PRODUCT CATALOGUE

Chemitec

WATER MONITORING SOLUTIONS

ABOUT CHEMITEC

WHO WE ARE

Founded in Florence, Italy in 1984, Chemitec is a world-class manufacturer of instruments, controllers and other solutions for modern, professional water-monitoring applications.

Chemitec operates in more than 80 countries and in 2015, we extended our international presence with the opening of our first Asian subsidiary in Shanghai, China.

WHAT WE DO

Drawing upon our vast experience and expertise in water treatment and liquid chemical analysis, Chemitec designs, manufactures and distributes sophisticated level and flow rate detection systems, analysers and sensors to industries worldwide, enabling them to take their processes to a new standard of operational excellence.

With a reputation for exceptional quality and service, we specialise in developing state-of-the-art, customised, user-friendly products for our discerning clients.

OUR VISION

TO LEAD THE WORLD IN HIGH-TECH ONLINE WATER & LIQUID ANALYSIS

Our aim is to be the world leader in online water and liquid analysis through new specific sensor development, ensuring an international presence, a customer-focused approach and a philosophy of continuous appraisal and improvement.

OUR MISSION

TO TURN KNOWLEDGE INTO INNOVATION

Everyone at Chemitec is driven by a single purpose - to translate our knowledge and expertise into new and innovative products that not only fulfill customer requirements but provide user-friendly, cost-effective, sustainable water-monitoring solutions.

CUSTOMER SATISFACTION

Chemitec provides an experienced, professional and comprehensive technical consultancy service. We are focused on the individual needs of each customer, from the preliminary stages of the project through to design, manufacture and after-sales technical support.

SUSTAINABILITY

At Chemitec, we're serious about sustainability and our responsibility towards environmental protection. We understand that positive actions we take today benefit both us and future generations.

That's why, from recyclable packaging to innovative systems that reduce consumption of chemicals, water and energy, sustainability is at the heart of everything we do.

QUALITY ASSURANCE

As a quality-oriented company, Chemitec monitors and evaluates all aspects of design, planning (MRP), production (Kaizen) and after-sales support in order to guarantee customer satisfaction.

Chemitec develops its products according to the most rigorous international quality standards. We operate in accordance with quality management system UNI EN ISO 9001:2015, while our dedication to maintaining the highest standards in health and safety and environmental management is reflected in ISO 14001 and ISO 45001 certification respectively.

QUALITY SYSTEM CERTIFICATION DNV ISO 9001

ENVIRONMENTAL SYSTEM CERTIFICATION DNV ISO 14001

SAFETY SYSTEM CERTIFICATION DNV ISO 45001

RESEARCH & DEVELOPMENT

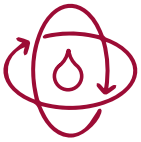
With 40 years of R&D experience in the field, uncompromising quality and premium components, our highly skilled engineers develop all of our products in accordance with individual customer specifications, ensuring optimum performance and reliability at the right cost.

APPLICATIONS

INDUSTRY FIELDS

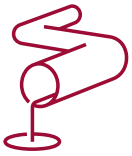
At Chemitec, almost 40 years of experience means we understand that every application is unique, with process requirements dependent on the individual needs and specification of the project.

Our extensive array of instruments, tailor-made solutions and services are based on a vast range of application parameters and measurement principles. This enables optimal adaptation to every challenge and environment and allows us to deliver superior water-monitoring solutions.



ALL APPLICATIONS

Chemitec's comprehensive range of instruments includes multi-application solutions that help operators achieve reliable, repeatable results in every field.



WASTEWATER

Dedicated monitoring solutions for improving wastewater treatment processes such as nutrient removal, aeration control, nitrification/denitrification and sludge dewatering.

INDUSTRIAL WATER

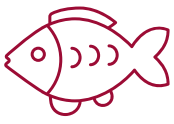
Chemitec's advanced water monitoring tools help operators in a wide range of industries meet the most demanding monitoring and process management needs.

DRINKING WATER

Chemitec solutions help operators monitor incoming water, manage changes to the treatment process, and maintain the correct dosages and adjustments to ensure the quality of the final effluent.

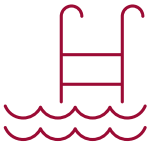
IRRIGATION

Chemitec's advanced probes, sensors, controllers and analysis systems for agricultural irrigation applications help operators save money, improve yields and ensure greater product quality.



FISH FARMING

Precise monitoring of turbidity, dissolved oxygen, electrical conductivity and other essential water-quality parameters in aquaculture facilities.



SWIMMING POOLS

Giving swimming pool operators peace of mind that their water is safe, Chemitec's world-leading monitoring instruments deliver precise, intuitive control of essential values such as chlorine and pH.

ELECTROPLATING

In electroplating, where water bath temperature and chemical composition are crucial, Chemitec's advanced instruments allow users to have complete confidence that their process is safe and effective.

CLEAN IN PLACE (CIP)

Advanced instruments for monitoring water parameters during the automated cleaning of pipes, vessels and equipment where the highest standards of hygiene must be achieved.

PULP & PAPER

Chemitec's state-of-the-art instruments allow operators to reduce fresh water consumption while treating discharge water to comply with environmental regulations and protect local resources.

COOLING TOWERS

Solutions for ensuring maximum uptime through preventative protection and superior service throughout the water and steam process.

FOOD & BEVERAGE

Chemitec controllers, sensors and analysers help optimise food and beverage production processes and ensure products comply with safety legislation and shelf-life requirements.

CHEMICAL INDUSTRY

In the production of chemicals, where achieving delicate parameter balance is key to product quality, Chemitec is present with a comprehensive range of sophisticated instruments.

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S411 DIG/N

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SENSORS & CONTROLLERS

CONTROLLERS

80 SERIES 12
Multiparametric plug & play control unit

50 SERIES 14
Multiparametric plug & play control unit

46 SERIES 16
Single or double channel control unit

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pH / ORP - Conductivity control unit

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S401 DIFF/N • S406 DIFF/N

CONDUCTIVITY 23
S411 range
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Portable system for measuring the respiratory activity of biomass

OUR TEST 43
Measurement of OUR

CONTROLLER/SENSOR CONNECTION TABLE

Parameters	Sensor models	30 Series	46 Series	50 Series	80 Series
pH	S401 DIG/N			•	•
	S401 DIFF/N			•	•
	S401 VG	•	•	•+	•
	S401 LC/S401 LC OSM	•	•	•+	•
	S401 VG C	•	•	•+	•
	S401 VG HTAJ	•	•	•+	•
	S408 MEC/POL PLUS	•	•	•+	•
Redox (ORP)	S406 DIG/N			•	•
	S406 DIFF/N			•	•
	S406 VG	•	•	•+	•
	S406 POL/OXT	•	•	•+	•
	S406 VG HTAJ	•	•	•+	•
Conductivity	S411 DIG			•	•
	S411 DIG/N			•	•
	S411 IND DIG			•	•
	S411S	•	•	•+	•
	S411/S411 C	•	•	•+	•
	S411 D12		•	•+	•
	S411 TEF C	•	•	•+	•
	S411 U/PS		•	•+	•
	S411 IND/S411 IND HT			•+	•+
Disinfectants	S494 Cl_2		•	•+	•
	S494 ClO_2		•	•+	•
	S494 O_3		•	•+	•
	S494 CLT		•	•+	•
	S494 Br		•	•+	•
	S494 PAA		•	•+	•
	S494 H_2O_2		•	•+	•
	S494/CL_2/HT70		•	•+	•
Oxygen Dissolved	S423C/OPT		•	•	•
	S423/C/OPT/T		•	•	•
Turbidity	S461 LT		•	•	•
	S461 N			•	•
	S461 TN		•	•	•
Suspended Solids	S461S		•	•	•
	S461ST			•	•
Nutrients	S470/N NH_4^+			•	•
	S470/N NO_3^-			•	•
	S470/NO_3^- NH_4^+			•	•
Organic Substances/ Colour	S480 NO_3			•	•
	S480 SAC_{254}			•	•
	S480 PAH			•	•
	S480 Colour			•	•
	S480 CHL			•	•

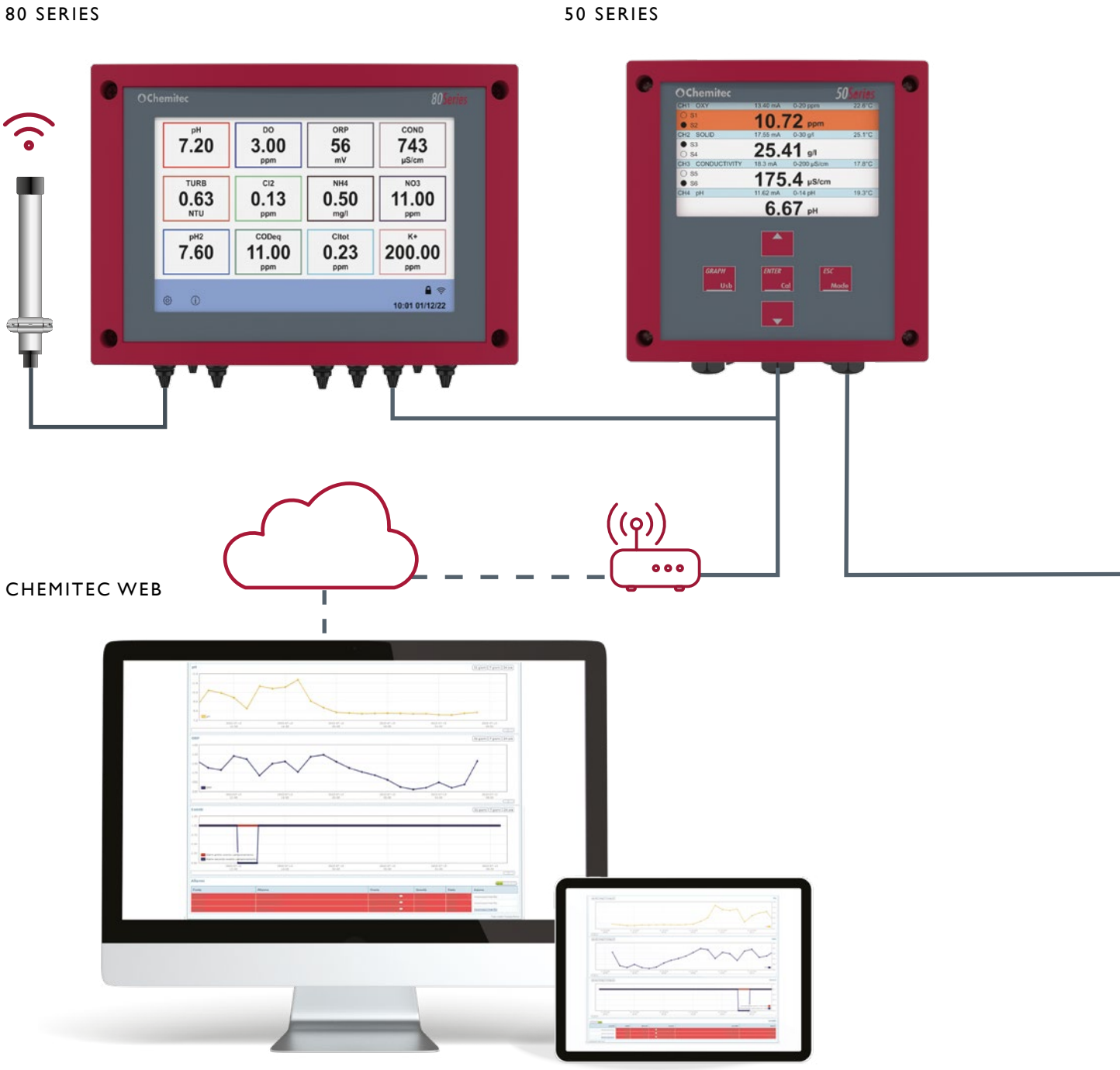
+ Through Digitiser

CONFIGURATION EXAMPLE

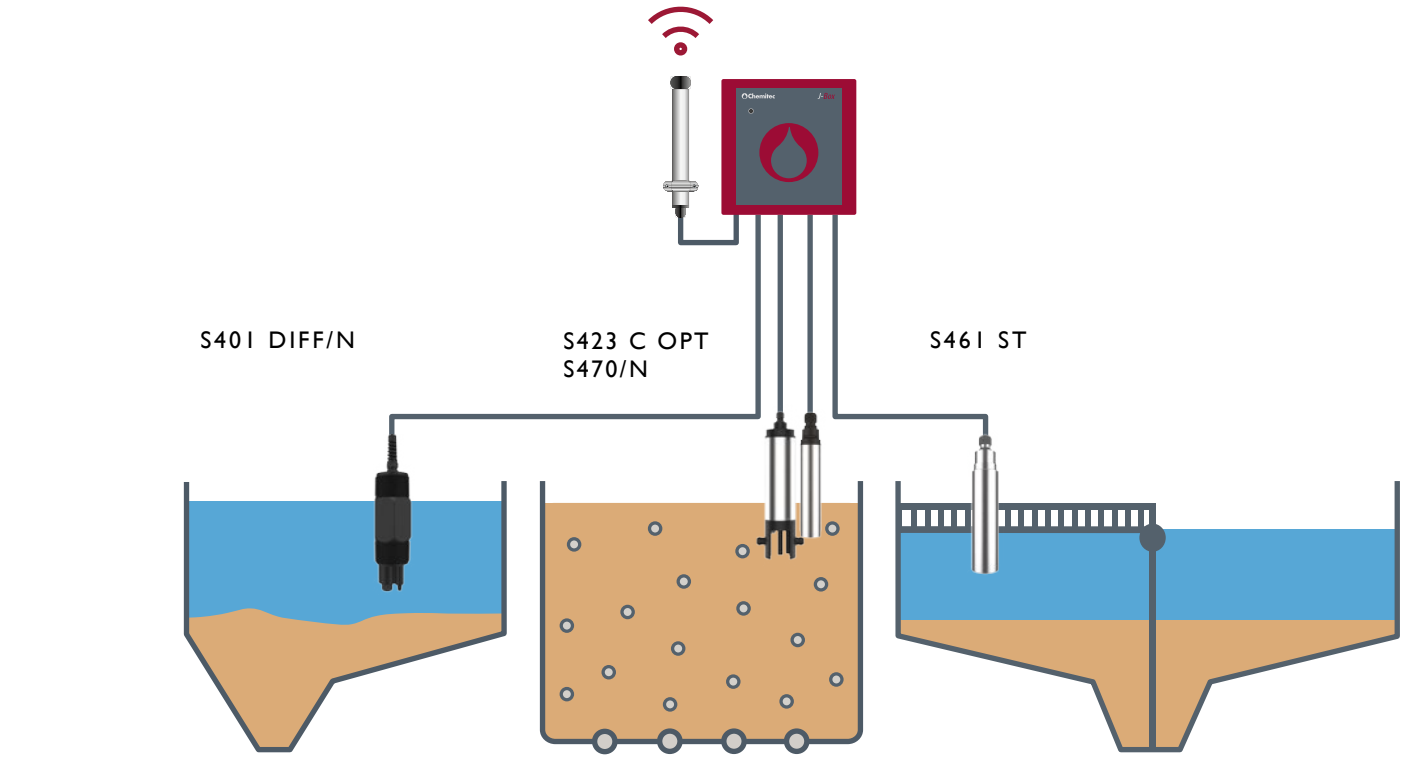
80 OR 50 SERIES UP TO 8 SENSORS

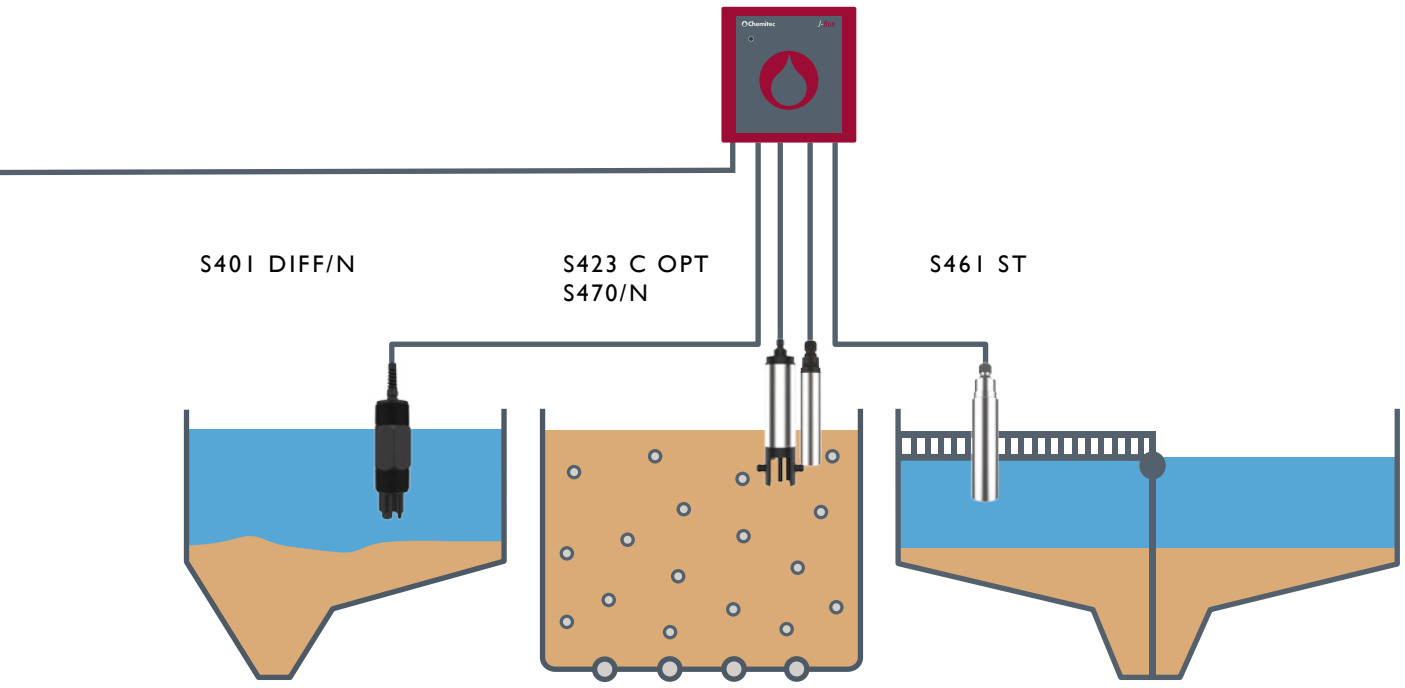
Here we have a graphical representation of an example controller configuration using either the 80 or 50 Series with digital sensors in a typical biological purification plant with two parallel treatment lines. The connection between the sensors in the field and the controllers can be cabled or wireless with radio modem antennas.

Data collected by the sensors is transmitted to the dedicated Chemitec Web platform that gives the operator remote access to live and stored measurements, alarm event setting and notification as well as configuration parameters modification.



WIRED OR WIRELESS CONNECTION





80 SERIES

MULTIPARAMETRIC PLUG & PLAY CONTROL UNIT

Chemitec's 80 Series delivers state-of-the-art control of industrial process applications, making it ideal for the modern water-treatment professional.

FEATURES

- Up to 12 parameters visible on the large display and saved in the internal data logger
- Stored data can be downloaded via USB or the controller's integrated Wi-Fi module
- Up to 8 mA outputs available with PID control for proportional dosing. 8 relays
- Modbus RS485 serial protocol (Profibus on request)
- The large 7'' touch screen RGB 800x480 colour display allows to display all parameters on a single screen
- Programmable analogue outputs for repeating measurements, PID control and temperature
- Digital output relays for set point adjustment
- Analogue input for perturbative functions or engineered display of additional measuring
- Digital input for disabling of dosage

MEASURES

- pH/ORP*
- Dissolved oxygen
- Conductivity*
- Turbidity
- Suspended solids
- Chlorine*
- Chlorine dioxide*
- Ozone*
- Chlorites*
- Hydrogen peroxide*
- Peracetic acid
- Nitrates (UV)
- Ammonia + Nitrate (ISE)
- Organic substances (UV)
- Colour (UV)
- Chlorophyll
- PAH/OIL (UV-Fluorescence)

* connectable to analogue sensors

TECHNICAL SPECIFICATION

Display	7" TFT LCD graphic colour display 800x480 RGB with resistive touch 16:9
Languages	Italian, English, French, German, Spanish
Data logger	Internal Flash 64Mbit. Download by USB port or Wi-Fi
Recording method	Circular (F.I.F.O.) or filling
Display of stored data	In tabular and graphical form with indication of maximum, minimum and average values of the period recorded Zoom function
PID control	Settable functions: P [Proportional]; PI [Proportional – Integral] and PID [Proportional – Integral – Derivative]
Activation	On analogue or digital output
Proportional range	0...500%
Time	Integral and/or derivative 0:00...5:00 min
Analogue outputs	Eight programmable; 0/4...20 mA; galvanic separation; opto-isolator 1KV; maximum load 500 Ohm; freely programmable output limits within the measuring ranges
Digital outputs	Eight freely programmable; 1A 230V ON-OFF or PWM function
Alarm output	NAMUR ; 3.6 mA [with range 4...20 mA]
Alarm/wash	Two Alarm: instrument fault, minimum/maximum value, delay set point delay (live check); delay time; Set point disablement in case of alarm: Enable/Disable Washing: programming of the interval (minimum 15 minutes) and of the duration from 00:00...24:00 hh:mm; during the washing phase they are frozen
Digital inputs	Two for dosage disabling or washing cycle activation Input voltage 24 Vdc/ac Absorption 10mA max
Serial outputs/ports	Programmable RS485 for setup and remote real-time data or stored data download (through dedicated SW)
Baud rate	1200...38400
Manual commands	Simulation of all analogue and digital outputs via keyboard
Power supply	90 - 240 Vac/dc 47 - 63 Hz
Transformer isolation	4 kV
Power consumption	≤ 20W
Electrical protection	EMI/RFI CEI-EN55011 - 05/99
Mounting	Wall
Container	Red ABS
Dimensions	(WxHxD) 250x160x116 mm
Mechanical protection	IP66
Weight	1 kg
Operating temperature	0...50°C
Humidity	10...95% non-condensing
Storage and transport	-25...65°C

50 SERIES

MULTIPARAMETRIC PLUG & PLAY CONTROL UNIT

The flexible 50 Series is used worldwide for a broad range of applications in water treatment, with easy-to-use software, automatic recognition of sensors and multiple configurations making it a popular choice among water-treatment operators.

Compatible with Chemitec digital sensors, the 50 Series is expandable to traditional electrodes/sensors through AD Series digitisers.

MEASURES

- pH/ORP
- Dissolved oxygen
- Conductivity
- Turbidity
- Suspended solids
- Chlorine
- Chlorine dioxide
- Ozone
- Chlorites
- Hydrogen peroxide
- Peracetic acid
- Ammonia + Nitrates (ISE)
- Nitrates (UV)
- Organic substances (UV)
- Colour (UV)
- Chlorophyll
- PAH/OIL (UV-Fluorescence)

FEATURES

- Available in three configurations: Up to two, four and eight simultaneous measurements, freely selectable.
- Two RS485 serial ports: Sensor with RS485 digital interface and Modbus RTU protocol. Sensor opto-isolated for connection with local network communication devices.
- Real-time clock allows software to archive data chronologically to flash memory
- Internal data logger with 250,000-record capacity
- Programmable analogue outputs for repeating measurements, PID control and temperature
- Digital output relays for set point adjustment
- Analogue input for perturbative functions or engineered display of additional measuring
- Digital input for disabling of dosage

TECHNICAL SPECIFICATION

Display	Graphic TFT colour LCD 480x272 (visible area 95x93)
Languages	Italian, English, French, German, Spanish
Keypad	5 bubble keys
Data logger	Internal Flash 32Mbit Download by USB port
Display of stored data	In tabular and graphic form, with indication of maximum, minimum and average values of the selected period Zoom function
PID control	Settable functions: P [Proportional]; PI [Proportional – Integral] and PID [Proportional – Integral – Derivative]
Activation	On analogue or digital output
Analogue outputs	Four programmable; 0/4...20 mA; Galvanic separation
Alarm output	NAMUR; 2.4 mA [with range 4...20 mA]
Digital outputs	Six; 3A at 230Vac
Set point	Four operating range setting (Hysteresis/direction)
Alarm/wash	Two Alarm: Instrument failure, min/max value, set point delay, permanence time (live check); Delay time; Set point disabling (in case of alarm); Enable/Disable Wash; Programmable interval (minimum 15 minutes) and duration
Digital inputs (2)	To disable dosing or activate wash cycle
Serial ports/outputs	RS485 programmable for set-up and real time data acquisition from remote or download stored data (using dedicated SW)
Baud rate	1200…38400
Communication protocol	Modbus RTU ; on request PROFIBUS DP SLAVE, ethernet, device net, Modbus TCP
Manual controls	Keyboard can be used to simulate all analogue and digital outputs
Power supply	90...240 Vac/dc 47– 63 Hz [on request 24Vac/dc]
Power consumption	< 6W
Electrical protection	EMI / RFI CEI-EN55011 – 05/99
Mounting	Wall
Housing material	ABS
Dimensions	(LxHxP) 144x144x122.5 mm
Mechanical protection	IP 66
Weight	1 kg
Operating temperature	0...50°C
Humidity	10...95% non-condensing
Storage and transport	-25...65°C

46 SERIES

SINGLE OR DOUBLE-CHANNEL CONTROL UNIT

In advanced, high-end water treatment applications, professionals choose 46 Series controllers to benefit from exceptional ease of use and full programming autonomy within their process.

With a graphic display showing digital output status, washing cycle and alarms plus intuitive controls for instrument calibration and configuration, it's never been easier to take control.

MEASURES

- pH / ORP (redox)
- Conductivity
- Chlorine
- Chlorine dioxide
- Ozone
- Hydrogen peroxide
- Peracetic acid
- Chlorites
- Bromine
- Dissolved oxygen
- Turbidity
- Suspended solids
- Flow

FEATURES

- IP65-rated ABS wall-mounted casing
- Two independent 4-20mA output with galvanic isolation
- Four independent relays, two set-points, remote alarm and backwashing sensor setting by software
- On/Off, timed and proportional (PWM) routine function setting
- Solid state relay (SSR) with Wi-Fi embedded module, two-frequency output signal and two set-points

APPLICATIONS

- Wastewater
- Drinking water
- Swimming pools
- Fish farming
- Electroplating
- Clean in place
- Food and beverage
- Pulp and paper

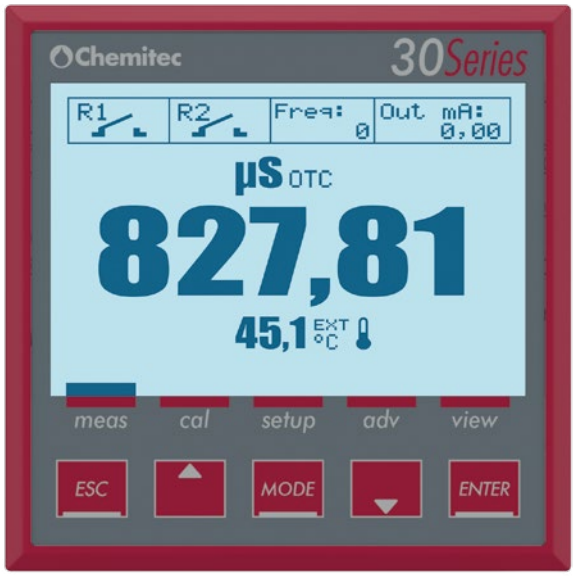
TECHNICAL SPECIFICATION

POWER SUPPLY (VERSION 100...240 VAC)	
Electrical requirements	From 100 to 240 VAC ±10%, 8 W (note 1)
Frequency	50 to 60 Hz
Power supply fuse	Fuse glass body 5x20 mm T1.25AL250V
Short circuit protection	Active
POWER SUPPLY (VERSION 24...48 VDC)	
Electrical requirements	From 24 to 48 Vdc, or 24Vac ±20%, 8 W (note 1)
Power supply fuse	Glass body 5x20 mm T1.25AL250V
Short circuit protection	Active
Reverse polarity protection	Active
RELAY OUTPUTS	
RL1, RL2, RL3 and RL4	2-SPST mechanical 250 VAC/5A, 30 VCC/3 A
Relay RL1, RL2 configuration	Load activation
Relay RL3, RL4 configuration	Load activation, probe wash, alarm repetition
Cycle time	1 sec to 3600 sec
Delay time	1 sec to 3600 sec
Test mode	ON, OFF
SSR OUTPUTS (SOLID STATE RELAYS)	
SSR1 and SSR2	2-SPST 60 V, max 100 mA, Bidirectional, NPN, PNP
Resistance in ON state	5 ohm max
Leakage current in OFF state	1 uA max
SSR1 and SSR2 configuration	Pulse output
Frequency range	0 to 400 pulse/min
Pulse duration	100 m/sec
Test mode	0 to 400 pulse/min
OUTPUTS 4-20 MA	
Analogue output signals	2 outputs 4-20 mA, galvanically isolated from one another and from the power supply
Measure error	± 0.01 mA
Load	max. 800 Ω
Error condition	NAMUR Alarm: OFF, 3.6 mA, 22 mA
Test mode	3 to 23 mA
DIGITAL INPUTS	
REED digital input	Input for dry contact 5 Vdc, max 6 mA
COMMUNICATION PORTS	
RS485 digital communication port	Modbus server ASCII/RTU standard protocol
OUTPUT 24 VDC FOR DIGITAL PROBE	
Voltage	24 Vdc ±5%, max. 250 mA (note 2)
Short circuit protection	Self-resettable fuse

(note 1) Only instrument: 8W; instrument + 1 digital probe: 10,5W; instrument + 2 digital probes: 13,5W;
(note 2) DO NOT exceed the maximum allowable current limit, risk of damaging the apparatus

30 SERIES

pH / ORP - CONDUCTIVITY CONTROL UNIT



Chemitec combines state-of-the-art technology with our renowned ease of use to deliver the 30 Series professional water-treatment controller dedicated to pH/ORP and conductivity measurement

MEASURES

- pH/redox
- Conductivity

APPLICATIONS

- Wastewater
- Drinking water
- Electroplating
- Cooling towers
- Irrigation
- Swimming pools

FEATURES

- IP65-rated front panel for protection against dust and water jets
- Programming keyboard with 5 bubble keys for instrument calibration and configuration
- 128x128-pixel monochrome display shows digital output, wash cycle and alarm menu status
- Automatic temperature compensation
- Two digital outputs for set point, with programmable hysteresis, or for set point delay alarm
- 0/4...20mA analogue output galvanically separated, programmable within the measurement range
- One frequency output with proportional control; two relay outputs for alarms or electrode washing

TECHNICAL SPECIFICATION

pH/ORP Specifications	pH	ORP
Range pH	0.00 to 14.00 pH	–2000 to 2000 mV
Resolution	0.01	1 mV
Accuracy	± 0.10 pH	± 5 mV
Input impedance	> 1012	
CONDUCTIVITY/RESISTANCE SPECIFICATIONS		
Range with C 0.01 cm-1/K 100 sensor	0.005 µS/cm to 200 µS/cm (5 KΩx cm to 200 MΩx cm)	
Range with C 0.10 cm-1/K 10 sensor	0.05 µS/cm to 2 mS/cm (500 Ωxcm to 20 MΩx cm) 0…100°C	
Range with C 0.20 cm-1/K 5 sensor	0.1 µS/cm to 4 mS/cm (250 Ωx cm to 10 MΩx cm)	
Range with C 1.00 cm-1/K 1 sensor	0.5 µS/cm to 20 mS/cm (50 Ωxcm to 2 MΩx cm)	
Range with C 10.0 cm-1/K 0.1 sensor	5 µS/cm to 200 mS/cm (5 Ωxcm to 200 KΩx cm)	
Range with C 20.0 cm-1/K 0.5 sensor	10 µS/cm to 400 mS/cm (2,5 Ωxcm to 100 KΩx cm)	
Resolution cond/res	0.0001/0.001/0.01/0.1/1 (adjustable from menu)	
Accuracy cond/res	± 5% on the measuring point	
Maximum distance of the sensor	up to 50 m (up to 164 ft)	
TDS range	0.3 to 2.0 ppm/µS	
Pt100/Pt1000 specifications	0.005 µS/cm to 200 µS/cm (5 KΩx cm to 200 MΩx cm)	
TEMPERATURE INPUT		
Pt100/Pt1000 detection	Automatic	
Temperature measure range	0.0...100°C (32...212°F)	
Temperature resolution	0.1°C	
Temperature accuracy **	± 1.0°C (± 1.8°F)	
CONTROL		
Keyboard	5 tactile feedback keys	
Display	Graphic LCD 128x128 pixels, Transflective, Backlit	
Relay Output: RL1 and RL2	2-SPST mechanical 250 VAC/5A, 30 VCC/3 A	
SSR1 Outputs (solid state relays)	2-SPST 60 VAC, max 100 mA, Bidirectional, NPN, PNP	
SSRI frequency range	0 to 400 imp/min	
SSRI pulse duration	100 m/sec	
OUTPUTS 4÷20 MA		
Analogue output signals	1 output 4÷20 mA, galvanically isolated from the power supply	
Load	Max. 500 Ω	
DIGITAL INPUTS		
REED digital input	Input for dry contact 5 VCC Max 6mA	
Power supply: electrical requirements	24, 115 or 230 VAC, 2.5VA	
Frequency	50 or 60 Hz	
Power supply fuse	500 mA delay not recoverable	

S401 • S406 • S408

SERIES OF PH & ORP ELECTRODES

GENERAL FEATURES

The electrodes listed below are all of the combined type (measurement+reference), without maintenance, and are classified by their construction features, which makes them adaptable to multiple applications.

pH MODELS & APPLICATIONS

S401 VG
For general use

S401 VG HTAJ
For applications in liquids with a high content of suspended solids

S401 LC
For waters with low electrical conductivity

S401 LC OSM
For osmotised waters with very low electrical conductivity

S408 MEC
For high temperature liquids and/or installations under pressure

ORP MODELS & APPLICATIONS

S406 VG
For general use

S406 POL
For harsh chemical applications

S406 OXT
For high temperature liquids and/or installations under pressure

S406 VG HTAJ
For applications in liquids with a high content of suspended solids

AD SERIES DIGITISER

The AD Series Chemitec digitisers convert the signals of the common pH and ORP electrodes into serial signal with standard Modbus RTU protocol, allowing connection to the 80 and 50 Series plug & play multiparametric instrument.

TECHNICAL SPECIFICATION

Models	S401 VG	S408 MEC	S401 LC OSM	S401 LC	S401 VG HTAJ	S406 VG	S406 POL	S406 OXT	S406VG HTAJ
Measuring range	0...14 pH	0...14 pH	0...14 pH	2...14 pH	0...14 pH	±2000 mV	±2000 mV	±2000 mV	±2000 mV
Operating temperature	0...80°C	0...130°C	0...100°C	0...60°C	-5...135°C	0...80°C	0...130°C	0...130°C	-5...135°C
Maximum pressure	6 bar	16 bar	6 bar	16 bar	10 bar	6 bar	16 bar	16 bar	10 bar
Min. liquid conductivity	5 µS/cm	50 µS/cm	0.1 µS/cm	2 µS/cm	50 µS/cm	5 µS/cm	2 µS/cm	50 µS/cm	50 µS/cm

S401 DIG/N • S406 DIG/N

DIGITAL PH AND ORP SENSORS

FEATURES

- Teflon® porous septum's liquid junction resists encrustations and chemical attack
- Reference electrode's double junction increases service life in applications containing sulphides (H2S) and metals such as lead, mercury and silver
- New solid-state electrolyte allows a constant reference potential over time even during pressure and temperature variations
- Pt100 capillary temperature sensor is positioned behind sensitive membrane (pH or ORP) for accurate temperature measurement and compensation
- IP68 rated for protection of high-impedance electrodes from condensation

APPLICATIONS

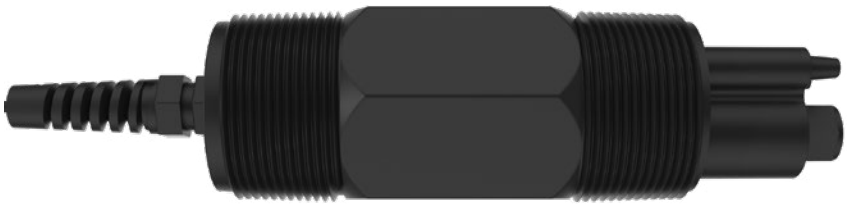
- Drinking water
- Process water
- Wastewater
- Samples containing sulphides and metals such as mercury, lead and silver

TECHNICAL SPECIFICATION

Models	S401 DIG/N	S406 DIG/N
Measurement range	0...14 pH	-1500 mV...+1500 mV
Measurement method	Potentiostatic	
Accuracy	0.05 pH	± 5 mV
Repeatability	± 0.05 pH	± 1 mV
Response time	T_{90} < 60s	
Operating temperature	0...100°C in insertion / by-pass - 0...50°C in immersion	
Maximum operating pressure	11 bar	
Body material	Glass and PPS	
Measuring electrode	Hemispherical glass membrane	
Other materials	Teflon®	
Mechanical protection	IP68 sensor + cable	
Power supply	12...24Vdc	
Absorption	Max. 1W	
Cable	10 m integral with the sensor (others on request)	
Signal interface	Standard Modbus RTU protocol	

S401 DIFF/N • S406 DIFF/N

DIFFERENTIAL DIGITAL PH AND ORP SENSORS



FEATURES

- Extensive lifespan
- Ryton® body
- Reference electrode with salt bridge and KCL reserve guarantees high stability of reference signal
- Operates in varying environmental conditions
- The measurement and reference electrode are connected to a ground reference for excellent measurement accuracy even in extreme conditions
- Replaceable reference electrode

APPLICATIONS

- Heavy-duty processes
- Entry and exit from biological wastewater treatment
- Aggressive industrial applications

TECHNICAL SPECIFICATION

Models	S401 DIFF/N	S406 DIFF/N
Measuring range	0...14 pH	-1500...+1500 mV
Measurement methods	Potentiostatic differential	
Accuracy	± 0.01 pH	± 5 mV
Response time	T_{90} < 60s	
Operating temperature	Immersion: -5...70°C (21...158°F) Insertion: -5...95°C (21...203°F)	
Maximum operating pressure	6.9 bar (100 psig)	
Body material	Ryton®	
Measuring electrode	Hemispherical glass membrane	Platinum wire
Other materials	PVDF, ceramic junction, Viton® o-rings, titanium (ground ref)	
Mechanical protection	IP68 sensor + cable	
Power supply	12...24Vdc	
Absorption	Max. 1W	
Cable	PUR, integral with the sensor, 10m	
Signal interface	Standard Modbus RTU protocol	

S411

SERIES OF CONDUCTIVE MEASURING CELLS

GENERAL FEATURES

Wide range of conductive cells designed for both water treatment and industrial applications. Courtesy of premium materials and cell constant (k), users can cover a wide range of applications with different measuring ranges.

APPLICATIONS

- Raw water
- Drinking water

MODELS

- S411 U
- S411 PS
- S411 D12
- S411/ S411 C
- S411 TEF/ S411 TEF C

TECHNICAL SPECIFICATION

Models	S411/S411 C	S411 TEF/ S411 TEF C	S411 D12	S411 U	S411 PS
Constant K	1	1	1	1	10/100
Measurement range	0...50.000 µS	0...10.000 µS	0...200.000uS	0...50.000 µS	00...1.000/ 0.04...20.00uS
Temp compensation	No/Yes (C)	No/Yes (C)	Yes	Yes	Yes
Operating temperature	0...100°C	0...100°C	0...60°C	0...120°C	0...130°C
Maximum operating pressure	5 bar	2 bar	1 bar	6 bar at 20°	16 bar
Body material	PP	PTFE	Epoxy	PSU	Stainless-steel
Electrode material	Graphite	INOX	Platinum	Graphite	Stainless-steel
Process connection	½" GAS	1" GAS	PG 13.5	½" npt	½" npt

S411 DIG

DIGITAL CONDUCTIVITY SENSOR FOR IMMERSION

FEATURES

- Reliable conductivity measurement courtesy of graphite electrodes
- Two-electrode conductive measurement method with temperature compensation
- Sensor body in PVC
- No mechanical moving parts
- Immediate installation and easy maintenance
- Modbus RTU serial communication protocol

APPLICATIONS

- Artesian wells
- Pure and process water
- Raw water
- Drinking water
- Process water
- Water from air conditioning and boiler systems

TECHNICAL SPECIFICATION

Measurement range	0...20000 µS
Measurement method	Two-electrode conductive
Accuracy	± 2.5% f.s.
Response time	90% of the value in less than 60 seconds
Refresh time	1 Secs
Temp compensation	With internal NTC sensor (external NTC sensor on request)
Operating temperature	0...50°C
Maximum operating pressure	10 bar
Body material	PVC
Electrode	Graphite
Mechanical protection	IP68 sensor & cable. The sensor is completely resin-coated inside
Power supply	12...24Vdc
Absorption	Max. 2W
Cable	10 m integral-10 m disconnectable cable
Equipotential contact	For solution included
Signal interface	RS485 with Modbus RTU protocol

S411 DIG/N

WIDE RANGE DIGITAL CONDUCTIVITY SENSOR

FEATURES

- Broad measurement range courtesy of 4-electrode graphite sensor
- Measurement communication via Modbus RTU protocol
- Immediate installation and easy maintenance
- Integrated temperature sensor
- Sensor body in PPS and epoxy
- Electrodes in graphite
- No mechanical moving parts
- Maximum operating pressure: 5 bar

APPLICATIONS

- Pure and process water
- Wastewater
- Cooling towers
- Industrial and recirculating water

TECHNICAL SPECIFICATION

Measurement range	1 µS/cm - 200 mS/cm (k = 0.55 nominal)
Measurement method	Conductive with 4 graphite electrodes
Accuracy	≤ 4% on the reading point
Repeatability	≤ 0.2% on the reading point
Response time	5s
Operating temperature	-5...100°C in non-frozen waters
Maximum operating pressure	5 bar
Body material	Epoxy and PPS
Measuring electrode	Graphite
Other materials	Viton® O-rings
Mechanical protection	IP68
Power supply	12...24 Vdc
Absorption	<250 mA
Cable	10 mt
Signal interface	RS485 Modbus RTU protocol

S411 IND

SERIES OF INDUCTIVE CONDUCTIVITY CELLS

FEATURES

- Contactless measuring system
- Virtually maintenance free
- Re-calibration only required occasionally
- High tolerance to sensor "coating" phenomenon

APPLICATIONS

- Polluted surface water
- Process monitoring
- Wastewater
- Highly contaminated or aggressive media

AD SERIES DIGITISER

The AD Series Chemitec digitisers convert the signals of the inductive conductivity cells into serial signal with standard Modbus RTU protocol, allowing the connection to the 80 and 50 Series plug & play multiparametric instrument.

MODELS

S411 IND
sensor only

S411 IND T
by immersion

S411 IND E
for insertion with T-fitting

S411 IND T INS
for direct insertion on a flat wall

TECHNICAL SPECIFICATION

Operating temperature	- 5...60°C (without freezing)
Measurement range	1000 uS...1000 mS
Temp compensation	2-wire Pt1000 temperature sensor
Cable	Standard 5 metres
Operating pressure	Vacuum to 6.5 bar (100 psi)
Materials	PVC with Viton® seals
Materials in contact	Glass-filled polypropylene
Immersion length	600 or 1200 mm
Assembly	Standard bracket or optional flange
Connection	0.5" BSP male
Mechanical protection	IP68

S411 IND HT

SERIES OF INDUCTIVE CONDUCTIVITY CELLS FOR HIGH TEMPERATURES/PRESSURES

FEATURES

- Manufactured in PEEK™, a food-grade material with excellent aggressive chemical resistance and high temperature performance
- Operates at 100°C continuously, withstanding thermal shocks commonly associated with CIP applications
- The sensors can be sterilised at up to 135°C
- Wide range of process connections

AD SERIES DIGITISER

The AD Series Chemitec digitisers convert the signals of the inductive conductivity cells into serial signal with standard Modbus RTU protocol, allowing connection to the 80 and 50 Series plug & play multiparametric instrument.

APPLICATIONS

- Food and beverage
- Conductivity and concentration measurement

MODELS

S411 IND HT
for insertion

S411 IND HT 60/120
for immersion

S411 IND HT TP
for bypass with PVC T-fitting

S411 IND HT TS
for bypass with SS T-fitting

TECHNICAL SPECIFICATION

Operating temperature	- 5...100°C – up to 135°C for short periods (CIP process)
Measuring range	1000 uS...1000 mS
Temp. compensation	Temperature sensor Pt1000 with 2 wires
Cable	5 metres (disconnectable)
Operating pressure	Vacuum to 10 bar (150 psi)
Materials	PEEK/AISI
Contact materials	Body in PEEK – Temperature sensor in INOX (PEEK on request)
Immersion length	600 or 1200 mm
Mounting	Standard bracket or optional flange
Connections	RJT 2", 2.5", 3" – Tri clamp 2", 3" – IDF/ISS 2", 2.5", 3" DIN 1185: 50 mm, 80 mm (other on request)
Mechanical protection	IP67

S411 DIG IND

DIGITAL INDUCTIVE CONDUCTIVITY SENSOR

FEATURES

- Operates in dirty water conditions up to 1 siemens
- Easily interfaced with data acquisition systems courtesy of Modbus RTU RS485 protocol
- Presence of four possible scales with one or two-point calibration
- Robust body in loaded PP
- Immediate installation

APPLICATIONS

- Wastewater
- Primary waters
- Cooling towers

TECHNICAL SPECIFICATION

Measurement range	0,5...1.000 mS/cm
Accuracy	± 6% on the measuring point
Repeatability	± 3%
Response time	T90 <60s
Operating temperature	-10...60°C
Operating pressure	From vacuum to 6.5 bar
Body material	Glass-filled PP, PPS, Viton® O-ring
Mechanical protection	IP68 (Sensor & cable) / IP67 Connector
Power supply	12-24 Vdc
Cable	10 mt
Signal interface	RS485 Modbus RTU protocol
Thread	1" 1/2 GAS BSP
Measurement method	Inductive without contact electrodes
Temperature compensation	Automatic with built-in PT1000
Salinity	0-120g/kg (programmable conversion factor default 0,64)

S423 C OPT

DIGITAL DISSOLVED OXYGEN SENSOR

FEATURES

- Reliable, accurate measurements with no drift removes need for calibration
- Minimal maintenance
- Does not consume oxygen, making it compatible with a variety of applications
- Suitable for applications in which the measuring liquid is almost stationary
- Available with titanium body for salt-water applications

APPLICATIONS

- Surface waters
- Wastewater
- Fish farming

TECHNICAL SPECIFICATION

Measuring range	0...20 mg/l
Measuring method	Optical measure by luminescence
Accuracy	± 0,2 mg/l when < 5mg/L ± 0,3 mg/l when > 5mg/L
Response	T90 < 60s
Refresh time	< 1s
Temp. compensation	With internal NTC sensor
Operating temperature	0...50°C
Maximum operating pressure	5 bar
Body material	SS316 (PVC or titanium optional)
O-Rings	NBR and silicon
Mechanical protection	IP68 sensor + cable
Power supply	12...24Vdc
Power consumption	Max. 2W
Cable	10 m integral with the sensor
Signal interface	RS 485 Modbus RTU protocol

S461 LT

DIGITAL TURBIDITY SENSOR FOR LOW CONCENTRATIONS

FEATURES

- Measurement performed by 90° scattered light method compliant with ISO 7027 / EN 27027
- Immersion, insertion or bypass installation
- Stainless-steel body on request

APPLICATIONS

- Drinking water
- Industrial process water
- Low-turbidity waters

MODELS

- S461 LT (immersion)
- S461 LT INS (insertion in combination with S305-INS)

TECHNICAL SPECIFICATION

Measuring range	0...10 NTU / 0...100 NTU
Measuring method	90° Scattered light
Resolution	0,01 NTU for 0...10 NTU range 0,1 NTU for 0...100 NTU range
Accuracy	≤ 5% of the measured value without calibration ≤ 1% of the measured value with calibration
Repeatability	±0.05 NTU for 0...10 NTU range ±0.5 NTU for 0...100 NTU range
Response time	T90 < 60s
Operating temperature	0...40°C
Maximum operating pressure	4 bar
Body material	Black PVC (on request Stainless-steel)
O-ring	Viton® and silicone
Optics	Special glass with oleophobic treatment
Mechanical protection	IP68 sensor and cable
Power supply	12...24Vdc
Power consumption	Max. 3W
Cable	10 mt integral with the sensor
Calibration	1-point and/or 2-point for scale
Signal interface	Modbus RTU standard protocol RS485

S461 TN

DIGITAL TURBIDITY SENSOR FOR HIGH CONCENTRATIONS

FEATURES

- Measurement performed by 90° scattered light method compliant with ISO 7027 / EN 27027
- Immersion, insertion or bypass installation
- Stainless-steel body on request

APPLICATIONS

- Untreated water
- Surface water
- Process water
- Industrial or municipal water

MODELS

- S461 TN (immersion)
- S461 TN INS (insertion in combination with S305-INS)

TECHNICAL SPECIFICATION

Measuring range	0...1000 NTU / 0...4000 NTU
Measuring method	90° scattered light
Resolution	1 NTU for 0...1000 NTU range 1 NTU for 0...4000 NTU range
Accuracy	±2% for 0...1000 NTU range ±5% for 0...4000 NTU range
Repeatability	±5 NTU for 0...1000 NTU range ±20 NTU for 0...4000 NTU range
Response time	T90 < 60s
Operating temperature	0...40°C
Maximum	4 bar
Body material	Black PVC (stainless-steel on request)
O-ring	Viton® and silicone
Optics	Special glass with oleophobic treatment
Mechanical protection	IP68 sensor and cable
Power supply	12...24Vdc
Power consumption	Max. 3W
Cable	10 mt integral with the sensor
Signal interface	Modbus RTU standard protocol RS485

S461 N

NEPHELOMETRIC TURBIDITY CELL CONTACTLESS, DIGITAL

FEATURES

- Contact-free measurement
- 90° scattering method compliant with ISO 7027/ EN 27027 with visible light beam
- Black rigid PVC sensor body
- Optional air bubble elimination device (de-bubbler)
- No mechanical moving parts
- Measurement pre-processed in the sensor, providing high sensitivity in low-signal transmission

APPLICATIONS

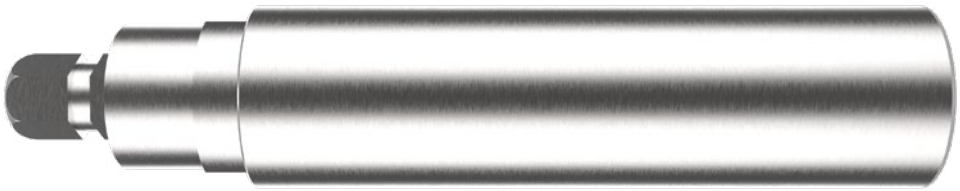
- Primary water upstream of treatment plants
- Industrial or municipal water

TECHNICAL SPECIFICATION

Measuring ranges	0...100 NTU / 0...1000 NTU (optional 0...4000 NTU)
Measuring method	Nephelometric
Resolution	0.1NTU for 0...100 NTU range 1 NTU for 0...1000 NTU range
Accuracy	±10% f.s
Maximum flow rate	60 l/h
Operating temperature	0...50°C
Maximum operating pressure	0.5 bar
Materials	ABS case Black PVC measuring cell, receiver assembly and spotlight assembly
O-ring	NBR and Silicone
Power supply	24Vdc
Power consumption	Max. 5W
Cable	10 m with connector
Signal interface	Modbus RTU standard protocol RS485

S461 ST

DIGITAL TURBIDITY AND SUSPENDED SOLIDS SENSOR



FEATURES

- Utilises dual sensor scattering measurement method
- Infrared optical measurement process delivers reliable concentration measurement
- Sensor body in AISI316
- No mechanical moving parts
- Pre-processed measurement in the sensor provides high sensitivity in low signal transmission
- Immediate installation and simple maintenance

APPLICATIONS

- Industrial and process waters up to 300 g/l (depending on sludge type)
- Biological purification processes
- Extraction processes including quarries, tunnels and aggregate extraction

MODELS

- S461 ST (immersion)
- S461 ST INS (insertion in combination with S305-INS)

TECHNICAL SPECIFICATION

Measurement range	Measuring ranges SS: 0-300 g/l depending on the type of sludge Turbidity measuring ranges: 0...4000 NTU
Measurement method	Double-angle scattering light
Repeatability	± 0,5g/l for SS; ± 1NTU for Turbidity
Accuracy	± 5% on measured point
Response time	T90 < 60s
Operating temperature	0...50°C
Maximum operating pressure	4 bar
Body material	SS316
O-ring	Viton®
Optics	Special epoxy
Mechanical protection	IP68 sensor & cable
Power supply	12...24Vdc
Absorption	Max. 3W
Cable	10 m integral with the sensor
Signal interface	RS485 with Modbus RTU protocol

S461 S

DIGITAL SUSPENDED SOLIDS SENSOR

FEATURES

- Infrared, absorption light measurement
- Modbus RTU RS485 interface

APPLICATIONS

- Biological process slurry
- Chemical industry
- Paper mills

MODELS

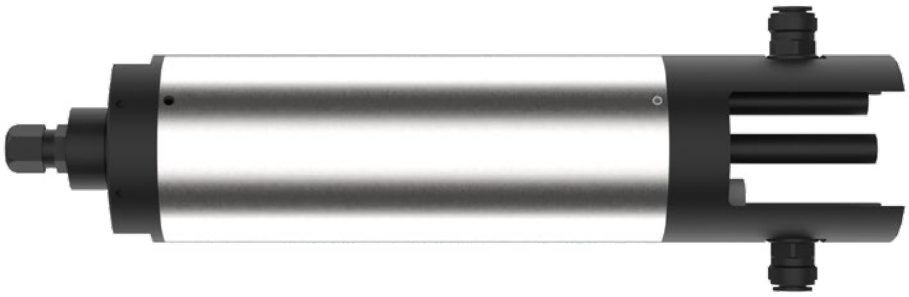
- S461 S (immersion)
- S461 S INS (insertion in combination with S305-INS)

TECHNICAL SPECIFICATION

Measuring range	0...30 g/l MLSS of WWTP - on request 0...100 g/l kaolin reference
Measuring method	Absorption of light
Resolution	0.1 g/l
Accuracy	± 0.3 g/l
Repeatability	± 0.5 g/l
Response time	T90 < 60s
Operating temperature	0...50°C
Maximum operating pressure	4 bar
Body material	SS316 (black PVC on request)
O-ring	Viton®
Optics	Special epoxy
Mechanical protection	IP68 sensor and cable
Power supply	12...24Vdc
Power consumption	Max. 3W
Cable	10 mt integral with the sensor
Signal interface	Modbus RTU standard protocol RS485

S470/N

I.S.E. AMMONIUM AND NITRATE SENSOR, DIGITAL



FEATURES

- Ion-selective electrodes
- Stable and sensitive sensors
- All specific electrodes are individually replaceable
- High capacity for pollutant compensation

APPLICATIONS

- Ammonium ion and nitrate monitoring in a liquid matrix

MODELS

- S470 NH_4+ (ammonium ion sensor with potassium ion compensation)
- S470/N NO_3 (nitrate ion sensor with chloride ion compensation)
- S470/N (combined sensor for ammonium and nitrate ions with compensation of potassium and chloride ions)

TECHNICAL SPECIFICATION

Measurement range	NH_4: 0...100 ppm K+: 0...1000ppm NO_3: 0...100 ppm Cl-: 0...1000 ppm
Diameter	36 mm
Body material	Sensor body in AISI 316
O-Rings	NBR
Mechanical protection	IP68 sensor & cable
Resolution	0.1 mg/l
Accuracy	± 5 mg/l
Repeatability	± 5%
Operating temperature	5...40°C
Maximum operating pressure	1 bar
Power supply	12...24Vdc
Signal interface	Modbus RTU standard protocol
Temperature sensor	PT100 included

S480

DIGITAL UV PHOTOMETRIC SENSORS

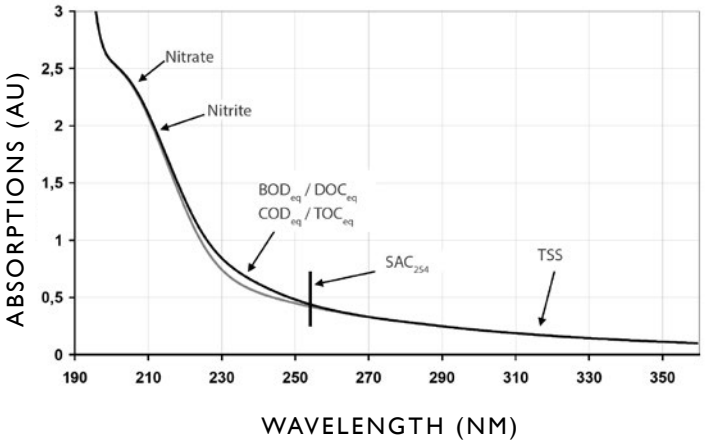
GENERAL FEATURES

- New generation of spectral sensors for the online measurement of nitrogen and carbon compounds
- Exclusive nanocoated optical lenses and compressed air for extended operating time without cleaning
- Optical path length adaptable according to application.

APPLICATIONS

- Industrial water and chemical industry
- Drinking water
- Wastewater

ABSORPTION SPECTRUM



UV NO_3

FEATURES

- Innovative UV photometric technology
- Four detection channels
- Precise optical determination
- Internal temperature correction increases stability of measured values

UV SAC_{254}

FEATURES

- Long life, UV-LED technology
- Robust design
- High energy efficiency
- Automatic turbidity compensation via second measuring channel
- SAC_{254} measurement correlated displayed with BODeq, CODeq or TOCeq values by means of appropriate internal temperature laboratory checks

S480

PHOTOMETRIC UV SENSORS FOR COD/BOD/TOC$_{EQ}$ & NITRATES

TECHNICAL SPECIFICATION

Template	S480 UV NO_3	S480 UV SAC_{254}
Light source	Xenon flash lamp	2 LED technology (254 nm, 530 nm)
Detector type	4 photodiodes & filter	Photodiode
Measurement method	Attenuation	Attenuation
Optical path	0.3, 1, 2, 5, 10, 50 mm	1, 2, 5, 10, 50 mm
Measurement parameter	NO_3-N, NO_3, NOx-N, NOx Calibrated with standard solution NO_3	SAC_{254}, CODeq, BODeq, TOCeq
Precision	± (5 % + 1 mg/L NO3-N) with 1 mm path	2,5 m-1 SAC_{254} at 1 mm path
Turbidity compensation	Yes	Yes
Response time	T100 20s	T100 4s
Measurement interval	≥ 10 s	≥ 2 s
Dimensions (L x Ø) mm	470x48 mm (10 mm path)	300x48 mm (with 10 mm path)
Weight	SS ~ 3 kg (titanium 2 kg)	SS ~ 2,7 kg (titanium 1,9 kg)
Absorption	≤ 7 W	≤ 1 W

MEASURING RANGE S480 UV NO_3

Optical path 1mm	0.5...60 mg/l NO_3-N
Optical path 10mm	0.05...6 mg/l NO_3-N

MEASURING RANGE S480 UV SAC_{254}

Path (mm)		1	10
		Measurement range	Measurement range
Measurement parameter	SAC_{254} nm	5...1500/m	0.5...150/m
	CODeq**	5...2200 mg/l	0.8...220 mg/l
	BODeq**	2.5...700 mg/l	0.25...70 mg/l
	TOCeq**	3...880 mg/l	0.3...90 mg/l

** based on KHP (Note: 100 mg COD-standard-solution corresponds to 85 mg/l KHP)

S480 COLOUR

DIGITAL COLOUR PHOTOMETRIC SENSORS

FEATURES

- Reliable, cost-effective instrument
- Dual LEDs for long-term stable measurements of SAC or colours at different wavelengths
- Robust nano-coated housing for low maintenance
- Optional titanium model for use in aggressive waters

APPLICATIONS

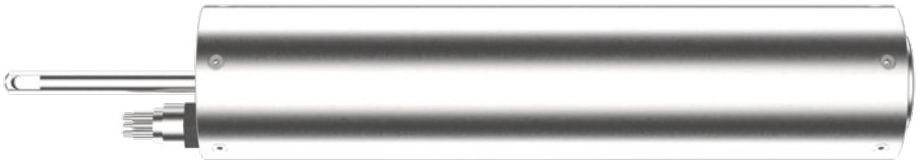
- Environmental monitoring
- Drinking water
- Food and beverage
- Textile industry
- Pulp and paper

TECHNICAL SPECIFICATION

Measurement technology	Light source	2 LEDs
	Detector	Photo diodes
Measurement principle		Attenuation, transmission
Optical path		50 mm, 100 mm, 150 mm, 250 mm
Parameter		SAC436
		Colouring (based on DIN EN ISO 7887 (410 nm, 525 nm, 620 nm)
		Pt-Co colour number (APHA/Hazen) (390 nm or 455 nm)
		Cr-Co colour number (390 nm or 413 nm)
Measuring range		See parameter list
Measurement accuracy		0.5 %
Turbidity compensation		Yes, 740 nm
T100 response time		T100 4 s
Measurement interval		≥ 2 s
Dimensions		(LxØ) 340x48 mm (with 50 mm path)
Weight		SS ~ 2.4 kg (titanium ~ 1.3 kg)
Power consumption		≤1W

S480 UV PAH

DIGITAL SENSOR FOR POLYCYCLIC AROMATIC HYDROCARBONS (PAH) / MINERAL OILS



FEATURES

- UV absorption method
- Real-time sensor
- No reagents
- Optical window with nano coating

APPLICATIONS

- Petrochemical industry
- Drinking water
- Cooling water
- Desalination plants
- Refineries
- Exhaust gas cleaning approved for ship use according to IMO regulation MEPC.184(59)
- Leakage detection in environmental monitoring

TECHNICAL SPECIFICATION

Measurement technology	Light source	Xenon flash lamp & filter (254 nm)
	Detector	Photo diode & filter (360 nm)
Measurement principle		Fluorescence
Parameter		PAH, mineral, oil
Measuring range	500 version	PAH: 0...50 ppb, 0...500 ppb / Oil: 0...1.5 ppm, 0...15 ppm typical
	5000 version	PAH: 0...500 ppb, 0...5000 ppb / Oil: 0...15 ppm, 0...150 ppm typical
Measurement accuracy		500 version 0.3 ppb / 5000 version 0.5 ppb
Turbidity compensation		NO
T100 response time		T100 ≤ 10 s
Measurement interval		≤ 5 s
Dimensions (L x Ø)		311x68 mm
Weight	SS	~ 2.7 kg
	Titanium	~ 1.9 kg
Power consumption		≤ 3.5 W
Maintenance effort		Typically ≤ 0.5 h/month
Calibration/maintenance interval		24 months

S494

AMPEROMETRIC SENSOR FOR CHLORINE & OTHER OXIDANTS

FEATURES

- Two or three membrane-coated electrodes
- Integrated temperature sensor for signal compensation

APPLICATIONS

- Swimming pools
- Drinking water
- Wastewater
- Process water

TECHNICAL SPECIFICATION

Measuring parameters	Free Chlorine; Total Chlorine; Organic and Inorganic Free Chlorine; Chlorine Dioxide; Ozone; Peracetic Acid; Hydrogen Peroxide; Chlorides; Bromine
Measuring error	±2 % of the indicated value
Repeatability	±2 %
Stability	±1 % of the analytical determination 4 weeks after calibration
Operating conditions	Constant flow rate of the hydraulic supply 30…40 l/h Acceptable overpressure: 1 bar
Operating temperature	>5...45°C (other on request)
Temp. compensation	Automatic through NTC integrated sensor
Polarisation time	First polarization from 1 to 3 h Re-polarisation 30 min
Response	60 sec for 90% f.s
Body material	PVC, silicone, PTFE
Membrane	PTFE (Teflon) semi-permeable
Measuring electrode	Gold (Catod)
Reference electrode	(Anode) Silver/Silver Chloride
Calibration point	Zero not necessary Work according to user requirement, through analytical determination (colourimetric with DPD)
Warnings	Maintenance interval: 2 weeks or more Lifetime of the electrolyte solution: approx. 1 year

COMPACT PRO

PLUG & PLAY MULTI-PARAMETER PORTABLE UNIT

Compact Pro is an advanced multi-metric portable system for the easy and safe measurement of water quality. With a convenient connector and special automatic recognition software, operators can connect a wide range of sensors to measure primary, waste or industrial water quality parameters.

FEATURES

- IP67 rated for dust tightness and immersion in water up to 1 metre
- Excellent impact resistance for use in the most challenging environments

MEASUREMENTS

- pH + temp
- ORP + temp
- Conductivity
- Salinity
- Dissolved Oxygen + temp
- Turbidity
- Suspended solids
- Ammonia
- Chlorophyll

TECHNICAL SPECIFICATION

Display	2" monochrome TFT LCD
Dimensions	130x80x35 mm
Battery	Non-removable lithium (LiPo) 1400mAh wireless charging via dedicated PAD
IP grade	IP67
Barometer	Integrated atmospheric pressure sensor
Response time	T90 < 60s
Weight	210g without sensor
Kit	Wireless power supply - shockproof carrying bag (optional hard case)

S250

PORTABLE SYSTEM FOR MEASURING BIOMASS RESPIRATORY ACTIVITY (OUR TEST)

Chemitec's S250 is a complete system for taking respirometric measurements, featuring parameter setting via a dedicated display and measurement management software (Windows 98 or higher).

FEATURES

- Fully-portable system housed in shock-resistant aluminium case
- Measurements displayed in graphical and tabular form
- Accuracy ± 1% of the f.s. at constant temperature
- Storage of measurements and relative graphics with printing option
- 500 ml flask with airtight stopper
- Stirring/oxygenation unit powered by rechargeable batteries or 220 V mains power
- Thermo-compensated fluorescent optical sensor

SPECIFICATION

- Selectable measuring ranges: 0.00 ÷ 3.00/5.00/10.0/20.0 ppm of O_2
- Selectable measuring times: 1 minute - 60 minutes

TEST	USE
Biological activity test	Checking the degree of activity of the biomass in breaking down a certain organic substrate in relation to the endogenous OUR
Assessment of the degree of inhibition	Determining the possible toxic effect of sewage containing potentially inhibitory substances by making use of the OUR test
Biodegradability test on special wastewater	Testing the behaviour of the activated sludge when fed with a compound, the effect of whose biomass is not known for certain; for example the acceptance of special waste water at the treatment plant
Characterisation of organic substrates	Quantification of the organic substrate present in fluent wastewater, in order to determine the fraction of readily biodegradable COD of wastewater for the integration of a carbonaceous substrate in a state of de-nitrification or biological de-phosphating

OUR TEST

(OXYGEN UPTAKE RATE)

To control the efficiency of a biologically activated sludge treatment plant, the test for determining oxygen uptake rate is performed on a sample taken directly from the oxidation/nitrification basin.

The traditional method tests the consumption of dissolved oxygen by a sample of activated sludge, with known MLSS concentration and volume, previously brought to a rapid saturation via a forced ventilation system and constantly mixed (see figure 2).

The time/concentration of oxygen pairs are then turned into a graph, and a descending, almost straight curve is obtained, whose slope represents the rate of consumption of oxygen by the biomass (see figure 1).

The OUR value obtained in this way is generally expressed as mg O_2/g SSV*h.

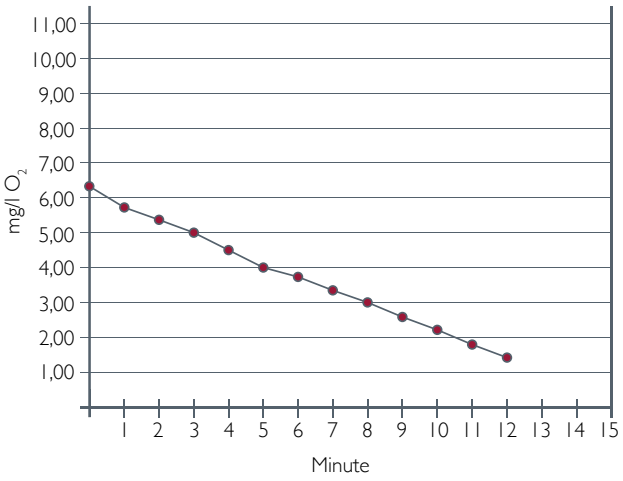


Figure 1
Sample graph of an OUR measurement conducted in the laboratory

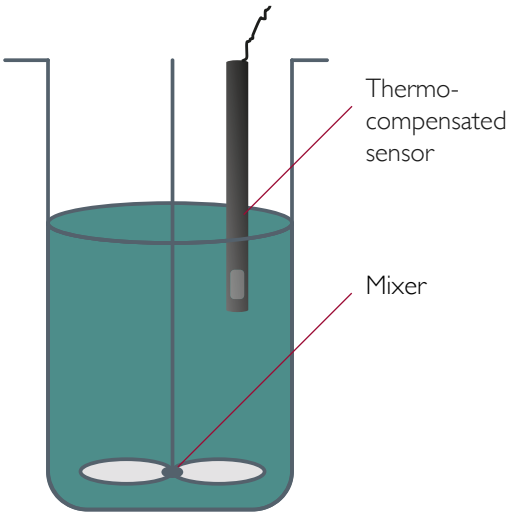


Figure 2
Air insufflation system

ANALYSERS & SAMPLERS

ANALYSERS

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ON-LINE ANALYSIS

METHODS OF MEASURING

THE PHOTOMETRIC METHOD

Photometry has developed as an essential method of analysis because it enables the quantitative determination of both organic and inorganic compounds. The technique uses the colourimetric methods characteristic of certain analytes, such as the ability of certain chemical reagents to develop colour with an intensity proportional to the concentration of a given substance at a particular wavelength of the spectrum visible between the UV and IR (from 400 to 800 nm).

Compared to UV or IR spectrophotometry, the colourimetric technique has the advantage of relying on well-defined linear reactions with few well-known interfering substances. The Palin method employs the interactive DPD principle to determine the concentration of certain oxidants such as free chlorine, total chlorine, chlorine dioxide, ozone, peracetic acid, bromine and permanganate.

The DPD reacts with the oxidant present in the water, producing almost instantly a pink colour, making sure that all those factors that may affect measurement (including pH, µS, temperature and organic matter) have no influence on the analytical methodology.

PHASES OF THE MEASURING CYCLE

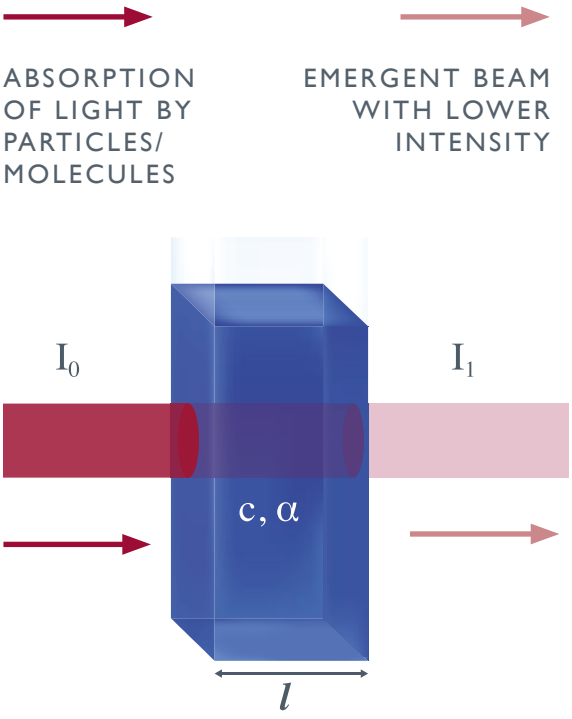
- The sample enters the measuring cell for washing/priming
- First measurement (photometric zero)
- Reagent addition
- Development of the reaction through stirring
- Colour reading (absorbance): the differential measurement between zero and absorbance is processed and converted into a concentration value using correlation tables

GENERAL PRINCIPLES OF THE LAMBERT-BEER LAW

The Lambert-Beer law is an empirical relation that correlates the amount of light absorbed by a medium to the chemical nature (molar extinction coefficient), to the concentration (c) and to the thickness of the crossed medium.

When a light beam (monochromatic) of intensity I0 passes through a layer with the thickness l of the medium, a part of it is absorbed by the medium itself and another part of it is transmitted with residual intensity I1.

HOW IT WORKS:



4001 SERIES

MULTIPARAMETER PHOTOMETRIC ANALYSER FOR CHLORINE AND OTHER DISINFECTANTS

FEATURES

- Low operating and maintenance costs
- System calibration performed automatically at each measuring cycle
- Intuitive interface provides measurement status
- Create graphs to display measurements
- Internal data logger
- Peristaltic pump for high-precision reagent dosing
- Continuous monitoring of reagents via level sensors

AVAILABLE VERSIONS

- Free chlorine, free + total chlorine
- Peracetic acid
- Chlorine dioxide
- Ozone
- Bromine
- Combiner version with pH, Redox, condutivity and temperature

APPLICATIONS

- Drinking water
- Wastewater
- Swimming pools
- Food and beverage
- Pharmaceutical

TECHNICAL SPECIFICATION

Operating temperature	0...50°C
Storage and transport	-25...65°C
Humidity	10...95% non-condensing
Power supply	85...275Vac 50-60Hz
Power consumption	66 W
Electrical protection	UL6950-1 TUV EN60950 EN 55022 Class B EN61000 ENV50204 EN55024

TECHNICAL SPECIFICATION

Display	LCD STN with white backlight
Resolution	240x128 pixels
Languages	Italian, English, French, German, Spanish
Keypad	4 bubble-keys [6] [5] [GRAPH/USB] [ESC/MODE] [ENTER/CAL]
Data logger	Internal flash 4Mbit memory equal to 16000 records with a recording interval of 01:00...99:99 min
Recording method	Circular (F.I.F.O.) or filling
Display of stored data	In tabular and graphic form (1 for each parameter)
Analogue outputs	1 for each parameter measured (excluding Combined chlorine)
Type	0/4...20 mA galvanically isolated
Programming limits	Lower/upper/reverse
Maximum load	500 Ohm
Alarm output	According to NAMUR 2.4 mA (with range 4/20mA)
PID control	Activation on the pH output
Set point relay outputs	Two for primary measure + two for pH measure (only mod. 4001-3)
Programming	Hysteresis, operating time and daily/hourly activation non subject to the measured value: ON – OFF: 00.00...05.00 ppm Cl2 / 00.00...14.00 pH
Operating time	000...999 sec.
Max resistive load relay	5A at 230Vac
Alarm relay output	Cumulative ON-OFF for: Min/Max, set point delay, faults (no water, reagents finished, projector burned, cell dirty)
Delay time	00:00...59:99 mm:ss with minimum steps of 15 seconds
Auxiliary relay output	Programmable as: Set point for Temperature measurement or timed activation (programmable frequency and activation time)
Digital Input	Clean contact for disabling dosages
RS485 serial input	Modbus RTU Protocol (1200...38400 Baud rate) for set-up, real time status or downloading data
Dimensions	(LxHxP) 598x601x190 mm
Total width	598 mm

COLOR MASTER

PHOTOMETRIC COLOUR ANALYSER

Color Master is Chemitec's sophisticated system for automated photometric colour analysis in water-treatment applications.

The all-in-one system delivers precise, repeatable process measurement results while its low maintenance requirement makes it a cost-effective choice.

APPLICATIONS

- Industrial effluent
- Potable water
- Wastewater
- Food and beverage
- Pulp and paper

COLOUR ANALYSIS

The analytical procedure is used for spring waters, groundwater, water from rivers and lakes and water destined for human consumption after appropriate treatment. The method can be applied to samples with the base colour similar to that of the platinum-cobalt reference solution (yellow-brown).

The colour of water is generally caused by organic substances such as humic and fulvic acids (to which a yellow-brown colouring may be assigned) or by salts of some metals such as iron, copper and manganese.

Observing the light transmitted through a thickness of a few metres, the colour of water is variable in blue shades, while the presence of coloured foreign substances causes a variation of colour in infinite shades.

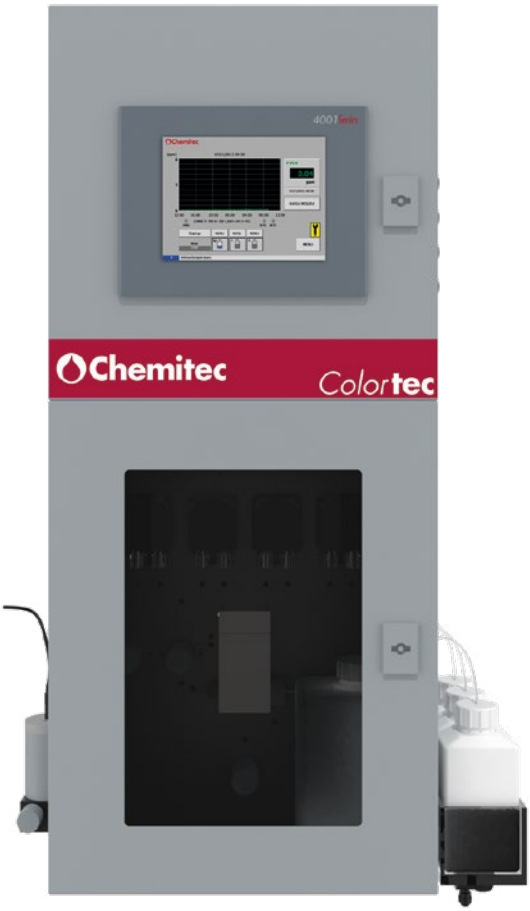
The apparent colour, caused by substances dissolved and suspended into the water, must therefore be distinguished from the actual colour.

TECHNICAL SPECIFICATION

Absorbency measuring	0...500 ABS
Resolution	0.01 ABS
Accuracy	1% f.s.
Temperature measuring	0...50°C
Resolution	0.1°C
Accuracy	1% f.s.
Wavelength	445 nm (others on request)
Analogue outputs	Four 0/ 4...20 mA galvanically isolated
Programming limits	Lower/ upper
Maximum load	500 ohms
Alarm output	NAMUR 2.4 mA (with range 4...20mA)
Set point relay outputs	2 for absorbance; 1 for Temperature; 1 for Alarm
ON – OFF	0...500 ABS
Alarm relay output	Closed / open relay max resistive load 3A at 230Vac
ON – OFF	Cumulative for min/max, set point delay, faults (no water sample, projector burned, cell dirty)
Delay time	00:00...59:99 mm:ss with minimum steps of 15 seconds
Thresholds disabling	Active
Power supply	85...265Vac 50-60Hz
Power consumption	30 W
Electrical protection	CEI EN 61010-1
Mounting	Wall
Dimensions	(LxHxP) 276x514x126,5 mm
Mounting depth	126,5 mm
Housing	ABS Grey RAL 7045
Front panel	UV-resistant polycarbonate
Weight	4 kg
Operating temperature	0...50°C
Recording interval	-25...65°C
Humidity	10....95% non-condensing

COLOR TEC

PHOTOMETRIC ANALYSER FOR CHEMICAL PARAMETERS



Color Tec is Chemitec's leading solution for the analysis of chemical parameters such as Al, NH_4+, Cr(VI), PO_4^{3-}, Fe, Mn, SiO_2, $NO_2$and others on request.

The system comprises two sections, hydraulic/ analytical and electronics, which are separated from each other so as to ensure efficiency and durability of all parts.

HOW IT WORKS

- Depending on the specific methodology, one or more colourimetric reagents are dosed
- Light intensity value of the coloured liquid is read after proper mixing of the reagents
- Reading cell is emptied and flushed together with the entire hydraulic circuit ready for the next measurement

FEATURES

- Touch-screen user interface
- Intuitive control software
- Measurements may be performed at programmed intervals, a specific time or an external event
- All measurements archived and made available in graphical form
- Designed for connection to an existing LAN

APPLICATIONS

- Industrial effluent
- Potable water
- Wastewater

TECHNICAL SPECIFICATION

Photometric range	2.5 optical density
Accuracy	± 3% of the full scale
Repeatability	90% of the measure
Frequency of the analysis	Hourly or by step (20 minutes minimum)
Turbidity of the sample	Max 10 FTU/NTU. For higher turbidity we recommend the optional filtration system
Liquid pressure	0,1 ÷ 0,3 Atm. stable
H_2O or air pressure for filter washing	0,1 ÷ 0,5 Atm. stable
Measuring sensor	Standard silicone sensor with 17-bit digital converter
Wavelength	445...800 nm
Light source	LED
Reading cell	Made of PYREX® Ø 16 mm
Mixer	Aluminium thermostat reaction coil
Reactive dosage	Peristaltic pump with variable speed
Hydraulic system cleaning	Automatic washing with distilled H_2O
Visualization	LCD 8.4 colour display
Data insertion	Resistive touch screen
Computer CPU	Atom with 4GB flash disk
Access to the system	Via password
Archive	Circular, with date and value storage
Visualisation of measures	Via SW it is possible to view the daily, weekly and / or monthly chart of all the archived measures
Data download	Possible via USB mass storage device
Set-points	2 ON-OFF programmable as min. or max. via SW
Output relay contacts	Max 2A 220V resistive load
Current output	0/ 4...20 mA programmable via software
Load	Maximum 500 ohm
Serial interface	2 ON-OFF programmable as min. or max. via SW
Calibration	Manual with activation from menu
Calibration curve	Creation of the calibration curve using a table from 2 to 50 points with arbitrary values
Dimensions	(LxHxP)1000x400x200 mm
Weight	45 kg
Power supply	220 Vac 50 Hz (110 Vac on request)
Power consumption	100 W max

UV METER

PHOTOMETRIC ANALYSER

FEATURES

- Compact size
- No reagents
- Built-in automatic washing system
- Fast response time
- UV spectrophotometric measurement principle does not require analysis reagents, helping reduce operating costs
- Extremely simple hydraulic system and large-diameter pipes
- Automatic measuring cell cleaning system
- Cleaning solution tank (5% sulfuric acid) refill only necessary monthly
- Built-in peristaltic pump for sampling

TECHNICAL SPECIFICATION

Measuring ranges	Referred to parameter	
Principle of measurement	UV spectrophotometry	
Frequency of analysis	Settable	
Accuracy	Referred to parameter	
Drift	On zero 5%	Full range 10%
Temperature	Environment > 0...50°C	Sample > 0...80°C
Analogue output	2x4.20 mA	
Serial output	RS 485 MODBUS	
Alarms	2 relays	
Data logger	Integrated with USB download	
Power Supply	110 ÷ 130 Vac or 220 ÷ 240 Vac/30 VA/50 ÷ 60 Hz	
Dimensions	(LxHxD) 604x380x210 mm	
Weight	Approx. 20 kg	

UV METER 254

PHOTOMETRIC ANALYSER OF ORGANIC SUBSTANCES

The UV Meter 254 is a spectrophotometric analyser for the determination of absorption at 254 nm.

This parameter is a measurement related to many organic substances load in aqueous streams and therefore is often used to determine water quality.

In many cases the absorbency determined by the analyser at 254 nm can be related to the organic content sum parameters such as TOC, COD and BOD by applying an appropriate conversion factor.

The analysis process lasts less than one minute and in many cases does not require sample pretreatment due to the automatic turbidity compensation.

FEATURES

- Turbidity, organic substances, suspended solids or dirt are automatically compensated through a differential measurement with a second detector at a different wavelength

APPLICATIONS

- Surface water monitoring
- Potabilisers
- Water-treatment plants

TECHNICAL SPECIFICATION

Measured parameters	COD UV, BOD UV, TOC UV, $SAC_{254,}$ abs 254 nm
Measuring principle	Dual wavelength technique, 254 nm measuring and 590 nm as reference, with turbidity compensation
Measuring range	24 mm cell: 0.01 – 50 m-1 equivalent to: COD (KHP) 0.15-100 mg/L, TOCeq 0.06-40mg/L, BODeq 0.05-30 mg/L 16mm cell: 0.01 - 100 m/1 equivalent to COD (KHP) 0 - 200 mg/l 11mm cell: 0.02 - 250 m/1 equivalent to COD (KHP) 0 - 500 mg/l Up to 10,000 m/1equivalent to COD (KHP) 20,000 with internal dilution
Reproducibility	± 2.5 % on the absorbency value for samples having turbidity below 100 NTU
Analysis frequency	Freely programmable, batch near continuous analysis
Cycle time	Less than 1 minute, including conditioning before analysis cycle and rinsing after measuring
Sample	Pressure: Atmospheric temperature: 5...50°C (41...122°F) Flow rate: 80 to 500 mL/min Connection: 6 mm (¼-in.)
Drain	Pressure-free, atmospheric drain Connection: 12 mm (½-in.)
N° of streams	Up to 2 with integrated switching valve
Dimensions	(LxWxD) 604x380x242 mm
Weight	Approx. 20 kg (44 lbs)
Power supply	Voltage: 100 - 240 VAC 50/60 Hz standard or 24 VDC (option) Power consumption: max. 80 VA
Outputs	2x4-20 mA outputs for measured data Modbus RTU RS485
Alarms	2 SPDT programmable potential free relays
Digital input	Remote start/stop, start extra cycle, skip idle time, emergency stop
Installation	Wall mount (standard), bench top supporter panel mount (options)
Protection grade	IP54

UV METER NITRATE

PHOTOMETRIC ANALYSER OF NITRATE

The measuring principle is based on the intense UV absorption of the NO chromophore at 210...220 nm in accordance with the Lambert-Beer law:

[*C*]: sample concentration

k: extinction coefficient

I_{in}: sample input light intensity

I_{out}: sample output light intensity

FEATURES

- Automatic linearisation stored in the analyser allows the user to compensate for the non-linearity of the Lambert-Beer law for high concentrations
- The measurement is the weighted sum of the concentrations of NO_2 and NO_3, in most applications, the concentration of NO_2 is negligible compared to that of NO_3
- Organic substances, suspended solids or dirt in the measuring cell are automatically compensated through a differential measurement with a second detector at a different wavelength

APPLICATIONS

- Surface water monitoring
- Potabilisers
- Water-treatment plants

TECHNICAL SPECIFICATION

Measured parameters	NO_3/N-NO_3/N-NO_2+3
Measuring principle	Dual wavelength technique, 220 nm measuring and 270 nm as reference, with matrix compensation
Measuring range	16 mm cell: 0-30 mg/l NO_3 (0-6.75 mg/l as N-NO_3) 11 mm cell: 0-60 mg/l NO_3 (0-13.50 mg/l as N-NO_3) Up to 2,000 mg/l with internal dilution (0-450 mg/l as N-NO_3)
Reproducibility	± 2.5% (30 ppm) ± % (60 ppm) on the absorbency value for samples having turbidity below 100 NTU
Cycle time	Less than 1 minute, including conditioning before analysis cycle and rinsing after measuring
Sample	Pressure: atmospheric temperature: 5...50°C (41...122°F) flow rate: 80 to 500 mL/min Connection: 6 mm (¼-in.)
Drain	Pressure-free, atmospheric drain. Connection: 12 mm (½-in.)
No. of streams	1, 2 with integrated switching valve
Dimensions	(HxWxD) 604x380x242 mm
Weight	Approx. 20 kg (44 lbs)
Power supply	Voltage: 100-240 VAC 50/60 Hz standard or 24 VDC (option) Power consumption: max. 80 VA
Outputs	2x4-20 mA outputs for measured data Modbus RTU RS485
Alarms	2 SPDT programmable potential free relays
Digital input	Remote start/stop, start extra cycle, skip idle time, emergency stop
Operating temperature	5...45°C (41...113°F)
Installation	Wall mount (standard), bench top supporter panel mount (optional)
Protection grade	IP54

UV METER PAH/OIL

PHOTOMETRIC ANALYSER FOR POLYCYCLIC AROMATIC HYDROCARBONS/ MINERAL OILS

The analyser is based on the fluorescence photometric determination of the active species dissolved or suspended in water. The sample is irradiated with a specific wavelength in the UV region. The chemical species in the sample absorb energy from the radiation and release it partially as heat and partially as a new radiation in the visible field.

The intensity of the emitted radiation is proportional to the concentration of the molecules to be measured. The instrument is particularly recommended for the determination of aromatic hydrocarbons in aqueous samples.

APPLICATIONS

- Aromatic hydrocarbons in water (including BTEX, PAH, phenol, oil and fuel)
- Ground water
- Cooling water
- Drinking water
- Process water

TECHNICAL SPECIFICATION

Measured parameters	Oil-in-water, BTEX, aromatic hydrocarbons, PAH/PAC
Measuring principle	Fluorescence photometry
Measuring range	PAH 0-1/5/10 ppm equivalent NDSA OIW 0-5/10/30 ppm equivalent phenol
Reproducibility	± 3 % of full scale
Limit of detection	0.1 ppm
Sampling mode	Batch, with freely settable frequency
Analysis duration	2 minutes, including conditioning before analysis cycle and rinsing after measuring
Cell material	Optically pure quartz
Sample	Pressure: atmospheric temperature: 5...50°C (41...122°F) Flow: 80-500 mL/m Connection: 6 mm (¼-in.)
Drain	Pressure-free, atmospheric drain. Connection: 12 mm (½-in.)
No. of streams	Up to 2, with integrated switching valve
Dimensions	(HxWxD) 300x380x210 mm (11.8x14.8x8.3 in)
Weight	Approx. 10 kg (22 lbs)
Power supply	Voltage: 100-240 VAC 50/60 Hz standard or 24 VDC (option) Power consumption: max. 80 VA
Outputs	2 x 4-20 mA outputs for measured data Modbus RTU RS485
Alarms	2 SPDT programmable potential free relays
Digital input	Remote start/stop, start extra cycle, skip idle time, emergency stop
Operating temperature	5-45°C (41-113°F)
Installation	Wall mount (standard), bench top supportor panel mount (options)
Protection grade	IP54

SF 100

FILTRATION SYSTEM FOR ANALYSERS

FEATURES

- Stainless-steel filter maintained by compressed air with programmable frequency
- Special profile filter element prevents rapid accumulation of dirt and deposits on the filter
- Powerful filter backwash system
- Automatic washing cycle frequency and duration can be programmed in a wide range of values

APPLICATIONS

- Upstream of on-line analysis systems
- Industrial water and chemical industry
- Wastewater

TECHNICAL SPECIFICATION

Filter body material	PP (polypropylene)
Filter element	SS316 – Passage size 100 micron
Solenoid valve	Parts in contact with the liquid SS SS316 - Viton®
Filter weight	1 kg
Temperature	Sample and ambient 2...55°C
Pressure	Minimum sample line 0.3 bar Maximum sample line 2.5 bar Backwashing compressed air pressure minimum 20% above sample line pressure, up to 3 bar max
Flow	Minimum sample line 0.1 mc/h Filtered sample 0.1 - 2 l/min depending on the sample line pressure
Hydraulic connections	Input/output filter: 1" NPT Compressed air inlet connection for washing tube: ¼"
Power supply	220...240 Vac
Power consumption	20VA
Washing frequency	Programmable from 1 to 45 min
Washing time	Programmable from 1 to 30 sec

UF TEC

IMMERSION FILTRATION SYSTEM

FEATURES

- Specially designed to allow sample feeding of Color Tec or similar analysers
- Operation is independent of the sample condition, allowing installation in any section of a water-treatment plant
- Peristaltic pump-driven sample suction
- Cleaning system allows user to purge the filtering element line and pipes

APPLICATIONS

- Industrial water and chemical industry
- Wastewater
- Food and beverage

TECHNICAL SPECIFICATION

Components	Wall-mounted control panel; immersion filter candle; suction/delivery tube 10 m
Filtration	Porosity 0.02 µm with candle/0.1 µm with hollow fibre Capacity 1 l/h with a 3m head between control panel and candle filter
Temperature	Sample 4...40°C; ambient 4...45°C, max humidity 95% non-condensing
Installation conditions	Maximum mounting depth of the immersed filter: 2 m Maximum distance control panel to immersed filter: 10 m Maximum distance from analyser to control panel: 5 m Maximum head from control panel to immersed filter: 5 m Maximum head from analyser - control panel: 5 m
Cleaning system	Integrated with compressed air at 4 bar Automatic control from Color Tec analyser or timer (optional)
Materials	Control panel in ABS
Candle filter	Body housing in white PVC-U; covers made of Noryl GTX Filtering material: PESM
Suction tube	PE
Power supply	220 Vac – power consumption 50 VA
Dimensions	Control panel (LxHxP) 900x600x300 mm – weight 10 kg Candle filter (LxØ) 425x95 mm – weight 4 kg

SAMPLING SYSTEMS

FIXED INSTALLATION OR PORTABLE USE

Chemitec markets MAXX GmbH sampling systems in Italy, with the company's 25 years' experience culminating in a wide range of equipment and technical solutions for standard and difficult application.

- Wide range of models for fixed installation or portable use
- Universal electronic control unit
- Internal data logger for storing sampling and fault data
- Connect to a remote PC for programming or data download

ELECTRONIC CONTROL UNIT

- Microprocessor control
- Sleep mode (<5 mA)
- 128x64-pixel backlit display
- Mini-USB interface
- Analogue input: 0/4...20 mA
- Digital inputs for remote control, event and pulse launch flow meter
- Digital outputs for reporting status and faults
- Optional communication Modbus

PROGRAMMING

- Twelve sampling programmes with linking function
- Time related with internal between 1 minute and 99 hours 59 minutes with 1-minute increments
- Flow related with 0/ 4...20 mA analogue or digital input
- Each bottle filled in relation to time or number of samples
- Memorisation of sampling and fault events with date and time plus remote data acquisition and programming via serial port, LAN or UMTS/GPRS modem with dedicated software (optional)

SAMPLING SYSTEM

- Dosage system
  Vacuum : 20...350 ml
  Vacuum VAR (variable): 5...250 ml
  Peristaltic pump: 20...10.000 ml
  Flow-trough system (pressure line)
  Ceramic slide system (pressure line, harsh applications)
- Accuracy
  Vacuum pump: < 2,5 % or ±3 ml
  Peristaltic pump ±5 % or ±5 ml
- Suction speed
  >0,5 m/s at suction height up to 6 m (at 1013h Pa); pump capacity can be adjusted electronically
- Maximum suction height:
  7,5 m (at 1013hPa and stagnant medium)
  Optional 8,5 m or 15 m (Power booster)

SP5 S

Thermostat-controlled stationary sampler
in stainless-steel cabinet

Housing	Two separate SS 1.4301 compartments, each with door and lock
Upper part	Control unit and dosing unit, with door and window, upper canopy made of plastic material (Styrosun) can be opened for inspection and maintenance
Lower part	Distribution system and bottles for collecting the samples with blind door, double wall insulation, thermostat-controlled
Dimensions	1290 (1890 with canopy open) x690x645 mm
Weight	Approx. 90 kg (with a single bottle)
Operating temp.	Ambient -20...43°C Sample 0...40°C
Power supply	230V...50/60Hz; Consumption 350VA
Bottle variants	Plastic: 1x25L, 1x50L, 2x10L, 4x6L, 4x10L, 4x14L,12x2.9L, 24x1L, 24x2.9L Glass: 12x2L, 24x1L (special version in bigger housing by request)

SP5 B

Thermostat-controlled stationary sampler
in plastic container

Housing	PE material with 50 mm insulation/ Styrosun/PC (GF10)
Upper part	Control unit and dosing unit with lid
Lower part	Distribution system and sample collection bottles, with door and handle with lock, insulated
Dimensions	1100 (1640 with lid open) x760x7450 m
Weight	Approx. 75 kg (with a single bottle)
Operating temp.	Ambient -20...50°C Sample 0...40°C
Power supply	230V...50/60Hz; Consumption 350VA
Bottle variants	Plastic: 1x25L, 4x14L, 4x10L, 12x2.9L, 24x1L Glass: 12x2L, 24x1L

SP5 A

Thermostat-controlled self-emptying stationary sampler in stainless-steel cabinet

Housing	Two separate SS 1.4301 compartments, each with door and lock
Upper part	Control unit and dosing unit, with door and window, upper canopy made of plastic material (Styrosun) can be opened for inspection and maintenance
Lower part	Distribution system and bottles for collecting the samples with blind door, double wall insulation, thermostat-controlled
Dimensions	2x10L, 4x5L, 12x1,6L: 1290 (1930*)x 690x645 mm or 24x2L:1400 (2175*)x800x850 mm*) with opened top
Weight	115 kg version with 2 bottles; greater for versions with more bottles
Operating temp.	Ambient -20...40°C; Sample 0...43°C
Power supply	230V...50/60Hz; Consumption 350VA
Bottle variants	Plastic: 2x10L Glass: 4x5L; 12x1.6L; 16x2L; 24x2L (other on request)

TP5 W

Sampling head for wall mounting

Housing	Electronic control unit, suction and dosing unit, assembled in a PS/PC (GF 10) plastic structure for wall mounting
Dimensions	362x442x222 mm
Weight	Approx. 10 kg
Control unit	Inserted in waterproof box
	Waterproof keypad – display LCD 4 x 20 backlit
Power supply	230/115 Vac – Power consumption approx. 25VA

TP5 C

Compact portable sampler

Housing	PE/PC (GF10) consisting of 3 parts
	Insulated lower part (sample compartment) Insulation thickness: 40 mm Option: freezer packs (200x10x8 mm) Option: compressor cooling (12V/115V/230V)
	Control and sample dosing unit
	Lid with latches
Dimensions	787x510x468 mm/Insulating box passive 1028x550x468 mm/Insulating box active (with compressor cooling)
Weight	Approx. 25 kg 24x1 L - Isobox with passive cooling Approx. 40 kg 24x1L - Isobox with compressor cooling (device incl. battery, empty bottles but no suction hose)
Operating temp.	Ambient 0...45°C ; Sample 0...40°C
Power supply	Electronic control unit, suction and dosing unit: 12VDC with internal rechargeable battery or direct from the mains via battery charger
Bottle variant	Plastic: 1x10L, 1x25L, 2x13L, 4x5L, 16x1L incl. freezer packs, 24x1L (standard version)

P6

Portable compact unit. Available with distributor and various types of bottles

Housing	ABS / PP, insulated lower part (sample compartment) Insulation thickness 22-33 mm
Dimensions	(DxH) P6 L= 500x805 mm (DxH) P6 MiniMaxx = 400x605 mm
Weight	P6 L = approx. 13 kg (without battery, without bottles) P6 MiniMaxx = approx. 9 kg (without battery, without bottles)
Operating temp.	Ambient 0...50°C; Sample 0...40°C
Power supply	230V...50/60Hz; Consumption 15VA
Bottle Variant	Plastic: 24x1L = Standard, Option:1x10 L,1x25 L, 4x4L, 8x2L Glass: 24x350ml,12x950ml, 8x2L, 1x5L
	P6 Mini Maxx: Composite container 10L PE or 5L Bottle Glass

PROCESS SOLUTIONS & WEB APP

PROCESS SOLUTIONS

DETECTOR 63
Sewer monitoring system

OXYSMART 64
Optimisation system for biological treatment plants

OXYSMART BLUE 66
Simplified biological process automation system

WEB APP

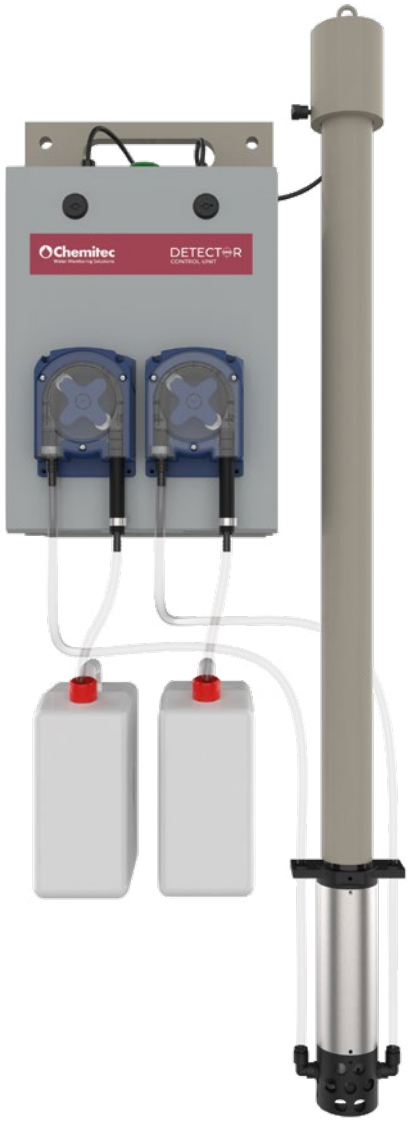
CHEMITEC WEB 67
Remote management system

DETECTOR

SEWER MONITORING SYSTEM

Detector, designed and built by Chemitec, is the ideal solution for the temporary or permanent monitoring of sewer networks directly in road shafts.

By enabling the detection of unwanted pollutants in wastewater, Detector helps operators identify anomalous discharges and prevent the malfunction of water-treatment plants.



CONTROL UNIT

The control unit acquires measurement data from the multi-parameter sensor, manages events, alarms, sampling and configuration locally or remotely via integrated modem.

The entire system is powered by a high-performance battery that guarantees 16 days of operation in H24 mode. The battery fully recharged in five hours.

S400 MULTIPARAMETER SENSOR

The multi-parameter sensor allows simultaneous measurement of several parameters (pH, ORP, Conductivity, level, flow and temperature, etc) comes with 10 metres of integrated self-supporting cable and is designed for quick installation.

TECHNICAL SPECIFICATION

pH	0...14 pH
ORP	-1500 mV... +1500 mV
Conductivity	1-200 mS/cm (K = 0.55 nominal)
Temperature	0...50°C
Level	0-2m H_2O (with flow rate calculation algorithm)

OXYSMART

OPTIMISATION SYSTEM FOR BIOLOGICAL TREATMENT PLANTS

Oxysmart is a specialised algorithm that transforms a Chemitec control unit into a system capable of managing compressors, inverters and mixers to optimise the process and adapt it to load variations.

Oxysmart is the ideal solution to help operators properly manage the nitrogen and carbon cycle in order to comply with legislation while preventing resource wastage.

FEATURES

- Safety features protect compressors and inverters
- Alarm functions alert operator to component malfunction or anomaly
- Automatic safety value adjustment
- Reduces intervention costs
- Unlocks optimal energy consumption
- Stabilises effluent parameters

HOW IT WORKS

Oxysmart is adaptable to any plant, regardless of its electromechanical equipment, and is operational as soon as installation is complete.

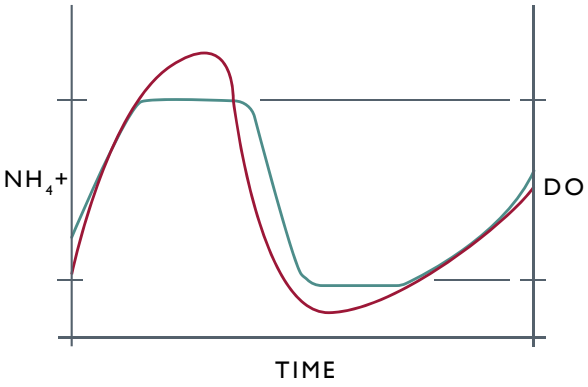
The oxygen setpoint is varied in a continuous manner according to the load detected by Chemitec's ammonia-ion selective sensor S470/N-NH_4, while oxygen is monitored by the S423 C OPT sensor.

Oxysmart offers three logical algorithms, suitable for every kind of plant.

THREE LOGICAL ALGORITHMS AVAILABLE SUITABLE FOR EVERY KIND OF PLANT

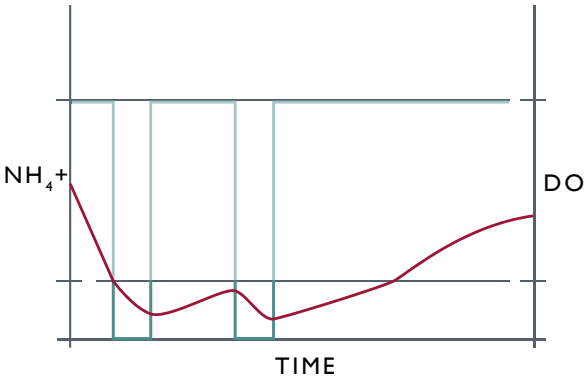
MINIMUM THRESHOLD

In low-load conditions, the DO threshold is maintained at low levels and rises as the load increases.



SMART ON/OFF

In low-load conditions, the system enters pause/work mode, ready to modulate oxygen when load increases.

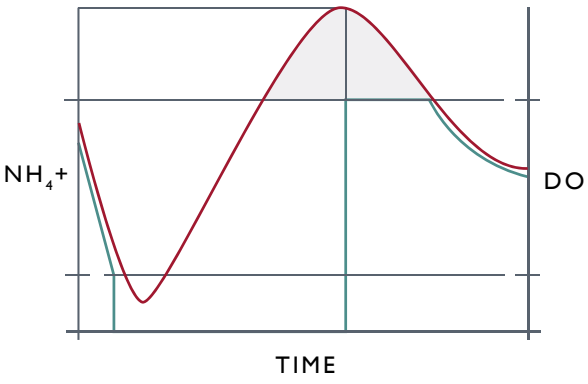


SMART N/DN

At the end of an oxidation cycle, the system activates the mixer, turns off the compressors and waits for a peak of ammonia nitrogen. When the peak is reached, the system reactivates oxidation.

When used with the four-parameter 50 series, Oxysmart can connect two additional sensors for the management of two different analytes:

- ISE S470/N sensor for NO_3 nitrates
- Sensor for freely selectable parameter



OXYSMART BLUE

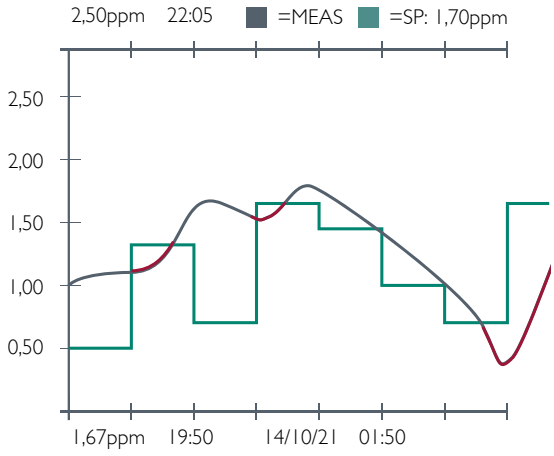
SIMPLIFIED BIOLOGICAL PROCESS AUTOMATION SYSTEM

Oxysmart Blue is Chemitec's leading solution for optimising purification processes within small and medium-sized treatment plants, whether staffed or unstaffed.

Intelligent blower modulation/optimisation delivers improved energy performance, while calibration and maintenance interventions are drastically reduced due to the minimal use of dissolved oxygen sensors.

With Oxysmart Blue, users can set a model of oxidation progress over 24 hours on a weekly basis according to the presumed load.

EXAMPLE OF A TYPICAL TREND



FEATURES

- Installer friendly and easy to use
- Compatible with CHEMITEC WEB to enable 24/7 access to remote systems
- Minimal maintenance requirement
- Offers a high degree of safety in process management

CHEMITEC WEB

REMOTE MANAGEMENT SYSTEM

Enjoy unprecedented control of your application with Chemitec Web, the revolutionary platform that brings you closer to your Chemitec instruments than ever before.

With unrestricted access to data via smart device or PC, Chemitec Web allows you to monitor your process wherever you are and ensure optimum performance 24/7.

FEATURES

- Monitor up to 50 water-quality parameters for as many as 30 instruments
- Secure cloud storage
- Automatic alerts for exceeding parameter limits
- Parameter trend graphs
- Historical trend reports
- Event log and alarm history

COMMUNICATION GATEWAY

The communication gateway automatically connects to the field devices through different connection methods: either RS-232/485 serial ports, ASCII or Modbus RTU. The gateway sends the data to the cloud-based data centre via Ethernet or a GSM/GPRS cellular network. The SIM card for connection is the client's responsibility.

FEATURES

- Plug-and-play functionality for quick and easy setup
- Support for GPRS quad-band communication or Ethernet communication
- Device connectivity via RS232 and RS485 serial ports
- Extendible through add-in boards dedicated to instrumentation with analogue output (4...20mA) and equipment with digital outputs (e.g. ON-OFF status and alarm)
- Integrated temperature sensor
- Status LED for diagnostics

FLOW, LEVEL & PRESSURE

FLOW

OPEN CHANNEL WITH RESTRICTIONS 70
- 50 Series F/L Flow & Level Controller
- S425 Ultrasonic Level Sensor
- Venturi • Weirs
- Palmer-Bowlus

ELECTROMAGNETIC 74
- S103 C
- CH608 Converter
- CH406 Converter
- Table of measuring tubes and insertion sensors
- CH2300 Measuring tube U0-D0 installation

ULTRASONIC 82
- S101 F • 200 H

DOPPLER EFFECT 84
- DFM 6.1 • PDFM 5.1

AREA X VELOCITY 86
- AVFM 6.1 • STINGRAY

LEVEL

ULTRASONIC 88
- 50 Series F/L Flow & Level Controller
- S425 Ultrasonic Level Sensor
- Meter

RADAR 91
- RPL 55
- RDR 81
- RDR 75

SLUDGE INTERFACE 93
- Echosmart

IDROSTATIC 95
- KPL
- KWL

PRESSURE

PIEZORESISTIVE & CAPACITIVE 98
- KPT • CPT
- SPT • SDT

FLOW METER SELECTION TABLE

Application/ Model	50 F/L	S103C	S101F/ 200H	DFM6.1/ PDFM5.1	AVFM6.1/ STINGRAY
Open channel with restriction or weir	●				
Open channel without restriction					●*
Pressurised pipe (raw or clean water)		●	●		
Pressurised pipe (dirty water or sludge)		●		●*	
Partially full pipe	●**				●*

* = Requires suspended solids or air bubbles with minimum cross section of 100 microns, 75ppm concentration

** = By insertion of Palmer-Bowlus channel

50 SERIES F/L

OPEN CHANNEL FLOW METER WITH ULTRASONIC/ PIEZOMETRIC/RADAR LEVEL SENSOR

FEATURES

- Preset calculation or user programming
- Calibration table up to 30 points for non-linear functions
- Double data logger for instant measurement and totalised volumes
- USB port for data download
- Graphic display with visualisation of real-time and historical values
- Modbus RTU communication protocol

TYPES OF PDM

(Primary Measurement Device)

Restrictions:

- Venturi
- Parshall
- Palmer-Bowlus (for partially full pipe)

Weir:

- Rectangular
- V-shaped
- Bazin - rectangular suppressed

Other:

Programming exponent or table with 30 points

TECHNICAL SPECIFICATION

Unit of measure	Flow rate: mc/h, lt/sec - cm, mm - Temperature: °C
Measurement range	0...99999 mc/h - Up to 3 decimal points
Two totalisers	Absolute 9-digit (saved on Flash PROM non-resettable) - Partial 9-digit resettable
Display	Graphic TFT colour LCD 480x272 (Visible Area 95x93) Simultaneous display of: instantaneous flow rate (numeric & bar-graph), totalized volume, temperature, status of digital outputs, alarm events. In scrolling: Status level of the analogue outputs, resettable totalizer
Checks	5 Keys
Data logger	Internal 32 Mbit 128000 record
Serial output	One RS485 galvanically separated modbus RTU
Analogue outputs	Two galvanically programmable separated
Relay outputs	Four for thresholds - two for alarm (max load 1A at 230Vac resistive)
Power supply	100...240Vac / dc 50-60Hz (Optional 24Vac / dc) - Isolation 4kV
Average absorption	<7W
Dimensions / weight	(LxHxD) 144x144x122.5 mm - Weight: 1 kg

S425

ULTRASONIC SENSOR

FEATURES

- Integrated sensor for temperature compensation
- PVDF body suitable for aggressive environments
- High-resolution 1mm measurement
- Double-threaded connection
- Immediate installation with removable IP67-rated connector
- Modbus RTU protocol

APPLICATIONS

- Raw water
- Drinking water
- Wastewater without persistent foams

TECHNICAL SPECIFICATION

Model	S425C	S425K
Measuring method	Ultrasonic with automatic temperature compensation	
Measuring ranges	30...500 cm	5...100 cm
Operating temperature	-10...75°C	-25...75°C
Operating pressure	0,5...1,5 bar	
Accuracy	± 0.2% of measured distance (but not better than 2mm)	
Interface	RS485 Modbus RTU	
Body material	PVDF – PCV	PP
Protection class	IP67/IP68 with integral cable	IP67/IP68 with integral cable
Process connection	1" g.m and 1,5" g.m	1" g.m

VENTURI CHANNELS

HYDRAULIC MODELLER FOR FLOW MEASUREMENT IN RECTANGULAR CHANNEL

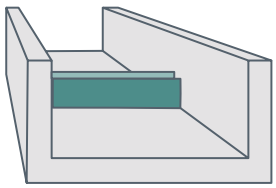
FEATURES

- Dedicated primary measurement device for channels
- For installation in rectangular-section ducts
- Flow rate: >1...2250 m^3/h
- Low-pressure drops
- Suitable for installation in pre-existing rectangular channels
- Design prevents debris build-up

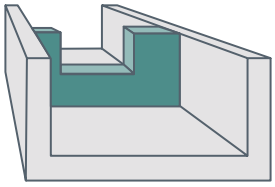
MEASURING RANGES

Model	Q.min m^3/h	Q.max m^3/h
BS 150	1	50
BS 200	2	55
BS 300	3	150
BS 400	10	310
BS 500	20	500
BS 600	25	850
BS 800	50	1400
BS 1000	60	2250

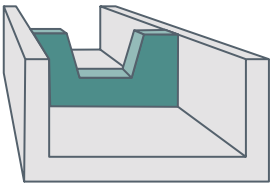
WEIRS



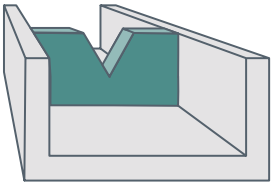
Rectangular weir
without side restraints



Regular weir
with side restraints



Trapezoid weir



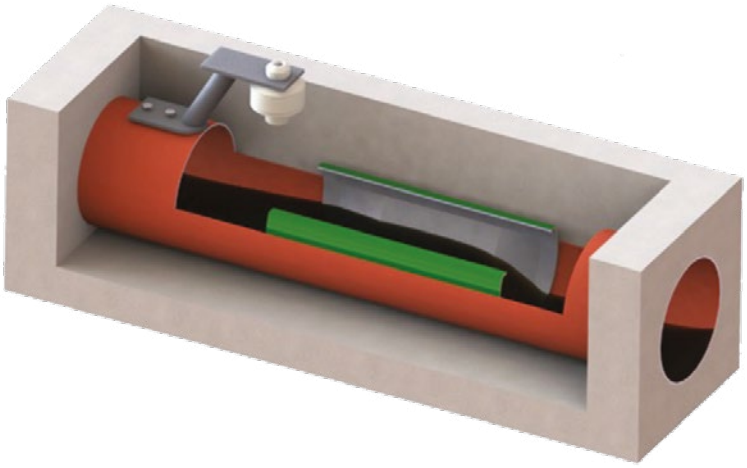
Triangular weir

PALMER-BOWLUS

HYDRAULIC MODELLER FOR FLOW MEASUREMENT IN NON-FILLED PIPES

FEATURES

- Direct installation in the pipe or inspection well
- Level sensor calculates the instantaneous flow rate value
- Low cost, easy installation
- Flow rate: 0.45-1800 m^3/h



MEASURING RANGES

Model	DN pipe	Measuring range
100	100	0.45 ÷ 6 m^3/h (max. 8 m^3/h)
150	150	0.68 ÷ 15 m^3/h (max. 19 m^3/h)
200	200	1.2 ÷ 48 m^3/h (max. 56 m^3/h)
250	250	1.29 ÷ 68 m^3/h (max. 76 m^3/h)
300	300	2.27 ÷ 136 m^3/h (max. 150 m^3/h)
350	350	5.5 ÷ 161 m^3/h (max. 192 m^3/h)
400	400	2.23 ÷ 213 m^3/h (max. 240 m^3/h)
450	400	3.8 ÷ 330 m^3/h (max. 365 m^3/h)
500	500	5.34 ÷ 468 m^3/h (max.532 m^3/h)
600	600	10 ÷ 560 m^3/h (max.623 m^3/h)
700	700	15 ÷ 1019 m^3/h (max.1115 m^3/h)
800	800	18 ÷ 1672 m^3/h (max.1806 m^3/h)

S103C

ELECTROMAGNETIC FLOW METERS

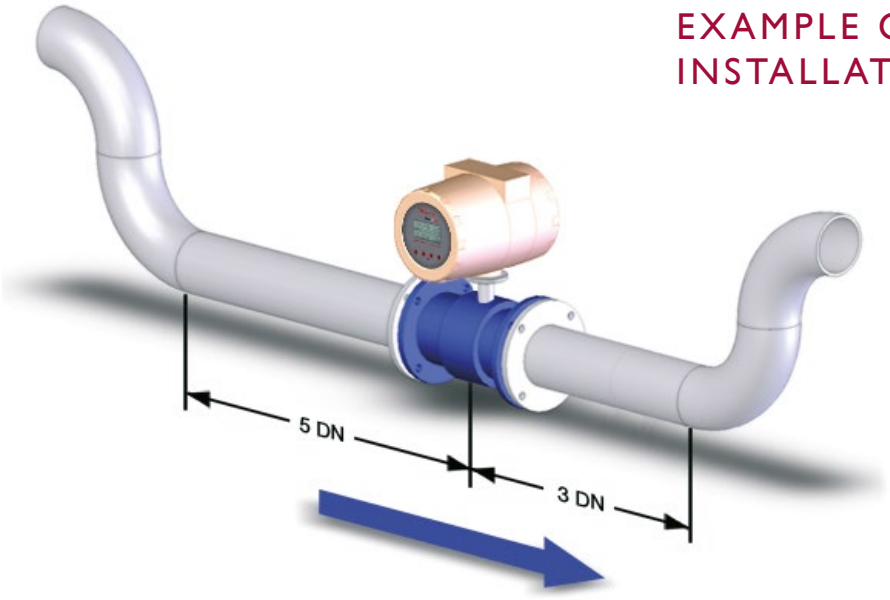
FEATURES

- Advanced instruments for the measurement of flow rate in conductive fluids and wastewater
- Measurements in full-section pipes
- Horizontal or vertical installation

APPLICATIONS

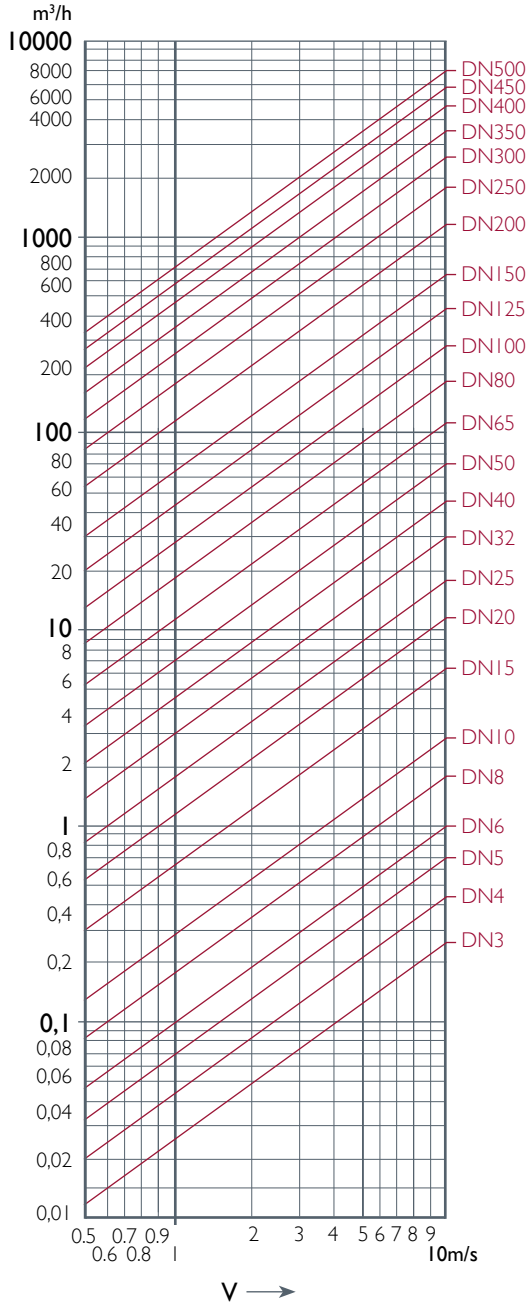
- Conductive fluids
- Wastewater
- Sludge
- Potable water
- Civil and industrial waste
- Chemical industry
- Paper industry
- Tanning industry
- Pharmaceutical
- Food production
- Energy industry (generation and distribution)
- Extractive industry (quarries, mines)
- Environmental protection

EXAMPLE OF CORRECT INSTALLATION



SELECTION TABLE

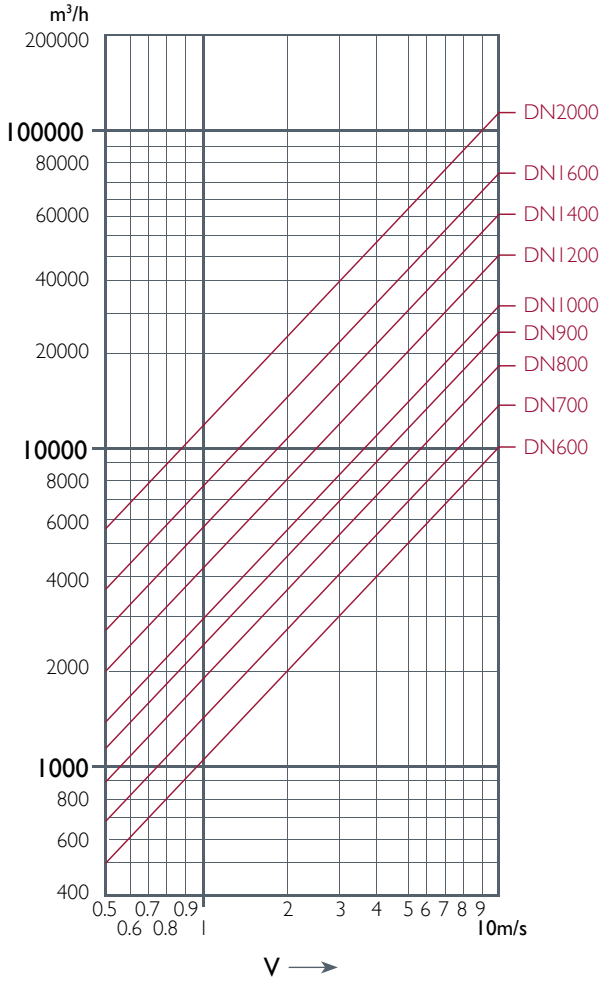
S103 C



DIAMETER ABACUS

Abacus for optimal diameter selection depending on effective flow rate.

Recommended speed 1...2 m/s



S103C FLOW METER

CH608 CONVERTER

FEATURES

- The converter for all applications
- Communications via: 4-20 mA analogue output, frequency, pulse, RS485 Modbus
- 5 independent internal totalisers (2 positive, 2 negative, 1 NET)
- IrCOM communication
- 4 MB flash memory, 200,000 lines of data
- Hart protocol available on request
- Availability of field verificator for verification of correct functioning and status of electronics in position

TECHNICAL SPECIFICATION

Converter installation	Compact on the sensor or remote on support, up to 100m from the sensor
Converter case	Epoxy painted aluminium, IP68. With front window in toughened glass
Power supply	CH608 90...264 Vac; 12/24 Vac/dc; max. consumption 10 Watt
Output signals	Active analogue output 4...20 mA Digital output for pulses Programmable digital output Digital output in active frequency 0...10 kHz
Display	Graphic LCD 128x64 pixels, visual area 50x25 mm, backlit Simultaneous indications: Instanteous flow, counter, alarm and status flag 5 totalisers available (2 positive, 2 negative, 1 NET)
Programming	With 4 push buttons for non-billing applications Through IrCOM interface and dedicated software Via RS485 Modbus RTU protocol
Process data logger	4 MB flash memory, 200,000 lines of data (one line includes: instant flow, 2 counters, date, time, temperature)

S103C FLOW METER

CH406 CONVERTER

FEATURES

- CH406 converter is the new High-efficiency battery-operated converter
- Compact version (horizontal or vertical) or separate (up to 30m cable)
- Coupling with body sensors up to DN1000 and with all sizes of insertion meters
- 5 independent internal totalisers
- Pressure and temperature reading modules (opt.)
- Integrated data logger with capacity for more than 100,000 data lines
- Available also with 12/24Vdc power supply and 4...20 mA output
- RS485 Modbus

TECHNICAL SPECIFICATION

Transmitter type	Battery powered - 2xD cell 3.6 V * - optional 12/24Vdc power supply
Battery life	Lithium battery pack up to 10 years/GSM module battery up to 10 years
Display and keyboard	LCD display-index, menu and status icons for dedicated information Four buttons to access all functions
Views	Instantaneous flow; positive total counter (T+); negative total counter (T-); positive partial counter (P+); negative partial counter (P-); net counter (NET) Time & date converter temperature Process pressure and temperature (if available) Matching parameters, codes and value
Outputs	2 passive outputs (1 programmable) MOS, galvanically isolated - clean contact Maximum load ± 35V DC, 100mA protected against short circuits Optional 4...20mA loop powered output. Optional RS485 Modbus output
Data logger	100,000 lines of data with a recording rate between 1 minute and 120 minutes
Alarms and status icons	Status icons shown on the display and alarms recorded in the data logger
Self-diagnosis	Available alarms: interrupted excitation, power supply voltage, empty tube with fourth electrode, accumulation of pulses, empty tube with measuring electrodes, wet electronic board, high temperature, low battery level

S103C FLOW METER

TABLE OF MEASURING TUBES AND INSERTION SENSORS

	CH2200	CH2400	CH1000
			
DN (Diameter Nominal)	15...2000	25...100	25...300
Connections	EN1092-1 on request ANSI 150; ANSI 300; AWWA Cl.D; ANSI 600	TRICLAMP on request DIN 11851; MS 1146 female	WAFER
Pressure	PN10...PN64	16 bar Triclamp/ 25 Bar DIN or SMS	PN40 up to DN150 PN16 ≥200
Accuracy With liquid speed ≥ 0.2 m/s	0,2%	0,2%	0,2%
Material Inner lining	PTFE or EBANITE	PTFE	PTFE or EBANITE
Electrodes	HASTELLOY C on request Titanium, Tantalum, Platinum	HASTELLOY C on request Titanium, Tantalum, Platinum	HASTELLOY C on request Titanium, Tantalum
No. of electrodes	2xDN15...20 3xDN25...40 4xDN50...2000	2	3xDN15...40 4xDN50...300
Body	Carbon steel	SS304	Carbon steel
Flange	Carbon steel	SS304	–
Process temperature Compact version	up to 80°C	up to 80°C	up to 80°C
Separate version with liner in PTFE	up to 130°C (180°C on request)	up to 130°C (180°C on request)	up to 130°C (180°C on request)
Protection grade Compact version	IP68	IP68	IP68
Separate version	IP68	IP68	IP68
Certifications ATEX/IECEx: II 2GD Ex mb IIC T6...T4 Gb Ex mb IIIC T85°...T135°C Db Ta -20°...60°C U=30V; I=70mA	on request	on request	on request

CH500	CH2660	CH2770	CH1222
			
6...20	80...500	80...2500	50...2600
GAS Clamp (BS4825); DIN 11851 Male	Insertion threaded	Insertion flanged UNI2278 DN40	Insertion 1" ball valve Hot tap installation
PN16	PN10	PN25	PN20
0,2%	2%	2%	2%
PTFE	-	-	-
SS316 L	SS316 L	SS316 L	SS316 L
2	2	2	2
SS304	SS304	SS304	SS304
SS316 L	1" 1/4 GAS thread	UNI 2278 DN40 for connection to the pipe	Ball valve SS316 L
up to 80°C	up to 80°C	up to 80°C	up to 80°C
up to 130°C (180°C on request)	up to 80°C	up to 80°C	up to 80°C
IP68	IP68	IP68	IP68
IP68	IP68	IP68	IP68
-	on request	-	on request

S103C FLOW METER

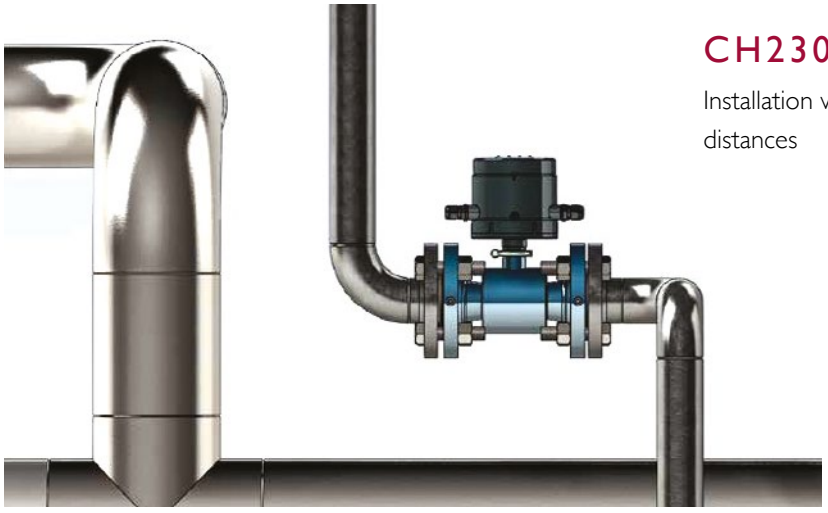
CH2300 MEASURING TUBE U0-D0 INSTALLATION

FEATURES

- Measuring tube for mounting in confined spaces
- Wide range of measurement
- Innovative sensor design increases flow rate and measurement precision
- Repeatable measurement even in complex applications
- Optimised and accelerated flow profile
- Flexible installation options
- Accredia and OIML R 49 certified
- Bi-directional measure

APPLICATIONS

- Water cycle
- Industrial water and chemical industry
- Drinking water with food and beverage

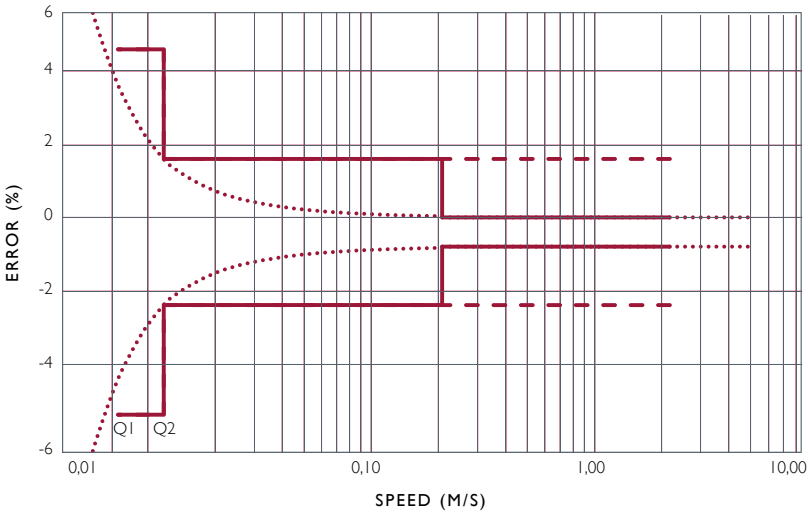


CH2300 INSTALLATION

Installation with no upstream and downstream distances

ACCURACY DIAGRAM

The maximum permissible error is within the limits shown in the following graph:



CH2300 FLOW RATES TABLE

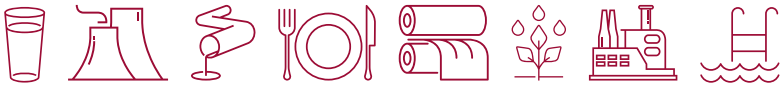
Sensor diameter	Flow [m³/h]					Ratio Q3/Q1
	Min. Q1	Trans. Q2	Q0.4%	Perm. Q3	Overl. Q4	
DN 50 - 2"	0.125	0.20	3.50	25.00	31.25	200
DN 65 - 2½"	0.2	0.32	6.00	40.00	50.00	200
DN 80 - 3"	0.315	0.50	9.00	63.00	78.75	200
DN 100 - 4"	0.50	0.80	14.00	100.00	125.00	200
DN 125 - 5"	0.80	1.28	22.00	160.00	200.00	200
DN 150 - 6"	1.25	2.00	32.00	250.00	312.50	200
DN 200 - 8"	3.15	5.04	57.00	630.00	787.50	200
DN 250 - 10"	5.0	8.00	90.00	1000.00	1250.00	200
DN 300 - 12"	8.0	12.50	128.00	1000.00	1250.00	125

TECHNICAL SPECIFICATION

Flow tube material	AISI 304, SS316 (optional)
Flanges material	Carbon steel, AISI 304, SS316 optional
Available electrodes	SS 316L, (standard), Hastelloy C, Hastelloy B, Titanium, Tantalum, Platinum
Internal lining	Ebanite
Liquid temperature	Up to 80°C
Standard flanged connections	EN1092-1 PN 16, ANSI 150 on request
Installation requirements/ conditions	U0-D0
Protection degree	IP68 permanent submersion at 1.5 m (EN 60529)

S101F & 200H

FIXED OR PORTABLE FLOW METER ULTRASONIC "TRANSIT TIME" FOR PRESSURE PIPE



S101F

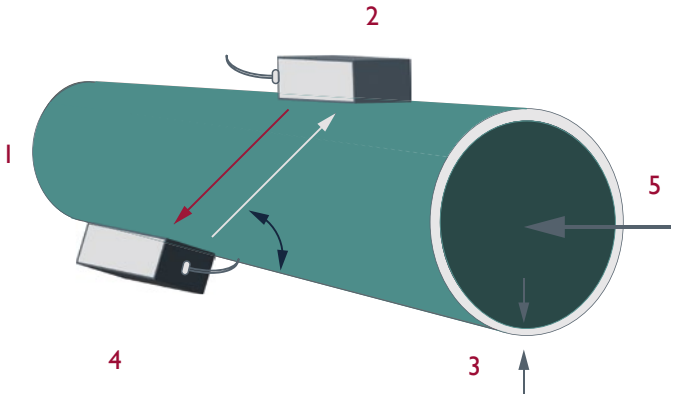
200H

FEATURES

- Instruments comprise digital converter and two ultrasonic clamp-on or insertion transducers
- Digital signal processing (DSP) technology ensures low sensitivity to disturbing factors
- Suitable for pipe dimensions from 20 to 4000 mm
- Transmitter resistant to damage by wear, deposits or pressure
- Password-protected EEPROM

APPLICATIONS

- Ultra-pure water
- Drinking water
- Chemicals
- Cooling water
- River water



DSP TECHNOLOGY - DIAGRAM

1. Pipe diameter
2. Upstream transducer
3. Tube thickness
4. Downstream transducer
5. Flow direction

TECHNICAL SPECIFICATION

Models	S101 F	200 H
Measurement on pipes	From DN 20 to 4000 mm	From DN 20 to 4000 mm
Piping material	Steel, stainless steel, cast iron, copper, PVC, aluminium, fibreglass-reinforced plastic (cement with insertion transducers)	
Measurement units (user selectable)	Metres, cubic metres, litres, feet, cubic feet, U.S. gallons, imperial gallons, oil barrels, U.S. oil barrels, imperial oil barrels, millions of U.S. gallons	
Type of liquid	Conductive fluids and not, even with the presence of suspended material (< 10g/l; < Ø1 mm)	
Speed range	± 12 m/s	
Linearity	0.5%; repeatability: 0.2%; total accuracy ± 1%	
Display	2x20 alphanumeric characters	3.5"; 320x240 px
Keypad	Four membrane buttons	Eight buttons
Internal data logger	Optional	Storage capacity up to 32GB with SD card
Displayed data	Instantaneous flow rate; total flow; other	
Safety	Password protection for setup and settings	
Selectable output	4...20 mA or 0...20 mA	–
Frequency output	Programmable 0...5000 Hz	–
Output relay	For pulse or alarm totaliser	–
Signal interface	RS485	
Communication protocol	Modbus RTU; ASCII+ (optional)	
Power supply	230Vac/24Vdc (optional)	External p. supply 100 ± 253Vac
Rechargeable batteries	–	Three (3) AAA Ni-mH integrated with autonomy >24 hours
Mounting	Wall-mounted IP66	Portable
Housing	Aluminium	ABS
Dimensions	(LxHxD) 200x120x77 mm	100x66x20 mm
Weight	1 kg	0.4 kg
Operating temperature	-20...60°C	–
Maximum humidity	85% RH non-condensing (40°C)	
Process temperature	Sensor -40...160°C in reference to sensor type	
Sensor protection	IP68	

DFM 6.1 & PDFM 5.1

FIXED OR PORTABLE DOPPLER-EFFECT FLOW METERS FOR PRESSURE PIPE

DFM 6.1

PDFM 5.1

DFM 6.1

Dedicated instrument for liquids containing solids or air bubbles. Sensor mounted externally on steel, iron, PVC or ABS pipe.

PDFM 5.1

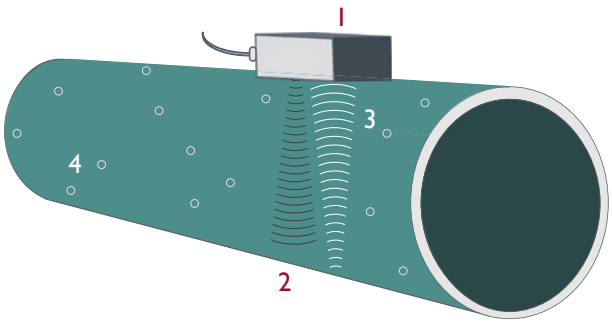
The ideal instrument for evaluating the performance of in-line flow meters. Fast installation, calibration and commissioning makes it ideal as a temporary in-line transmitter.

FEATURES

- Continuously frequency deviation measurement ensures precise fluid velocity data
- Can be installed without interrupting plant operation
- Intuitive programming menu
- Password protection for totalisation and calibration data
- Sensor unaffected by dirt or deposits

APPLICATIONS

- Wastewater
- Chemicals
- Sludge
- Viscous liquids



OPERATING PRINCIPLE

1. Sensor
2. Soundwave transmitted from sensor
3. Soundwave reflected back to sensor
4. Bubbles or solids reflect sound

TECHNICAL SPECIFICATION - DFM 6.1

Liquid characteristics	Required suspended solids or air bubbles with minimum cross section of 100microns, concentration 75ppm
Piping / DN and materials	½"...180" (12.7...4500 mm) Steel, stainless steel, cast iron, ductile iron, concrete-lined ductile iron, PVC, HDPE or any other sound-conducting pipe material, including pipe lined with a coating bonded to the pipe wall. Avoid pipes with deteriorated coatings that contain air
Velocity measurement range	±0.03 up to 12.2 m/sec
Accuracy	±2% of reading or 0.05 ft/sec (0.015 m/sec). Repeatability ±0.1%, Linearity ±0.5%
Display	White, backlit - Display of instantaneous flow rate, totalisation, relay status
Programming	5-digit keypad
Analogue output	4...20mA opto-isolated (1000 ohm max.)
Control relay	Two SPDT, 5 A programmable for flow alarm and/or pulse output
Power supply	100...240VAC 50-60Hz (other on request), absorption 5 Watts max.
Enclosure	Polyester IP66 NEMA4X. Clear polycarbonate front panel
Operating temperature	-23...60°C (-10...140°F)

SENSOR SPECIFICATIONS

Model SE4-A	Single-head ultrasonic with 7.6 m cable and SS mounting kit for pipes ½" (12.7mm) ID or larger. Certified for Class I Division 2, Groups A, B, C, D hazardous locations
Assembly kit	Sensor mounting bracket for pipes with external diameter from 15 to 800 mm Gel of coupling (150g)
Operating temperature	-40...150°C (-40...300°F)

TECHNICAL SPECIFICATION - PDFM 5.1

Flow rate range	± 0.46 up to 12.2 m/sec
Pipe size	From ½" up to 180" (12.7...4500 mm)
Display	White, backlit matrix - displays flow rate, totaliser
Power input	Built-in NiMH battery for up to 18 hours continuous operation External charger with 100...240VAC 50/60Hz input
Outputs	4...20mA (500 ohm) when AC powered USB for Data log transfer by direct PC connection
Data logger	Programmable 300000 data point capacity, time and date stamped or formatted flow reports including total, average, minimum, maximum and times of occurrence
PC software	For Windows 98 or higher. Retrieves, displays and saves data log files
Electronics operating temperature	-23...60°C (-10...140°F)
Electronics enclosure	Portable, ABS enclosure
Carry case	Rated IP67 with protective molded foam insert
Accuracy	±2% of full scale, requires solids or bubbles minimum size of 100 microns, minimum concentration 75 ppm. Repeatability: ±0.25%, Linearity: ±0.5%
Calibration	Built-in 5-key programming with user-friendly calibration menu. Password protected
Sensitivity	Adjustable cut-off, damping: adjustable

SENSOR SPECIFICATIONS

Model PSE4	Clamp-on, single-head ultrasonic for pipes ID: ½"...180" (12.5 mm...4.5 m) with 3.4 m shielded dual-coaxial cable
Sensor mounting kit	SS pipe clamp and 5.3 oz. (150 g). Silicone coupling compound
Operating temperature	-40...150°C (-40...300°F)

AVFM 6.1 & STINGRAY

"AREA VELOCITY" FLOW METER, FIXED OR PORTABLE

AVFM 6.1

AVFM 6.1

State-of-the-art instrument for the simultaneous measurement of fluid level and velocity for flow-rate calculation in open channels or pipes.

FEATURES

- Simple calibration
- Calibration parameters remain stored even in the absence of tension

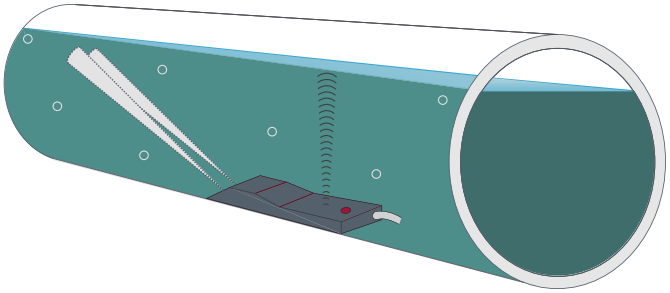
STINGRAY

STINGRAY

Portable instrument for the measurement of water level, velocity and temperature in open channels and partially-filled of pressurised pipes.

FEATURES

- Alkaline battery for extensive operating time
- Data stored to memory and presented as trend graphs and tables
- No calibration required
- Energy-saving display timeout



SUBMERGED SENSOR

- Measuring levels and velocity

TECHNICAL SPECIFICATION - AVFM 6.1

Liquid characteristics	Required suspended solids or air bubbles with minimum cross section of 100 microns, 75ppm concentration
Type of channels	Unfilled pipe, rectangular, trapezoidal, egg-shaped or custom channels
Accuracy	Level: ±0.25% of measurement range. Velocity: ±2% of reading repeatability and linearity: ±0.1%.
Display	White, backlit display - of instantaneous flow rate, totalisation, relay status
Programming	5-digit keypad
Data logger	Recording capacity of 26 million points. Includes USB output and Windows software
Analogue outputs	Three 4...20mA opto-isolated (1000 ohms max.)
Control relays	Two SPDT, 5 A programmable for flow alarm and/or pulse output
Power supply	100...240VAC 50-60Hz (other on request), absorption 5 Watts max

QZ02L SENSOR SPECIFICATION

Velocity measurement range	0.03...6.2 m/sec
Level measurement range	Minimum head: 25.4 mm Maximum head: 4.57 m
Operating temperature	-15...80°C
Exposed materials	SS316, epoxy resin, polyurethane

TECHNICAL SPECIFICATION - STINGRAY

Liquid characteristics	Required suspended solids or air bubbles with minimum cross section of 100 microns, 75ppm concentration
Electronics enclosure	Watertight, airtight, dust proof (IP67) polycarbonate
Accuracy	Level: ±0.25% of range. Velocity: ±2% of reading
Display	LCD displays: level, velocity, water temperature, battery and memory capacity
Operating temperature	-20...60°C (-4...140°F)
Instrument set-up	Via software for Windows: logging time interval, site name
Data logger capacity	130,000 data points
Power	4 alkaline 'D' cell batteries
Software	For Windows. Supports real-time monitoring, log file download and export, graph and data table presentation, level/velocity to flow conversion
Approx. shipping weight	4.5 kg

QZ02L SENSOR SPECIFICATION

Velocity measurement range	0.03...3.8 m/sec
Level measurement range	Minimum head: 25.4 mm Maximum head: 4.5 m
Operating temperature	-15...80°C (5 to 175°F)
Exposed materials	SS316, polyurethane, epoxy

50 SERIES F/L

LEVEL METER WITH ULTRASONIC OR PIEZOMETRIC OP RADAR SENSOR

FEATURES

- Ultrasonic level measurement; single level, double level, differential level
- Automatic temperature compensation
- Pump operation: single, rotating or timed
- RS485 Modbus RTU serial output
- 2 x programmable analogue outputs
- 5 x relay outputs for intervention pump control thresholds
- 1 x relay output for instrument anomaly alarm, flow totalisation or level 2 alarm

APPLICATIONS

- Wastewater
- Industrial water
- Drinking water
- Cooling towers

TECHNICAL SPECIFICATION

Unit of measure	Level mt, cm, mm - temperature °C
Measurement fields	Level 0...200 mt (in relation to the connected sensor) Temperature -25°C...75°C
Precision	± 0.2% F.S.
Display	Graphic TFT colour LCD resolution 480x272 visible area 95x93 backlit Simultaneous display of: Level (absolute / differential & bar-graph for percentage of full scale), temperature, status of the digital outputs, alarm events Level 2, status of the analogue outputs
Controls	5 keys
Data logger	Internal with 4 Mbit flash
Serial output	One RS485 galvanically separated Modbus RTU
Analogue outputs	Two galvanically programmable separated 1st output: level/temperature - 2nd output: level 2, differential, temperature
Relay outputs	Five for thresholds - One for Alarm (max load 1A at 230Vac resistive)
Power supply	100...240Vac/dc 50-60Hz (Optional 24Vac/dc) - Isolation 4 kV
Average absorption	<7W
Dimensions/weight	(LxHxD) 144x144x122.5 mm - Weight: 1 kg

S425

ULTRASONIC LEVEL SENSOR

FEATURES

- Integrated sensor for temperature compensation
- PVDF body suitable for aggressive environments
- High-resolution 1mm measurement
- Double-threaded connection
- Immediate installation with removable IP67-rated connector
- Modbus RTU protocol

APPLICATIONS

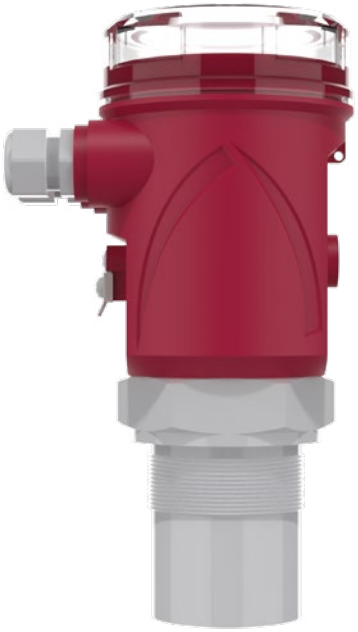
- Drinking water
- Wastewater without persistent foam chemicals

TECHNICAL SPECIFICATIONS

Models	S425 C	S425 K
Measurement range	30...500 cm	50...1200 cm
Measurement method	Ultrasonic with automatic temperature compensation	
Emission angle	14° ±1°	10° ±1°
Accuracy	± 0.2% of measured distance (but not better than 2mm)	
Resolution	1 mm	
Operating temperature	-10...75°C	
Maximum operating pressure	0,5 bar...1,5 bar	
Body materials	PVDF – PCV	
Thread	1" g.m./1.5" g.m	1" g.m./2" g.m
Degree of protection	IP67 (IP68 optional)	

METER

COMAPACT ULTRASONIC LEVEL TRANSMITTER



FEATURES

- Suitable for liquids and solids
- Range 0,25 ÷ 6 m/0,4 ÷ 10 m
- Power supply 24 Vdc; 12 Vdc
- Output 4 ÷ 20 mA (2 wire version); 4 ÷ 20 mA + 2 relays set (4 wire version); Modbus
- On request ATEX
- Remote control via smart phone (CHEMITEC APP)

TECHNICAL SPECIFICATION

Measuring range	0.25...6 m or 0.4...10 m (distances expressed are valid for measurements of perfectly reflective surfaces, otherwise the maximum measurable distance is reduced)
Temp. compensation	Digital between -30...80°C
Accuracy	±0.2% (of the measured distance) but not less than ±3mm
Resolution	1 mm
Operating temperature	-30...70°C; 80°C non-continuous
Operating pressure	0.5...1.5 bar (absolute)
Programming/display	Removable module with 4 keys and dot matrix LCD (or via HART / Modbus RTU on request)
Housing material	PC or Al/PP or PVDF (ATEX certified versions only of PVDF)
Mechanical installation	2"GAS M (PP flange DN80 optional)
Protection grade	IP67
Power supply	24Vdc (20...30Vdc); 12Vdc (only 2 wires version)
Power consumption	2 wires version 0.6 W ; 4 wires version 1.5 W
Analogue output	4...20mA
Output relays	Nr.2 - 3A 230Vac (n.a.) (only 4 wires version)
Digital communication	2 wires version (optional) HART; 4 wires version Modbus RTU
Ex-proof	ATEX II 1/2G Ex ia/db IIC T4 Ga/Gb; II 1D Ex ta IIIC T135°C Da Tamb: -20...+60°C

RPL 55

RADAR LEVEL TRANSMITTER

FEATURES

- Suitable for level measurement in tanks with G1½" threaded connections
- Compact antenna allows mounting in pipes or small tanks
- Antenna extensions allow installation in the presence of insulation or other obstacles
- Continuous level measurement for liquids, pastes and sludges
- Measurement range: 10 m
- Maximum operating pressure: 3 bar
- 2/4 wire technology
- Radar pulses at 26 GHz (K band)
- ATEX certification II 1 G/D Ex ia IIC T6...3 Ga/ Ex ia IIIC T76°C...T146°C

TECHNICAL SPECIFICATION

Maximum measuring range	10 mt
Accuracy	± 10 mm
Resolution	1 mm
Frequency range	K band (26GHz)
Housing / antenna material	Aluminium; PVDF
Mechanical installation	Threaded G1½"
Degree of protection	IP67 / IP68 (sensor)
Electrical connection	Pressure terminal blocks
Operating temperature	PVDF antenna -40...130°C
Operating pressure	-1...3 bar
Power supply	24Vdc; 230Vac
Certification	ATEX
Analogue output	4...20mA
Digital communication	HART/Modbus
Calibration	4 buttons or via HART / Modbus
Thermal stabilisation	5 minutes typical
Visualisation	Extractable programming module VL602 (optional) with 4 keys and matrix LCD

RDR 81

RADAR LEVEL TRANSMITTERS

FEATURES

- Non-contact continuous level measurement
- For liquids (max 20 m) and solids (max 10 m)
- 80GHz radar pulses
- Visualisation and configuration on removable display module
- Output: 4...20mA; 2 x configurable relays
- Remote control via smart phone (CHEMITEC APP)
- IP68 Version available

TECHNICAL SPECIFICATON

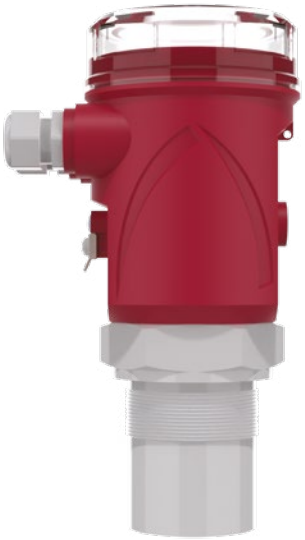
Housing / sensor material	PP
Mechanical installation	2" GAS M (DN80 PP flanges optional)
Degree of protection	IP67 (IP68 optional)
Electrical connection	Terminal blocks or waterproof connector IP68 (optional)
Operating temperature	-20... +60°C
Maximum operating pressure	3bar
Power supply	24Vdc;12Vdc
Absorbed power	5W peak; 2.5W average
Analogue output	4...20 mA, max 750 ohm
Relay in output	N° 2 3A 230 Vac (n.a.)
Digital communication	Modbus RTU
Maximum measuring range	0.05...20 mt
Accuracy	Measurement deviation ± 5 mm
Calibration	Vers. IP67 display opt. – 2 buttons – modbus – Bluetooth Vers. IP68 display – modbus – Bluetooth
Visualisation	VL620/1 module (opt.) with 4 keys and LCD

RDR 75

RADAR LEVEL TRANSMITTERS

FEATURES

- Non-contact continuous level measurement
- For liquids (max 20 m) and solids (max 10 m)
- 80GHz radar pulses
- Visualisation and configuration on removable display module
- Output: 4...20mA; 2 x configurable relays
- Remote control via smart phone (CHEMITEC APP)



TECHNICAL SPECIFICATON

Housing / sensor material	PC / PP wet part
Mechanical installation	2" GAS M (DN80 PP flanges optional)
Degree of protection	IP67
Electrical connection	Pressure terminal blocks
Operating temperature	-20...+60°C
Maximum operating pressure	3 bar
Power supply	24Vdc
Absorbed power	5W peak; 2.5W average
Analogue output	4...20 mA, max 750 ohm
Relay in output	N° 2 3A 230Vac (n.a.)
Digital communication	Modbus RTU
Maximum measuring range	0.05...20mt max for liquids
Block distance	0.05 m
Accuracy	Measurement deviation ± 5mm (If distance < 250 mm ± 10 mm)
Calibration	4 buttons or via Modbus RTU or Bluetooth via dedicated app
Visualisation	VL601 programming module (optional) with 4 keys and matrix LCD

ECHOSMART™

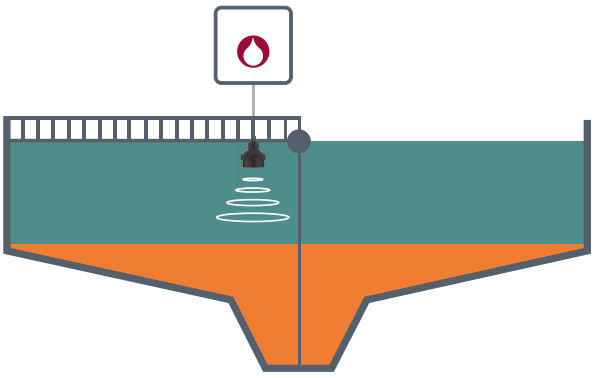
SLUDGE INTERFACE LEVEL METER

FEATURES

- Superior signal control and performance of control algorithms
- Flexible combinations between sensor, control unit and power supply unit
- Communication via RS-485 or Ethernet
- Large display with intuitive screens for quick parameter entry
- Soft-key operation
- Initialisation and automatic calibration for quick start-up with no process interruption
- Up to 16 EchoSmart™ sensors can be connected in a network with a single EchoSmart™ controller for optimised operation and significantly reduced costs
- Zigbee's "self-healing" mesh technology eliminates unnecessary piping and wiring costs

APPLICATIONS

- Wastewater
- Miming industry



SUBMERGED SENSORS

- Network interconnection of up to 128 EchoSmart™ sensors

TECHNICAL SPECIFICATIONS

Components	Sensor	Control unit
Measuring range	0.305...10.0 m	–
Measuring principle	Ultrasonic immersion	–
Measuring interval	Adjustable	–
Resolution	3.05 mm at 3 m	–
Accuracy	0.03 m at 3 m	–
Operating temperature	1...52°C	–
Calibration	Factory calibrated; Adjustable speed of sound	–
Display	–	Monochrome graphic backlit 320x240 pixels; visual area 92x122 mm
Material	ABS and epoxy	320x240 pixels ; visual area 92x122 mm
Self-cleaning wiper	Silicone (optional)	–
Environmental conditions	–	- 40...60°C
Power supply	15 VDC	Polycarbonate NEMA 4X with IP65 protection
Power	3W with wiper 6W	65 W (fuse)
Relay (optional)	–	Four 10A at 250 VAC; 10A at 30 VDC
Mounting	Fixed or flexible	Wall or pipe
Dimensions	Standard 62x75 mm With wiper 146x75 mm	235x229x115 mm
Weight	Standard 1.02 kg With wiper 1.25 kg	Approx. 1.36 kg

KPL

HYDROSTATIC LEVEL TRANSMITTERS

FEATURES

- Superior technological performance in terms of overpressure, small temperature drifts, high stability and accuracy
- No separation liquid between the membrane and the pressure sensor

APPLICATION

- Drinking water
- Industrial water

TECHNICAL SPECIFICATION

Measurement	From 0.1 bar (1mH2O) to 20 bar (200mH2O)
Accuracy / stability	±0.5 % f.s.
Operating temperature	- 20...+70°C
Output signal	4...20mA
Power supply	10...36Vdc with two wires
Material	Body and membrane AISI316L
Protection grade	IP68
Dimensions	Sensor submerged Ø 27 mm; Ø 16 mm on request

KWL

HYDROSTATIC HEAD LEVEL TRANSMITTER

FEATURES

- Designed specifically for wastewater
- Accuracy: ± 0.5%
- Range: 1...200 mH2O
- Immersed sensor protection (wet part): IP68
- Power supply: 12...30Vdc (2-wire)

APPLICATION

- Wastewater
- Chemical industry

TECHNICAL SPECIFICATION

Measurement range	From 0...0.4 mH2O to 0...200 mH2O
Operating temperature	-10...+50°C
Accuracy	±0.5 % f.s
Sensor material	Immersed PVC (ø 46 mm)
Capacitive sensor	Golden ceramic membrane
Shielded cable material	PU Ø 7.5 mm
Analogue output	4...20 mA
Power supply	10...36 Vdc (2 wires)

KPT

PIEZORESISTIVE PRESSURE TRANSMITTER

FEATURES

- Suitable for continuous level measurement of liquids, gases and vapours
- Small pressure transducer offers maximum reliability and safety
- Accuracy: ±0.25%
- Cost-effective solution
- Threaded, sanitary and vacuum connections

CPT

COMPACT PRESSURE TRANSMITTER

FEATURES

- Suitable for aqueduct and water-treatment applications
- Accuracy: ±0.2%
- Cost-effective solution
- Threaded process connections
- Capacitive sensor with ceramic membrane
- High mechanical resistance to over-pressure

SPT

PIEZORESISTIVE PRESSURE TRANSMITTERS

FEATURES

- Designed for use in industrial processes
- High rangeability and multiple connection options
- Innovative technology delivers precise measurement and stability over time
- Internal temperature sensor corrects measurement deviations caused by thermal variations
- Accuracy: 0.075%
- Relative and absolute measurement
- Process connection: threaded, male or female and by vacuum
- HART communication
- Parameter setting via display
- Self-diagnosis and fast response time

SDT

DIFFERENTIAL PRESSURE TRANSMITTER

FEATURES

- Especially suited to installations in processes demanding high accuracy and stability
- Capable of measuring very low differential pressures from 1 mbar (10 mm H_2O)
- IP67 rated for protection against dust and water jets
- Fully programmable via backlit matrix display and two external watertight buttons
- Accuracy: 0.075%
- Range: 1 mbar – 20 bar
- HART communication
- Parameter setting via display
- Self-diagnosis and fast response time
- ATEX compliant

ACCESSORIES

IMMERSION SENSOR HOLDER 102

S315 Range

Jointed support and installation

INSERTION SENSOR HOLDER 104

S305 INS • S305/M

BYPASS SENSOR HOLDER 105

PSS8

INSERTION SENSOR HOLDER 106

PSS3 • SPP • SPPFIL

PRE-ASSEMBLED PANELS 107

Paneltec Series

INSTALLATION BRACKETS

DIAGRAM OF ACCESSORIES

With many years of experience, Chemitec has developed a wide range of accessories for the installation of sensors and controllers, which make it easy to install and maintain the measuring system.

1 Protection canopy

2 Measuring device

3 Floor slab with pole h = 600 mm
Floor slab with pole h = 1700 mm

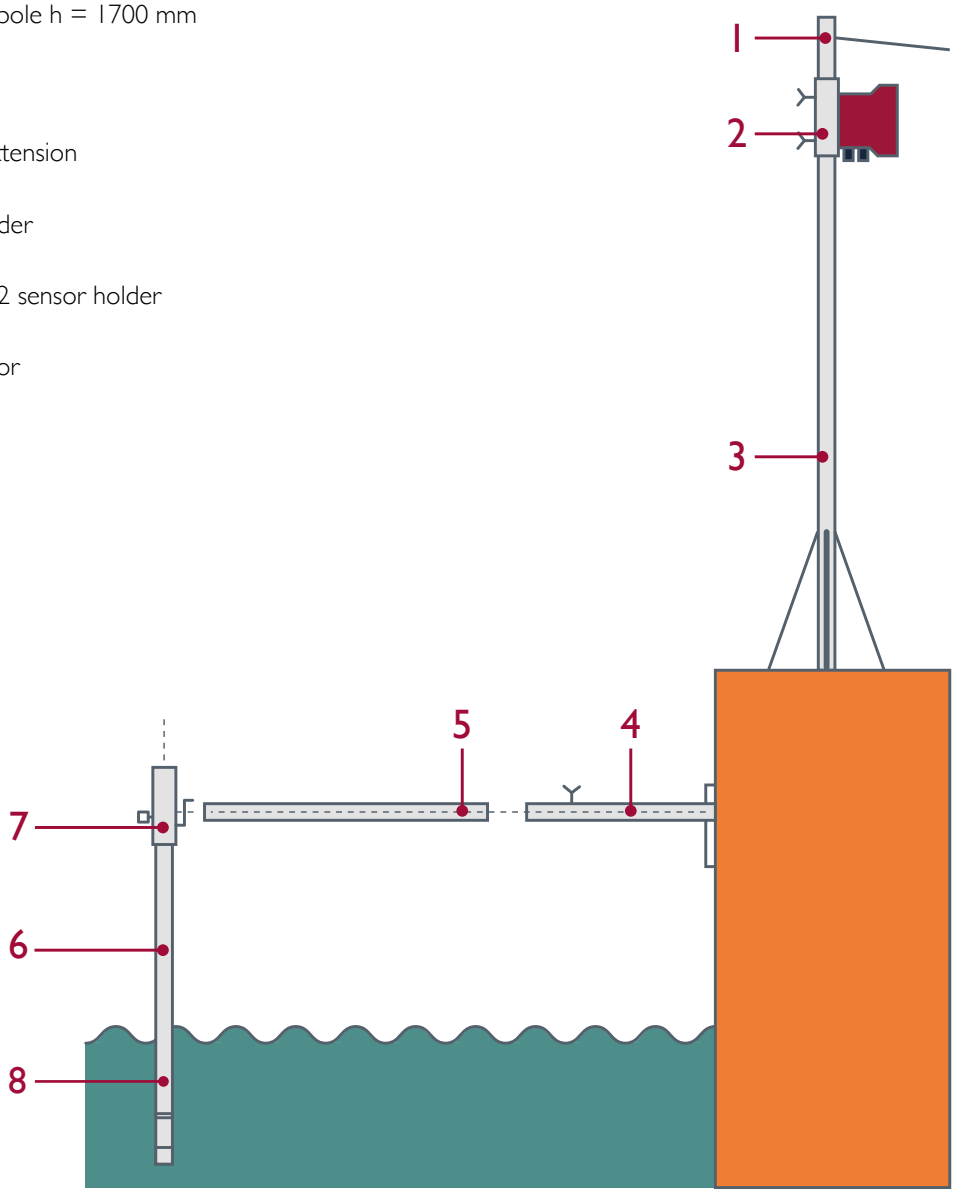
4 Wall bracket

5 L = 700 mm extension

6 D42 sensor holder

7 Support for D42 sensor holder

8 Measuring Sensor



S315

IMMERSION SENSOR HOLDERS

TECHNICAL SPECIFICATION

Model	Material	Operating temperature	Immersion sensor holder
S315	Polypropylene (PP) body Nylon fixing screw NBR O-Rings	max 80°C	S315 for single D42 electrode S315/2 for two D63 electrodes S315/3 for three D63 electrodes
S325/T	Plexiglass tube Polypropylene (PP) protection and cap Nylon fixing screw NBR O-Rings	max 80°C	S315/T with KCl tank S315/T/2 for two D12 electrodes with KCl tank

TECHNICAL SPECIFICATION

Model	Material	Operating Temperature	Immersion sensor holder
S315/F	Polypropylene (PP) tube and cap Nylon fixing screw NBR O-Rings	max 80°C	For turbidity/suspended solids sensors

TECHNICAL SPECIFICATION

Model	Material	Operating Temperature	Immersion sensor holder
S315/O	Polypropylene (PP) tube and cap Nylon fixing screw PVC 45° fitting NBR O-Rings	max 80°C	For S423-C-OPT oxygen sensor and S401/6 DF/DG pH and redox digital/differential electrodes

SENSOR HOLDER SUPPORT

JOINTED & FIXED VERSION

BRACKET FOR SENSOR HOLDERS & ULTRASOUND SENSORS

- SS316 material
- Available with fixed or swivelling arm
- 800, 1400 mm or telescopic length 700...1200 mm arm
- U or L bracket for sensor holders/ ultrasound sensors

JOINTED SUPPORT

- Black PVC articulated parts and sensor holder support
- SS316 plates and fixings
- SS316 fixing screws
- Suitable for supporting Chemitec Ø 42mm sensor holders, the articulated support rotates and tilts for multiple configurations

STANDING POLE SUPPORT

- Standing pole for floor mounting or poolside installation
- Designed for use with Ø 42 or 63mm immersion sensor holder
- Allows for secure, strong mounting

S305 INS

BRACKET FOR INSERTION SENSOR FOR TURBIDITY/SS

FEATURES

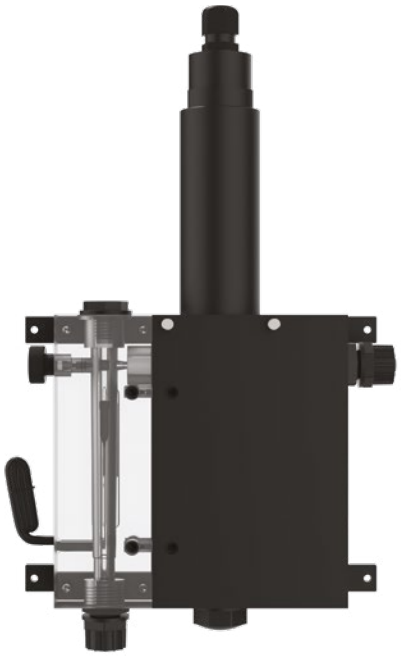
- Used for turbidity / suspended solids sensors
- Mounted onto pipes

TECHNICAL SPECIFICATION

Body material	SS316
Ball valve	DN 40 for extraction of the sensor without interruption of the process
Connection	Welded for mounting on pipe
Complete with	Safety sensor fixing brackets

S305/M

BYPASS SENSOR HOLDER



FEATURES

- Modularity allows alternative sensors holders to be mounted
- No moving mechanical parts
- Easy emptying and cleaning

TECHNICAL SPECIFICATION

Materials	Black PVC and plexiglass body, aluminium plate, NBR seals
Operating Temperature	0...50°C
Maximum operating pressure	6 bar
Flow rate	min 60l/h - max 100l/h

PSS8

BYPASS SENSOR HOLDER

PSS8-A

Bypass sensor holder for three sensors Ø 12mm
Pressure: up to 2 bar
Temperature: up to 50°C
Transparent vessel
pH range: 4,0...10 pH
Sensor types
pH and ORP (redox) 12 mm
pH and ORP (redox) 13.5 mm
Temperature: 12 or 13,5 mm
Conductivity: 12 or 13.5 mm
Oxygen: 13,5 mm

PSS8-AI

Bypass sensor holder for three sensors Ø 12mm
Pressure: up to 2 bar
Temperature: up to 50°C
Black vessel
pH range: 2,7...12 pH
Sensor types
pH and ORP (redox) 12 mm
pH and ORP (redox) 13.5 mm
Temperature: 12 or 13,5 mm
Conductivity :12 or 13.5 mm
Oxygen: 13,5 mm

PSS8-BI

Bypass sensor holder for one sensor Ø 35 or 42mm
Pressure: up to 2 bar
Temperature: up to 50°C
Black vessel
pH range: 2,7...12 pH
Sensor types
Turbidity 42 mm
Oxygen 35 mm

PSS3 • SPP • SPPFIL

PROBE HOLDER FOR DIRECT INSERTION INTO PIPE

PSS3

SPP

SPPFIL

FEATURES

Insertion in-line probe holder with different materials and mechanical arrangements for a wide range of plant applications

TECHNICAL SPECIFICATION

Model	Connection	Sensor connection	Maximum temperature	Maximum pressure	Materials
PSS 3	½" G.M	PG 13.5 or Ø 12 mm	60°C	6 bar	PVC
SPP	1"G.F	PG 13.5	60°C	16 bar	PP and PVC
SPPFIL	¾" or 1"1/4 G.M	PG 13.5	80°C	16 bar	PP

PANELTEC SERIES

PRE-ASSEMBLED PANELS

FEATURES

The wide range of Chemitec products is enriched with new integrated systems for ease of use and operation.

Controllers, sensors and measuring cells are pre-assembled on polypropylene panels. The only required operations are the links to the electric and hydraulic networks.

Paneltec is a modular system that can be expanded to measure up to four parameters with a relevant controller.

The standardised solutions of the Paneltec series meet the needs of the most advanced operators and can be integrated with additional modules for the dosing or analysis of specific parameters, configuring the system according to customer requirements.

WORLDWIDE DISTRIBUTOR NETWORK

Thanks to flexible and reliable instruments, user-friendly solutions, outstanding technical skills and continuous improvement, we are selected as an ideal partner and continue to increase our international presence.

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