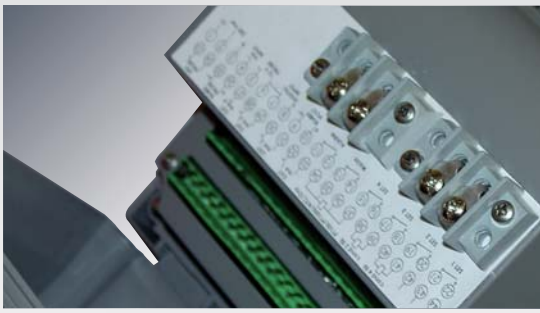
Chemitec



35 *Series*

Process analysers

35 *Series*

Chemitec introduces the 35 Series family of industrial control instruments designed for measuring:

- pH/ORP
- Dissolved Oxygen
- Conductivity
- Turbidity
- Chlorine
- Chlorine Dioxide
- Ozone

Wall mounting version with IP66 protection
(144 x 144 x 120 mm)

Panel mounting version
(144 x 144 x 100 mm)

Panel mounting version
(96 x 96 x 133 mm)

Chemitec devices for process analysis

1 analogue output

- Programmable for measure.
- Output limits are freely programmable between the range of measures.

4 digital outputs

- ON –OFF Set Point: set of the operating range (hysteresis / direction) and of start/stop time 000 ÷ 999 Seconds

Alarm

- Reporting: Instrumental anomalies, minimum, maximum, set point's delay, permanence time (live check)
- Delay time: 00:00 ÷ 59:99mm:ss at minimum steps of 15sec
- Permanence time: 00:00 ÷ 99:99 hh:mm
- Set Point disableing (in case of alarm): Enable / Disable.

Electrode washing

- Programming of the time leg (minimum 15min) and lasting.
- During the washing phase, all digital and analogue outputs are freezed.

Digital input

- To disabile dosages.

RS485 Serial output

- For set-up and real-time data acquisition from remote.

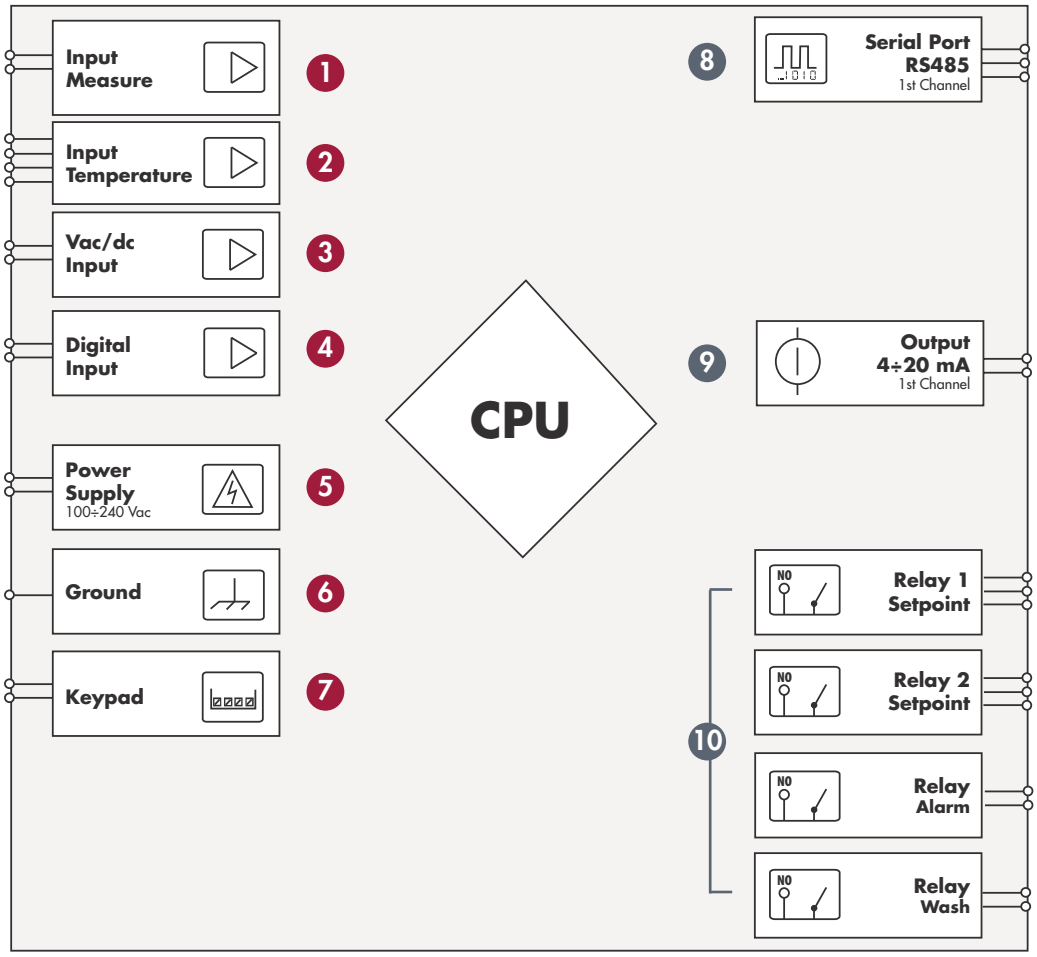
Manual controls

Possibility to simulate all the analogue and digital outputs using the keyboard

Temperature compensation

- Via Temperature sensor PT 100 with 3 o 4 wires, or PT 1000

Electrical connections



Input

1. Chemical Measurement
2. Temperature measurement
3. Input voltage 15 – 30 Vac-Vdc
4. Digital Input
5. Universal input 100 – 240 Vac
6. Earth Potential Input
7. Keypad and Display

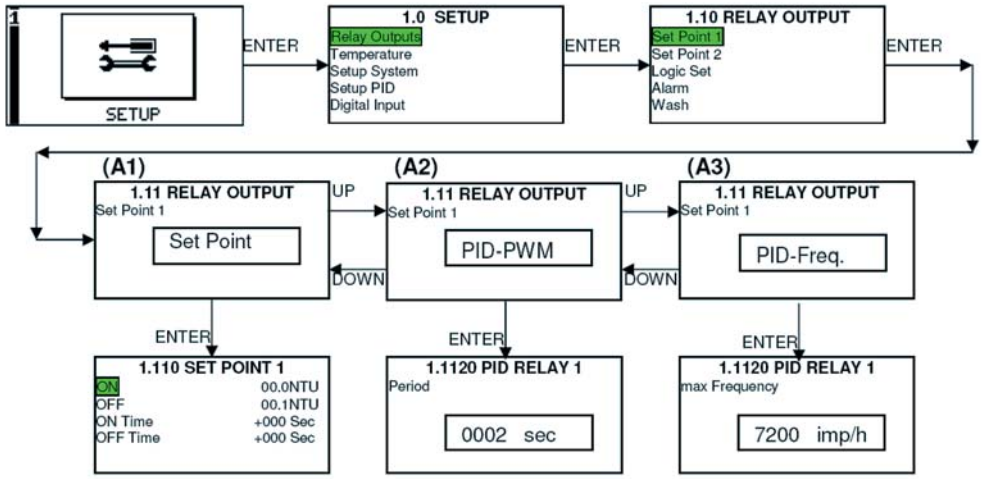
Output

8. SRS485 Serial and USB Ports
9. Current outputs
10. Dry contact relay
    - SetPoint 1
    - SetPoint 2
    - Alarm
    - Probe washing

Simple and user friendly set up.

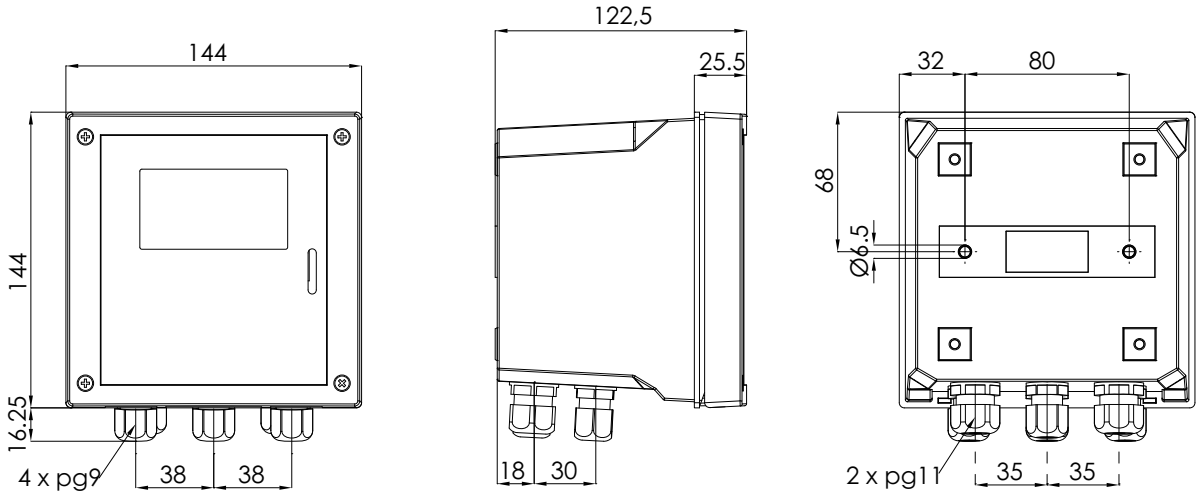
VISUALIZATIONS ON THE GRAPHIC DISPLAY	DESCRIPTION
1 SETUP	SETTINGS MENU All basic parameters for operation logics are set
2 CALIBRATIONS	CALIBRATIONS MENU Calibration Procedure of the electrode
3 mA Set OUTPUTS	DIGITAL AND ANALOGUE OUTPUTS MENU Setting of digital and analogical outputs
6 MANUAL CONTROL	MANUAL CONTROL MENU Manual control and activation of Entries and Outputs

- Main menu graphic icons

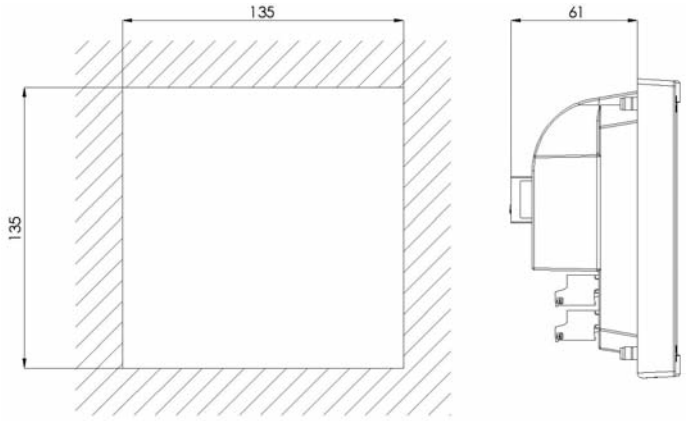


- Interactive and clear interface

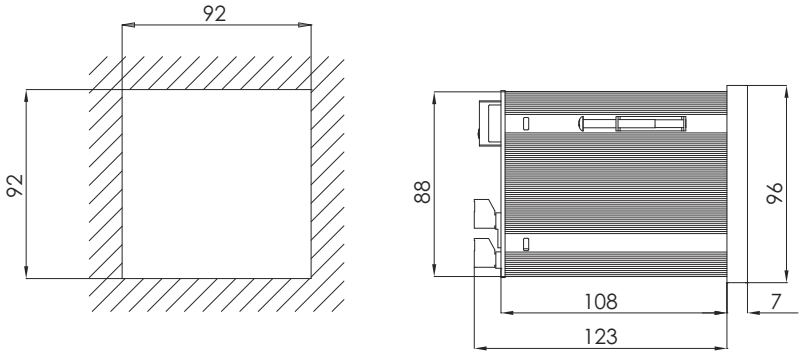
Wall-mounting version IP66



Panel-mounting version 144 x144



Panel-mounting version 96 x 96



3537 pH/REDOX

Range

pH
0 ÷ 14 pH
Resolution 0,01 pH

REDOX
±1500 mV
Resolution 1 mV

pH and ORP Probes

The electrodes are all of the combined type (Measurement/Reference), without maintenance, and are classified by their chemical-physical characteristics, which makes them adaptable to multiple applications. The elements to be considered when choosing an electrode are: measurement range, temperature, pressure, chemical substances present in the process, type of assembly of the electrode within the system.

	Probe Type	pH /ORP Range	Minimum Conductivity	Maximum Temperature	Maximum Pressure	Diaphragm Type	Reference	Connections	Mounting	Body
pH	**S401/BE 1,5**	0 ÷ 14 pH	50 µS	60°C	7 bar	Single Pore	GEL	cable 1,5 m + BNC	standard Ø12	Epoxy 12x120
	S401/BE 6	0 ÷ 14 pH	50 µS	60°C	7 bar	Single Pore	GEL	cable 6 m + BNC	standard Ø12	Epoxy 12x120
	S401/VG	2 ÷ 14 pH	5 µS	80°C	6 bar	Single Pore	GEL	S7	PG 13,5	Glass 12x120
	S408/MEC	0 ÷ 14 pH	50 µS	130°C	16 bar	Single Pore	GEL	S7	PG 13,5	Glass 12x120
	S401/LC	0 ÷ 14 pH	< 0,2 µS	40°C	16 bar	Single Pore	GEL	S7	PG 13,5	Glass 12x120
	S408/POL	2 ÷ 14 pH	5 µS	90°C	6 bar	Single Pore	GEL	S7	PG 13,5	Glass 12x120
	S402/PS	0 ÷ 14 pH	5 µS	80°C	0,2 bar	Annular	KPCL/ KN03	cable 5 m	standard Ø12	Glass 12x230
REDOX	**S406/BE 1,5**	±1000 mV	50 µS	60°C	7 bar	Single Pore	GEL	cable 1,5 m + BNC	standard Ø12	Epoxy 12x120
	S406/BE 6	±1000 mV	50 µS	60°C	7 bar	Single Pore	GEL	cable 1,5 m + BNC	standard Ø12	Epoxy 12x120
	S406/VG	±1000 mV	50 µS	80°C	6 bar	Single Pore	GEL	S7	PG 13,5	Glass 12x120
	S403/PS	±1000 mV	50 µS	60°C	0,2 bar	Annular	KPCL/ KN03	cable 5 m	standard Ø12	Glass 12x230
	S406/POL	±1000 mV	50 µS	130°C	16 bar	Single Pore	GEL	S7	PG 13,5	Glass 12x120

3582 Dissolved Oxygen

Range

Dissolved Oxygen
0 ÷ 20,0 ppm or mg/l - 0 ÷ 200% SAT
Resolution 0,1 ppm o mg/l - 1% SAT

S423/Oxysens

Measurement principle

The oxygen content in liquids is best measured with cells using Clark's principle. These cells generate an electrical current proportional to the oxygen partial pressure which can be evaluated with a suitable measurement converter. In order to prevent interference effects, the Clark's cell is covered with a gas-permeable membrane. The PTFE membranes typically used, however, are mechanically very fragile, with the result that they must be frequently changed to allow reliable measurement. It is difficult to handle such fragile membranes. As a solution, S423 use the OPTIFLOW membrane. This membrane is very mechanically stable and is manufactured as a laminate around a steel mesh. OPTIFLOW membranes are stable under harsh ambient conditions as well as high pressures. This ingenious design allows fast response times to be combined with unusually low flow dependence. In addition to the PG 13.5 versions with their various lengths, they are now also available as 25 mm versions. The S423/OXYSENS sensors have been developed as 100% maintenance-free, low cost sensors for water management and fish farming.

Maintenance free

No membrane or electrolyte substitution is requested. Replace the sensor if it can no longer be calibrated.

Features			
Electrode Material	combination Silver-Platinum	**Body Material**	Stainless Steel 1.4435, PEEK, Silicone, NBR
Electrolyte	Alkaline solution	**Regeneration**	not requested
Membrane	OPTIFLOW™	**Response Time $t_{98\%}$**	max. 60 s a 25 °C, from air to Nitrogen
Temperature Sensor	NTC 22 kOhm	**Temperature Response**	ca. 3.1%/K
BIAS Current	-670 +/- 50 mV	**Liquid velocity measurement**	min. 0.03 m/s
Sensibility	40 ... 80 nA to 25 °C in air	**Influence of flow**	< 5% a 25°C
Stabilisation Time	typical 15 min., max. 1 h	**Oxigene Consumption**	ca. 20 ng/h in air at 25°C
Operating Temperature	0 ... 60 °C	**Residual Current**	< 0.5% current in air
Storage Temperature	-10 ... 60 °C, with water inside electrode cup	**Zero Drift**	< 0.5% of current in air every 2 months at 25°C or in water at stable conditions
Pressure	0 ... 4 bar inserted; max. 0.5 bar total immersion	**Sensitivity drift**	< 10% every 2 months at 25°C or in water at stable conditions
External Diameter	12 mm		
Connections	PG 13.5 – threaded		

3522 Conductivity

Range

Conductivity
0÷20 µS; 0÷200 µS; 0÷2.000 µS; 0÷20.000 µS; 0÷200.000 µS
Resolution 0,01 µS; 0,1 µS; 1 µS; 10 µS

S411-S428 Conductivity Probes

Our range of conductivity probes was specifically designed for industrial applications with our measuring instruments. The various available models allow to cover a very wide range of measurements. Probe versions available with temperature sensor, particular versions with graphite or platinum electrodes, PTFE cell bodies with IP67 connectors. The conductivity measurement is carried out by immersing two metal electrodes into the solution to be measured. The current passing between the two electrodes allows the electrical resistance of the liquid, and therefore its conductivity. NB. All models are guaranteed for a maximum pressure of 6 Bar.

For industrial applications

Model	Range	Constant	Max. Temp.	Max. Press.	Body Material	Electrode Material	Mounting	Connections
S411S	0÷2.000 µS	K=1	50°C	1 bar	PVC	AISI 316	1"GAS	1" connection, no cable
S411	0÷20.000 µS	K=1	50°C	2 bar	PVC	Graphite	1"GAS	Cable joint from 5m to 10m
S411/TEF	0÷10.000 µS	K=1	100°C	2 bar	PTFE	AISI 316	1"GAS	Cable joint of 5m
S411/C(*)	0÷20.000 µS	K=1	50°C	2 bar	PVC	Graphite	1"GAS	Cable joint of 5m
S411/TEF/C(*)	0÷10.000 µS	K=1	100°C	2 bar	PTFE	AISI 316	1"GAS	Cable joint of 5m
S428 K0.1 High range	2÷100 mS	K=0.1	120°C	0,2 bar	Glass	Platinum	-	Four-pole screw connector
S411/U K0.1(*) **High range**	10÷200 mS	K=0.1	120 °C	2 bar	PES	Graphite	½" NPT	Four-pole screw connector
S411/U K1(*) **Middle range**	0÷50.000 µS	K=1	120 °C	2 bar	PES	Graphite	½" NPT	Four-pole screw connector
S411/U K10(*) **Low range**	0.05÷200 µS	K=10	120 °C	2 bar	PES	Graphite	½" NPT	Four-pole screw connector
S411/P K100(*) **Very Low range**	0.04÷20 µS	K=100	130 °C	16 bar	AISI 316	AISI 316	½" NPT	Four-pole screw connector
S411/P K10(*) **Low range**	0÷1000 µS	K=10	130 °C	16 bar	AISI 316	Graphite	½" NPT	Four-pole screw connector

(*) Temperature Compensation with PT 100

3523 Inductive

Range

Inductive

0÷1.000 µS; 0÷10.000 µS; 0÷100.000 µS;
0÷1 Simens (0÷999,999mS)

Resolution 1 µS; 10 µS; 100 µS; 1.000 µS

S410/IND Electrodeless Conductivity Sensors

- Low Cost
- Low Maintenance
- Online, Dip and Tank Mounting Options
- Ideal for Cooling Tower Bleed, Rinse Water & Solution Concentration Applications

The S410/IND Series of Electrodeless conductivity sensors have been developed and engineered to produce a very low cost sensor, without sacrificing performance or quality. This has been achieved by injection moulding the sensor in glass loaded polypropylene. The sensor provides all of the benefits that the method of Electrodeless conductivity measurement provides. It is extremely tolerant of coating on the sensor, probably the greatest problem with conventional conductivity measurement. The S410/IND incorporates temperature compensation and can be mounted online, in a tank wall or large bore pipe or in an open tank using a range of adapters.

Features

Sensor Only	Operating temperature	-5 to 60°C (not freezing)	**Online Assembly**	Material	PVC with Viton seal
	Wetted material	Glass filled polypropylene		Operating temperature	-5 to 60°C (not freezing)
	Temperature compen.	2 wire Pt1000		Dip length	600 or 1200 mm
	Cable	Standard 5 metres		Mounting	Standard bracket or flange option
	Connection	0.5" BSP male		Operating pressure	Vacuum to 6.5 bar (100 psi)
	Protection	IP68			

3593 Chlorine and other oxidants

Range

0÷2 ppm; 0÷5 ppm; 0÷10 ppm; 0÷20 ppm
Resolution 0,01 ppm

S494 Amperometric membrane sensor

Amperometric probe with 2 or 3 electrodes membrane type. Inbuilt Temperature sensor for signal compensation. Suitable for seective Chlorine and other oxidants in drinking water, wastewater, pool water, and process.

Flow cell Installation at constant flow (S305PX)

Model [Measurement]	Range [ppm]	pH Scale [pH]	Resolut. [ppm]	Precis. [% v.l.]	Temp. [°C]	Press. [bar]	Flow [lt/h]	Supply [Vdc]	Dimensions [mm]	Mater.
S494/2/CL_2 [Free Chlorine]	0 ÷ 2.0	4 ÷ 7.2	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/5/CL_2 [Free Chlorine]	0 ÷ 5.0	4 ÷ 7.2	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/10/CL_2 [Free Chlorine]	0 ÷ 10.0	1÷ 14	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/2/CLO_2 [Chlorine dioxide]	0 ÷ 2.0	1÷ 14	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/10/CLO_2 [Chlorine dioxide]	0 ÷ 10.0	1÷ 14	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/2/O_3 [Ozone]	0 ÷ 2.0	1÷ 14	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/5/O_3 [Ozone]	0 ÷ 5.0	1 ÷ 14	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/2/CLT [Total chlorine]	0 ÷ 2.0	4 ÷ 12	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/2/CL Org [Free Chlorine organic/inorganic]	0 ÷ 2.0	4 ÷ 12	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC
S494/2/CL [Chlorite]	0 ÷ 2.0	6.5 ÷ 9.5	0.01	2	45	1	>=30	12÷30	∅25 x 225	PVC

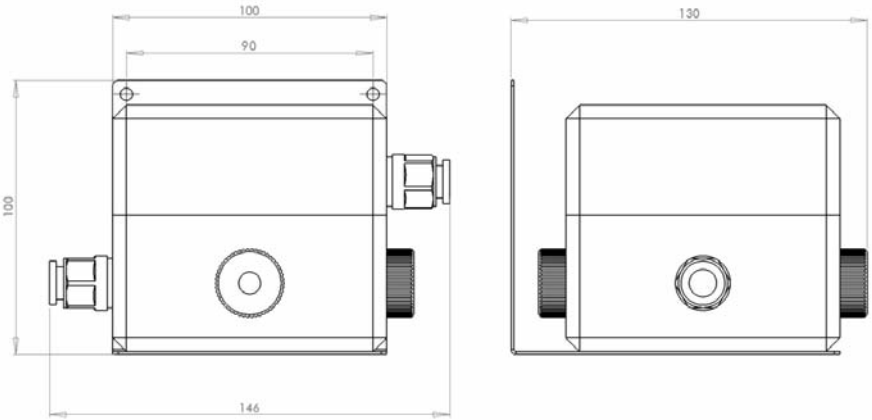
3561 Turbidity

Range

Turbidity
0,00÷40,00 NTU
Resolution 0,2 NTU

S460 Cell turbidimetric

Dati tecnici	
Material	PVC black body
Max.Temperature	60° C
Resolution	0,2 NTU
Fondo scala	0-40 NTU
Max. Pressure	4 Bar
IN/OUT connections	10x8
Projector and sensors	LED High Efficiency and High Brightness



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