Chemitec
world class water monitoring series 42

4283 Dissolved Oxygen and Temperature

Data Sheet

MAIN CHARACTERISTICS

- Measurement of Dissolved Oxygen
- Measuring of Temperature using the NTC/PT100/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***

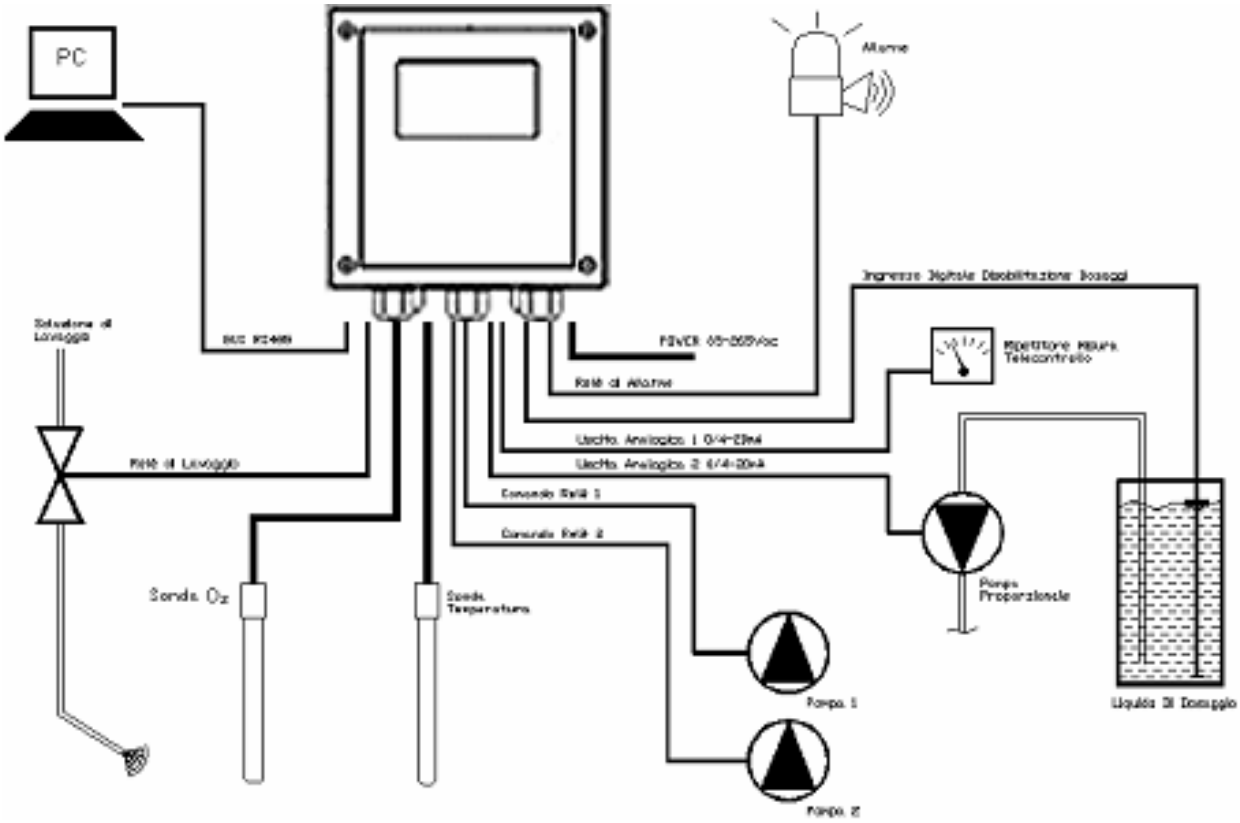
  The hardware structure of this periphery is based on the adoption of extremely new CPU CMOS with 8 bits developed specifically for the execution of the so-called "embedded" applications.

  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

Measurement Ranges / Resolution / Accuracy	Oxygen: 00.0 ÷ 40.0ppm / mg/l O_2 - 000 ÷ 200 % SAT Resolution ± 0.1 ppm/mg/l 1%SAT Accuracy: ± 0,5% f.s. Temperature: 0.00 ÷ +50,0 °C Resolution:± 0,1 °C Accuracy: ± 1% f.s.
Temperature Compensation	Via sensor incorporated in the O_2 Probe
Visualization	Simultaneous values of the Dissolved Oxygen measure: numeric + bargraph. Temperature values and anolgue outputs values in scrolling. Graphic icons showing: digital outputs' state, data storage, washing cycle, alarms

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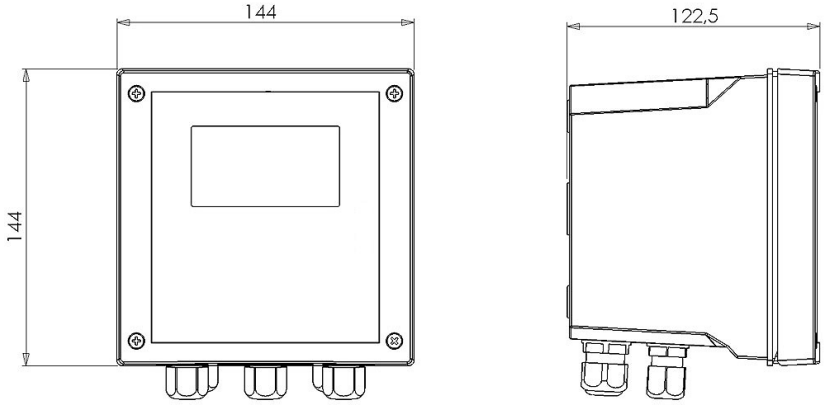
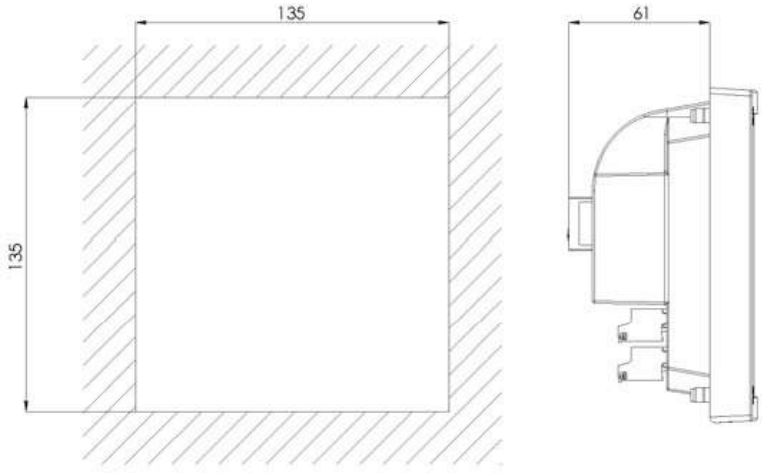
Software features and functions	
Data storage	Internal Flash 4Mbit Memory (near to 16000 records). Records interval: 01:00 ÷ 99:99 min Type: Circular (F.I.F.O.) or Filling Possibility of visualization of the stored data in tabular and graphic form, with indication of maximum, minimum and average values of the selected period. Zoom function
PID Regulation	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
2 Analogue Outputs	Output 1 programmable for Oxygen Output 2 programmable for Oxygen / Temperature / PID regulation Output limits freely programmable between measuring ranges.
2 Active Digital Outputs	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
Alarm digital 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 Relays functioning: Closed / Open
Digital output for electrode washing	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 freezed
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 backlit Display STN 128x64
Programming	5 bubble-Keys keyboard
Data Logger	Flash 4Mbit Memory (near to 16000 records).
Analogue Outputs	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)
Digital Outputs	Switching Relays Max resistive load 3A a 230Vac Usable as NO contact
Digital Input	Active and already supplied Possibility to link with a 3 wires - inductive sensor
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 90÷260Vac/dc 50-60Hz – (Optional 24Vac/dc) – Transformer isolation4KV – Absorbing average < 6W – Electrical Protection: EMI / RFI CEI-EN55011 – 05/99

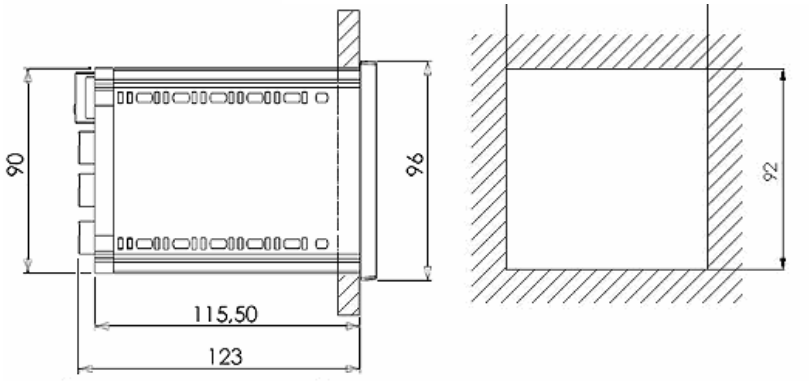
➢ *Mechanical dimensions*



Mechanical Dimensions	4283 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

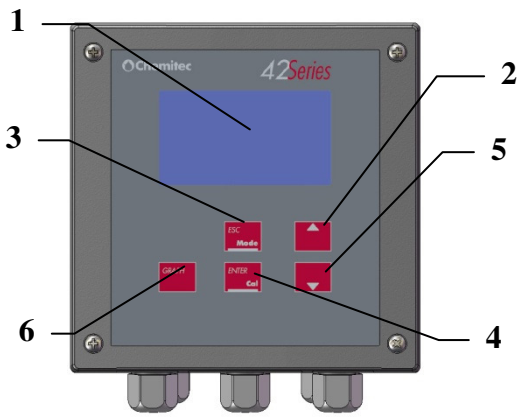


Mechanical Dimensions	4283 Panel 144x144
Dimensions (L x H x P)	144x144x86,5mm
Mounting thickness	61mm
Material	Grey ABS RAL 7045
Mounting	Panel
Weight	0,7 Kg
Front Panel	UV resistant Polycarbonate

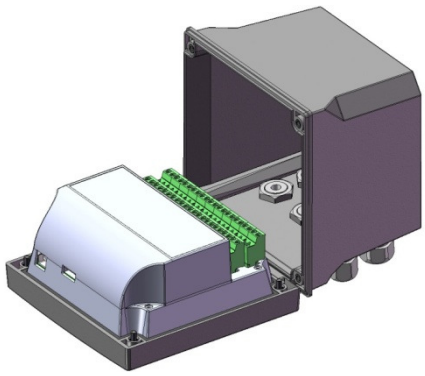


Mechanical Dimensions	4283 Panel 96x96
Dimensions (L x H x P)	96x96x115,5mm
Mounting thickness	130mm
Material	Black ABS
Mounting	Panel
Weight	0.7 Kg
Front Panel	UV resistant Polycarbonate

➢ *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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