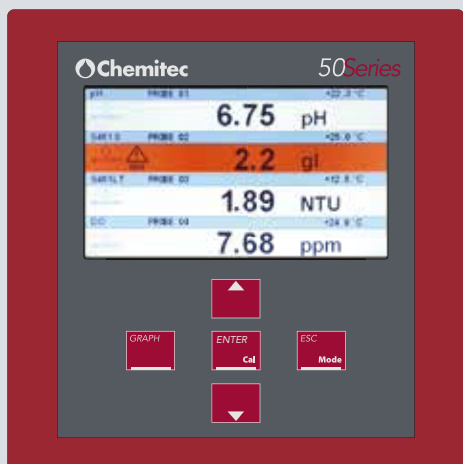# Multi-parametric plug & play control unit for digital sensors

Complete and flexible system for a wide range of applications in water treatment with easy to use software and automatic recognition of sensors: available in three configurations, up to two (2), four (4) and eight (8) simultaneous measurements, freely selectable.

Equipped with two RS485 serial ports: one (1) for sensors with RS485 digital interface and Modbus RTU protocol and one (1) opto-isolated for the connection with the communication devices (setup computer, remote control terminals etc.) of the local networks.

Incorporates a real-time clock which allows the software to archive the data chronologically to the flash memory also used for storing LOG event files.

50 Series

User Interface (HMI)

Programming keypad with 5 bubble-keys with:

- CAL key for direct access to the calibration menu
- GRAPH/USB key for direct access to the measure graphs and for data download to USB pendrive
- MODE key for self-recognition of sensors

Graphic TFT colour LCD resolution 480x272 visible area 95x93mm which allows the simultaneous display of digital measurements

Software & functions

Internal Data Logger (flash 64 Mbit) with the possibility of recording up to 250,000 records, graphical and tabular display. Data download on pendrive USB or via RS485 and dedicated SW C_NET.

Programmable analogue outputs for repeating measurements, PID control and temperature; with the first and the second set on the measurement of the same parameter, the third can be set as the average of the other two.

Digital output relays to adjust set points, instrument anomaly alarm, probe washing or temperature set point.

Analogue Input for perturbative functions or engineered display of additional measuring.

Digital Input for disabling dosage.

Connectable to the whole range of Chemitec digital sensors and expandable to the traditional electrodes/probes through AD Series digitizers.
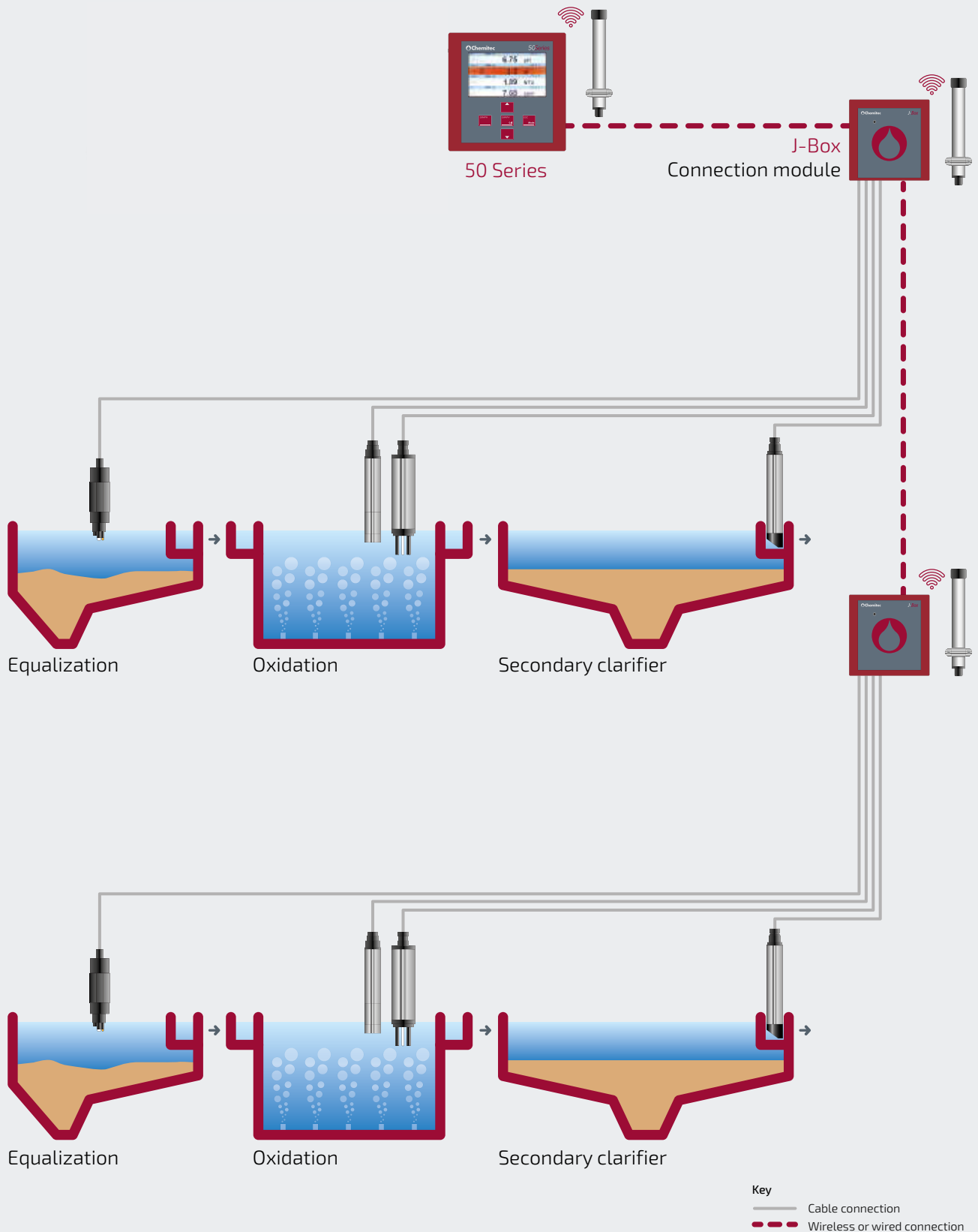
Measures

- pH/ORP
- Dissolved Oxygen
- Conductivity
- Turbidity
- Suspended Solids
- Chlorine
- Chlorine Dioxide
- Ozone
- Chlorites
- Hydrogen Peroxide
- Peracetic Acid
- Nitrates (ISE)
- Nitrates (UV)
- Organic Substances (UV)
- Colour (UV)
- Chlorophyll
- PAH*/OIL (UV-Fluorescence)

*Polycyclic Aromatic Hydrocarbon

50 Series
Possible layout up to 8 sensors

50 Series

J-Box
Connection module

Equalization

Oxidation

Secondary clarifier

Equalization

Oxidation

Secondary clarifier

Key

——— Cable connection

- - - - Wireless or wired connection

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Plug & play multi-parametric instrument

Hardware specifications, software and functions 50 Series

Display	Graphic TFT colour LCD
Resolution	480 X 272 (visible area 95x93)
Languages	Italian, English, French, German, Spanish, Russian
Keypad	5 bubble-keys [6] [5] single keys and [GRAPH/USB] [ESC/MODE] [ENTER/CAL] keys with double functions available
Data Logger	Internal Flash 64Mbit Memory up to 250,000 records with a recording interval of 15 sec up to 120 minutes
Recording method	Circular (F.I.F.O.) or Filling
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
Proportional range	0...500%
Time	Integral and/or derivative 0:00...5:00 min
Analogue outputs	Four (4) programmable ; 0/4...20 mA ; Galvanic separation ; 1KV Optoisolator ; Maximum load 500 Ohm ; Output limits user programmable between measuring ranges
Alarm output	NAMUR ; 2.4 mA [with range 4...20 mA]
Digital outputs	Six (6) ; Switching relays usable as NO ; Maximum resistive load 3A at 230Vac
Set point (4)	Working range setting (Hysteresis/direction) ; pause/working time setting 000...999 Seconds ; PID Control ; Pulse frequency or PWM
Alarm/wash (2)	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 between 00:00...24:00 hh:mm; during the washing phase, all digital and analogue outputs are frozen

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Hardware specifications, software and functions 50 Series

Digital inputs (2) for free contact	To disable dosing or activate wash cycle
Power consumption	5mA max
Absorption	10mA max
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, CAN open, Ethernet, Devicenet, Modbus TCP, Profinet
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]
Transformer isolation	4KV
Power consumption	< 6W
Electrical protection	EMI / RFI CEI-EN55011 – 05/99
Mounting	Wall
Housing material	ABS Gray RAL 7045
Dimensions (L x H x P)	144 x 144 x 122.5 mm
Mounting depth	122.5 mm
Mechanical protection	IP 66
Weight	1 Kg
Operating temperature	0…50°C
Humidity	10…95% non-condensing
Storage and transport	-25…65°C

Communication protocol

Modbus RTU (standard) for set-up, real time data communication or download of the stored data through C_NET dedicated software

Upon request PROFIBUS DP ; CAN open; Ethernet; Devicenet; Modbus TCP ; Profinet

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