PhotoMeter

ISO 9001:2000 CERTIFIED COMPANY

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innovation > technology > future

The monoray **PHOTOMETER** has designed for automated measurement free or total chlorine in primary and waste waters.

Its main applications include water plant conditioning, industrial and domestic water treatment plants, private and public swimming pools.

It is ideal for installation where chlorine dosing is necessary for sanitary reasons and to keep free and/or total chlorine within tolerances as laid down by EEC and national law.

The photometric analysis procedures **(520 nm)** used by **PHOTOMETER** are identical to those used in laboratory analysis.

Housed in a moulded casing with **IP55 protection degree**, the Photometer features two hinged covers to protect the hydraulic and the electronic sections separately.

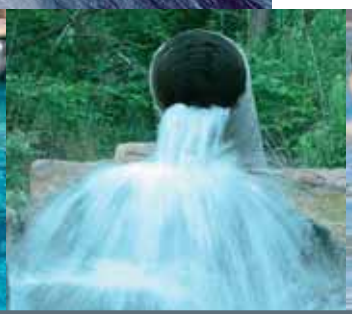
The front panel includes the keypad for operation and control display.

The hydraulic compartment, is shielded from daylight, and contains the photometric cell, the peristaltic pump for reagent dosing and two bottles of chemicals.

PHOTOMETER continuously controls free or total chlorine value and activates:

- via on-off contacts, one or two dosing pumps
- a 0/4÷20 mA output for recording
- one free contact output for remote alarm.






Fields of Applications

PhotoMeter 4

Multi-Parameter Analysis Unit with Free or Total Chlorine ,*

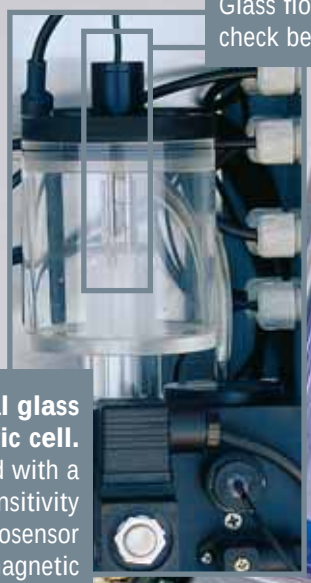
*The **Photometer 4** is able to carry out photometric analysis in an automatic cycle. The a allows high precision measurements.*

Peristaltic pump for the reagents dosage in the photometric cell, equipped with check for the alarm transmission

3-digit and 7- segments of free chlorine, pH, temp

Water flow sensor. Glass flow check becker

Reagent level control

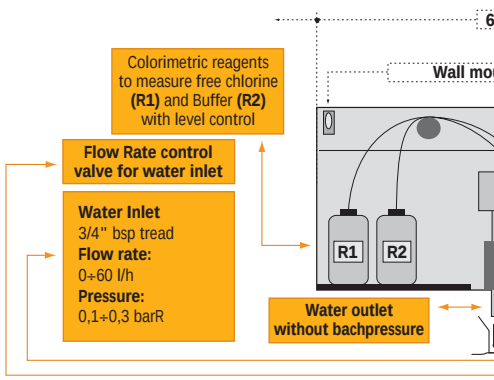


Cylindrical glass photometric cell. Equipped with a high-sensitivity photosensor and magnetic solenoid valve. Automatic rinsing

Alphanumeric LCD dialogues with the i operating instruction

Keypad for easy programming and check co

Colorimetric reagents DPD1 and DPD2 (BUFFER), pre-packed and easy to replace



pH, Redox and Temperature Measures

nalytical method applied (DPD DIETHYL-PARAPHENYL-DIAMINE PHOTOMETRIC METHOD)

** on demand*

display for instant reading
erature and Redox values

display (2x16) to
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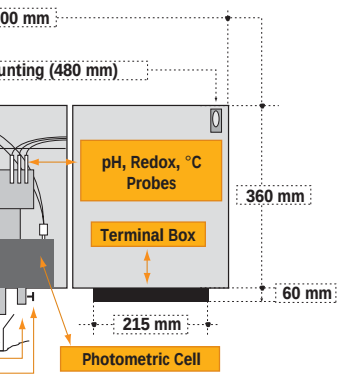
Installation



CHLORINE MEASUREMENT
(PHOTOMETRIC METHOD - DPD DIETHYL-PARAPHENYL-DIAMINE)

Range	0.00 ÷ 5.00 ppm Cl2
Resolution	0.01 ppm Cl2
Display	Luminous Red LED
Set-Points	3 settable
Max. load per set	3A 220V (resistance load)
Current output	0/4÷20 mA 500 Ω

Analysis intervals
Programmable between 3 and 60 min.

Local Alarm and remote system unit:

a) Time dosing for 3 Set-Points

b) Blown Lamp

c) Dirty Cell

d) Reactive Agents Finished

e) No water in the instrument

Start analysis
From Reset key in front panel or external switch by input terminal connection

Chlorination cut-out
Automatic stop by alarm description (a, b, c, d, e)

Analysis time	Continuous

pH MEASUREMENT
(COMBINED SINGLE-TUBE ELECTRODE)

Range	00.00 ÷ 14.00 pH
Resolution	0.1 pH
Display	Luminous Red LED
Set-Points	2 settable
Max. load per set	3A 220V (resistance load)
Current output	0/4÷20 mA 500 Ω

Alarm local and remote system unit as:

f) Time dosing for 2 Set-Points

g) No water in the instrument

pH Correction cut-out:
Automatic stop by alarm description (f, g)

Analysis time	Continuous

REDOX MEASUREMENT
(COMBINED GOLD SINGLE-TUBE ELECTRODE)

Range	± 1000 mV
Resolution	± 1 mV
Display	Luminous Red LED
Current output	0/4÷20 mA 500 Ω
Analysis time	Continuous

TEMPERATURE MEASUREMENT
(NTC PROBE)

Range	0 ÷ 50 °C
Resolution	± 0.1 °C
Display	Luminous Red LED
Current output	0/4÷20 mA 500 Ω
Analysis time	Continuous

DATA COMMON TO THE MEASUREMENTS TAKEN

User dialogue
Settable by an internal jumper on the basic card, to select language: Italian / English

Manual control
The relay for the required Set Point can be activated manually from the control panel

Displaying messages
All the instrument alarms are shown on the alphanumeric display

Programming
All programming data for the instrument is entered via the 4 function keys on the control panel

Power Supply	0 - 110 - 220V 50Hz 60W
Protection degree	IP 55
Weight	11.5 Kg
Dimensions	605x390x240 mm (w x h x d)

PhotoMeter 1

*The **PhotoMeter 1** carries out photometric analysis in an automatic cycle. The analytical method applied to this equipment makes high precision measurements possible, and requires very little maintenance.*

Peristaltic pump for the reagents dosing in the photometric cell, equipped with check for the alarm transmission

3-digit 7-segment digital display for instant reading and thresholds programming

LED check system.
Alarm for: no water, exhausted photometric lamp, dirty photometric cell, reagent 1 and/or 2 bottle empty

Water flow sensor.
Glass flow check becker

Reagent level control

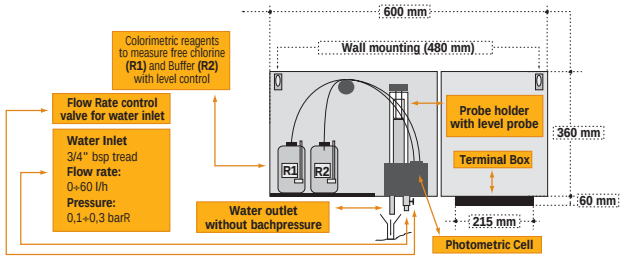
Cylindrical glass photometric cell.
Equipped with a high-sensitivity photosensor and magnetic solenoid valve. Automatic rinse

LED check control for: peristaltic pump start, washing, photometric zero, end of the measurement cycle

Programming push buttons with free set on the entire analysis range

Colorimetric reagents
DPD1 and DPD2 (BUFFER), pre-packed and easy to replace

Installation



Technical Features

Measuring Principle	Photometric (520 nm)
Measurement sensor	Photometric cell in a treated glass cylinder
Possible measurements	Residual Free Chlorine (standard) Total Chlorine (on demand)
Measurement range	0.00÷2.00 ppm di Cl2
Display	3-figure, 7-segment Digital
Accuracy	± 1% del f.s.
Repeatability	98% of the measurement
Ambient working temperature	0÷35 °C
Relative humidity	0÷90%
Temperature of liquid examined	5÷35 °C

Internal haze of liquid examined	≤ 10 FTU
Control threshold	2 ON-OFF (min-max)
Relay contacts	Max. 3A 220V (resistance load)
Current outputs	4÷20mA
Pressure of liquid examined	0.1÷0.3 atm. Stable
Analysis intervals	5 minutes Standard Programmable for 10-15-25-50 minutes
Power Supply	0-110-220V 50Hz
Power rating	30W max
Dimensions	600x360x250 mm (w x h x d)
Weight	about 7 Kg

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