



#### **MAIN CHARACTERISTICS**

- Measurement of Inductive Conductivity
- Measuring of Temperature using the PT1000 probe
- Automatic Compensation of Temperature
- Programming key pad with 5 keys
- "CAL" Function Key to direct access to the calibration menu
- "GRAPH" Function Key to direct access to the graphs of measure
- LCD Graphic display 128x64 with background illumination
- Internal Data Logger (flash 4 Mbit) with the possibility of graphic and table visualisation of measurement trends
- PID adjustment
- Serial outlet RS485 MOD BUS RTU
- Data download on USB key (optional)
- 2 Programmable Analogical Outlets
- 2 Relay Outlets for intervention thresholds
- 1 Relay Outlet for Instrument Anomaly Alarm or Temperature Set Point
- 1 Relay Outlet for Probe Washing or Temperature Set Point
- 1 Digital Entrance for disabling of doses

➤ **Main hardware characteristics of the electronic device**

The hardware structure of this periphery is based on the adoption of extremely new CPU CMOS with 8 bits developed specifically for the execution of the so-called “embedded” applications.

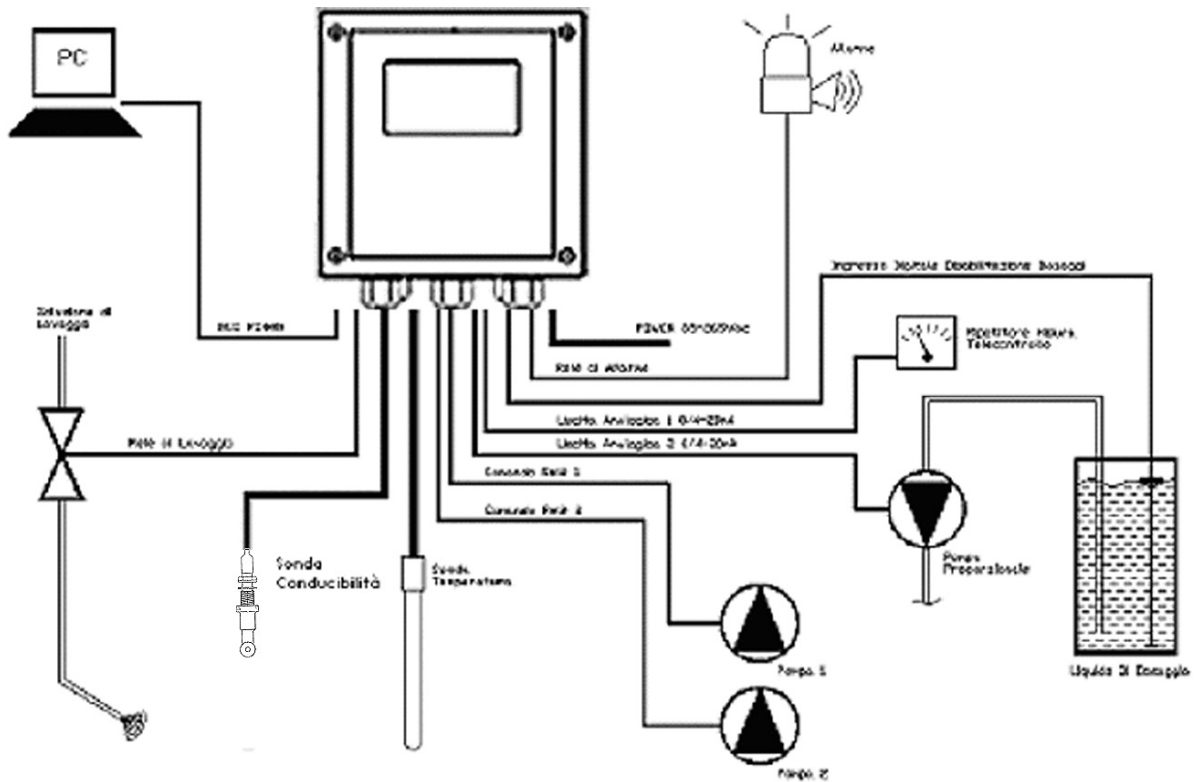
The card uses an EEPROM to store the Set-up data and flash memories for storage of the archives of historical data and LOG files of events.

The Card has 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**

<b>Measurement Ranges / Resolution / Accuracy</b>	Conductivity: 0 ÷ 2000µS – 00.0÷20.0mS - 000.0÷200.0mS - 00.00÷1.00S Resolution ± 0.01/± 0.1/± µS ..... ± 0.01mS Accuracy: ± 1% f.s. <b>NOT RECOMMENDED FOR MEASURES BELOW 1000 µS</b>
<b>Temperature Compensation</b>	<b>Possibility of TDS (Total Dissolved Salts) measure</b> Temperature: 0.00 ÷ +130,0°C Resolution:± 0,1 °C Accuracy: ± 1% f.s. Via sensor incorporated in the Conductivity Probe
<b>Visualization</b>	Simultaneous values of the Conductivitymeasure: numeric + bargraph. Temperature values and analog outputs values in scrolling. Graphic icons showing: digital outputs' state, data storage, washing cycle,

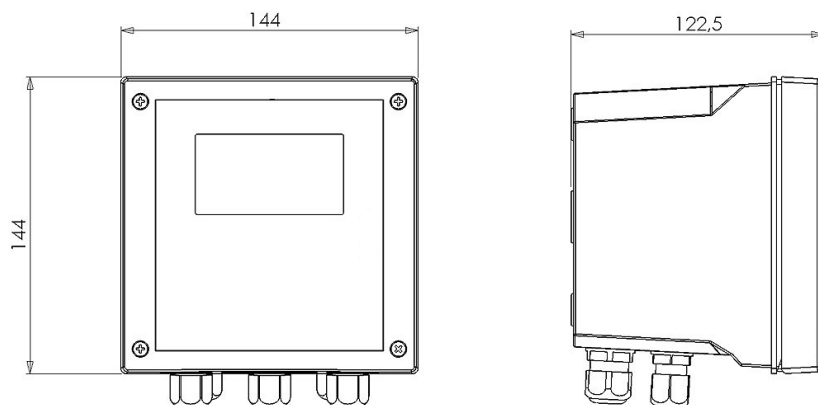
### Software features and functions

<b>Data storage</b>	Internal Flash 4Mbit Memory (near to 16000 records). Records interval: 01:00 ÷ 99:99 min Type: Circular (F.I.F.O.) or Filling Possibility of visualization of the stored data in tabular and graphic form, with indication of maximum, minimum and average values of the selected period. Zoom function
<b>PID Regulation</b>	Functions: P – PI – PID. Activated on the analogue or the digital output. Proportional range: 0 ÷ 500% Time of integral: 0:00 ÷ 5:00 min Time of derivative: 0:00 ÷ 5:00 min
<b>2 Analogue Outputs</b>	Output 1 programmable for Inductive Conductivity Output 2 programmable for Inductive Conductivity / Temperature / PID regulation Output limits freely programmable between measuring ranges.
<b>2 Active Digital Outputs</b>	Set Point ON – OFF : working range setting (Hysteresys / direction) and pause/working time setting: 000 ÷ 999 Seconds PID Regulation ( only on Set point 1 ): Pulse Frequency or PWM
<b>Alarm digital output</b>	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 Relays functioning: Closed / Open
<b>Digital output for electrode washing</b>	Programming of the time leg Frequency: 00:00 ÷ 24:00 hh:mm minimum time leg: 15 min During the washing phase, all digital and analogue outputs are freed
<b>Digital input</b>	To disable dosages or activate washing cycle
<b>RS485 Serial output</b>	For set-up and real-time data acquisition from remote or for stored data download (using a dedicate-SW) . MODBUS RTU communication protocol
<b>Manual controls</b>	Possibility to simulate all the analogue and digital outputs using the keyboard

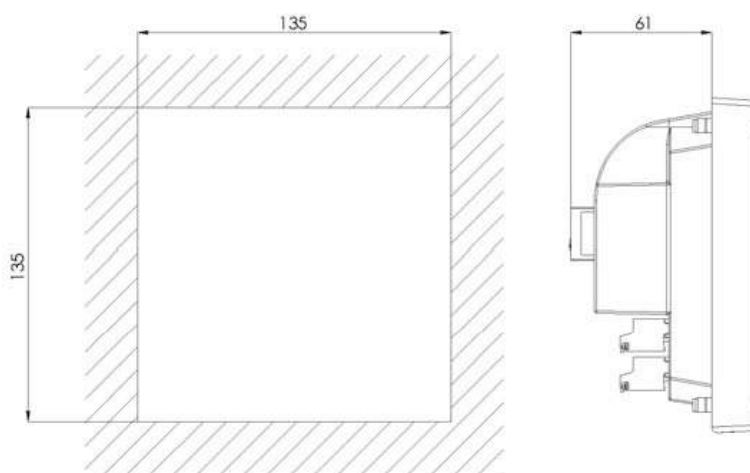
### Hardware Features

<b>Visualization</b>	LCD graphic backlit Display STN 128x64
<b>Programming</b>	5 bubble-Keys keyboard
<b>Data Logger</b>	Flash 4Mbit Memory (near to 16000 records).
<b>Analogue Outputs</b>	0 / 4.00 ÷ 20.00 mA Galvanic separation: 1KV Optoisolator Maximum load 500 Ohm Second Alarm output: NAMUR 2.4 mA (with 4/20mA Range)
<b>Digital Outputs</b>	Switching Relays Max resistive load 3A a 230Vac Usable as NO contact
<b>Digital Input</b>	Active and already supplied Possibility to link with a 3 wires - inductive sensor
<b>Serial Output</b>	RS485 with 1200÷38400 Baud Rate programmable speed MOD BUS RTU Protocol
<b>Operating conditions</b>	Operating temperature 0÷50 °C Storage and transport -25÷65 °C Humidity 10-95% (non-condensing)
<b>Power Supply/ Electrical protections</b>	Power supply 90÷260Vac/dc 50-60Hz – (Optional 24Vac/dc) – Transformer isolation 4KV – Absorbing average < 6W – Electrical Protection: EMI / RFI CEI-EN55011 – 05/99

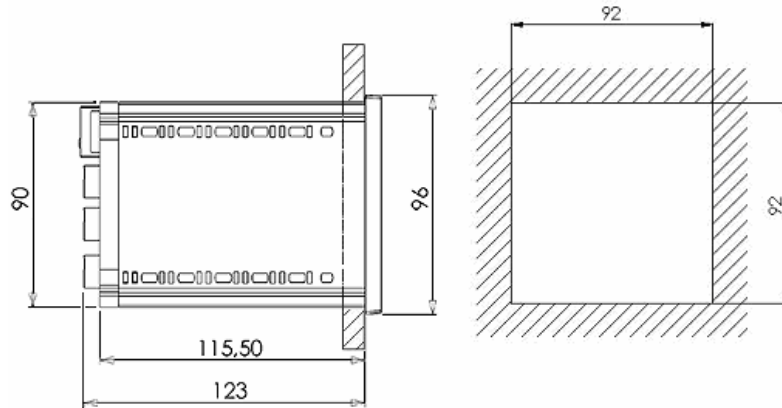
➤ **Mechanical dimensions**



Mechanical Dimensions	4223 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

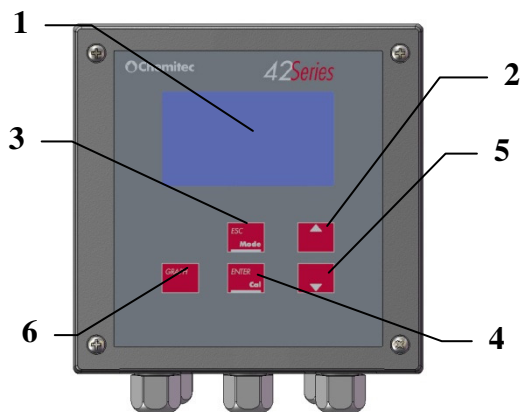


Mechanical Dimensions	4223 Panel 144x144
Dimensions (L x H x P)	144x144x86,5mm
Mounting thickness	61mm
Material	Grey ABS RAL 7045
Mounting	Panel
Weight	0,7 Kg
Front Panel	UV resistant Polycarbonate

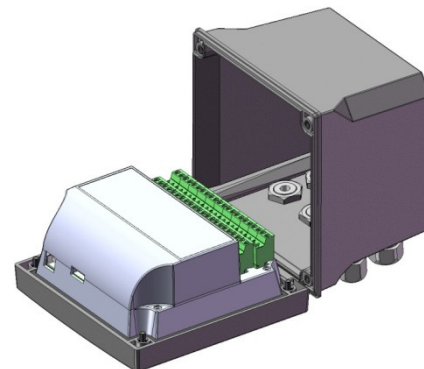


Mechanical Dimensions	4223 Panel 96x96
Dimensions (L x H x P)	96x96x115,5mm
Mounting thickness	130mm
Material	Black ABS
Mounting	Panel
Weight	0.7 Kg
Front Panel	UV resistant Polycarbonate

➤ **Controls, indicators and connections**



**Front panel, wall mounting version**



**Access to terminal box**

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

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