



MAIN CHARACTERISTICS

- Up to four simultaneous digital measurements. Turbidity \ Suspended Solids \ pH \ diff. pH \ ORP \ diff. ORP \ Oxygen \ Inductive and Conductive Conductivity \ Chlorine \ NH₄⁺ \ NO₃⁻ \ Low range flowing Turbidity
- J-Box junction box to execute third and fourth measurements
- Temperature measured using the PT100/PT1000 probe
- Programming key pad with 5 keys
- "CAL" Function Key shortcut to the calibration menu
- "GRAPH" Function Key shortcut to the graphs display
- "USB" Function Key for data download on USB
- "MODE" Function Key for self-recognition of probes
- LCD Graphic color (RGB) display 480 x 272 (WxH)
- Internal Data Logger (flash 32 Mbit) able to graphically display graphs and tables of trended measurements.
- PID adjustment
- Two Serial outputs RS485 MOD BUS RTU
- Data download on USB support
- Four Programmable Analog Outputs (with two of the same measurements the third output can be set as average)
- 4 Relay Outlets for intervention thresholds (2 for each measurement) freely programmable
- 1 Relay Outlet for Instrument Anomaly Alarm
- 1 Relay Outlet for Probe Washing or Temperature Set Point
- 2 Digital Inputs for disabling of doses
- 1 4-20mA programmable analog input

Main hardware characteristics of the electronic device

The hardware structure of this device is based on the adoption of new CPU, CMOS with 32 bits developed specifically for the execution of embedded applications.

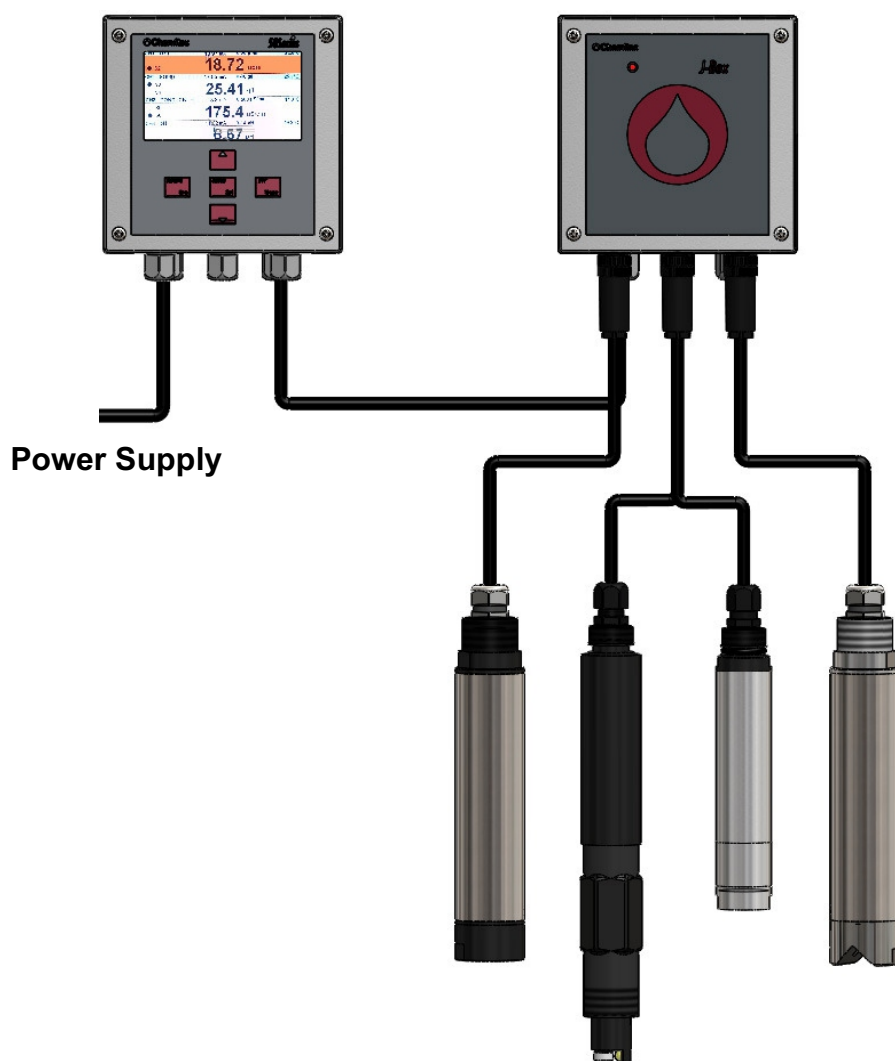
The card uses an EEPROM to store setup data and flash memory to store historical archives and logged events.

The Card has 1 RS485 gate for sensors and 1 RS485 gate (opto-isolated) for local networks used for connections with local communication devices (configuration computer, terminals and remote controls etc).

The card integrates a Real Time Clock (clock with date) that allows the software to storage figures in a chronological order.

The device has been designed to be fitted onto a panel and is built with IP66 protection panel.

Controller maximum capability



Characteristics of the measure

Measurement Ranges (depending on the connected sensor)	See the characteristics of every probe
Temperature Compensation	The probes which provide for the temperature are already self compensated
Visualization	Simultaneous values of up to four measurements, numeric + bargraph, Current outputs, Analogue outputs and Alarms.

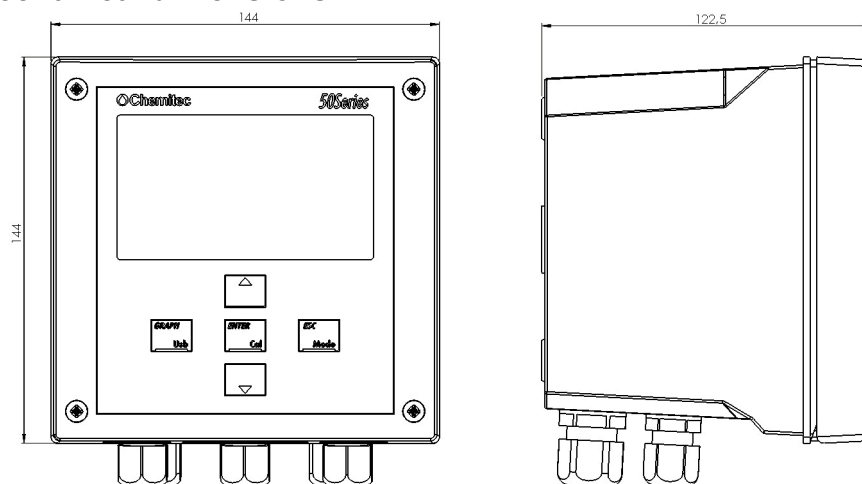
Software features and functions

Data storage	Internal Flash 32Mbit Memory (near to 128000 records). Records interval: 01:00 ÷ 99:99 min Type: Circular (F.I.F.O.) or Filling Able to display the stored data in tabular or graphic form, with indication of max, min and average values of the selected period. Zoom function
PID Control	Functions: P – PI – PID. Activated on the analog or the digital output. Proportional range: 0 ÷ 500% Time of integral: 0:00 ÷ 5:00 min Time of derivative: 0:00 ÷ 5:00 min
4 Analog Outputs	1 for each measure with possibility of PID management
2 Command Digital Outputs Max 2 For each measure	Set Point ON – OFF : working range setting (Hysteresis / direction) and pause/working time setting: 000 ÷ 999 Seconds PID Regulation (only on Set point 1): PWM
Alarm digital output / Alarm digital output / Washing output	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
Digital output for electrode washing or temperature set point	Programming of the time lag Frequency: 00:00 ÷ 24:00 hh:mm minimum time leg: 15 min During the washing phase, all digital and analog outputs are frozen
Digital input	To disable dosages or activate washing cycle
RS485 Serial output	For set-up and real-time data acquisition from remote or for stored data download (using a dedicate-SW) . MODBUS RTU communication protocol
Manual controls	Possibility to simulate all the analogue and digital outputs using the keyboard

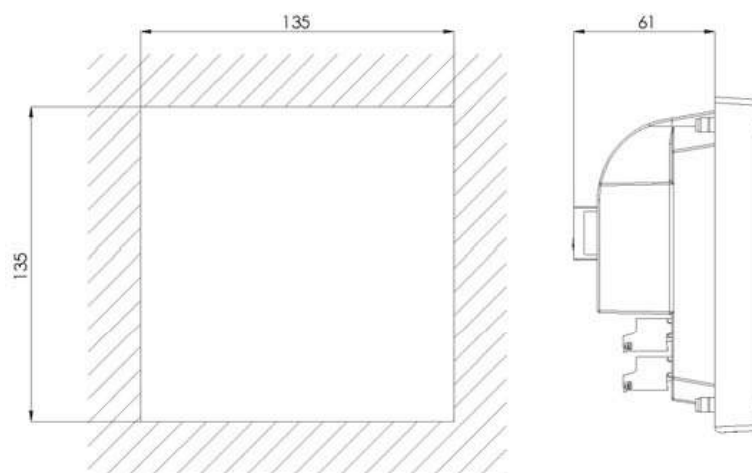
Hardware Features

Visualization	LCD Graphic color display 480(R.G.B.) (W) x 272(H)
Programming	5 bubble-Keys keyboard
Data Logger	Flash 32Mbit Memory (near to 128000 records). 0 / 4.00 ÷ 20.00 mA
Analog Outputs	Galvanic separation: 1KV Optoisolator Maximum load 500 Ohm Second Alarm output: NAMUR 2.4 mA (with 4/20mA Range)
Digital Outputs	Switching Relays Max resistive load 3A a 230Vac Usable as NO contact
Digital Input	Active and already supplied Able to link with a 3 wires - inductive sensor
Analog Input	4-20mA Analogue Input freely programmable
Serial Output	RS485 with 1200÷38400 Baud Rate programmable speed MOD BUS RTU Protocol
Operating conditions	Operating temperature 0÷50°C Storage and transport -25÷65°C Humidity 10-95% (non-condensing)
Power supply/ Electrical protections	Power Supply 100÷240Vac/dc 50- 60 Hz – (Optional 24Vac/dc) – Transformer isolation 4KV – Absorbing average < 7W – Electrical Protection: EMI / RFI CEI-EN55011 – 05/99 – According to UL, not connect to relay outputs a voltage exceeding 115V

Mechanical dimensions

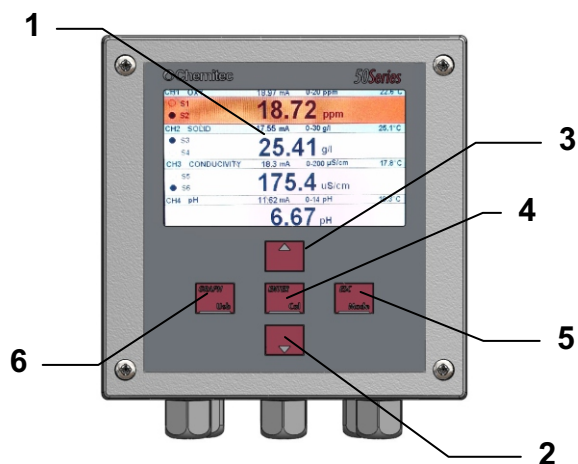


Mechanical Dimensions	50Series Wall IP66
Dimensions (L x H x P)	144x144x122,5mm
Mounting thickness	122,5mm
Material	Grey ABS RAL 7045
Mounting	Wall
Weight	1 Kg
Front Panel	UV resistant Polycarbonate

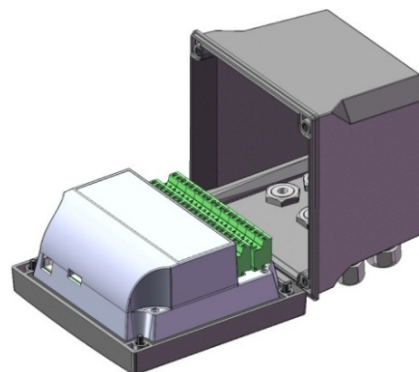


Mechanical Dimensions	50Series Panel 144x144
Dimensions (L x H x P)	144x144x86,5mm
Mounting thickness	61mm
Material	Grey ABS RAL 7045
Mounting	Panel
Weight	0,7 Kg
Front Panel	UV resistant Polycarbonate

Controls, indicators and connections



Front panel, wall mounting version



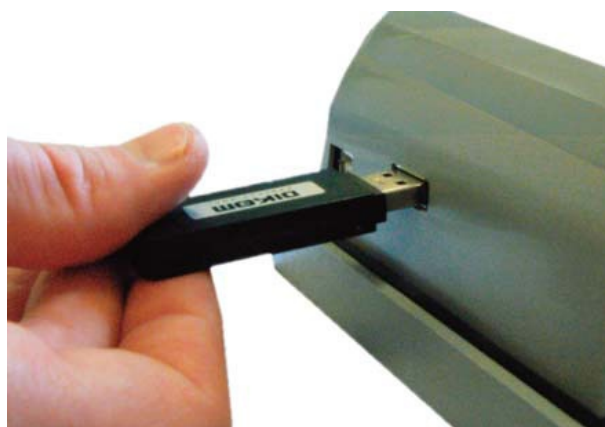
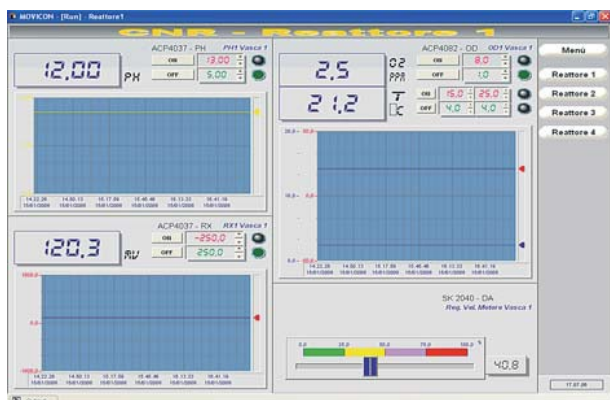
Access to terminal box

1. LCD Display
2. DOWN
3. UP
4. ENTER
5. ESC
6. GRAPH-USB

Modbus-RTU serial interface

Real-time data communication

Download of the stored data on a PC via SW or directly on an USB support



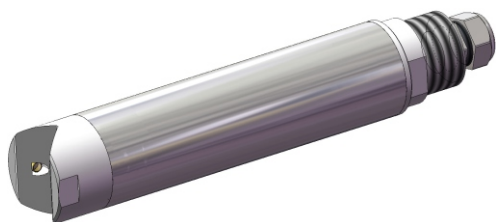
Plug & play sensors



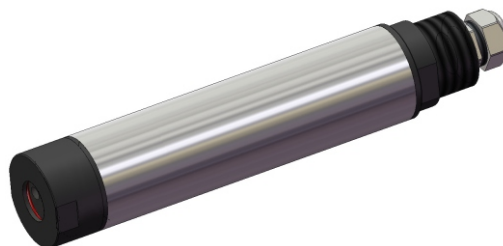
9700830067
S423 C OPT Oxygen optical probe



9700831067
S423 D OPT Oxygen optical probe



9700620063
S461 S Suspended solids probe



9700590063
S461 T Infrared turbidity sensor



9700720097 – 9700730097
S401-S406 Diff pH-ORP differential electrodes



9700770097 – 9700780097
S401-S406 Dig pH-ORP digital electrodes



9700913097
S411 DIG Conductivity probe



9700880067
ISE Probe for Nitrates, Ammonia, etc.

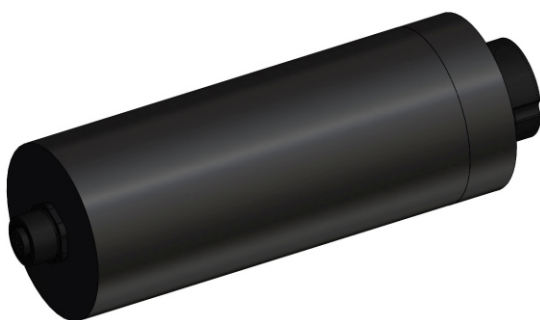
Digitizer kits for Analog sensors



9400411037
AD / 494 / C
Digitizer Kit for Chlorine Probe



9400411021 & 9400411022
AD / PH & AD / RX
Digitizer Kit for pH / Rx probe



9400411036
AD / CD / IND
Digitizer Kit for inductive Conductivity probe



9400411045
AD / CD / COND
Digitizer Kit for conductive Conductivity probe



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