INSTRUCTIONS MANUAL

STIRRER D-13CEM

TEMPERATURE CONTROLLER D-85CEM

SPECTROPHOTOMETER 3500CEM

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Mark CE

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GENERAL INTRODUCTION

The following considerations have as purpose to guarantee a correct reception and use the apparatus, as well as the security of the user. We recommend to read this manual detailed before proceeding to unpack the apparatus and later use.

-This manual should be conserved permanently within reach of the user.

- To unpack the apparatus carefully. Check that the content coincides with the packing list. Notify any eventuality immediately.

- For the correct conservation of the apparatus, it is necessary to avoid their installation in areas with corrosive atmospheres or exposed liquid splashes.

- To avoid the use of the apparatus when the possibility exists to generate mixtures of explosive and inflammable gases.

-The European norm for use 89/655/CEE it exempts the maker all responsibility when it lacks an appropriate maintenance or there is alteration or change of some component.

-The apparatuses that are sent to the Technical *DINKO* I*nstruments* Service they will be p e r f e c t l y clean and disinfected. Otherwise, they will be rejected and returned with freight in charge of the owner.

PACKING LIST

Description	Code	Quantity
Stirrer D-13CEM	1.8000.11	1
Controller D-85CEM	1.8102.01	1
Spectrophotometer 3500CEM	6.3500.10	1
Cuvette holder, thermostatted*	1.9366.02	1
Round glass cuvette	1.9366.00	1
Power pack for D-13CEM	1.0066.09	1
Cable with two connectors of 5 pins		1
Main power cable		1
Instructions Manual and maintenance		1
Warranty		

*Installed in the Spectrophotometer

DESCRIPTION

The temperature controller D-85 is a regulator to impulses type PID for temperature control of the spectrophotometer cuvette with the following elements:

1- Green luminous general switch
2- Digital Thermostat of temperature
3- Red pilot lamp, lit in heating, out when cutting.
4- Temperature probe Pt100, with 1m. cable.
5-Rear connector for temperature probe.
6-Rear connector for the device to control
7-Main connector
8- Fuse 10 Amp, incorporated in the main connector, 230V /50-60 Hz.

SPECIFICATIONS

Controller D -85 CEM Code: 1.8102.01
Range: room to 60.0ºC. Precision: 0,1ºC. Protection: IP60.
Power: 60 W. Size: 185 x 245 x 120 mm
Operation: 230V /50-60Hz.

OPERATING INSTRUCTIONS

1- Place the switch to OFF position. Put line cord into a suitable power-line. Be sure the main is 230V.
To install the interconnection cable of 5 pins between the Controller and the Spectrophotometer 3500CEM to regulate.

2 - Press the general switch ON.

3- Select the set point temperature

INSTRUCTIONS- TEMPERATURE CONTROLLER

Pilot lamp AT

P: process temperature (current) - Red digits
S: temperature to maintain- Set Point-Green digits

Place the general switch of the Heater in the ON position

1-Press << AT to configure the Set Point. The flashing of the digit to be modified corresponding to the Set Point starts.

2-Press ▲ or ▼ to choose the first digit of the Set Point.

3-Press <<AT to select the second digit of the Set Point. Flashing starts. Press ▲ or ▼ to choose the second digit of the Set Point.

4-Proceed in the same way, starting by pressing << AT, for the following digits until setting the Set Point temperature.

5-Confirm by pressing the blue SET key

Heating will start if the Set Point is higher than the current temperature.

AUTO-TUNING

If there is a deviation from the programmed Set Point, it may be necessary to carry out an Auto-tuning in which the regulator automatically selects the most suitable conditions to achieve adequate heating, obtaining the greatest accuracy of which it is capable.

AUTO-TUNING ACTIVATION

Put the container to be heated in the appliance and adjust the Set Point to zero degrees. Check that the temperature probe is properly installed. Place the magnetic rod in the container and activate the stirring at medium power.

1- Enter the Set Point temperature. (S). See previous instructions.

2- Keep the <<AT key pressed for 5 seconds, and the AT light (green) will come on.

3- The process starts automatically. The working conditions must not be modified while it lasts. The setting ends when the green AT light turns off.

However, this controller is calibrated at the factory for precise regulation of the cuvette holder mounted on the Spectrophotometer 3500CEM and it is not necessary to carry out Auto Tuning.

To homogenize both the temperature and the titration reagent in the liquid in the cuvette, it is necessary to place the rod stirrer D-13CEM in the perforation of the sample compartment lid. Connect the stirrer to the main by means of the power pack and choose a gentle agitation regime that does not project liquid outside the cuvette

ORDERING INFORMATION

Temperature controller PID Model D-85CEM with probe, 60ºC. Code: 1.8102.01
Rod stirrer D-13CEM. Code 1.8000.11

Spectrophotometer 3500CEM Code 6.3500.10

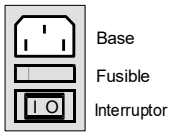
MAINTENANCE-SPARES

Before proceeding to any exam or repair it is necessary to disconnect of the mains.
All initiative should be made by qualified personnel to avoid bigger wrongs.
Trust their apparatus to a technical service authorized by *DINKO Instruments.*

Power pack for D-13CEM. Code 1.0066.09
Glass round cuvette Code 1.9366.00
Fuse 1 amp. Code 1.0005.06
Fan 80x80 Code 1.0042.02
Heating unit for cuvette holder Code 1.8080.01
Cuvette holder, thermostatted Code1.9366.02
Temperature probe Pt 100 Code 1.0055.07
Digital Thermostat PID for Controller D-85. Code 1.0050.03

CHANGE FUSE

The fuse box is part of the supply base located at the rear of the pump. See figure.



Base/Fuse /Switch ON-OFF

Prying with a screwdriver between the central part of the box holder and the top of the supply base to remove the fuse box.
The box is subject not removed completely. There are two fuses.
Press the box inward to restore its original position.

Note

Disposal of Waste Electrical and Electronic Equipment by users in private households in the the European Union.

This symbol on the product or on the packing indicates that this can not be disposed of as household waste. You must dispose of your waste equipment by handling it over to the applicable take-back scheme for the recycling of electrical and electronic equipment. For more information about recycling of this equipment please contact your city office, the shop where you purchased the equipment or your household waste disposal service. The recycling of materials will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and environment.

WARRANTY

WHAT IS COVERED:

This product is guaranteed to be free of defect in workmanship and materials under normal use for a period of one year from the date of purchase by the consumer. During the warranty period, the manufacturer will repair or, at their option, replace at no charge a product that proves to be defective, provided you return the product, shipping prepaid, to an authorized service center.

WHAT IS NOT COVERED:

Instruments subjected to misuse, buses, neglect or unauthorized repair or modifications will be excluded from this warranty. Also excludes expendables, consumables. The liability of *DINKO* is limited to repair or replacement and in no event shall *DINKO* be liable for any collateral or consequential damages or loss.

"CE" DECLARATION OF CONFORMITY

Reg.OF1086 de 2-01-1997

DINTER S. A.
DINKO Instruments c/ Encarnación, 123-125 / 08024 – Barcelona

Declare that the products mentioned in attached list, to which this declaration relates,

conform with the essential safety requirements of the relevant European Directive:

- Low Voltage Directive 73/23/EEC of 19/02/73 modified by Directive 93/68/EEC of 22/07/93.

- Electromagnetic compatibility (EM), standards referring to the generic standards EN 50081-2 /50082-1 / 50082-2:

  NF- EN 55011 Clase A-B Grupo 1. Class A-B Group 1
  NF- EN 55022 Clase A-B. Class A-B
  NF- EN 55014 Clase A-B. Class A-B

Presuming compliance to the requirements of Directive 89/336/EEC.

-Safety for electrical instruments UNE- 603352-(IEC 3352).

Mounting and connecting instructions defined in catalogues and technical data sheets must be respected by the user

Name:	Joan A. Bravo	Josep X. Sensada
Position:	Technical Manager	Quality Manager
Signature:		

Model:
Stirrer D-13CEM. Code1.8000.11
Temperature controller D-85CEM. Code 1.8102.01
Spectrophotometer 3500CEM. Code 6.3500.10

OTROS APARATOS *DINKO* / *OTHER DINKO APPARATUS*

- Agitadores Magnéticos / *Magnetic Stirerrs.*

- Agitadores Orbitales / *Orbital Shakers*

- Agitadores Rotativos / R*otary Stirrers*

- Agitadores de Varilla / R*od Stirrers*

- Baños de Arena / S*and Baths*

- Bombas Dosificadoras / *Proportioner Pumps*

- Bombas de Vacío / Vacuum Pumps

- Bombas Peristálticas / *Peristaltic Pumps*

- Calefactores de bloques metálicos / *Heater Metallic Blocks*

- Colorímetros / *Colorimeters*

- Conductivímetros / *Conductimeters*

- Controladores de Temperatura / *Temperature Controllers*

- Extractor para análisis de carnes / *Extractor for mince analysis*

- Estufas de Infrarrojos / *Infrared Ovens*

- Espectrofotómetros / *Spectrophotometers*

- Fotómetros / *Photometers*

- Giraplacas / *Turn Dishes*

- Kits para análisis de aguas / *Kits for Water Analysis*

- Microscopios / *Microscopes*

- Nefelómetros / *Nephelometers*

- Oxímetros / *Oxygen Meters*

- pH-metros / *pH-meters*

- Placas Calefactoras / *Heater Plates*

-Respirómetros / *Respirometers*

- Temporizadores / *Timers*

- Trituradores-Homogeneizadores / *Blenders-Homogenizers*

- Turbidímetros / *Turbidimeters*