LACTOSCAN TET combo
Thermostatic device / Dry incubator

Operation manual

1. INTRODUCTION

LACTOSCAN TET combo is very simple to use thermostatic device for incubation of Twinsensor BT and Eclipse 3G tests. The users only have to choose the desired incubation mode.

For safe and dependable operation of this thermostatic device, please comply with the following **safety precautions:**

- Verify that the input voltage printed on the AC Adapter and the plug type matches the local AC power supply.
- Make sure that the power cord does not pose a potential obstacle or tripping hazard.
- Place the incubator on a firm and lever surface.
- Disconnect the thermostatic device from the power supply when cleaning it.
- Follow the instructions in this manual when operating with the thermostatic device.
- Service should be performed by authorized personnel only.

2. Unpacking:

Unpack and verify that the following components have been included:
- LACTOSCAN TET combo;
- Switching AC adapter 12V or 24V;
- Power cord;
- Car/truck lighter connecting cord;
- Additional cover without holes – to be used when the ambient temperature is below 10 °C;
- Instruction manual.

Save the packaging materials. This packaging ensures the best possible protection for the storage or transport of the product.

3. Mechanical parameters:

W x L x H: 90x157x47mm
Weight: 0,650 kg
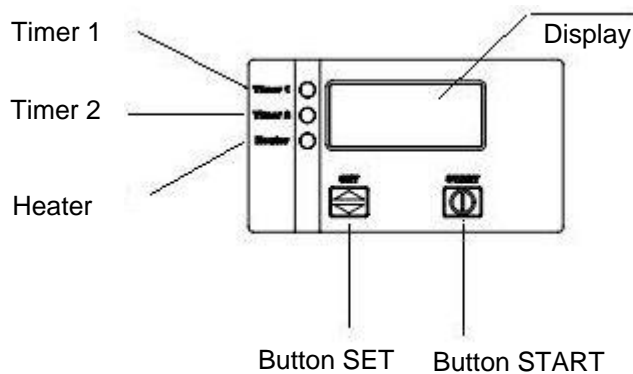Stainless steel cover box

4. Electrical parameters:

LACTOSCAN TET combo can be supplied with 12V or 24V power supply. On customers` request the device is shipped with either 12V or 24V switching adapter.

Switching adapter details:

> **12V switching adapter:**
> Input: 100-240V ~ 50/60 Hz
> Output: 12V --- 3A

> **24V switching adapter:**
> Input: 100-240V ~ 50/60 Hz
> Output: 24V --- 3.75A

5. Overview of display indications and keyboard functions:

> Timer 1 (green) – shows the status of Timer 1 (also in the programming mode).
> Timer 2 (green) – shows the status of Timer 2 (also in programming mode).
> Heater (red) – shows the status of the heater (on-off).
> Button SET – serves to adjust the temperature / time.
> Button START – starts Timer 1 and Timer 2.
> Three digits indication (display) - shows the temperature / time.
> Decimal point – blinks when measuring the temperature.

6. Operations:

6.1. Factory settings:

The thermostatic device is factory set for the following temperature and time ranges in Mode 1 and Mode 2:

	Mode 1 **Twinsensor BT test**	Mode 2 **Eclipse 3G test**
Temperature	40 °C	65 °C
Timer 1	180 seconds	180 minutes
Timer 2	180 seconds	-

7. Switching modes of LACTOSCAN TET combo and starting the incubation:

7.1. Selecting Mode 1:
  - ➢ Switch off the thermostatic device from the power cord.
  - ➢ Press and hold the button **SET**.
  - ➢ Switch on the thermostatic device.
  - ➢ After 3 seconds the device beeps and on the display is written the number "1", the software version "In4" and 400.
  - ➢ Release the button SET.
  - ➢ The device restarts and on the display is the current temperature.
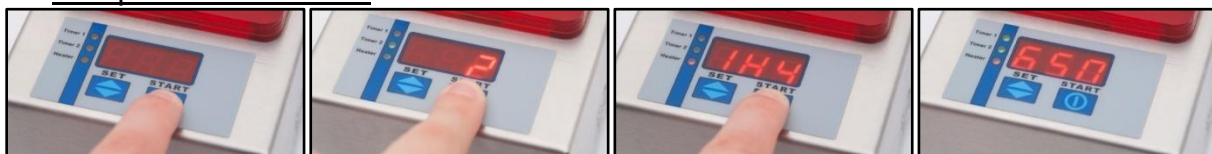
See photos 1-4 below:

1.   2.   3.   4.

7.2. Selecting Mode 2:
  - ➢ Switch off the thermostatic device from the power cord.
  - ➢ Press and hold the button **START**.
  - ➢ Switch on the thermostatic device.
  - ➢ After 3 seconds the device beeps and on the display is written the number "2", the software version "In4" and 400.
  - ➢ Release the button START.
  - ➢ The device restarts and on the display is the current temperature.
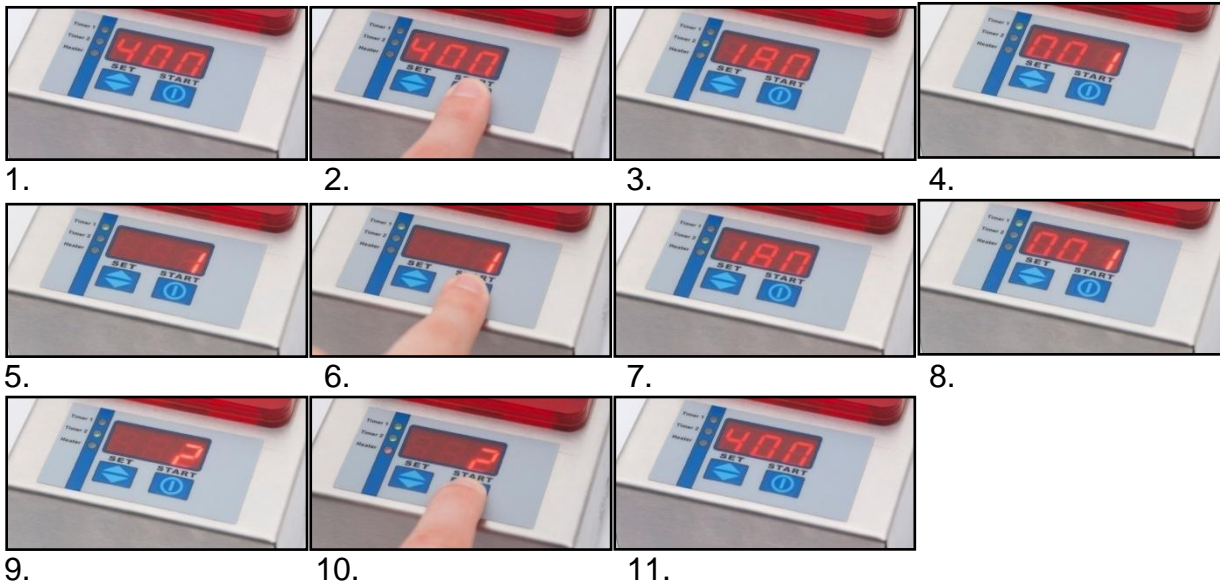
See photos 1-4 below:

1.   2.   3.   4.

After selecting the desired incubation mode, the thermostatic device is ready to be used.

8. Starting incubation:

  - ➢ After selecting the desired incubation mode, wait till the thermostatic device reaches the set temperature for the mode.
  - ➢ Once the temperature is reached, press **START** button to start running Timer 1.
  - ➢ When Timer 1 finishes, the device beeps, on the display is written number "1" and the user has to press the **START** button to start Timer 2.
  - ➢ When Timer 2 finishes, the device beeps, on the display is written number "2" and the user has to press the **START** button to stop the mode.
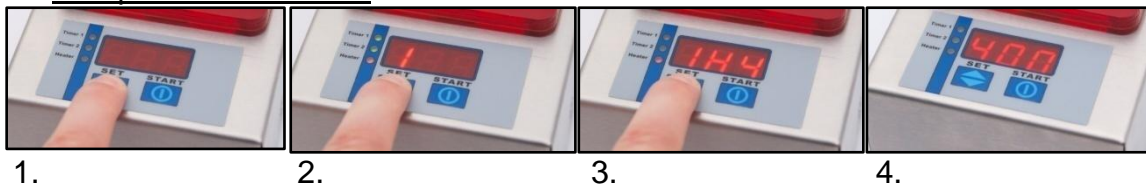
See photos 1-11 below:

1.   2.   3.   4.

5.   6.   7.   8.

9.   10.   11.

9. Programming:

For programming or reprogramming, the user must follow the step below:

9.1. Setting parameters of Mode 1:

9.1.1. Choosing Mode 1:
➢ Switch off the thermostatic device from the Power cord.
➢ Press and hold the button **SET** and keep it pressed.
➢ Switch on the thermostatic device.
➢ After 3 seconds the device beeps and on the display is written the number "1", the software version "In4"and 400.
➢ Release the button SET.
➢ The device restarts and on the display is the current temperature.

See photos 1-4 below:

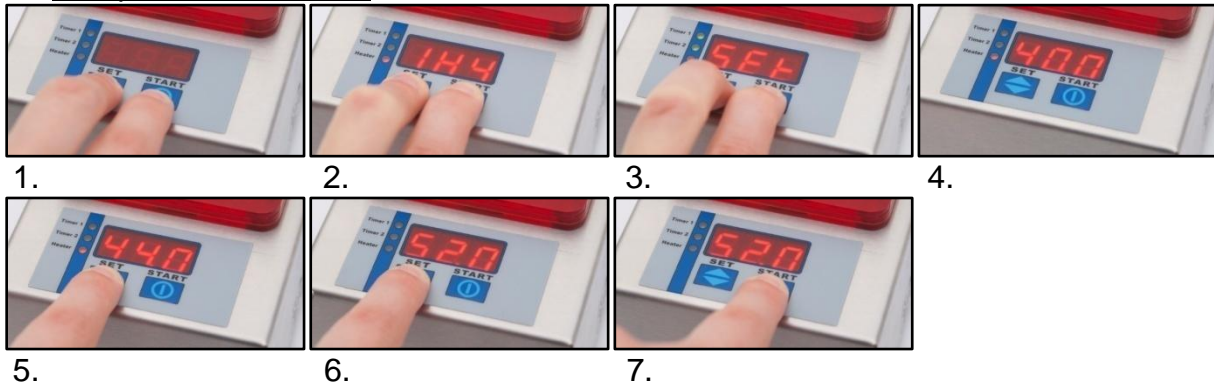1.   2.   3.   4.

9.1.2. Setting temperature for Mode 1:
➢ Switch off the thermostatic device from the power cord.
➢ Press the buttons **SET** and **START** simultaneously and keep them pressed.
➢ Switch on the thermostatic device.
➢ After 2 seconds, on the display is written inscription SET accompanied by a double beep.
➢ Release both buttons.
➢ The display shows 40.0 – this is the initial temperature.
➢ By using the **SET** button, the temperature can be changed upward to 80 degrees.

> ➢ Press the button START to save the adjusted temperature.

See photos 1-7 below:

| 1. | 2. | 3. | 4. |

| 5. | 6. | 7. |

9.1.3. Setting time for Timer 1 of Mode 1:
> ➢ After you have saved the adjusted temperature, on the display is written 001. Use the button **SET** to adjust the desired time for Timer 1. Timer 1 is in seconds. By pressing the button SET the time interval is changed to 1 second.
> ➢ Press the button START to save the adjusted time.

See photos 1-3 below:

| 1. | 2. | 3. |

9.1.4. Setting time for Timer 2 of Mode 1:
> ➢ After you have saved the adjusted time for Timer 1, on the display is written 001. Use the button **SET** to adjust the desired time for Timer 2. Timer 2 is in seconds. By pressing the button SET the time interval is changed to 1 second.
> ➢ Press the button START to save the adjusted time.

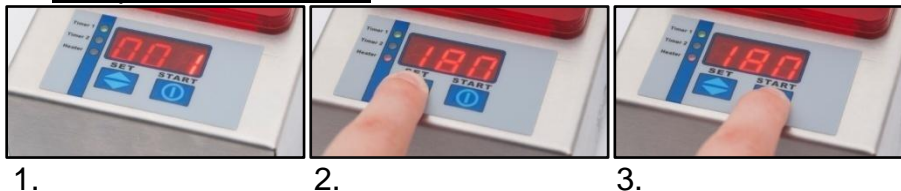See photos 1-3 below:

| 1. | 2. | 3. |

The device beeps and shows the current temperature. Now the temperature and time settings for mode 1 have been saved.
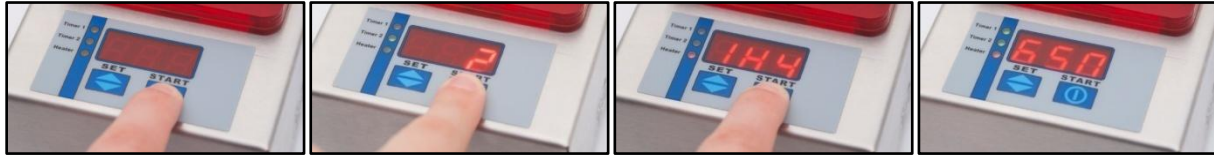
9.2. Setting parameters of Mode 2:

9.2.1. Choosing Mode 2:
> ➢ Switch off the thermostatic device from the power cord.
> ➢ Press and hold the button **START** and keep it pressed.
> ➢ Switch on the thermostatic device.

> ➤ After 3 seconds, the device beeps and on the display is written number "2", the software version "In6" and 400.
> ➤ Release the button START.
> ➤ The device restarts and on the display is the current temperature.

See photos 1-4 below:

1.   2.   3.   4.

9.2.2. Setting temperature for Mode 2:
> ➤ Switch off the thermostatic device from the power cord.
> ➤ Press the buttons SET and START simultaneously and keep them pressed.
> ➤ Switch on the thermostatic device.
> ➤ After 2 seconds, on the display is written inscription SET accompanied by a double beep.
> ➤ Release both buttons.
> ➤ The display shows 30.0 – this is the initial temperature.
> ➤ By using the SET button, the temperature can be changed upward to 80 degrees.
> ➤ Press the button START to save the adjusted temperature.

See photos 1-7 below:

1.   2.   3.   4.

5.   6.   7.

9.2.3. Setting time for Timer 1 of Mode 2:
> ➤ After you have saved the adjusted temperature, on the display is written 001. Use the button SET to adjust the desired time for Timer 1. Timer 2 is in minutes. By pressing the button SET the time interval is changed to 1 minute.
> ➤ Press the button START to save the adjusted time.

See photos 1-3 below:

1.   2.   3.

9.2.4. Timer 2 of Mode 2 is not available:

The device beeps and shows the current temperature. Now the temperature and time settings for mode 1 have been saved.

10. Connecting LACTOSCAN TET combo towards 12V car lighter or 24V truck lighter:

The user can connect the device towards a car lighter voltage 12V or towards a track lighter voltage 24V by using the car/truck lighter connecting cord.

11. Cleaning:

 ATTENTION!
In order not to damage any part of the thermostatic device, please follow the cleaning instructions below.

Clean the **metal cover box** of the thermostatic device with ethyl alcohol and soft cloth.

Clean the **plastic parts and covers** of the thermostatic device with dishwashing liquid, water and soft cloth.

LACTOSCAN Thermostatic device
Data sheet

Model:	LACTOSCAN TET combo
Number of wells:	22 (16 small and 6 bigger)
Compatible test/tube:	Twinsensor BT, Eclipse 3G and Eclipse 3G FARM tests
Temperature range:	40°C to 80°C (±0.5°C)
Working modes:	1st mode: • Temperature: 40°C • 1st time interval: 3 minutes • 2nd time interval: 3 minutes 2nd mode: • Temperature: 40 °C • 1st time interval: 180 minutes • 2nd time interval: 180 minutes
Environmental condition:	Ambient temperature has to be 5°C below the desired set temperature
	Operating temperature: 0 to 40°C
Electrical parameters:	Switching adapter: Input 100 – 240 V ~ 1.6 Amax, 50 ~ 60 Hz
	Power consumption: 25W (12V), 100W (24V) until the necessary temperature is reached, after that 1/10th
Dimensions (W x L x H):	90x157x47 mm
Weight:	0.650 kg
Cover box material:	Stainless steel
Application:	Incubating antibiotic test for raw milk

WARRANTY CARD

LACTOSCAN TET combo

Guarantee period is 1 (one) year after purchasing date. Improper handling, transport and storage will invalidate the guarantee. Guarantee is void if warranty labels are removed.

Serial №

Date of purchase:

Password:

Distributor:

Distributor:

Signature:

Stamp:

Milkotronic Ltd. reserves the right to select the methods used to analyze a product to determine the validity of the guarantee. No warranty is granded for products beyond their expiration date.

WARRANTY CARD

Purchaser:

Service report:

Service entry date	Damage	Delivery date	Signature