

## User Manual

# Digital Incubator for Self-Contained Biological Indicator

Ref.: 120.001.0001  
Model: DI SCBI

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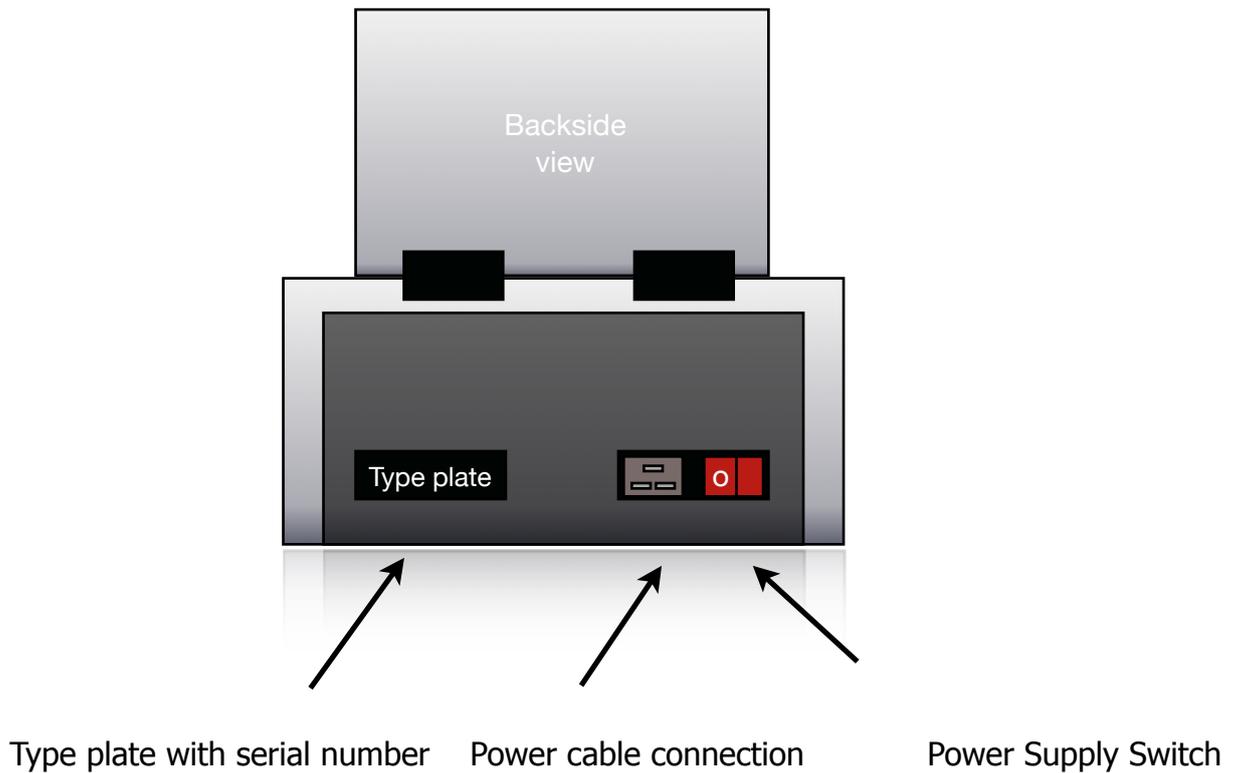
## 1 Installation

In order to ensure an optimal operation of the Digital SCBI incubator, follow the instructions given in this chapter to install it.

### 1.1 Location

The Incubator must be situated in a dry and non-corrosive environment. In addition, it must not be near a source of electro-magnetic radiation (such as motors, centrifuges, etc.) or a source of heat, nor directly placed in sunlight.

It must be located on a flat and spacious surface. Keep a distance/gap of at least 15 cm to the nearest wall at all sides.



## 1.2 Power supply

Before connecting the Incubator to the power supply, some aspects of the electrical supply to which it is to be connected should be observed, as well as carrying out some simple checks.

### 1.2.1 Quality of power supply

It is very important to connect the Incubator to a good electrical system. It should be as exclusive as possible, and it is absolutely imperative for it to have an earth connection for a correct working.

If a malfunctioning of the Incubator is noticed, switch-off the unit and check that it is not near centrifuges or machines containing motors or electro-magnets, which can generate strong electrical noise. In such a case, place the Incubator far from such equipment.

### 1.2.2 Checking the supply voltage and frequency

This Incubator is designed to work at the following voltages:

220 V AC 50 Hz single phase incl. earth connection (Range 90- 270 VAC / 50 – 60 Hz)

**ATTENTION:** Working beyond the range limits will cause the Incubator to function incorrectly and the Incubator may be damaged.

### 1.2.3 Connection to power supply

Once the voltage of the power supply is checked to be corresponding to that of the Incubator, proceed as follows:

Check that the switch is in the OFF position.

Connect the power cable, first to the apparatus, then to the electrical power supply.

Put the power supply switch in the ON position.

## 2 Operation of the incubator

### 2.1 The controls

Below you see the front control panel of the Incubator. Please read and check the controls.

Displays:

- |            |  |
|------------|--|
| a) Display | Display the menu and process parameters                              |
| b) Power   | Is light up at all times when the main switch is switched on         |
| c) PWM     | Will constantly light while heating up, blinking at maintaining temp |



Controls:

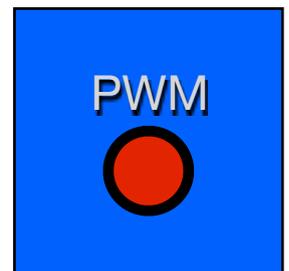
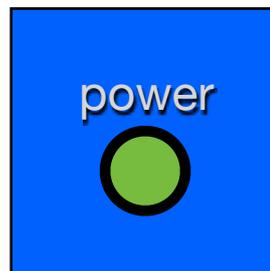
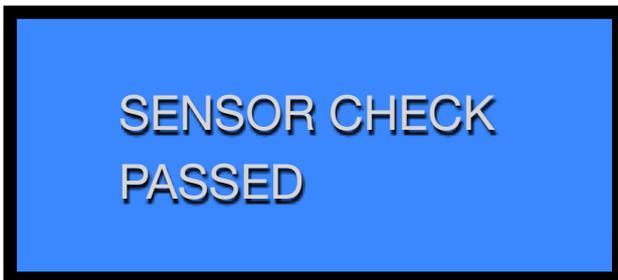
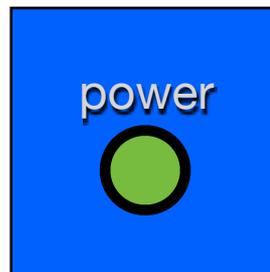
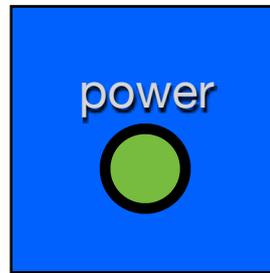
- |                        |   |
|------------------------|---|
| 1) Start / Stop button | To start or stop the incubation count-down  |
| 2) T1: STEAM SCBI      | To select the STEAM SCBI process parameters |
| 3) T2: EO SCBI         | To select the EO SCBI process parameters    |
| 4) T3: Plasma SCBI     | To select the Plasma process parameters     |
| 5) Set                 | Not used by users.                          |

## 2.2 Operation of the Incubator

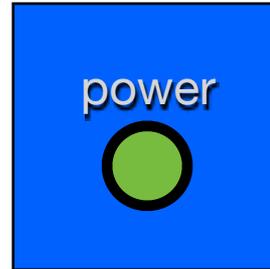
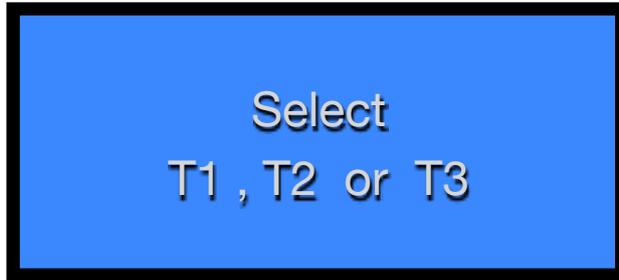
At switch on the Incubator the following screens will be presented:

Welcoming screens.

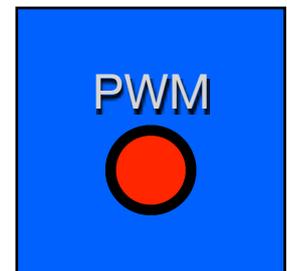
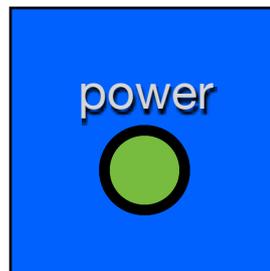
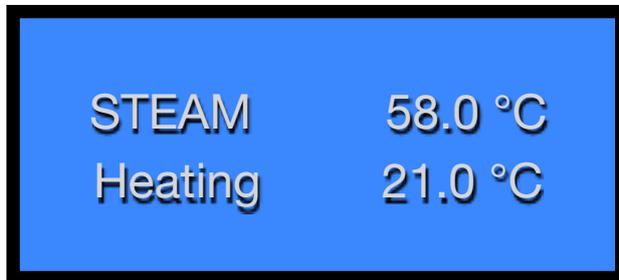
These are shown after each other while the micro-processor is starting and sensors are checked.



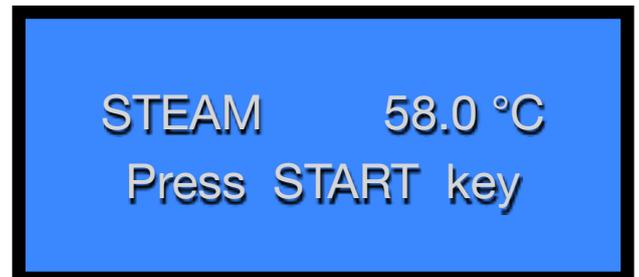
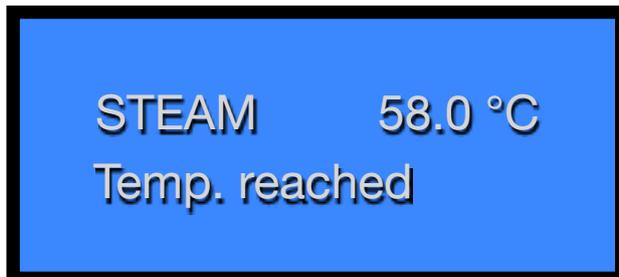
After the opening screens have passed the following screen is presented. It invites you to make a selection from T1, T2 or T3. Just press one of the three required Incubation cycle by the respective push buttons.



After you selected T1 the screen will show you the selected Incubation cycle and starts heating up or cooling down to the required temperature. Heating up will take only 5 minutes when the surrounding temperature is around 20 degrees Celsius. During heat up the PWM Led will continuous light. Cooling down is costing about 30 minutes from 58 to 37 degrees Celsius as the complete block need to cool down. Please keep the cover open to let the aluminum black cool off more rapidly.



Once the temperature has been reached the display will show you two intermitting messages i.e. 'Temp. reached' and 'Press START key'. Once you placed all SCBI and closed the cap you may press the START key to start the incubation timer.



After the incubation process started the following screen is displayed until the end of the incubation time has reached. The Time is counting back.



After the Incubation time has been reached, timer is 00.00.00 an audible alarm starts beeping until the Start/Stop button has been pressed.



The display is returning to the selection screen again.

### 3 Warranty

We have paid much attention to the Incubator while producing them. They have undergone 24 hours of testing before packing them. The packaging has been specially developed in order to guarantee a delivery to our customers.

Please check the carton upon receipt. When any damage is visible report this on the delivery note of the forwarder upon receipt. Later claims of broken or damaged packaging cannot be claimed afterwards with most of the forwarders.

Upon receipt please check the content carefully. Only complaints reaching us within 24 hours after receipt will be taken into account.

The Incubator has a 1 year warranty on defective parts by exchange. Please keep the original packing for future use.

#### 4. Calibration of Temperature

The Incubator have been calibrated in our workshop before our internal testing and before shipment. Normally a calibration is not necessary within 2 years after initial calibration however your quality system may require a calibration every year.

The following procedure may only be performed by expert technicians to ensure that no failure incubation will take place after false calibration.

- 1) Switch OFF the system
- 2) Press SET and T3 keys simultaneously and switch ON the system.
- 3) Then the system prompts for a password. Immediately release the keys.
- 4) Now enter password as T1, T2, T3 and SET.

The system enters calibration mode.

- 5) The default value is 610 - 613 counts.
- 6) Place a digital thermometer in the well and monitor the thermometer for 10 minutes.

Now the system will reach control mode.

- 7) Increment/decrement the ADC counts using UP/DOWN arrow key such that the temperature settles at 37°C.

#### NOTE:

If the thermometer shows 36 °C then decrease the set point to 10 times.  
Each decrement is approx. to 0.1 degree. Do VICE VERSA if temperature is above 37 °C.

- 8) Please carry out the calibration very slowly since it takes ½ hour to calibrate the system.
- 9) Once calibration is complete, press the SET key to save the calibrated value.
- 10) Now switch OFF and switch ON the system after 3 seconds.
- 11) With this the system is calibrated to 37 °C.

## Certificate of Conformity

This Digital Incubator DI- SCBI has been designed and tested in accordance with the current European directives applicable for these kind of laboratory equipment.

### To whom it may concern

In accordance with European directives 2006/95/EC (Low voltage directive) and 2006/42/EC (EMC directive) we hereby declare that the listed products conform to the published specification and complies with the requirements of the following European Standards and to their current amendments.

- ★ BS EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements
- ★ BS EN 61326-3-1:2008 Electrical equipment for measurement, control and laboratory use. EMC requirements. Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety). General industrial applications

Further to these type tests each individual unit has been undergoing 24 hours of works test and finally a works calibration to meet the 1,0 degrees Celsius accuracy.

Based upon the above mentioned tests and their results the Digital Incubator is carrying a CE-mark at the back the unit.

16th June 2012



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Quality Department



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Managing Partner