard Methods* (ASTM 4500 - PC) TN: *Standard Methods* (4500 - NO3 -)
Measuring ranges	TP: 0 - 1 - 5 - 20mg/l or other range TN: 0 - 5 - 10 - 20mg/l or other range
Precision (RSD)	≤5% full scale range *for standard test solutions*
Cycle time	≥50 - 60 minutes, *adjustable between 0 - 1440min.*

USA Office
Brasten America Corporation
2323 Still Water Dr., Mesquite, Tx 75181, USA
E-mail:admin@brasten.us

ASIA Region
Brasten Engineering & Service Co. Ltd.
254 Soi Onnuch 40, Sukhumvit 77, Bangkok 10250, Thailand
Tel.: (662) 730 6500 Fax: (662) 730 6505
E-mail:info@brasten.com Website:www.brasten.com

BRASTEN®
commitment to excellence



BRASTEN BAC SERIES CONTROLLER

BAC SERIES

Single/ Dual Parameter Controller

BA-MULTIPARAMETER CONTROLLER

For BAS-Smart Probes & Sensors

BAC-EX

Explosion Proof Terminal Controller

Your global Industrial Automation Solutions Partner since 1990

ISO 9001:2015 certified

BRASTEN®
commitment to excellence

Your global Industrial Automation Solutions Partner since 1990

ISO 9001:2015 certified

BAC SERIES

Single/ Dual Parameter Controller

The Brasten BAC Series dual-input transmitter offers single or dual sensor input with an unrestricted choice of dual measurements thus reducing the cost per loop and saving panel space. This dual-parameter instrument offers a wide range of measurement choices, including pH, ORP, conductivity, turbidity and many other combinations supporting most industrial, commercial, and municipal applications. The modular design of the instrument allows signal input boards to be field replaced making configuration changes easy.

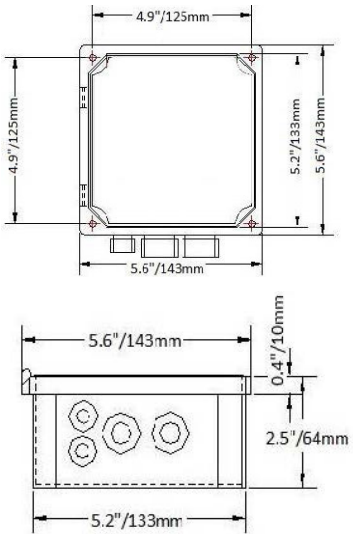
THE ADVANTAGE

- Universal Terminals: Use with BAS Smart Sensors for measurements of a variety of different parameters
- Advanced Display: 40 C tolerance brighter OLED screen
- Multiple Channels: Simultaneous Acquisition one or two sensors for BAC 01(single channel) or BAC 02(dual channel)
- 4 20 mA output with Optional HART and Alarm Relays: Flexible configurations for all applications

INTRODUCTION

Brasten's BAC controller series terminals are designed for continuous measurements with BAS Smart Sensors in both general purpose industrial or municipal environments Our BAC Controller terminals have the ability to connect to network via intelligent sensors with RS 485 output or Modbus RTU protocol The BAC controller terminals supply power to sensors while simultaneously receiving probe input Our plug and play function seamlessly connects to all sensors in our recommended list which means by plugging an intelligent sensor into a BAC controller will result in automatic configuration

DIMENSION



INDUSTRIES SERVED

Oil & Gas	Petrochemical	Chemical
Textile	Pharmaceutical	Pulp & Paper
Food & Beverages	Power plants	Water Treatment

SPECIFICATION

Possible parameters	01 / 02
Accuracy	±0.1%Full scale
Repeatability	±0.1%Full scale
Linearity	±0.05%Full scale
Response time	T90 < 1s
Power	DC: 24VDC (13 ~ 50VDC) AC: 110VAC/ 220VAC, 50Hz/ 60Hz
Display	OLED screen
Temperature	-40 ~ 60 C
Humidity	0 ~ 95 % RH
Inputs	Analog input : 4~20mA, Digital input: RS 485 MODBUS
Analog Output	4-20mA, HART (option)
Digital output	RS485 MODBUS
Relay	2 x SPDT,5A@250VAC/ 5A@30VDC (option)
IP Ratings	IP 66

STANDARD WARRANTY

Standard warranty is 12 months from the date of commissioning limited to maximum of 15 months from the date of shipment of the analyzer system

SALES & SERVICE SUPPORT

Factory Acceptance Test (FAT)

Site Acceptance Test (SAT)

Site Commissioning

After Sales Service backup

Guaranteed spares parts availability for maximum 10 years of instrument life

ORDERING INFORMATION

BAC Series	Single/Dual Channel Controller
01/02	01 - Single channel 02 - Dual Channel
Output	BH - HART PB - Profibus DP MB - RS485 Modbus
Relays	R2 - Two SPDT Relays R4 - Four SPDT Relays
Power Supply	AC - 110/230 VAL DC - 24 VDC

BA-MULTIPARAMETER CONTROLLER

For BAS-Smart Probes & Sensors

The Brasten BAC Series dual-input transmitter offers single or dual sensor input with an unrestricted choice of dual measurements thus reducing the cost per loop and saving panel space. This dual-parameter instrument offers a wide range of measurement choices, including pH, ORP, conductivity, turbidity and many other combinations supporting most industrial, commercial, and municipal applications. The modular design of the instrument allows signal input boards to be field replaced making configuration changes easy.

THE ADVANTAGE

- Universal Terminals: Use with BAS-Smart Sensors for measurements of water analyzing
- Advanced Display: LCD Touch Screen
- Multiple Channels: Simultaneous acquisition of up to 8 channels
- 4-20 mA output with Optional HART and Alarm Relays: Flexible configurations for all applications
- USB Port: For easy data log
- Optional Wi-Fi: For BA-Multiparameter controller, can be connected wirelessly by tablets, smart phones and computers for remote display and operations.

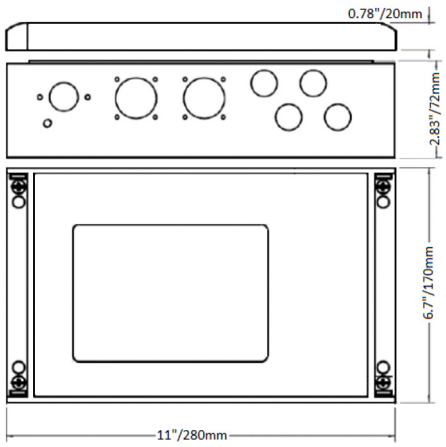
INTRODUCTION

BA-Multiparameter controller is designed for continuous measurements with BAS-SMART probes & Sensors in all industry types.

BA-Multiparameter controller has the ability to connect to network with intelligent sensors- RS485 output and Modbus RTU protocol.

BA–Multiparameter controller provides power to sensors while simultaneously receiving. A plug & play function which can seamlessly connect sensors to the controller.

DIMENSION



INDUSTRIES SERVED

Oil & Gas	Petrochemical	Chemical
Textile	Pharmaceutical	Pulp & Paper
Food & Beverages	Power plants	Water Treatment

SPECIFICATION

Possible parameters	Up to 8
Accuracy	±0.1%Full scale
Repeatability	±0.1%Full scale
Linearity	±0.05%Full scale
Response time	T90 < 1s
Power	DC: 24VDC (13 ~ 50VDC) AC: 110VAC/ 220VAC, 50Hz/ 60Hz
Display	LCD touch screen
Temperature	-20 ~ 70 C
Humidity	0 ~ 95 % RH
Inputs	Analog input : 4~20mA, Digital input: RS 485 MODBUS RTU
Analog Output	4-20mA, Up to 8 channels
Digital output	RS485 MODBUS
Relay	SPDT,5A@250VAC/ 5A@30VDC (option)
IP Ratings	IP 65

STANDARD WARRANTY

Standard warranty is 12 months from the date of commissioning limited to maximum of 15 months from the date of shipment of the analyzer system

SALES & SERVICE SUPPORT

Factory Acceptance Test (FAT)

Site Acceptance Test (SAT)

Site Commissioning

After Sales Service backup

Guaranteed spares parts availability for maximum 10 years of instrument life

ORDERING INFORMATION

BA Series	Multiparameter controller
04/06/08	04 - Four channel 06 - Six Channel 08 - Eight Channel
Output	BH - HART PB - Profibus DP MB - RS485 Modbus
Relays	R2 - Two SPDT Relays R4 - Four SPDT Relays
Power Supply	AC - 110/230 VAL DC - 24 VDC

BAC-EX

Explosion Proof Terminal Controller

The Brasten BAC Series dual-input transmitter offers single or dual sensor input with an unrestricted choice of dual measurements thus reducing the cost per loop and saving panel space. This dual-parameter instrument offers a wide range of measurement choices, including pH, ORP, conductivity, turbidity and many other combinations supporting most industrial, commercial, and municipal applications. The modular design of the instrument allows signal input boards to be field replaced making configuration changes easy.

THE ADVANTAGE

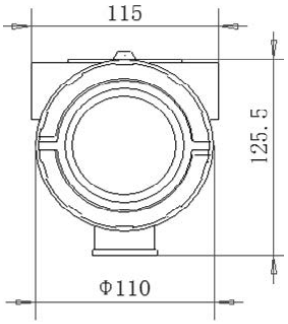
- Universal Terminals: Use with BAS-Smart Sensors for measurements of water analyzing
- Advanced Display: -40°C tolerance brighter OLED screen
- 4-20 mA output with Optional HART and Alarm Relays: Flexible configurations for all applications
- Explosion-Proof NEMA 4X, IP66

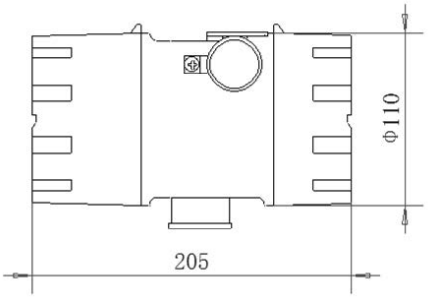
INTRODUCTION

BAC-EX are designed for continuous measurements with BAS-Smart Sensors in both general purpose industrial or municipal environments. Our BAC –EX have the ability to connect to network via intelligent sensors with RS485 output or Modbus RTU protocol. The BAC controller terminals supply power to sensors while simultaneously receiving probe input. Our plug and play function seamlessly connects to all sensors in our recommended list. which means by plugging an intelligent sensor into a BAC controller will result in automatic configuration.

BAC-EX explosion-proof allow it to be programmed without removing the cover, making it easy and economical to change batch sizes in the hazardous area

DIMENSION





INDUSTRIES SERVED

Oil & Gas	Petrochemical	Chemical
Textile	Pharmaceutical	Pulp & Paper
Food & Beverages	Power plants	Water Treatment

SPECIFICATION

Possible parameters	O1/ 02
Accuracy	±0.1%Full scale
Repeatability	±0.1%Full scale
Linearity	±0.05%Full scale
Response time	T90 < 1s
Power	DC: 24VDC (13 ~ 50VDC) AC: 110VAC/ 220VAC, 50Hz/ 60Hz
Display	OLED screen
Temperature	-20 ~ 70 C
Humidity	0 ~ 95 % RH
Inputs	Analog input : 4~20mA, Digital input: RS 485 MODBUS RTU
Analog Output	4-20mA
Digital output	RS485 MODBUS
Relay	SPDT,5A@250VAC/ 5A@30VDC (option)
IP Ratings	IP 66

STANDARD WARRANTY

Standard warranty is 12 months from the date of commissioning & limited to maximum of 15 months from the date of shipment of the analyzer system

SALES & SERVICE SUPPORT

Factory Acceptance Test (FAT)

Site Acceptance Test (SAT)

Site Commissioning

After Sales Service backup

Guaranteed spares parts availability for maximum 10 years of instrument life

ORDERING INFORMATION

BAC-Ex	Ex-proof controller
01/02	01 - Single channel 02 - Dual Channel
Output	BH - HART PB - Profibus DP MB - RS485 Modbus
Relays	DO - Done R1 - One SPDT Reply
Power Supply	AC - 110/230 VAL DC - 24 VDC

USA Office
Brasten America Corporation
2323 Still Water Dr., Mesquite, Tx 75181, USA
Email: **admin@brasten.us**

ASIA Region
Brasten Engineering & Service Co. Ltd.
254 Soi Onnuch 40, Sukhumvit 77, Bangkok 10250, Thailand
Tel.: **(662) 730 6500 Fax: (662) 730 6505**
Email: **info@brasten.com**
Website: **www.brasten.com**

BRASTEN

Contents

Commitment to deliver the highest quality products and services that exceeds customer expectations

About us

BRASTEN GROUP of Companies (an ISO9001 Organization), founded in 1990 is an instrumentation product and solutions powerhouse that manufactures and represents various types of field instruments and analyzers catering to all process industries with a team of dedicated, experienced professionals to provide unmatchable world class solutions.

- Through deep understanding of the challenges
- Operational Excellence
- High quality instruments enabling accelerated ROI
- Value added services

Honor BRASTEN

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group
certifies that

BADOTHERM® For East

Badotherm Far East Co., Ltd.
254, Soi Onnuch 40, Kwang Suanluang,Khet Suanluang,
Bangkok 10250, Thailand

has established and applies
a Quality Management System for

Manufacture of Diaphragm seals for pressure transmitters and gauges.

An audit was performed, Report No. **721238075**
Proof has been furnished that the requirements according to

ISO 9001:2015

are fulfilled. The certificate is valid from 2021-05-12 until **2024-04-24.**

Certificate Registration No.: TUV100 11 1279

2021-05-12

Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group

JAS-ANZ IAF

TÜV

QUALITY CERTIFICATION

UKAC

Certificate of Registration

This is to certify that
The Quality Management System of

BRASTEN ENGINEERS & CONSULTANTS PRIVATE LIMITED

Unit No-501, 5th Floor, Tower-1, Assotech Business Cresterra, Sector-135, Noida-201301, (U.P.) India

has been assessed and found to be in compliance with the requirements of the standard

ISO 9001:2015

for the following scope :

Manufacturing, Supplying, Consulting, Testing, Erection, Commissioning & Servicing of Analytical Products & Mechanical Field Instrumentation and Its Accessories

CERTIFICATE NO. : 19ZAAM013540

ISSUED DATE : 26/12/2018
SURVEILLANCE DUE : 25/12/2019
EXPIRY DATE : 25/12/2020

ISO 9001

Authorised Signatory
INTERNATIONAL QUALITY CERTIFICATION SERVICES UK LTD

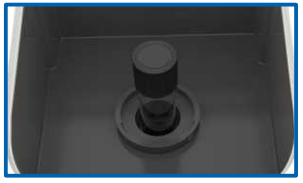
Desktop High Precision Water Quality Analyzer

BAC-LH-T725

Introduction

BAC-LH-T725 uses high-precision LED light source and advanced optical structure, adoption an intelligent detection system, Hundreds of data collections per second, and Þltering algorithms to eliminate interference, improve data accuracy. The 7-inch IPS large touch screen makes the measurement results intuitive and clear. The helpful assistant for scientiÞc research, data analysis, and water quality testing.

Detail



Feature

- The light source advantage
- Operational intelligence
- Operation safety
- Low using cost
- Data transmission
- Quick Print
- Powerful data management
- Professional Testing

Application


Plant sewage


Water treatment plant


scientiÞc research institutes


Sewage treatment


Surface water


Educational research

Technical Data

Measuring Items	COD	Ammonia Nitrogen	Total Phosphorus	Total Nitrogen
Detection method	Potassium dichromate method Potassium permanganate method	Salicylic acid method Nessler's reagent method	Ammonium molybdate method	Thymol method
Measuring Range	10-15000mg/L	0.02-100mg/L	0.02-20mg/L	0.5-500mg/L
Measuring Minimum	10mg/L	0.02mg/L	0.02mg/L	0.5mg/L
Digestion Temperature	165℃,20min	N/A	150℃,15min	125℃,30min
Indication Error	≤±5% or ±4mg/L	≤±5% or ±0.1mg/L	≤±5% or ±0.04mg/L	≤±5% or ±0.4mg/L
Repeatability	≤3%	≤3%	≤3%	≤3%

Technical Parameter	
Indication Error	≤±5%
Repeatability	3%
Absorbance Detection range	0-3.5Abs
Optical path Stablity	≤±0.002Abs/30min
Absorbance Resolution	0.001Abs
Operation Repeatability	≤±0.005Abs
Light Source Life	100,000 hours
FilterLife	5 years
Size	412mm×253mm×164mm
Weigh	3.25Kg
Power	DC 12V/5A
Operating conditions	Humidity:0-50℃ Relative humidity:0-90%(non-condensing)
Data storage	10000 pcs

Test Item

Number	Test Item	Measuring range (mg/L)	Detection lower limit (mg/L)
1	COD	10-15000	10
2	Ammonia Nitrogen	0.02-100	0.02
3	Total Phosphorus	0.02-20	0.02
4	Total Nitrogen	0.5-500	0.5
5	Permanganate	0.5-25	0.5
6	Hexavalent chromium	0.01-3	0.01
7	Total chromium	0.01-3	0.01
8	Nickel	0.02-5	0.02
9	Total nickel	0.025-5	0.025
10	Zinc	0.02-5	0.02
11	Total zinc	0.02-5	0.02
12	Copper	0.01-2	0.01
13	Total copper	0.01-2	0.01
14	Ferrous	0.01-3	0.01
15	Total iron	0.01-3	0.01
16	Manganese	0.1-20	0.1
17	Total manganese	0.1-20	0.1
18	Cadmium	0.02-1	0.02
19	Total cadmium	0.02-1	0.02
20	Aluminum	0.005-0.5	0.005
21	Silicon	0.01-100	0.01
22	Chloride	3-500	3
23	Cyanide	0.005-0.5	0.005
24	Fluoride	0.02-2	0.02
25	Sulfide	0.005-1	0.005
26	Volatile	0.05-5	0.05
27	Nitrite	0.005-0.3	0.005
28	Nitrate	0.25-40	0.25
29	Phosphate	0.005-2	0.005
30	pH	6.5-9	/
31	Oxygen	0.2-20	0.2
32	Residual chlorine	0.02-12	0.02
33	Total chlorine	0.02-12	0.02
34	Chlorine dioxide	0.02-5	0.02
35	Total hardness	0.1-500	0.1
36	Total alkalinity	1-3000	1
37	Ozone	0.02-2.5	0.02
38	Urea	0.1-20	0.1
39	Cyanuric acid	5-160	5
40	Aniline	0.005-2	0.005
41	Formaldehyde	0.01-1.5	0.01

Multiple & Portable Water Quality Analyzer

BAC-LH-C660

Introduction

The Multiple & Portable Water Quality Analyzeradopts the spectrophotometry to measure the COD ,ammonia nitrogen, total phosphorus and total nitrogen concentration in the water.

Indicators comprehensive

Measure COD, ammonia nitrogen,total phosphorus, total nitrogen and other parameters,read the concentration directly.

Data transmission

Store data can be transmitted to computer by USB

Feature

High memory storage

Low using cos

Intelligent saving power

Easy to hold

Application

River and lake water quality monitoring

Laboratory researching and testing

The textile and printing and dyeing industry

Water treatment plant

Drinking water treatment plants

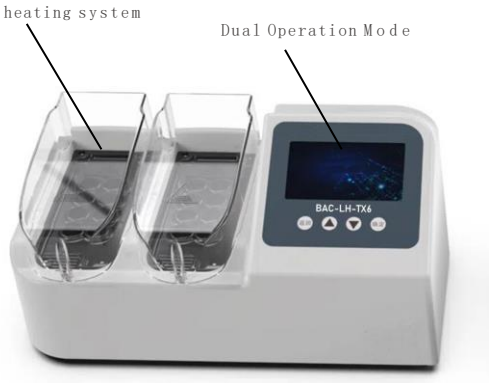
Sewage treatment plants

Technical Data

Test item	COD	Ammonia Nitrogen	Total Phosphorus	Total Nitrogen
Measuring range	10-15000mg/L	0.05-100mg/L	0.02-20mg/L	0.5-500mg/L
Wavelength	COD 420nm/620nm Ammonia nitrogen 420nm Total phosphorus 620nm Total nitrogen 420nm			
Indication error	≤±5%	≤±5%	≤±5%	≤±5%
Digestion temperature	165℃ 20min	N/A	150℃ 15min	125℃ 30min
Light source	LED			
Operating conditions	Humidity:0-50% Relative humidity:0-80%(non-condensing)			
Battery life	Over 30 hours			
Size	90mmX70mmX125mm			
Weight	300g(battery included)			

The 16 Vials Reactor

BAC-LH-TX6



Introduction

The 16 vials reactor adopts the sealed micro-reßux method,dividing into two independently controlled 8-well templates, which can digest more than two kinds of indicators to be tested at different temperatures and times at the same time.Totally can digest 16 samples at the same time.Commonly used for: CODcr, CODmn, total phosphorus, total nitrogen, total chromium, total iron, total copper, total nickel, total zinc and other indicators of water sample digestion.

Feature

Smart digestion
Safe and reliable
Wide range parameter
Dual temperature and dual control

Technical Data

Technical Parameter	
Temperature control range	45~180℃
Digestion temperature	45~180℃
Temperature control accuracy	±0.1℃
Temperature tolerance	±0.5℃
Sample processing quantity	Can process 16 water samples simultaneously
Power supply	DC 24V/12.5A
Size	359x195x167mm
Weight	4kg

Portable 4 Vials Reactor

BAC-XC-200

Introduction

Portable 4 vials reactor adopts sealed micro ßow digestion method , can digest four water samples at the same time,which is small and smart, easy to carry, affordable,stable quality.And it can be equipped with high-power batteries to realize Þeld work without power supply.Commonly used for: CODcr, CODmn, total phosphorus, total nitrogen, total chromium, total iron, total copper, total nickel, total zinc and other indicators of water sample digestion.

Feature

Safe and reliable
Smart digestion
Wide range parameter

Technical Data

Technical Parameter	
Temperature control range	Room temperature~180℃
Digestion temperature	50~180℃
Temperature control accuracy	±0.1℃
Temperature tolerance	±1℃
Sample processing quantity	Can process 4 water samples simultaneously
Power supply	DC 12V/10A
Size	110X170X125mm
Weight	918g

Multi-parameter Water Quality Analyzer

BAC-LH-M900

Introduction

Multiple & portable water quality instrument BAC-LH-M900 adopts method of spectrophotometry, which supports the wavelengths of 420nm, 470nm, 520nm and 620nm, and can support multiple parameter detection.Many experiments shows that this method is simple, quick and sensitive.The instrument is small size, light and easy to carry, suitable for Þeld and work Þeld use.By adopting imported sensor, advanced optical system and expanding the measuring range of colorimeter, the time needed for sample dilution is saved.Test items can be freely matched according to customer requirements.The instrument has been used in various environmental protection bureau, factory waste water discharge detection, aquaculture, lake and bay detection, river regulation, laboratory scientiÞc research detection Þeld.

Feature

- Waterproof-sealing
- Large data storage
- Light source advantage
- Strong development practicality
- Multiple power supplymethods

Application

Chemical engineering

Water treatment plant

Water quality monitoring station

Technical Data

Model	Parameter
Absorbance detection range	
Optical path stability	⩽±0.005Abs/30min
Absorbance resolution	0.001Abs
Enclosure protection class	IP65
The temperature	0~50℃
Size	170X72X44mm
Light life	100000 hours
Lens lifetime	5 years
Rated power	0.3 W
Operation repeatability	⩽±0.01Abs
Humidity	N/A
The weight of the	277g

Test Item

Number	Test Item	Measuring range (mg/L)	Detection lower limit (mg/L)
Conventional 16 Parameters	Ammonia Nitrogen (Salicylic acid method)	0-2.5	0.02
		0-50	0.1
	Ammonia Nitrogen (Nessler)	0-5	0.02
		0-50	0.1
	Residual Chlorine	0-3	0.02
		0-12	0.4
	Total Chlorine	0-3	0.02
		0-12	0.2
	Ozone	0-2.5	0.01
	Chlorine Dioxide	0-5	0.02
	Sulfide	0-1	0.04
	Dissolved Oxygen	0-20	1
	Phosphate	0-2	0.01
	Nitrate	0-40	0.5
	Nitrite	0-0.3	0.003
	Urea	0-20	0.1
	Total Alkalinity	0-280	4
		0-2800	100
	Total Hardness	0-100	5
		0-500	50
	pH	6.5-9.0pH	/
	Cyanuric Acid	0-160	5
Medical and Swimming Pool 8 Parameters	Residual Chlorine	0-3	0.02
		0-12	0.1
	Total Chlorine	0-3	0.02
		0-12	0.1
	Ozone	0-2.5	0.01
	Chlorine Dioxide	0-5	0.02
	Urea	0-20	0.1
	Total Hardness	0-100	4
		0-500	100
	pH	6.5-9pH	/
	Cyanuric Acid	0-160	5

Test Item

Number	Test Item	Measuring range (mg/L)	Detection lower limit (mg/L)
Heavy Metal 12 Parameters	Total Copper	0-4	0.05
	Total Iron	0-5	0.05
	Total Zinc	0.-2.5	0.05
	Total Manganese	0-9	0.01
	Total Nickel	0-5	0.05
	Total Cadmium	0-0.6	0.005
	Hexavalent Chromium	0-1	0.004
	Total Chromium	0-1	0.01
	Aniline	0-2	0.01
	Fluoride	0-2	0.03
	Volatile Phenol	0-2.5	0.05
	Cyanide	0-0.5	0.005
Residual Chlorine/ Total Chlorine Low Range	Residual Chlorine	0-3	0.02
	Total Chlorine	0-3	0.02
Residual Chlorine/ Total Chlorine High Range	Residual Chlorine	0-12	0.1
	Total Chlorine	0-12	0.1
Residual Chlorine/ Total Chlorine Full Range	Residual Chlorine	0-3	0.02
		0-12	0.1
	Total Chlorine	0-3	0.02
		0-12	0.1
Total Hardness/ Total Alkalinity/ Chloride	Total Alkalinity	0-280	5
		0-2800	50
	Total Hardness	0-100	4
		0-500	100
	Chloride	0-500	8
Ammonia Nitrogen (Nessler)/Ammonia Nitrogen (Salicylic Acid)/Phosphate Phosphate	Ammonia Nitrogen (Salicylic Acid Upgrade)	0-2.5	0.02
		0-50	0.4
	Ammonia Nitrogen (Nessler)	0-5	0.02
		0-50	0.2
	Phosphate	0-2	0.01

Portable Water Quality Total Suspended Solids Turbidity Analyzer

BAC-LH-Z10A/LH-XZ03

Introduction

The portable water quality total suspended solids turbidity test analyzer measures the scattered light principle in the direction of 90° according to the ISO 7072 standard. Combined with the scattered light method and the transmitted light method, an infrared light source is used to eliminate the noise and the measurement results are more accurate and reliable. The instrument has built-in dual detectors of 90° and 180°. The 90° detector receives scattered light and the 180° detector receives transmitted light. The intensity of the scattered light and the transmitted light is proportional to the turbidity in the sample to converted turbidity of the water sample.

Feature

- Double Light Test
- Professional Testing
- Sealed Waterproof
- Strong Storage

Detail

Technical Data

Measurement Parameters	LH-Z10A(Turbidity)		LH-XZ03(TSS)	
Measuring Range	0-20NTU	0-1000NTU	0-1000mg/L	0-1000NTU
Accuracy	±0.1NTU or ±5%NTU	±0.3NTU or ±8%NTU	±0.3mg/L or ±8%NTU	±0.3NTU or ±8%NTU
Repeatability	± 0.1NTU @<10NTU ≤±1%@ ≥10NTU	<10NTU,≤±0.1NTU ≥10NTU,≤±1%NTU	<10mg/L,≤±0.1mg/L ≥10mg/L, ≤±1%NTU	<10NTU,≤±0.1NTU ≥10NTU,≤±1%NTU
Calibration Method	Calibration Up To 4 Points (Optional Calibration Solution)	Calibration Up To 8 Points(Optional Calibration Solution)	1 Point Calibration	Four points calibration (Up to 8 points calibration)
Zero Drift	≤±0.3%F.S/30minutes			
Operating Temperature	5-40℃			
Storage Temperature	-10-55℃			
Humidity	0-80%RH			
Power Supply	Lithium Battery			
Protection Grade	IP65			
Size	170X72X44mm			
Weight	290g			

Portable Water Quality Analyzer

Introduction

Brand-new model portable water quality analyzer, used for the concentration determination of residual chlorine, total chlorine, chlorine dioxide, ozone, ammonia nitrogen in water samples with simple and quick operation and high sensitivity.With lightweight, easy to carry, delicate and compact design,save space for you.It is suitable for site and Þeld use in municipal water, medical water, public health, environmental monitoring and other industries, bring you a new working experience.

Feature

- Pre-stored standard curve
- Good optical stability
- IP65 degree of protection
- Economical and environmentally friendly
- Intuitive operation

Detail

Application


Waterworksr


Drinking Water


Environmental friendly


Swimming Pool Water

Technical Data

Model	LH-C10F	LH-C06F	LH-C03F	LH-D01F	LH-N11F	LH-P30F
Test Item	Residual Chlorine	Total Chlorine	Chlorine Dioxide	Ozone	Ammonia Nitrogen	Phosphate
Measure range	0.05 ~ 10mg/L	0.05 ~ 10mg/L	0.1 ~ 5mg/L	0.05 ~ 2.5mg/L	0.01 ~ 10mg/L	0.00 ~ 2mg/L
Wavelength	520nm	520nm	520nm	520nm	420nm	620nm
Principle	Reference to HJ 586-2010 National Environmental protection standard "Water Quality Determination of Free Chlorine and Total Chlorine N, N-diethyl-1, 4-phenylenediamine Spectrophotometric Method"		DPD photometric method, chlorine dioxide reacts with DPD reagent to make the sample solution appear red.	DPD photometric method, ozone reacts with DPD reagent to make the sample solution appear red.	Nessler's reagent photometry	Ammonium molybdate spectrophotometry
Accuracy	<1.0 mg/L,≤±0.05mg/L; ≥1.0 mg/L,≤±5%					
Light source	LED light emitting diode					
Battery life	More than 24 hours (without shutdown)					
Size	128×70×48mm					
Weight	188g (including battery)					

Intelligent BOD Detector

BAC-LH-TB100

Introduction

BAC-LH-TB100 series intelligent BOD detector simulates the a biological degradation process of organic matter in nature, according to the national standard (HJ505-2009) Þve days of biochemical oxygen demand (BOD5) determination, the principle of mercury free differential pressure sensing method is designed. The method is simple, accurate measurement, experiment process is safe and effective, BOD measurement range is wide, intelligent instrument operation, automatic testing and data storage, data can be uploaded to the wireless computer, wireless connection printer print data, the experimental process without modes, applicable to the monitoring station, the third party inspection institutions, colleges and universities, industry pollution enterprises, etc.

Application


Sewage treatment plants


sewage enterprises


hospital waste water


chemical pharmaceutical


scientiÞc research institutes


river basin surface water

Feature


Direct reading of concentration


Independent determination


Wide detection range


Wireless transmission


Data recording

Technical Data

Project	LH-TB100 standard model	LH-TB100 High-end models
Test range	0-4000mg/L	0-4000mg/L
Resolution	0.01mg/L	0.01mg/L
Accuracy	±8%	±8%
Quantity of samples	1-6	1-6
Test result storage	10 years of data	10 years of data
Detailed data storage	1 set	3 set
Test period	1~7 days	1~30 days
Sampling points	60	30~960
Direct reading of concentration data	√	√
Smart mixing	√	√
Dilution concentration direct reading	×	√
Display data curve	×	√
Upload data wireless	×	√
Print data wireless	×	√
Test principle	Mercury-free differential pressure sensing method	
Culture temperature	20±1℃	
power supply	AC220V±10%/50-60HZ	
Rated power	10W	
Size	270mm×185mm×75mm	
Host weight	2.4kg	

Portable Water Quality Dissolved Oxygen Meter

BAC-LH-D701

Introduction

BAC-LH-D701 is an intelligent analytical instrument that can be used to measure dissolved oxygen in water bodies for water source monitoring, aquaculture, sewage treatment plants and scientiÞc research units. The instrument has a novel appearance and is easy to carry. It is suitable for spot and Þeld operation.

Feature

- Portable & Widescreen
- High Detection Accuracy
- Sealed And Waterproof
- Sensor Light Switch
- Strong Storage
- Power Management Function

Technical Data

Item	Dissolved Oxygen Concentration	Dissolved Oxygen Saturation	Temperature
Measuring Range	0~20mg/L	0~200%	0~60℃;32~140°F
Resolution	0.01mg/L	0.1%	0.1℃;0.1°F
Accuracy	≤±0.30mg/L	≤±3.0%	≤±0.3℃
Atmospheric Pressure Compensation	Manual Compensation (60~110)KPa		
Salinity Compensation	Manual Compensation (0~50)g/L		
Temperature Compensation	Automatic Compensation (0~40)℃;(32~104)°F		
Standard Electrode	Sd02 Type Dissolved Oxygen Electrode, 3 Meters Length Cable		
Response Time	≤45S		
Power Supply	Lithium Battery		
Environmental Protection Level	IP65		
Dimensions	165x75x51mm		

Temperature	Dissolved Oxygen mg/L	Temperature	Dissolved Oxygen mg/L	Temperature	Dissolved Oxygen mg/L	Temperature	Dissolved Oxygen mg/L
0	14.62	1	14.22	2	13.83	3	13.46
4	13.11	5	12.77	6	12.45	7	12.14
8	11.84	9	11.56	10	11.29	11	11.03
12	10.78	13	10.54	14	10.31	15	10.08
16	9.87	17	9.67	18	9.47	19	9.28
20	9.09	21	8.92	22	8.74	23	8.58
24	8.42	25	8.26	26	8.11	27	7.97
28	7.83	29	7.69	30	7.56	31	7.43
32	7.31	33	7.18	34	7.07	35	6.95
36	6.84	37	6.73	38	6.62	39	6.52

Portable Fluorescent Dissolved Oxygen Meter

BAC-LH-D702

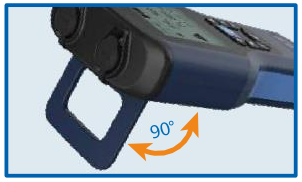
Introduction

Fluorescent Dissolved Oxygen Analyzer is an hand-held intelligent optical analyzer, which is widely used in continuous monitoring of dissolved oxygen, saturation and temperature in solutions such as environmental protection, biochemical, food and tap water.

Feature

- Result Smart Lock
- Smart alarm
- Circuit protection
- Data storage
- Waterproof IP67
- Dual power supply
- Salinity/Air pressure compensation
- Backlight display function
- Chinese & English

Detail



Application


Environmental monitoring


Sewage treatment


Educational research


Aquaculture

Technical Data

Meter Specifications	
Screen	3.3-inch monochrome LCD screen
Dimensions	200mm*101mm*36mm
Weight	420g
Data storage	support
language	Chinese/ English
Air pressure measurement	50 ~ 115kPa
waterproof	IP67
power supply	4*AA batteries
Relative humidity	10 ~ 85%RH(no condensation)
Working temperature	-10 ~ 60℃
Transportation and storage conditions	Temperature: -15 ~ 65℃; Relative humidity: 5 ~ 85%RH(no condensation)

Sensor Specifications	
Measurement principle	Fluorescence
Measuring range	Dissolved oxygen: 0 ~ 20mg/L; Saturation: 0 ~ 200%; Temperature: 0 ~ 50℃
Calibration	One or two point calibration

Pentype Dissolved Oxygen Meter

BAC-LH-D300J

Introduction

BAC-LH-D300J pentype dissolved oxygen meter, a product specially designed to test the dissolved oxygen, fast response, reliable measurement, delicate and small design concept, clear and easy to read data interface, excellent anti-interference performance, combined with high brightness backlight lighting, can complete one hand measurement operation, can meet your different measurement needs.

Feature

- Automatically lock the reading
- Lightweight and easy to carry
- Multiline energy storage back-light screen
- IP65 protection
- Automatic temperature compensation

Application


Waterworks


Aquaculture


Plant sewage


Environmental friendly


Educational research


Sewage disposal

Technical Data

Item	Instrument electronic unit parameters
Model	LH-D300J
Measuring range	0-20mg/L; 0-200%
Resolution ratio	0.01mg/L; 0.1%
Measurement accuracy	0.05mg/L;0.5%
Temperature measurement range	0-100℃/32-212°F
Operation temperature range	0-60℃/32-140°F
Automatic temperature compensation	0-60℃
Temperature resolution	0.1℃/1°F
Temperature accuracy	0.2℃(0-60℃)
Calibration	1 point/2 point (0% anaerobic / 100% saturated oxygen)
Salinity compensation	0-40g/L
Atmospheric pressure compensation	700-1400mbar
Display screen	20*30mm multi line liquid crystal display
protection level	IP65
Auto backlight	1 minute
Auto shut off	20 minutes
Electric source	1×1.5V AAA
Size	185×40×48mm
Weight	95g

Portable Digital pH Meter

BAC-LH-P210

Introduction

This instrument is an intelligent analytical instrument, suitable for petroleum, chemical, pharmaceutical, power plant, environmental protection, universities and scientiPc research institutions and other units. It can not only measure the pH value in the aqueous solution, but also measure the electrode potential and temperature of the solution. The instrument is novel in appearance and easy to carry, suitable for on-site and Peld operations.

Feature

- Protection Grade IP65
- Low Power Design
- 3 Buffer Reagents
- Power Management Function
- Widescreen Display
- Automatic Temperature Compensation

Technical Data

Item	pH	mV	Temperature
Measuring Range	(0~14)pH	(-1999.9~1999.9)mV	(0~80.0)℃; (32~176)°F
Resolution	0.01pH	0.1mV	0.1℃;0.1°F
Accuracy	⩽±0.02pH	⩽±0.1%F.S	⩽±0.5℃
pH Temperature Automatic Compensation Range	0~60℃ (32~140°F)		
Protection Grade	IP65		
Power Supply	Lithium Polymer Battery		
Dimensions	165X75X51mm		
Weight	270g		

Pentype pH Meter

BAC-LH-P300

Introduction

The BAC-LH-P300 pH pen adopts a ßat-head electrode and supports automatic temperature compensation. It is suitable for the pH measurement of ßat materials and a small amount of samples.Exquisite and compact design concept, clear and easy-to-read data interface, excellent anti-interference performance, combined with high-brightness backlighting, the measurement operation can be completed with one hand, which can meet your different measurement needs and experience the fun of testing.

Feature

- Multiline energy storage back-light screen
- Automatically lock test value
- Platinum round plane electrode
- IP65 protection
- Electrode self diagnosis

Application


Cosmetic


Food and drink


Skin detection


Environmental friendly


Educational research


Paper printing

Technical Data

Project	Instrument electronic unit parameters	Instrument complete set of measurement parameters
pH range	0-14pH	
pH resolution	0.01pH	
pH accuracy	±0.01pH	±0.1pH
Temperature measurement range	0-100℃/32-212°F	
Operation temperature range	0-60℃/32-140°F	
Temperature resolution	0.1℃/1°F	
Temperature accuracy	±0.2℃(0℃-60℃)	±0.5℃(0℃-60℃)
Calibration pH standard solution	Automatic recognition of 3-point standard solution calibration	
	USA: 4.01,7.00,10.01	
	NIST: 4.01,6.86,9.18	
pH electrode	High impedance planar electrode	
Temperature compensation	NTC22K automatic temperature compensation	
Lock function	Manual / Auto	
Screen	20*30mm multiline LCD backlit display	
Protection level	IP65	
Automatic backlight	1 minute	
Automatic shut-down	20 minute	
Power	1*1.5V AAA battery	
Size	185*40*48mm	
Weight	95g	

Pentype ORP Meter

BAC-LH-M300

Introduction

BAC-LH-M300 ORP Pen is a specially designed for testing redox potential. Adopting platinum circular plane electrode, with fast response, accurate and reliable measurement, exquisite and compact design concept, clear and easy to read data interface, excellent anti-interference performance, combined with high brightness backlight lighting, it can complete the measurement operation with one hand, which can meet different measurement needs, test and track the millivolt value of the measured object anytime and anywhere.

Feature

- Platinum round plane electrode
- Automatic value lock
- Multi-line energy storage backlight screen
- IP65 protection
- Electrode self diagnosis

Application


Waterworks


Aquaculture


Food and beverage


Environmental friendly


Educational research


Swimming pool

Detail

Technical Data

Item	Instrument electronic unit parameters	Complete set of instrument measurement parameters
ORP	-1000~+1000mV	
ORP resolution	1mV	
ORP measurement accuracy	±1mV	±5%F.S
Temperature measurement range	0-100℃/32-212°F	
Operation temperature range	0-60℃/32-140°F	
Temperature resolution	0.1℃/1°F	±0.5℃
Calibration	1 point(Calibration at any point in the full scale range)	
ORP electrode	Replaceable platinum round plane electrode	
Screen	20*30mm Multi line LCD backlight display	
Protection level	IP65	
Auto backlight	1 minute	
Auto shutdown	20 minutes	
Power supply	1*1.5V AAA Battery	
Size	185*40*48mm	
Weight	95g	

Portable pH/ORP Meter

BAC-LH-P500

Introduction

Exquisite and compact design concept saves space for you, clear and easy-to-read data interface, excellent anti-interference performance, calibrated point display, accurate measurement, convenient operation,combined with high-brightness backlighting, it is your professional test tool and a reliable instrument for daily measurement in laboratories and schools.

Feature

- Large LCD backlight display
- Temperature offset adjustment
- 3-point automatic calibration
- Multiple sets of measure-ment data
- HOLD auto lock

Application


Biotechnology


Food and drink


Cosmetic


Environmental friendly


Educational research


Chemical pharmaceutical

Detail

Technical Data

Project		Specifications
pH	Measuring range	0~14pH
	Resolution	0.01pH
	Indication error	±0.02pH
Redox	Measuring range	-2000~2000mV
	Resolution	1mV
	Indication error	±0.2%F.S
Temperature	Measuring range	-10.0℃~110.0℃
	Resolution	0.1℃
	Indication error	±0.2℃
Power	Power supply	2 AAA batteries
	Battery Life	More than 500 hours
Buffer	First group(NIST)	4.00, 6.86, 9.18
	Second Group(USA)	4.01, 7.00, 10.01
Other	Use environment	-5℃~60℃; Relative humidity<90%
	Data storage	256 sets of values
Size	210×95×35mm	

Desktop Water Quality pH Meter

BAC-LH-P800

Introduction

The exquisite and compact design concept, save space for you.It will bring user a new use experience.Clear and easy-to-read data interface, excellent anti-interference performance, calibrated point display, accurate measurement, convenient operation, combined with high-brightness backlighting, is your professional test tool,is a reliable instrument for daily measurement in laboratories and schools.

Feature

- Large LCD backlight display
- Automatically lock test value
- 5-point automatic calibration
- IP65 protection
- Powerful data management

Application


Biotechnology


Food and drink


Cosmetic


Environmental friendly


Educational research


Chemical pharmaceutical

Detail

Technical Data

Project		Specifications
pH	Measuring range	-2~16pH
	Resolution	0.01pH
	Indication error	-2000~2000mV
ORP	Measuring range	-2000~2000mV
	Resolution	1mV
	Indication error	±0.2%F.S
Temperature	Measuring range	-10℃
	Resolution	0.1℃
	Indication error	±0.2℃
Power supply	Power supply	4 AAA batteries or transformer 100~220V
	Battery Life	More than 500 hours
Calibration	First group	1.68, 4.00, 6.86, 9.18, 12.46
	Second Group	1.68, 4.00, 7.00, 10.01, 12.46
Other	Use environment	-5℃~60℃; Relative humidity <90%
	Data storage	256 sets of measurement value storage function
Size	150*200*60mm (W*L*H)	
Weight	650g	

Pentype EC Meter

BAC-LH-N300

Introduction

BAC-LH-N300 EC Pen,a BAC-LH-N300 conductivity test pen is equivalent to a conductivity test pen, a TDS pen-type test and a salinity test pen. The electrode adopts anti foaming design, accurate and stable anti-interference, exquisite and compact design concept, clear and readable data interface, excellent anti- interference performance, combined with high brightness backlight lighting, the measurement can be completed with one hand, Its immersion design makes the Þeld test more ßexible and convenient, and can meet different measurement needs.

Feature

- Anti bubble electrode
- Automatically lock test value
- Multi row energy storage backlight screen
- IP65 protection
- Electrode self diagnosis

Application


Waterworks


Aquaculture


Sewage disposal


Environmental friendly


Educational research


Boiler water

Technical Data

Item	Instrument electronic unit parameters	Complete set of instrument measurement parameters
Measuring range	0 μ S/cm(ppm)-20mS/cm(ppt)	
Resolution	0.1 μ S/cm(ppm)-0.01mS/cm(ppt)	
Measurement accuracy	±2%F.S	±3%F.S(After calibration)
Temperature measurement range	0-100℃/32-212°F	
Operation temperature range	0-60℃/32-140°F	
Temperature compensation range	0-60℃	
Temperature compensation	Auto / Manual	
Temperature coefÞcient	0-10% Adjustable(Ex factory 2%)	
Reference temperature	15-30℃(Adjustable Ex factory 25℃)	
Calibration mode	Automatic range 1-point calibration	
TDS measurement range	0mg/L (ppm)-20g/L(ppt)	
TDS coefÞcient	0.4-1Adjustable (Ex factory:0.50)	
Salinity measurement range	0mg/L (ppm)-13g/L (ppt)	
Salinity coefÞcient	0.60	
Conductive electrode	Φ13mm,K=1	
Screen	20*30mm Multiline LCD backlight display	
Protection level	IP65	
Auto backlight	1 minute	
Auto shutdown	20 minutes	
Power supply	1×1.5V AAA Battery	
Size	185*40*48mm	
Weight	95g	

Portable Electrical Conductivity Tester

BAC-LH-N500

Introduction

The exquisite and compact design concept, save space for you.Clear and easy-to-read data interface, excellent anti-interference performance, calibrated point display, accurate measurement, convenient operation, combined with high-brightness backlighting, is your professional test tool,is a reliable instrument for daily measurement in laboratories and schools.

Feature

- Lightweight and easy to carry
- Temperature offset adjustment
- Automatic range switching
- Multiple sets of measure-ment data
- HOLD auto lock

Application


Biotechnology


Food and beverage


Sewage disposal


Environmental friendly


Educational research


Chemical pharmaceutical

Detail

Technical Data

Project		Specifications
Measurement range	Measurement range	0~400mS/cm
	Resolution	0.001μS/cm~0.1mS/cm
	Indication error	±0.5%F.S
TDS	Measurement range	0ppm~200ppt (Conversion factor 0.5)
	Resolution	0.001mg/L~0.1g/L
	Indication error	±0.5%F.S
Salinity	Measurement range	0~260.0g/L
	Resolution ratio	0.1g/L
	Measurement accuracy	±0.5%F.S
	SAL coefficient	0.6
Temperature	Measurement range	-10℃~110℃
	Resolution	0.1℃
	Indication error	±0.2℃
Power supply	Electric supply	2 AAA batteries
	Battery life	> 500 hours
Other	Use environment	-5℃~60℃; Relative humidity < 90%
	Data storage	256 groups of data

Conductivity/TDS/Salinity Desktop Water Quality Meter

BAC-LH-N800

Introduction

The BAC-LH-N800 benchtop water quality analyzer, exquisite and compact design concept, save you the space. It will bring user a new use experience. Clear and easy-to-read data interface, excellent anti-interference performance, calibrated point display, accurate measurement, convenient operation, combined with high-brightness backlighting, is your professional test tool, a reliable instrument for daily measurement in laboratories and schools.

Feature

- Large LCD back-light display
- Automatically lock test value
- Automatic range switching
- IP65 protection
- Powerful data management

Application


Biotechnology


Cosmetic


Food and drink


Environmental friendly


Educational research


Chemical pharmaceutical

Detail

Technical Data

Project		Specifications
Conductivity	Measuring range	0~400mS/cm
	Resolution	0.001μS/cm~0.1 mS/cm
	Indication error	±0.5%F.S
TDS	Measuring range	0ppm~200ppt (Conversion factor 0.5)
	Resolution	0.001mg/L~0.1g/L
	Indication error	±0.5%F.S
Salinity	Measuring range	-10℃
	Resolution	0.1℃
	Measurement accuracy	±0.2℃
	SAL coefficient	0.6
Temperature	Measuring range	4 AAA batteries or transformer 100~220V
	Resolution	More than 500 hours
	Indication error	±0.2℃
Power	Power supply	4 AAA batteries or transformer 100~220V
	Battery life	More than 500 hours
Other	Use environment	-5℃~60℃; Relative humidity＜90%
	Data storage	256 sets of values
Size	150*200*60mm (W*L*H)	
Weight	650g	

Multifunctional Pentype Water Quality Tester

BAC-LH-TDS9

Introduction

The multifunctional water quality detection pen detect the TDS value (total dissolved solids, unit is ppm) and conductivity value (the conductivity of the solution, the unit is us/cm) of water, judge the purity of the water, with the function of water temperature and environment temperature. This product detect the water quality testing in the water treatment industry, homes, and outdoor places.

Feature

- Pure titanium probe
- Fast response
- Multi-function test
- Easy to carry
- Easy operation
- Environment friendly
- Accurate measurement
- Metal temperature compensation

Technical Data

Project	Specifications
TDS range	0~9999ppm
Conductivity range	0~9999 μS/cm
Temperature range	0-80℃ 32~176℃
Resolution	1ppm 1 μS/cm
Measurement accuracy	±2%F.S
Battery Specification	1.5V*2 (AG13 button battery)
Operating current	<1mA
Product weight	26.5g

Pentype Digital Salinity Meter

BAC-LH-SA10

Introduction

This pentype digital salinity meter is the portable intelligent analyzer, widely used for continuous monitoring of salinity content in solutions for domestic water, home kitchen, food processing and aquaculture etc.

Feature

- Waterproof
- Smart lock
- Vibration alert
- Quick response
- Durable
- Easy operation
- Platinum electrodes
- Accurate measurement
- Green energy efficiency

Technical Data

	Specifications
Measuring Range	0 ~ 10%
Measuring temperature range	0 ~ 99 ℃
Resolution	0.01%, 0.1℃
Accuracy	(0 ~ 1.99) %±0.1% ; (2 ~ 4.99) %±0.2% ; (5 ~ 10) %±0.5%
Battery	2*AAA
Size	164x25x16 mm

Online Universal Controller

BAC-LH-D6901

Introduction

This instrument is an intelligent online controller, which is widely used in water quality detection in sewage plants, waterworks, water stations, surface water and other Þelds, as well as electronic, electroplating, printing and dyeing, chemistry, food, pharmaceutical and other process Þelds, meet the needs of water quality detection; Adopting digital and modular design, different functions are completed by various unique modules. Built-in more than 20 kinds of sensors, which can be combined at will, and reserved powerful expansion functions.

Application


Aquaculture


Sewage treatment


Waterworks


Environmental monitoring


Plant sewage


Surface water

Feature

High deÞnition color touch screen

Strong expansibility and practicability

Multiple output modes

IP65 waterproof

High and low alarm

Chinese and English interface

Remote communication

History record

Customization services

Technical Data

Project	Specifications
Working voltage	AC 90~220V、50/60Hz
Instrument size	100*100*150mm
Hole size	93*93mm
Weight	0.56Kg
IP grade	IP65

Electrode parameters				
LH-D059 Dissolved Oxygen Intelligent Sensor	Measuring range	0~20mg/L		
	Resolution	0.01 mg/L		
	Accuracy	±5%		
LH-N100 Ammonia Nitrogen Intelligent Sensor	Measuring range	0~100mg/L (pH:4~10)		
	Resolution	0.1mg/L		
	Accuracy	±5%F.S or ±3mg/L take greater as standard		
LH-DE21 Conductivity Intelligent Sensor	Measuring range	K=0.1 electrode: 0.2-200μs/cm K=1 electrode: 2-2000μs/cm K=10 electrode: 20μs/cm~20ms/cm		
	Resolution	0.01μs/cm		
	Accuracy	±2%F.S		
LH-DpH07 pH Intelligent Sensor	Measuring range	0~14pH		
	Resolution	0.01pH		
	Accuracy	⩽±0.02pH		
LH-DY06 Fluorescence Dissolved Oxygen Intelligent Sensor	Measuring range	0~20mg/L or 0~200% saturation		
	Resolution	0.01 mg/L		
	Accuracy	±0.3mg/L or ±5%		
LH-DR31 OPR Intelligent Sensor	Measuring range	-2000~2000mV		
	Resolution	1mV		
	Accuracy	±15%		
LH-T615 Chlorophyll Intelligent Sensor	Measuring range	0~400μg/L or 0~100RFU		
	Resolution	0.1μg/L or 0.1%RFU		
	Accuracy	±5%		
LH-T613 Blue-Green Algae Intelligent Sensor	Measuring range	0-200, 000 cells/mL		
	Resolution	1 cells/mL		
	Accuracy	±5%		
LH-DZ09 Turbidity Intelligent Sensor	Measuring range	0-20/ 0-200NTU	0-1000NTU	0-3000NTU
	Resolution	0.01、1NTU	0.1、1NTU	
	Accuracy	≤5NTU accuracy, ≤ ±0.3NTU; >5NTU accuracy, ≤ ±6%	10NTU accuracy, ≤ ±0.5NTU; >10NTU accuracy, ≤ ±8%	

Electrode parameters				
LH-DX01 Online water quality Suspended solids electrode	Measuring range	0-200mg/L	0-1000mg/L	0-3000mg/L
	Resolution	0.01、1mg/L	0.1、1mg/L	
	Accuracy	⩽±0.3mg/Lor⩽±6%	⩽±0.5mg/Lor⩽±8%	
LH-E900 Chlorine Dioxide Intelligent Sensor	Test Item	Chlorine Dioxide	Temperature	
	Measuring range	0~20mg/L	-10~110℃	
	Resolution	0.01mg/L	0.1℃	
	Accuracy	±0.1 mg/L	±0.5℃	
LH-F900 Residual Chlorine Intelligent Sensor	Test Item	Residual Chlorine	Temperature	
	Measuring range	0~20mg/L	-10~110℃	
	Resolution	0.01 mg/L	0.1℃	
	Accuracy	±0.1mg/L	±0.5℃	
LH-DC18 COD Intelligent Sensor	COD	Measuring range	0~600 mg/L equiv.KHP	
		Resolution	0.1mg/L	
		Accuracy	±5%F.S	
	Turbidity	Measuring range	0~300NTU	
		Resolution	0.1NTU	
		Accuracy	±5%F.S	
LH-N03 Nitrate Intelligent Sensor	Nitrate	Measuring range	0.1~14000ppm(or mg/L)	
		Resolution	0.01	
		Accuracy	Measuring standard solution±5%	
	pH	Measuring range	2.5~11pH	
	Temperature	Measuring range	0~50℃	
		Resolution	0.1℃	
LH-DZ900 Ozone Intelligent Sensor	Ozone	Measuring range	0~20 mg/L	
		Resolution	0.01 mg/L	
		Accuracy	5%F.S	
	Temperature	Measuring range	-10~110℃	
		Resolution	0.1℃	
		Accuracy	±0.5℃	

Online Multi-parameter Intelligent Controller

BAC-LH-D6900

Introduction

This instrument is an intelligent online controller, which can select matching sensors to detect various parameters according to different customer needs, such as detection of dissolved oxygen, conductivity/salinity, suspended solids and other parameters. It is widely used in agriculture, aquaculture, and industrial wastewater. environmental protection and other Þelds with different needs.

Feature

- HD color touch screen
- Strong practicability for expansion
- Multiple output modes
- IP65 waterproof
- High and low alarm
- Chinese/English interface
- Remote communication
- History record
- Customized service

Application


Aquaculture


Sewage treatment


Waterworks


Environmental monitoring


Industrial sewage


Agriculture

Technical Data

Specification	
Working voltage	AC 90~220V、50/60Hz
Maximum power consumption	36W
IP grade	IP65
Connection interface	12V output, RS485 communication
Data output	RS485 (standard), Wireless transmission (standard) 4-20mA (optional), relay output (optional)
Installation method	Wall-mounted
Size	266*173*75mm
Weight	1.04kg

Electrode parameters					
LH-DC18 UV254Online COD Sensor	Measuring range	0~600mg/L equiv.KHP			
	Resolution	0.1mg/L			
	Accuracy	±5%F.S			
LH-DL05 Industrial Online Residual Chlorine Sensor	Measuring range	0~20mg/L			
	Resolution	0.01mg/L			
	Accuracy	①pH < 7.2: ±0.03mg/L or 3% (whichever is greater) ② When 7.2 pH 8.5: ±10%; ③ When 8.5 < pH < 9: ±20%			
LH-DL06 Constant Pressure Residual Chlorine Digital Module	Measuring range	0~3mg/L			
	Resolution	0.1mg/L			
	Accuracy	① 0.01~0.2mg/L:±0.02mg/L; ② 0.21~3mg/L:±0.1mg/L or 5%, whichever is greater			
LH-DY06 Online Fluorescent Dissolved Oxygen Sensor	Measuring range	0~20mg/L or 0~200% saturation			
	Resolution	0.01mg/L			
	Accuracy	±0.3mg/L or ±5%			
LH-DY12 Online Fluorescent Dissolved Oxygen Sensor	Measuring range	0~25mg/L			
	Resolution	0.01mg/L			
	Accuracy	±0.1mg/L or ±1%; ±0.2mg/L or ±2%			
LH-DZ09 Online Water Quality Turbidity Sensor	Measuring range	0-20NTU	0-200NTU	0-1000NTU	0-3000NTU
	Resolution	0.01、1NTU		0.1、1NTU	
	Accuracy	≤5NTU, accuracy ±0.3NTU; >5NTU, ≤ accuracy ±6%		≤10NTU, accuracy≤±0.5NTU ; >10NTU, accuracy ≤ ±8%	
LH-DX01 Online Total Suspended Solids Sensor	Measuring range	0-200mg/L		0-1000mg/L	0-3000mg/L
	Resolution	0.01mg/L		0.1mg/L	
	Accuracy	≤±0.3mg/L or ≤±6%		≤±0.5mg/L or ≤±8%	
LH-DpH07 Digital PH Sensor	Measuring range	0~14pH			
	Resolution	0.01pH ≤			
	Accuracy	±0.02pH			
LH-DR31 Digital ORP Sensor	Measuring range	-2000~2000mV			
	Resolution	1mV			
	Accuracy	±15%			
LH-DE03/LH-DE21 Digital Conductivity Sensor	Measuring range	K=0.1 electrode: 0.2~200 μS/cm K=1 electrode: 2~2000 μS/cm			
	Resolution	0.01 μS/cm			
	Accuracy	±2%F.S			
LH-D059 Digital Dissolved Oxygen Sensor	Measuring range	0~20mg/L			
	Resolution	0.01mg/L			
	Accuracy	±5%			

Electrode parameters		
LH-E900 Digital Chlorine Dioxide Sensor	Measuring range	0~20mg/L
	Resolution	0.01mg/L
	Accuracy	±0.1 mg/L
LH-S900 Digital Salinity Sensor	Measuring range	0~13000mg/L
	Resolution	0.1mg/L
	Accuracy	±2%F.S
LH-DZ900 Digital Ozone Sensor	Measuring range	0~20mg/L
	Resolution	0.01 mg/L
	Accuracy	5%F.S
LH-L100 Digital Chloride Ion Sensor	Measuring range	0~10000mg/L
	Resolution	1 mg/L
	Accuracy	±5%F.S
LH-L200 Digital Fluoride Ion Sensor	Measuring range	0-10000mg/L
	Resolution	1 mg/L
	Accuracy	±5%F.S
LH-L300 Digital Sludge Concentration Sensor	Measuring range	0~20g/L
	Resolution	0.01g/L
	Accuracy	±1%F.S
LH-L400 Digital Water Hardness Sensor	Measuring range	0~10000mg/L
	Resolution	1 mg/L
	Accuracy	±5%F.S
LH-N03 Smart Nitrate Ion Sensor	Measuring range	0.1~14000ppm (or mg/L)
	Resolution	0.01
	Accuracy	Standard solution ±5% F.S
LH-T613 Online Self-cleaning Blue-green Algae Sensor	Measuring range	0~200, 000 cells/mL
	Resolution	1 cells/mL
	Accuracy	±5%
LH-T615 Online self-cleaning Chlorophyll Sensor	Measuring range	0~400μg/L or 0~100RFU
	Resolution	0.1μg/L or 0.1%RFU
	Accuracy	±5%
LH-T616 Self-cleaning Oil in Water Sensor	Measuring range	0~200mg/L
	Resolution	0.01mg/L
	Accuracy	±3%F.S
LH-T660 Online Sensor Method NH4-N Ammonia Nitrogen Sensor	Measuring range	0~100mg/L
	Resolution	0.01mg/L
	Accuracy	±10% of measured value or ±0.5mg/l whichever is greater, depending on calibration

Digital pH Sensor

BAS-LH-DpH07

Product Introduction

This digital sensor integrates electronic circuits and microprocessors inside the sensor.It is suitable for the real-time pH value monitoring in industrial wastewater, water works, food processing, biological pharmaceutical and other industries.

Features

- Sensor has good repeatability, acid and alkali corrosion resistance, small error, good linearity in the range of 0~14 pH value.
- The pH composite sensor is made of low impedance sensitive glass Þlm, which can be applied to pH measurement under various conditions.Fast response, high thermal stability.
- With good reproducibility, acid and alkali corrosion resistance, alkali error in the range of 0 to 14pH linear presentation.
- The reference system composed of Ag/AgCl and gel electrolyte salt bridge has stable half-cell potential and excellent anti-pollution performance.
- The annular PTFE diaphragm is not easy to block and can be used for longterm on-line monitoring.

Project	Specifications
Measuring range	0~14pH
Accuracy	≤±0.02pH
Working temperature	0~60℃
Response time	20sec
Drift	≤±0.1pH/24h
Sensitive membrane impedance	≤500MΩ
Slope	≥97% (25℃)
Zero point	7±0.5pH (25℃)
IP grade	IP68
Power supply	12-24VDC
Data output	MODBUS / RS485

Intelligent Conductivity Sensor

BAS-LH-DE21 0-2000μS/cm
BAS-LH-DE03 0-200μS/cm

Product Introduction

This sensor is used for conductivity of water measuring. The measuring principle is to place two electrodes with a Þxed area and distance in the liquid to be measured, apply a constant voltage at both ends of the electrode plate (generally a sine wave voltage to avoid polarization effect), under the action of the electric Þeld, ions in solution will move in a certain direction. Measure the current passing between the plates, and calculate to obtain the conductivity of the liquid to be measured. It is suitable for real-time conductivity monitoring in sewage treatment, aquaculture, environmental monitoring, waterworks and other industries.

Features

- Coaxial structure design, excellent resistance to changes in electrode constants, mechanical damage or temperature effects.
- 316L liquid connection material, better improve the measurement accuracy.
- Built in temperature sensor with automatic water temperature compensation function.
- Supports MODBUS / RS485 output.

Technical parameters	
Measuring range	K=0.1: 0.2 ~ 200μs/cm K=1: 2 ~ 2000μs/cm
Measuring accuracy	±2%F.S
Temperature element	NTC10K
Working environment	Temperature: 0~60℃; Humidity: ⩽90%RH
Liquid connection material	316L stainless steel
Mounting thread	3/4"NPT thread
Cable	Standard 5 meters, OEM available
Calibration	1 point or two points calibration
Power supply	12~24VDC
Data output	MODBUS/RS485
IP grade	IP68

Intelligent ORP Sensor

BAS-LH-DR31

Product Introduction

ORP (REDOX potential) is a qualitative test of the REDOX capacity of water body.Since water in nature is a mixed system of REDOX, ORP electrode also reßects a mixed potential.It reßects a description of relative state. ORP value of water near a certain value point indicates a reduction or oxidation state of water, or a certain property of solution (sanitary level, etc.).In addition, temperature can affect the ORP value but cannot be corrected, so ORP electrodes generally do not have temperature compensation.It is suitable for ORP value real-time monitoring in various industries such as food processing, aquaculture, waterworks, education and scientiÞc research.

Features

- Sensor uses antifouling material PTFE liquid coil, can withstand the pollution caused by hydrocarbons and sulÞde.It can be used in severe environment, to ensure long-term monitoring process stability and service life.
- The gel electrolyte used is not easily disturbed by external ions, and will not be affected by changes in external pressure.
- Reliable sealing installation, IP68.
- Digital electrodes support MODBUS/RS485 output.

Technical parameters	
Measure range	-2000~2000mV
Resolution	1mV
Calibration	1 point calibration
Working temperature	0~60℃
Liquid joint material	Platinum、PTFE
Mounting thread	3/4 NPTthread
Cable	Standard 5 meters (OEM available)
Sensor material	PC
IP grade	IP68

Online Fluorescence Dissolved Oxygen Sensor

BAS-LH-DY06

Product Introduction

This sensor is coated with a luminescent material. Green light from an LED is transmitted to the sensor surface. The green light excites the luminescent material. As the material relaxes it emits red light. The time it takes for the red light to be emitted is measured. Between the ßashes of blue light, a red LED is ßashed on the sensor and used as an internal reference. Increased oxygen in the sample decreases the time it takes for the red light to be emitted. The time measurements correlate to the oxygen concentration.

Features

- Green excitation ßuorescence life detection technology, no electrolyte, no interference, no frequent calibration, stable and reliable measurement.
- Built-in temperature sensor automatic compensation function for water temperature.
- Support MODBUS/RS485 & 4-20mA current interface output.

Model	Parameter
Measuring range	0~20mg/L or 0~200% saturation
Accuracy	±5% or ±0.3mg/L
Response time	90s
Temperature sensor	DS18B20 digital temperature sensor
Working temperature	5 ~ 40℃
Power supply	12VDC±20%
Calibration	One point or two point calibration
Protection grade	IP68
Size	Φ34×222mm
Analog interface	4-20 mA (optional)
Pressure of work	＜5bar
Digital interface	MODBUS /RS485
Cable length	8m
Lifetime of ßuorescent cap	1 year
Material	The main body is stainless steel 316 and the sensitive Þlm is silicone

Intelligent Dissolved Oxygen Sensor

BAS-LH-DO59

Product Introduction

This sensor is based on polarography to measure dissolved oxygen in water. The dissolved oxygen sensor is composed of cathode and anode. The cathode is platinum electrode and the anode is silver / silver chloride electrode. The cathode and anode are immersed in the electrolyte chamber, which is isolated from the external measurement environment through a diaphragm. Dissolved oxygen diffuses to the cathode through the diaphragm and is reduced on the cathode to generate current. The reduction current is positive with the transfer rate of dissolved oxygen into the electrolyte. At a given temperature, the current is proportional to the partial pressure of oxygen in the water. It can be used for the determination of dissolved oxygen in aquaculture river monitoring, sewage treatment, swimming pool and other water.

Features

- Adopt the principle of polarography, the test water sample needs to maintain ßuidity.
- With appropriate oxygen permeable membrane, reference electrode and electrolyte, the electrode has better measurement accuracy and stability.
- Built in temperature sensor with automatic water temperature compensation function.
- Supports MODBUS / RS485 output.

Project	Specifications
Sensor material	Platinum cathode, silver/silver chloride reference electrode
Working condition	0 ~ 40℃
Temperature element	NTC10K
Response time	≤90s
Measuring range	0 ~ 20mg/L,0 ~ 200%
Installation mode	3/4" NPT thread, ßow-through or submersible mount
Cable	Standard 5 meters (OEM available)
Measuring principle	Two electrode polarography
Calibration	2 points calibration
Storage temperature	0 ~ 50℃ (Dry without electrolyte)
Power supply	12 ~ 24VDC
Data output	MODBUS/RS485

Constant Pressure Residual Chlorine Detection Module

BAS-LH-DL06

Constant pressure residual chlorine detection module includes pH electrode, residual chlorine electrode (platinum electrode, titanium electrode), installation backplane, ßow meter and controller.

Features

Technical Specification	
Test Item	Residual chlorine, pH, temperature, flow rate
Measuring Range	Residual Chlorine: 0~3mg/L
	pH: 0~14
	Temperature: 0~60℃
	Flow rate: 16~40L/H
Accuracy	Residual Chlorine: 0.01~0.2:±0.02mg/L; 0.21~3.00mg/L; ±0.1mg/L or 5%, whichever is greater
	pH: ±0.1
	Temperature: ±0.5℃
	Flow rate: ±5%
Resolution	Residual Chlorine: 0.01 mg/L
	Current: 0.01 μA
	pH: 0.01
	Temperature: 0.1 ℃
	Flow rate: 1L/H
Temperature element	NTC 10K
Flow rate requirement	16~40L/H, 20L/H optimal
Power	0.5W
Power supply	12~24VDC, standard 5m shielded cable, length OEM available
Data output	RS-485/MODBUS-RTU protocol
IP grade	BNC and flow meter interface: Ip65; Other interfaces and structural parts: IP68
Main material	PMMA/PC/PTFE/glass/titanium/platinum/304 stainless steel/silicone O-ring

Online Intelligent Turbidity Sensor

BAS-LH-DZ09

Product Introduction

The online turbidity electrode adopts 90-degree scattered light method and uses a near-infrared light source to eliminate chromaticity interference and meets the IS07027 standard.The LED emits a near-infrared beam to the sample at a certain angle.The beam will emit scattering when it hits the suspended matter in the sample during transmission.The detector set at 90% of the incident light receives the scattered light.The concentration of suspended matter in the sample is the intensity of the scattered light is directly proportional, so that the concentration of suspended matter in the sample and the turbidity can be calculated by measuring the intensity of the scattered light.

Features

- Can be used for low turbidity detection. (<1NTU, with ßow slot).
- Comes with intelligent device with automatic cleaning function.
- Built-in temperature sensor with temperature compensation function makes measurement more accurate.
- Support MODBUS / RS485 4-20mA current interface output to facilitate system integration.

Model	LH-DZ09-200	LH-DZ09-1000	LH-DZ09-3000
Measuring range	0 ~ 200	0 ~ 1000	0 ~ 3000
Resolution	0.01,1	0.1,1	0.1,1
Indication error	≤5NTU, ±0.3NTU; >5NTU, ≤±6%	≤10NTU, ±0.5NTU; >10NTU, ≤±8%	≤10NTU, ±0.5NTU; >10NTU, ≤±8%
Operating temperature	5 ~ 40℃		
Deepest depth	Underwater 6M		
Digital interface	MODBUS/RS485		
Analog interface	4-20mA		
Powered by	12VDC±20%		
Calibration	One point or two point		
Protection class	IP68		
Installation method	Flow tank installation or Submerged installation		
Size	Φ54X150mm		

Online Intelligent Suspended Solids Sensor

BAS-LH-DX01

Product Introduction

This product uses the turbidity method to measure the concentration of suspended solids. The LED emits a near-infrared beam to the sample at a certain angle. The beam will scatter when it encounters suspended solids in the sample during transmission. It is set at a 90° angle to the incident light. The detector receives the scattered light, and the concentration of suspended solids in the sample is proportional to the scattered light intensity, so that the suspended solids concentration in the sample can be calculated by measuring the scattered light intensity.

Features

- Can be used for low concentration detection (<1mg/L, with ßow cell) .
- Self-contained wiper with automatic cleaning function.
- Built-in temperature sensor.
- Corrosion-resistant housing, IP68, can work underwater for a long time.
- Support MODBUS/RS485/4-20mA current interface output.
- Wide test range (0~3000mg/L).

Item	LH-DX01-200	LH-DX01-1000	LH-DX01-3000
Measuring range (mg/L)	0 ~ 200	0 ~ 1000	0 ~ 3000
Resolution (mg/L)	0.01、1 ≤	0.1、1 ≤	0.1、1 ≤
Accuracy (mg/L)	±0.3mg/Lor ±6%	±0.5mg/Lor ±8%	±0.5mg/Lor ±8%
Working temperature	5 ~ 40℃		
Maximum diving depth	5 meters underwater		
Digital interface	MODBUS / RS485		
Analog interface	4-20mA		
Power supply	12VDC±20%, 1A		
Calibration	One or two point calibration		
Size	Φ 54×150mm		
IP grade	IP68		
Installation method	Flow cell installation, immersion installation		
Flow cell (optional)	350×117×198mm		
cable length	5m (default)		
material	316 Stainless Steel		

Online Intelligent Uv254 COD Sensor

BAS-LH-DC18

Product Introduction

This instrument uses 254nm deep ultraviolet LED, which is small in size and long in life.The 254nm deep ultraviolet beam is absorbed by the organic matter dissolved in the water during the transmission process, and the degree of absorption is proportional to the concentration of organic matter, so that the content of organic pollutants in the sample can be evaluated by measuring the absorbance of the deep ultraviolet beam.The built-in 365nm wavelength light source is used for turbidity compensation, effectively eliminating turbidity interference.

Features

- Optical measurement, no reagents, no pollution.
- Built-in 254nm and 365nm dual optical paths, automatically compensate for turbidity interference.
- Comes with wiper, with automatic cleaning function to prevent biological attachment.
- Imported LED light source, with small drift, fast response, and more accurate measurement.
- The size is small, the installation is more convenient, and the water quality can be monitored on-line without interruption.
- Digital sensor, RS-485 interface, Modbus/RTU protocol.

Technical Parameter	
COD range	0-600 mg/L equiv.KHP
COD accuracy	±5%F.S
COD resolution	0.1mg/L
TOC range	0-240 mg/L equiv.KHP
TOC accuracy	±5%F.S
TOC resolution	0.1mg/L
Turbidity range	0~300NTU
Turbidity accuracy	±5%F.S
Turbidity resolution	0.1NTU
Operating	5~40℃
Deepest depth	10 meters underwater
Digital interface	MODBUS/RS485
Analog interface	4-20mA
Powered by	12~24VDC
Calibration	One or two point calibration
Protection level	IP68
Installation method	Flow cell installation, immersion installation
Size	Φ 34×232mm
Cable length	5 meters (default)

Digital Brix/Salinity Refractometer

BA-LH-T55/LH-T95/LH-SA28

(BAC-LH-T55) (BAC-LH-T95) (BAC-LH-SA28)

Introduction

The instrument adopts the optical principle and specializes in measuring the sugar content in water sample, food, fruit, crops.It widely used in food industry, beverage, agriculture, agriculture product processing industry,etc.

Feature

Sensitive reaction, accurate measurement

Waterproof design, stable and durable

Shading cover design, not afraid of strong light,better repea-tability stability

Temperature compensation function

Wide measuring range

Technical Data

Model	LH-SA28	LH-T55	LH-T95
Measure range	0~28%	0~55Brix(%)	0~95Brix(%)
Resolution	0.1%/0.1℃	0.1Brix(%)/0.1℃	
Accuracy	±0.2%/±1℃	±0.2Brix(%)/1℃	±0.3Brix(%)/1℃
Temperature compensation	10~80℃		
Working condition	10~40℃		
Sample amount	≈0.2mL (3~5 drops)	≈0.2mL (3~5 drops)	≈0.5mL (7~10 drops)
Measuring time	≈3S		
Power supply	2 *AAA batteries	Built-in 3.7V lithium battery	
Size	154x52x44mm		

Rapid Detection Test Strips

Introduction

The rapid detection series are semi-quantitative detection products, and the detection results are interval values, so there are no concepts such as precision and accuracy, and the sensitivity is the lowest detection limit.
It is widely used in on-site rapid detection water quality of urban water supply, food and beverage, environment, medical treatment, chemistry, pharmacy, thermoelectricity, papermaking, breeding, bioengineering, fermentation process, textile printing and dyeing, petrochemical industry, water treament and other Pelds.

Technical Data

Product Name	Measuring range	Packing
Ammonia nitrogen test strip	0-0.5-1-3-5-10-20mg/L	100 tests/box
	0-2-5-10-30-50-70-100mg/L	
	0-10-30-60-100-200-400mg/L	
	0-50-120-200-270-350-420-500mg/L	
	0-5-10-30-60-100-200-400-1000mg/L	
Hydrogen peroxide test strip	0-0.5-2-5-10-25mg/L	100 tests/box
	1-3-10-30-100mg/L	
	100-200-400-600-800-1000mg/L	
Peracetic acid test strip	0.5-1-2-4-10-20-40mg/L	100 tests/box
	25-100-200-300-500mg/L	
	100-200-500-1000-1500-2000mg/L	
Residual chlorine test strip	0-0.5-1-3-5-10mg/L	100 tests/box
	0-0.5-1-3-5-7-10-20-25mg/L	
	0-25-50-100-200-500mg/L	
	0-20-50-100-300-500-700-1000-1500mg/L	
pH test trip	0-1-2-3-4-5-6-7-8-9-10-11-12-13-14 pH	100 tests/box
	4.5-5-5.5-6-6.5-7-7.5-8-8.5-9-9.5-10 pH	
	0-0.5-1.0-1.5-2-2.5-3-3.5-4-4.5-5-5.5-6-6.5-7 pH	
	7-7.5-8-8.5-9-9.5-10-10.5-11-11.5-12-12.5-13-13.5-14 pH	
Ferrous test strip	2-10-25-50-100-250-500mg/L	100 tests/box

Technical Data

Product Name	Measuring Range	Packing
Sulfur dioxide test strip	0-10-30-50-100-180-400mg/L	100 tests/box
Chlorine dioxide test strip	0-10-25-50-100-200-300-500-800mg/L	100 tests/box
Mercury test strip	0-10-20-50-100-200mg/L	100 tests/box
Quaternary ammonium Salts test strip	0-10-50-100-250-500mg/L	100 tests/box
Ozone (in air) test strip	0-5-10-20-30-40mg/m^3	100 tests/box
Phosphate test strip	0-10-25-50-100-250-500mg/L	100 tests/box
Sulfate test trip	＜200-200-400-800-1200-1600mg/L	100 tests/box
Chromium/CR(VI) test strip	0.5-2-5-10-30-50-100mg/L	100 tests/box
Aluminum test trip	10-25-50-100-250mg/L	100 tests/box
Chloride ion test strip	500-1000-1500-2000-3000mg/L	100 tests/box
Urea test strip	0-25-50-100-200-300mg/L	100 tests/box
Lead test strip	0-20-50-100-200-500mg/L	100 tests/box
Low hardness test strip	0-5-10-20mg/L	50 tests/box
Water hardness test strip	0-25-50-120-250-425mg/L	100 tests/box
Copper test strip	0-10-30-100-300mg/L	100 tests/box
Vitamin C test strip	50-100-200-300-400-700-1000-2000mg/L	100 tests/box
Nitrate test strip	5-10-25-50-100-250-500mg/L	100 tests/box
Zinc test strip	10-40-100-250mg/L	100 tests/box
Sulfite test strip	0-10-30-50-100-180-400mg/L	100 tests/box
Nitrite test strip	1-5-10-20-40-80mg/L	100 tests/box
Residual chlorine/Total chlorine/pH 3 in 1 test strip	Residual chlorine: 0-0.5-1-3-5-10mg/L	100 tests/box
	Total chlorine: 0-0.5-1-3-5-10mg/L	
	pH:6.2-6.8-7.2-7.8-8.4-9.0pH	

Note:Other specifications, parameters can be customized as required

Rapid Detection Test Kit

The rapid detection series are semi-quantitative detection products, and the detection results are interval values, so there are no concepts such as precision and accuracy, and the sensitivity is the lowest detection limit.

Technical Data

Product Name	Measuring range	Packing
COD test box	0-30-60-120-200- ≥250mg/L	50 tests/box
Ammonia nitrogen test box	0.01-0.05-0.1-0.2-0.4-0.6-0.8-1.0mg/L	25 tests/box
Zinc test box	0-0.1-0.2-0.5-1.0-2-5mg/L	50 tests/box
Fluorine test box	0-0.1-0.2-0.3-0.5-0.7-1.0-1.5mg/L	50 tests/box
Phosphorus test box	0.05-0.1-0.2-0.3-0.4-0.5-0.7-1.0mg/L	25 tests/box
Sulfide test box	0.02-0.05-0.1-0.2-0.4-0.5-0.6-0.8mg/L	30 tests/box
Chromium/CR(VI) test box	0.05-0.1-0.2-0.3-0.4-0.6-0.8-1.0mg/L	25 tests/box
Aluminum test box	0-0.01-0.02-0.04-0.06-0.1-0.15-0.2mg/L	50 tests/box
Chloride test box	20-400mg/L	50 tests/box
Manganese test box	0.1-0.5-1.0-2.0-5.0-10.0mg/L	25 tests/box
Urea test box	0.5-1.0-1.5-2.0-2.5-3.5-5.0-8.0mg/L	20 tests/box
Nickel test box	0-0.05-0.1-0.2-0.3-0.4mg/L	25 tests/box
Cyanide test box	0.005-0.01-0.05-0.1-0.2-0.5mg/L	50 tests/box
Low hardness test box	0.4-20mg/L	50 tests/box
Copper test box	0.2-0.4-1.0-2.0-3.0-5.0mg/L	25 tests/box
Nitrite test box	0.01-0.03-0.05-0.1-0.2-0.3-0.4-0.5mg/L	35 tests/box
Total iron test box	0.05-0.1-0.2-0.3-0.4-0.6-0.8-1.0mg/L	25 tests/box
Silver test box	0-0.5mg/L	50 tests/box
Chlorine dioxide test box	0.05-0.1-0.2-0.3-0.5-0.8-1.4-2.0mg/L	25 tests/box
Lead test box	0.2-0.5-0.8-1.0mg/L	50 tests/box
DPD Ozone test box	0.05-0.1-0.2-0.3-0.4-0.5-0.7-1.0mg/L	50 tests/box
DPD Residual chlorine test box	0.05-0.1-0.2-0.3-0.4-0.5-0.7-1mg/L	50 tests/box
	0.1-0.2-0.4-0.6-0.8-1.0-1.5-2.0mg/L	
DPD Total chlorine test box	0.05-0.1-0.2-0.3-0.4-0.5-0.7-1.0mg/L	50 tests/box
	0.1-0.2-0.5-1-2-5-10mg/L	
Total alkalinity test box	10-200mg/L	50 tests/box
	100-2000mg/L	
Total hardness test box	10-200mg/L	50 tests/box
	30-600mg/L	
Aquaculture Test box	pH:4-10pH	50 tests/box
	Ammonia nitrogen：0-1.8mg/L	
	Sulfide：0.2mg/L	
	Dissolved oxygen：0-10mg/L	
	Nitrite：0.01-1mg/L	
Heavy metal test box	Lead：0-1mg/L	20 tests/box
	Cadmium：0-0.5mg/L	
	Mercury：0-0.5mg/L	

Note:Other specifications, parameters can be customized as required

Rapid Detection Colorimetric Tube

Introduction

The rapid detection series are semi-quantitative detection products, and the detection results are interval values, so there are no concepts such as precision and accuracy, and the sensitivity is the lowest detection limit.
It is widely used in on-site rapid detection water quality of urban water supply, food and beverage, environment, medical treatment, chemistry, pharmacy, thermoelectricity, papermaking, breeding, bioengineering, fermentation process, textile printing and dyeing, petrochemical industry, water treament and other Þelds.

Technical Data

Product Name	Measuring range	Packing
COD test tube	0-30-60-120-200-250mg/L	50 tests/box
	0-100-300-400-500-600-800mg/L	
Ammonia nitrogen test tube	0-0.2-0.5-1-2-5-10mg/L	50 tests/box
Ozone test tube	0-0.1-0.2-0.5-1-2-5-10mg/L	50 tests/box
Cadmium test tube	Above 0-0.1-0.3-0.5-1-3mg/L	50 tests/box
Hydrogen peroxide test tube	0.02-0.1-0.2-0.5-1-5mg/L	50 tests/box
Peracetic acid test tube	0.1-0.2-0.5-1-2-5-10mg/L	50 tests/box
Formaldehyde test tube	0-0.1-0.2-1-2-5mg/L	50 tests/box
Chromium/CR(VI) test tube	0-0.05-0.1-0.2-0.5-1-2-5mg/L	50 tests/box
Nickel test tube	0-0.5-1-2-5-10mg/L	50 tests/box
Cyanide test tube	0.05-0.2-0.5-1-2-5mg/L	50 tests/box
Copper test tube	0-0.1-0.3-0.5-1-2-3-5mg/L	50 tests/box
Nitrate test tube	1-2-5-10-20-45mg/L	50 tests/box
Zinc test tube	0-0.5-1-2-5-10mg/L	50 tests/box
Nitrite test tube	0-0.05-0.1-0.5-1-3mg/L	50 tests/box
Total Nitrogen test tube	0-5-10-25-50-100mg/L	50 tests/box
Total chromium test tube	0.5-1-2-5-10-20mg/L	50 tests/box
Total phosphorus test tube	0.1-0.2-0.5-1-2-5-10mg/L	50 tests/box
	0.5-1-3-5-10-20mg/L	
Total iron test tube	0-0.2-0.5-1-2-5-10mg/L	50 tests/box

Note:Other specifications, parameters can be customized as required

BRASTEN®
commitment to excellence

BA-SMART UV-VIS PROBE

Multi-parameter depends on application

Your Global Industrial Automation Solutions Partner Since 1990
ISO 9001 : 2015 Certified

Why BOD and COD an important parameter for measurement?

Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) are two of the most important parameters to characterize (measure the degree of pollution) of wastewater.

BOD, the biological demand for oxygen a source of water has, **is the amount of oxygen used by microorganisms to break down organic substances.** These are usually bacteria (aerobic or anaerobic), yeasts and plankton contained in the water. It is a measure of the degree of contamination and is expressed in mgO2/L. It is measured via a delicate and time-consuming biological process, which depends on temperature. The standard measurement is performed at 20°C for 5 days and is called BOD5. The period of 5 days was chosen, as this is the average time it takes a British river to reach the sea.

In general terms, **the greater the pollution, the higher the BOD**. It provides a rough measure and some reference values for certain water types are as follows:

Pure: 2 – 20 mg/L	Slightly polluted: 20 – 100 mg/L	Moderately polluted: 100 – 500 mg/L
Highly polluted: 500 – 3,000 mg/L	Extremely polluted: 3,000 – 15,000 mg/L	

COD, the chemical demand for oxygen a source of water has, **is the amount of oxygen required to break down organic substances chemically** and convert them to CO2 and H2O. It is also expressed in mgO2/L, and the higher the COD, the more polluted the water is. However, this test only takes about 3 hours, so much less time is needed for a result than for a BOD test. The COD in industrial water may be 50 – 2,000 mgO2/L, although it may reach 5,000, depending on the type of industry.

The main difference between BOD and COD

COD measures all organic material, while BOD only measures organic material which is or can be biologically degraded. Therefore, for a given water sample, the COD is always greater than the BOD, and the second result (COD), as the complete chemical oxidation of the sample, can be considered to include the first.

BOD and COD are related and maintain their relationship for each type of water. The relationship is not the same for different types of water; however, industrial water of the same type has a similar BOD/COD relationship.

By providing more information and being quicker to obtain, the COD is becoming the reference standard in the field.

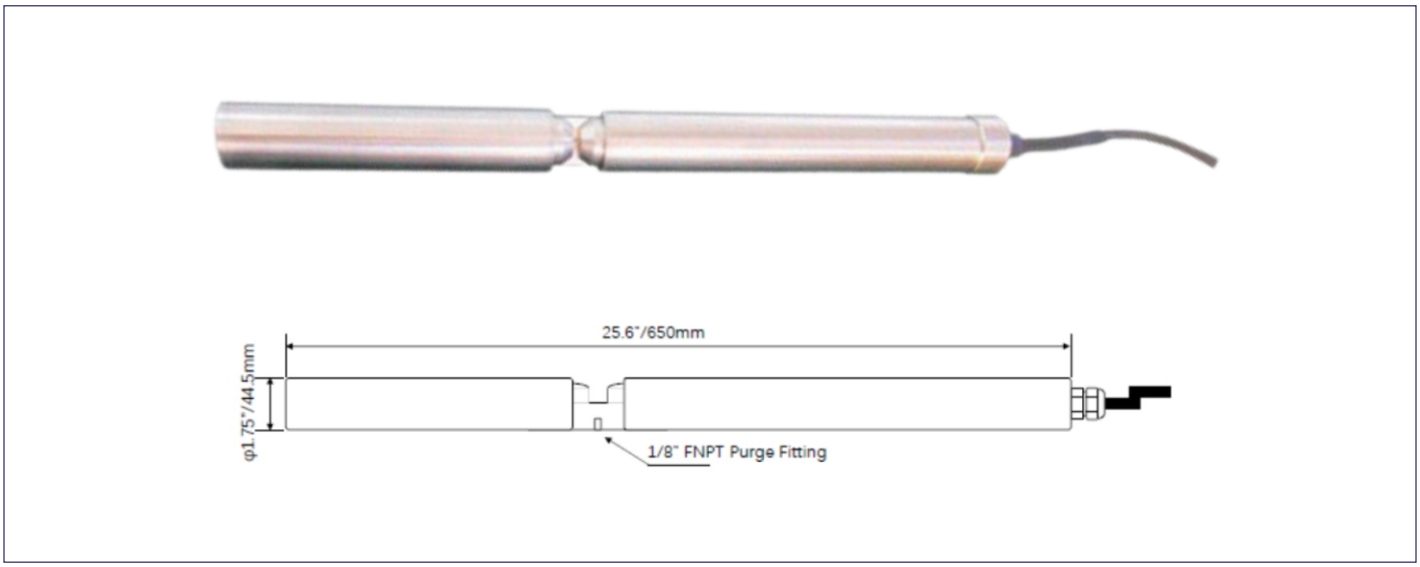
Brasten BA-SMART UV-VIS Multiparameter Probe

Introduction

BA-Smart UV-VIS is the new generation of immersion spectra analyzing sensor. It uses standardized spectra algorithms by taking the complete 200 to 720 nm absorption spectrum of water into account to determine the nitrogen and carbon compounds. BA-Smart UV-VIS' s spectrum compensation for light absorbing particles and turbidity provides a unique and high sensitivity approach that allows the monitoring of dissolved organic substances without sample pre-treatment. BA-Smart UV-VIS gives reliable readings for NO3-N, NO2-N, organic ingredients (CODeq, BODeq, DOCeq, TOCeq), and a number of other parameters.

The sensor can be submerged into water by mounting hardware or using flow cell for bypass installation.

Measurement path length is from 0.5 to 35 mm. There is a built-in purging nozzle for cleaning the test window by compressed air or pressurized water stream. There is also an optional clamp on wiper for automatic test window cleaning.



The validated spectral calibration by BA-Smart UV-VIS uses multiple wavelengths to monitor and compensate each sum parameter, which enables much more accurate and robust measurement than the single wavelength method. Using field special calibration that employs specific features of the absorption spectrum, it is even possible to distinguish various fractions of organic carbon groups. For a specific application, the relevant calculation and calibration of desired parameters require their corresponding spectra and reference values obtained from the analytical chemistry lab. The spectral data plus one or more corresponding measured values are called reference value pair. The sensor uses the reference value pair and the proprietary spectral algorithm to perform calibration. the more reference value pairs are provided; the more accurate calibration is given.

BA-Smart UV-VIS Sensor also enables applications in aggressive media (e.g. high chloride concentrations) thanks to the optional titanium housing.

Equipped with the BRASTEN View configuration, internal data logger, flexible protocols and data outputs, BA-Smart UV-VIS Sensor includes features that are much more advanced than those of comparable devices currently available on the market.

The unified platform of all BRASTEN photometers also facilitates a standardized spare parts and consumables system, which allows the use of a wide range of accessories for our devices. Furthermore, the cutting-edge BRASTEN View enables quick integration into third-party systems.

BA-Smart UV-VIS can also be used for reliable low-cost color measurements. It uses Xenon Flash Light for long-term stable measurements of SAC or colors on UV to Vis Spectrum, BA-Smart UV-VIS choose the different wavelengths for Color measurements, and the absorption at 550nm is used for turbidity/background correction. The cutting-edge device platform, used in all other BRASTEN photometers, enables optical path lengths of 10, 20, 50, and 100 mm, so that almost any application can be easily implemented.

BA-SMART UV-VIS
Continuous Spectrum Sensor

The sensor is designed and manufactured with 200 ~ 700nm continuous spectrum DOAS technology. It can work with the transmitter which is of full touch screen control.

The transmitter can record historical data, display historical trend, analyze spectra, calculate the custom formula, and perform lan and wireless gprs data transmission.

The BA-Smart UV-VIS is available in various measuring ranges (1mm, 2mm, 5mm, 20mm, 35mm,50mm and 100mm) to meet different measuring requirement.

The BA-Smart UV-VIS slight window is treated with a special anti-hanging coating when combined with the automatic purging device, the BA-Smart UV-VIS is basically maintenance-free.

The Advantage

- Online multi-parameter immersion spectra analysing sensor
- Xenon flash light 50 years theoretical life
- Different optical path lengths for various ranges and application
- 316L Stainless steel housing compatible with water with high salinity
- Factory pre-calibration for easy set up and field calibration for more accuracy turbidity compensation
- Fully integrated with automatic air pressure cleaning (optional mechanical wiper)

Application Areas

Drinking water analyzer

Waste water treatment plant

Process water analysis

Environmental monitoring

Ocean & marlin water

Aquaculture

Municipal treatment plant

Sewage treatment plant

Measuring Scale & Optical Path Length

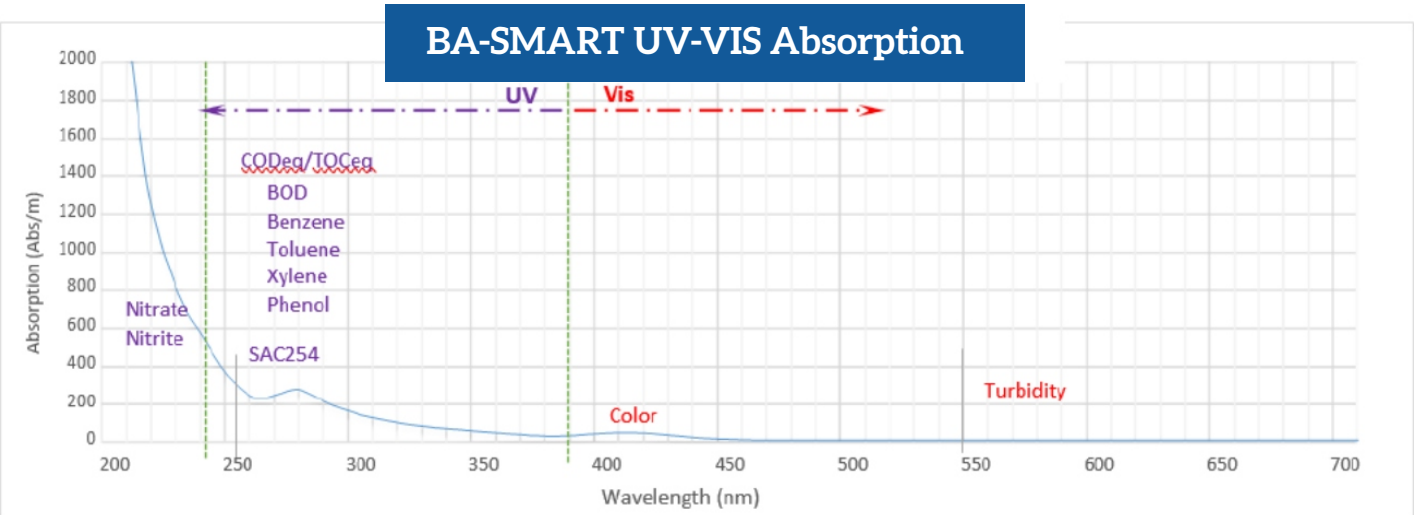
Application	WWWTP Influent/Sewer		WWWTP Effluent	River water	Drinking water
Path Length	**2mm.**	**5mm.**	**5mm.**	**5mm.**	**5mm.**
NO3-N mg/L	0.5-10	-	0.2-25	0.3-70	0.1-10
COD mg/L	23-3750	10-1500	2-500	-	-
BOD mg/L	20-1250	10-500	2-300	-	-
TOC mg/L	-	-	-	1-150	0.1-20
DOC mg/L	-	-	-	1.5-75	0.1-10
SAC254 Abs/m	5-750	2-300	2-300	2-300	0.1-40
TSS mg/L	25-2500	10-1000	2-500	-	-
Turbidity mg/L	-	-	-	5-1400	0.5-150
O3 mg/L	-	-	0.1-10	-	0.1-10

The measuring range of color

Parameter variations	According to the standard	Unit	Range: (Optical path: 5mm)	Range: (Optical path: 10mm)	Range: (Optical path: 20mm)	Range: (Optical path: 35mm)	Range: (Optical path: 50mm)	Range: (Optical path: 100mm)
Pt-Co color number (Hazen) (390 nm or 455 nm). Other Standard Please Contact The Factory								
Hazen 390 nm	DIN EN ISO 6271-2 2005-03	mg/L pt	0-500			0-300		0-100
Gazen 455 nm	DIN EN ISO 6271-2 2005-03	mg/L pt	0-500			0-300		0-100

The above data are based on the commonly used water quality calibration methods. for other special water, the data must be calibrated at the field.

BA-SMART UV-VIS Absorption



Specification

measuring principle	Absorb spectrial analysis UV-Vis(200-700nm) or Attenuation
light source	Xenon flash light
detector	Miniature 256 CCD array spectrometer
optical path	1/2/5/20/35/50100mm
resolution	+0.5% F.S.
accuracy	+2%
respond time	T90 < 1min
working temperature	32 to 122 °F (0to 50 °C)
storage temperature	14 to 140 °F (-10 to 60°C)
operating pressure	<5 bar
housing material	316L Stainless ateel, optional titanium
protection type	>Ip68 immersible
requirement of flow	<3m/s, high velocity may cause bubbles in the measurement.
Auto cleaning	Air or water purging controlled by BA-MULTIPARAMETER uses either compressed air of 3-7 bar or pressurized water. optional clamp-on wipe
power	24 VDC (18-36VDC) by BA-Multiparameter, Consumption normally 5W, Max 25W
interface	RS-485 Modbus RTU
dimension & weight	1.75" O.D, length (44.5 mm x 1.560 mm) & 6.6 ibs. (3kg) with SS housing

Installation

The protection grade of the BA-Smart UV-VIS sensor is IP68, which means it can be directly immersed in water for measurement. The proper installation is very important since it is the prerequisite for correct measurement. Follow the instructions below to install the sensor to ensure that the sensor can work properly.

When installing the spectral sensor, make sure that the optical window is not clogged and there are no particles piling up on it.

1. For horizontal installation (that is, the measurement window is in the vertical position), the plane of the measurement area should be in the vertical direction. This ensures that no sedimentation occurs on the optical window and also there is no air bubbles adhesion to the optical window. Properly use the sensor bracket or the bypass device can ensure the correct installation position.

2. In general, the vertical installation is not recommended (i.e. the measurement window is horizontal). If it has to be mounted vertically, make sure that the measuring medium is flowing or an automatic cleaning device is used to ensure that no particles are deposited on the lower part of the optical window and there is no air bubbles adhesion to the upper part of the optical window.

3. If the sensor will be installed into in the activated sludge aeration tank, the installation should be kept horizontal.

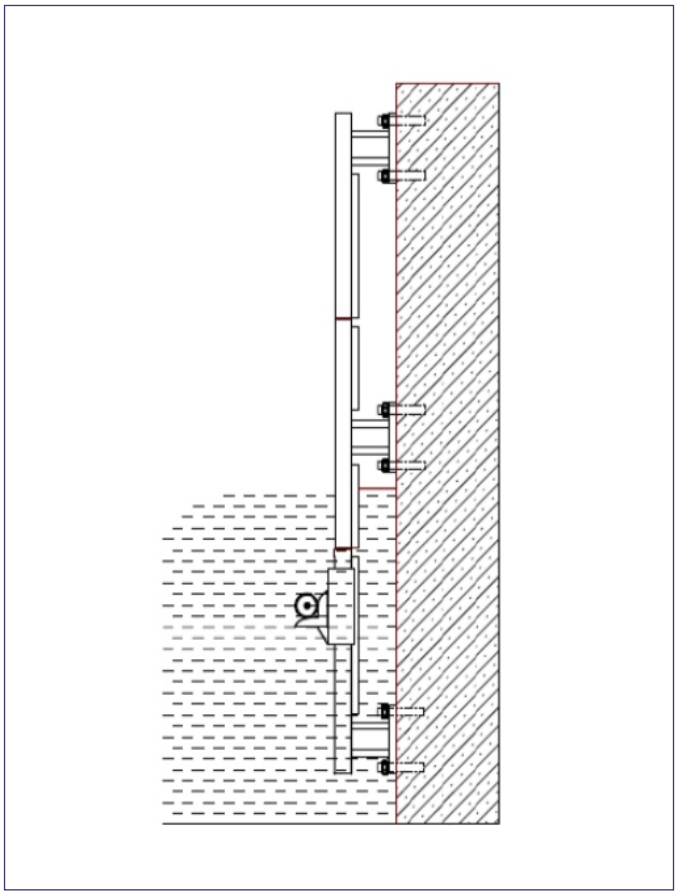
4. Flow rate: The flow rate of the measuring medium should be <3m/s to avoid cavitation. Otherwise, it will impact the measurement For the vertical installation, the medium flow rate should be >1m/s.

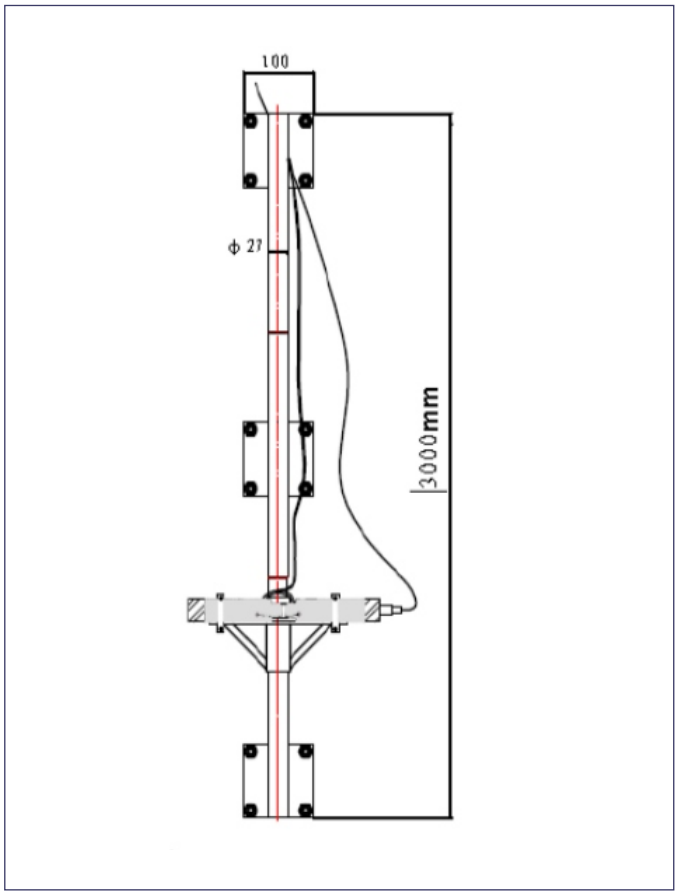
5. The suspended solids (sand) concentration should be <1g/L. It is recommended to install the sensor horizontally. It must be at least 10cm higher away from the bottom.

6. The probe housing is prohibited to directly contact with other materials to avoid possible corrosion.

7. The probe cable must be effectively protected to prevent it from being cut or damaged by other substances in water.

8. In the event of shallow water or low flow rates, the compressed air cleaning system may cause deposits around the measurement site (e.g. at the bottom of the waste water). In this case, the state of the medium to be measured does not represent the normal water quality parameters just after cleaning. To avoid this, the sensor should be installed in such a manner that the opening of the cleaning nozzle should be





Guidance for selection

BA - Smart UV To Vis Spectra Sensor (200 to 700nm)
BA - Smart UV Spectra Sensor (190 to 390nm

Housing Material:
S - Standard Stainless Steel 3161
T - Titanium

Optical Path

-001 1mm	-002 2mm	-005 5mm
-020 20mm	-035 35mm	-100 100mm

The recommanded application

- **I** - Inlet of WWWTP (COD,NO3-N, BOD, SS,H2s,SAC254)
- **A** - Aeration tank of WWWTP (NO3-N,SS)
- **O** - Outlet of WWTP (COD,NO-N, BOD, SS,H2s,SAC254)
- **G** - Ground Water (NO-N, DOC, TOC, SAC254, Turbidity)
- **D** - Drinking Water (NO-N, DOC,TOC, O3, SAC254, Turbidity)
- **S** - Surface Water (NO3-N, DOC, O3, SAC254 Turbidity))
- **IP** - Industrial Process (NO-N, TOC, O3, SAC254, Turbidity, Color)
- **O** - Other Parameters Please Contact Factory

Cable Length

-C20 20`	**-C30** 30`	**-C50** 50`

Standard Warranty

Standard warranty is 12 months from the date of commissiong & limited to maximum of 15 months from the date of shipment of the analyzer system

Sales & Service Support

- Factory Acceptance Test (FAT)
- Site Acceptance Test (SAT)
- Site Commissioning
- After Sales Service Backup
- Guaranteed Spares Parts Availability For Maximum 10 Years Of Instrument Life

USA Office
Brasten America Corporation
2323 Still Water Dr., Mesquite,
Tx 75181, USA
Email: **admin@brasten.us**

ASIA Region
Brasten Engineering & Service Co.Ltd.
254 Soi Onnuch 40, Sukhumvit 77, Bangkok 10250, Thailand
Tel.: (662) 730 6500 Fax: (662) 7306505
Email: **info@brasten.com**
Website: **www.brasten.com**

PCA2

PORTABLE COULOMETRIC ANALYSER

APPLICATION FIELDS

- Drinking water
- Surface water
- Waste water
- Foods and beverages
- Biological samples

The new Portable Coulometric Analyser PCA is designed for laboratory and field analysis of heavy metals, semi-metals and numerous non-metals in aquatic solutions for a broad concentration range addressing contents from sub-µg/L up to several g/L. In battery operation mode it is well suited for field applications. The analysis is full automatic, the sample solution is transported to the electrochemical measuring cell by means of a small but robust peristaltic pump and on completing the analysis the result is displayed and stored in the memory. The human interface is a simple touch screen.

UNIQUE FEATURES

- **Metals, semi-metals, non-metals**
- **Robust portable design**
- **Full automatic analysis**
- **At least 12 hours on battery operation ideal for field applications**
- **Simple and fast operation**
- **Ready to use applications**
- **Broad concentration range, starting at sub-µg/L**
- **Also suitable for coloured and turbid samples**

TYPICAL APPLICATIONS INCLUDE

- Arsenic, antimony, tin and selenium in various water samples
- Heavy metals such as mercury, thallium, cadmium, indium, lead, bismuth, silver, gold.
- Manganese, iron, cobalt, nickel, copper, zinc, gallium in various water samples
- Chromium(VI) and total chromium
- Iron(II), iron(III), total iron
- Arsenic(III) and total arsenic
- C-vitamin in vegetables, fruits, beverages, foods
- Fluoride, chloride, bromide, iodide in waters and biological samples
- Disinfection reagents such as chlorine, chlorine dioxide, hypochlorite in drinking water
- Disinfection by-products such as chlorite, bromate in drinking water
- Sulphite in foods, wines and beers
- Sulphides in waste waters
- Ammonia, hydrazine, nitrite, nitrate, cyanide in aquatic samples
- Phosphate in waste waters
- Ethanol in beverages
- Methanol in waste water
- Acids and bases in aquatic solutions, wines

Samples with suspended particles and solid samples can be analysed after an appropriate sample digestion, e.g. thermal, UV or microwave-assisted sample digestion.

Ag, Ammonia, As, Bromate, Bromide, Cd, Chloride, Chlorite, Co, Cr(VI), Cu, EDTA, Fe, Hg, Iodide, Mn, Ni, Nitrite, Pb, Sb, Se, Sn, Sulphide, Tl, Zn

istran

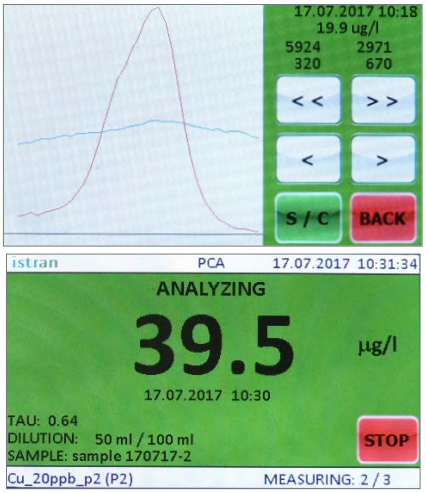
Istran, s.r.o., Žitná 42, 831 06 Bratislava, Slovakia +421 2 52 63 31 71 istran@istran.sk www.istran.sk

ANALYSIS PRINCIPLE

The analysis is based on automatic flow-through coulometry and voltammetry making use of a unique robust electrochemical measuring cell with a maintenance-free built-in reference and auxiliary electrodes and a long-life disposable working electrode. The sample solution is pumped into the cell where the determined species (analyte) is measured through its electrochemical conversion, i.e. it is electrochemically oxidised or reduced at the electrode surface. Low concentrations are determined after a preliminary electrochemical deposition of the measured species at the electrode surface (enrichment step), then the deposit is stripped by constant current while the signal is recorded and evaluated. In such a way, concentrations in the sub- µg/L level can be easily measured. A typical response of copper displayed on the touchscreen is depicted below.

The analytical procedure consists of three main steps:

1. **Sample preparation.** It includes the filtration of the sample (when necessary) and addition of a reagent to the sample. Solid samples or samples with suspended particles require a sample digestion..
2. **Analysis.** Full automatic procedure yielding the result displayed on the touch screen. The analysis starts on immersing the sampling tube into the sample which is pumped through the measuring cell where the analyte is electrochemically measured. Usually multiple runs are done with measurements repeated and evaluated automatically.
3. **Cleaning.** On completion of the analyses the cell is rinsed with water or a suitable reagent solution and the analyser is set to standby mode or turned down.



CONTROL AND COMMUNICATION

- User interface: Powerful 4.3" Intelligent LCD-TFT display module. 480 x 272 Resolution, RGB 65K true to life colours, TFT Screen with integrated 4-wire Resistive Touch Panel. On-board micro-SD memory card connector for data logging purposes.
- User interface for uploading new measuring parameters, downloading results and curves
- User interface with administrator access, firmware upgrading and calibration of electronic circuits

MECHANICAL AND ELECTRICAL DATA

Enclosure: The PCA instrument is integrated into a robust transport case made of polypropylene. Watertight, crushproof, and dustproof. Protection class IP 67	
Dimensions (W x D x H): 27 x 24.6 x 12.4 cm (10.62" x 9.68" x 4.87")	**Weight: 2.9 kg (6.4 lbs)**
Power input: 100-240V/50-60Hz	**Battery:** Ni-MH, 14.4V/4.5Ah
Ambient operating conditions: 5 °C – 45 °C at 5 - 95% relative humidity non-condensing (41 °F – 113 °F)	

TECHNICAL SPECIFICATIONS

MEASUREMENT

- **Analysis method:** Coulometry and voltammetry in chronopotentiometric mode
- **Determined species:** Metals, semi-metals, non-metals, organics (refer to the up to date list of applications)
- **Measuring cell:** robust three-electrode flow-through cell. Built-in maintenance-free platinum auxiliary and silver/silver chloride reference electrodes. Longlife disposable working electrodes made of glassy carbon, gold, silver, platinum, copper. No mercury or gold plating solutions required.
- **Detection limit:** less than 1 µg/L *
- **Precision (RSD, under repeatability conditions):** 5 % full scale for calibration or validation solutions
- **Calibration:** A built-in 10 point calibration curve adjusted in the factory
- **Re-calibration:** Two point re-calibration (blank and calibration solution) carried out on demand
- **Measuring ranges:** Please check the respective application list for each parameter
- **Analysis time/run:** 1-10 min, depending on the analyte concentration *.

*Refer to the corresponding application list

GLP FEATURES

- Automatic storage of about 1000 results, including the corresponding signal curve, date, time of analysis and the sample identifier.
- Statistical evaluation of the results
- Checking the accuracy and precision by means of a control sample with known analyte concentration.

REAGENTS AND CONSUMABLES

- Reagents, consumables, containers and tools can be transported in a separate transport case
- Reagent consumption is low, usually 0.1 to 1 mL/sample
- No organic or toxic reagents are used
- All reagents and consumables are delivered by the producer
- Reagent formulas are available against royalties
- Cleaning solution: Demineralised water or in most cases tap water is sufficient
- Calibration or validation solution: Available from the producer, prepared from single element Certified Reference Materials

OPTIONS

- Additional applications each including a measurement parameter file, measuring cell (if needed), electrode
- Transport case for reagents, consumables, tools ideal for field operation

DATA LOGGING AND SECURITY

- Log files with over 1000 results and corresponding curves are stored
- Easy export to spreadsheet files

Testomat 2000® PO$_4$

The **Testomat 2000® PO$_4$** process photometer is an online analytical measuring instrument for monitoring the content of ortho-phosphate in the range from 0 to 10.0 mg/l (ppm) using the photometric analysis principle.

Performance profile:

- Analysis by automatic addition of 2 reagents
- Measurement result display after a reaction time of approx. 10 minutes (measurement time without purging time)
- Menu-guided operation and programming by means of plain text display
- Selection of units in ppm or mg/l
- Analysis triggers:
  - Automatic interval operation (interval pause adjustable from 0 - 255 minutes)
  - External control
  - Quantity-dependent via contact water meter
- Two independent limit values with hysteresis (1, 2 or 3 bad analyses) and adjustable switching functions
- Monitoring of two measuring points (switchover by external solenoid valves)
- Internal error documentation
- Programmable service address
- Programmable maintenance interval for maintenance request

Technical data:

Power consumption:	max. 30 VA
Protection class:	I
Protection type:	IP 65
Ambient temperature:	10 - 45 °C
Water temperature:	5 - 30 °C
Dimensions (B x H x T):	380 x 480 x 280 mm
Weight:	ca. 9,5 kg
Operating pressure:	0,3 - 8 bar
Measuring range:	Phosphate PO_4: • 0,00 - 10,0 mg/l Resolution: • 0 - 7 mg/l (0,1) • 7 - 10 mg/l (1,0) Defection limit : • 0,1 bzw. 0,25 mg/l depending on measuring range

270305

Optional:

Article number	Description
270305	Interface card 0/4-20 mA (SK 910)
270310	Interface card RS 232 (for protocol printer)
270315	Interface card 0/2 - 10 V (UK 910)
100490	SD-Card data logger Testomat 2000®
100492	Network logger plug-in card
40315	Drain funnel
40187	Connection set

270310

Scope of application:

- treated wastewater (sewage treatment plants)
- Online - Environmental analysis
- Monitoring of conditioning agents in cooling and heating circuits

40187

Order number:

Menu language	24 V / 50 - 60 Hz	115 V / 50-60 Hz	230 V / 50-60 Hz
German	100560	100565	100570
English	100561	100566	100571
France	100562	100567	100572
Dutch	100563	auf Anfrage	100573
Spanish	100564	100568	auf Anfrage

Reagent:	Amount:	
Reagent kit PO_4 2100 A+B	Reagent A 1 x 500 ml Reagent B 1 x 100 ml	156264
Large container (requires suction lance):		
PO_4 Reagent A	20 Liter	156281
PO_4 Reagent B	5 Liter	156282
Suction lance for large containers	20 Liter Canister	40535
	5 Liter Canister	40536

Brasten Engineering & Service Co. Ltd.
Address: 254 Soi Onnuch 40, Sukhumvit 77, Bangkok-10250, Thailand
Tel.: (662) 730 6500 Fax: (662) 730 6505 E-mail: info@brasten.com Website: www.brasten.com

Testomat 2000® CrVI

The **Testomat 2000® CrVI** process photometer is an online analytical measuring instrument for monitoring the content of chromate (CrO42-) or chromium VI (CrVI). The instrument works with a photometric analysis principle based on DIN 38405. Two device variants are available for the realization of the most diverse measurement requirements.

Performance profile:

- Analysis by automatic addition of 2 reagents
- Measurement result display after a reaction time of approx. 2 minutes (measurement time without purging time)
- 2 independently programmable limit contacts for monitoring and control tasks
- Menu-guided operation and programming by means of plain text display
- High measuring accuracy due to precise piston metering pump
- Analysis triggers:
  - Automatic interval operation (interval pause adjustable from 0 - 99 minutes)
  - External control
  - Dynamic (exhaustion-dependent interval operation)
  - Quantity-dependent via contact water meter
- Two independent limit values with hysteresis (1, 2 or 3 bad analyses) and adjustable switching functions
- Monitoring of two measuring points (switchover by external solenoid valves)
- Internal error documentation
- Programmable service address
- Programmable maintenance interval for maintenance request

Technical data:

Power consumption:	max. 30 VA
Protection class:	I
Protection type:	IP 65
Ambient temperature:	10 - 45 °C
Water temperature:	10 - 40 °C
Dimensions (B x H x T):	380 x 480 x 280 mm
Weight:	ca. 10,5 kg
Operating pressure:	0,3 - 8 bar
Measuring range:	see following page

270305

Variant	Parameter	Measuring range	Resolution
CrVI (Standard)	Chromate (CrO_4^{2-})	0 - 2 mg/l	0,00 - 0,99 mg/l (resolution0,01) 1,0 - 2,0 mg/l (resolution 0,01)
	Chrome VI (CrVI)	0 - 1 mg/l	0,00 - 1,0 mg/l (resolution 0,01)
CrVI 0 - 5 ppm (high measu- ring range)	Chromate (CrO_4^{2-})	0 - 11,15 mg/l	
	Chrome VI (CrVI)	0 - 5 mg/l	0,00 - 0,99 mg/l (resolution 0,01) 1,0 - 3,0 mg/l (resolution 0,1) 3,0 - 5,0 mg/l (resolution 0,2)

270310

Optional:

Article number	Description
270305	Interface card 0/4-20 mA (SK 910)
270310	Interface card RS 232 (for protocol printer)
270315	Interface card 0/2 - 10 V (UK 910)
100490	SD-Card data logger Testomat 2000®
100492	Network logger plug-in card
40315	Drain funnel
40187	Connection set

40187

Scope of application:

- Monitoring the chromate content of wastewater in electroplating plants
- Control of wastewaer in the metalworking industry

Order number:

Type	Menu language	24 V 50 - 60 Hz	115 V 50-60 Hz	230 V 50-60 Hz
CrVI (Standard)	German	100310	100315	100320
	English	100311	100316	100321
	France	100312	100317	100322
CrVI 0 - 5 ppm (high measu- ring range)	German	upon request	upon request	100640
	English	upon request	upon request	100641
	France	upon request	upon request	upon request

Reagent:	Menge:	
Testomat 2000® Reagent CrVI 2100 A	500 ml	156220
Testomat 2000® Reagent CrVI 2100 B	500 ml	156221

Brasten Engineering & Service Co. Ltd.
Address: 254 Soi Onnuch 40, Sukhumvit 77, Bangkok-10250, Thailand
Tel.: (662) 730 6500 Fax: (662) 730 6505 E-mail: info@brasten.com Website: www.brasten.com

Testomat 2000® Fe

The **Testomat 2000® Fe** process photometer is an online analytical instrument for monitoring the dissolved iron (II) + (III) content in the range from 0 to 1.0 mg/l (ppm) using the photometric analysis principle.

Performance profile:

- Analysis by automatic addition of 2 reagents
- Measurement result display after a reaction time of approx. 7 minutes (measurement time without purging time)
- 2 independently programmable limit contacts for monitoring and control tasks
- Menu-guided operation and programming by means of plain text display
- High measuring accuracy due to precise piston metering pump
- Analysis trigger:
  - Automatic interval operation (interval pause adjustable from 0 - 99 minutes)
  - External control
  - Quantity-dependent via contact water meter
- Two independent limit values with hysteresis (1, 2 or 3 bad analyses) and adjustable switching functions
- Monitoring of two measuring points (switchover by external solenoid valves)
- Internal error documentation
- Programmable service address
- Programmable maintenance interval for maintenance request

Technical data:

Power consumption:	max. 30 VA
Protection class:	I
Protection type:	IP 65
Ambient temperature:	10 - 45 °C
Water temperature:	10 - 40 °C
Dimensions (B x H x T):	380 x 480 x 280 mm
Weight:	ca. 10,5 kg
Operating pressure:	0,3 - 8 bar
Measuring range:	Iron Fe (II + III): • 0,00 - 1,00 mg/l Resolution: • 0,00 - 0,65 mg/l (0,01) • 0,7 - 1,00 mg/l (0,1)

270305

Optional:

Article number	Description
270305	Interface card 0/4-20 mA (SK 910)
270310	Interface card RS 232 (for protocol printer)
270315	Interface card 0/2 - 10 V (UK 910)
100490	SD-Card data logger Testomat 2000®
100492	Network logger plug-in card
40315	Drain funnel
40187	Connection set

270310

Scope of application:

- Monitoring of deferrization plants and well water
- Control of operational or drinking water supply systems

40187

Order number:

Menu language	24 V / 50 - 60 Hz	115 V / 50-60 Hz	230 V / 50-60 Hz
German	100150	100155	100160
English	100151	100156	100161
France	100152	100157	100162
Italian	100153	100158	100163
Polish	100154	100159	100164
Dutch	100186	100187	100188

Reagent:	Amount:	
Testomat 2000® Reagent Fe 2005A	500 ml	156250
Testomat 2000® Reagent Fe 2005B	500 ml	156251

Brasten Engineering & Service Co. Ltd.
Address: 254 Soi Onnuch 40, Sukhumvit 77, Bangkok-10250, Thailand
Tel.: (662) 730 6500 Fax: (662) 730 6505 E-mail: info@brasten.com Website: www.brasten.com