Tester control gas probes TS1007

DUOMO

Main features

From the experience since 40 years and the requirements of the rules of the test, **DUOMO (UK) LTD** has built a new tool Tester **TS1007** for its own products.
Mainly this new device is suitable to test all conventional probes to detect **explosive and toxic gas** manufactured by **DUOMO (UK) LTD**
This device allows to read all of the data and the configuration of work that are in the memory of the probes, also, having supplied by the **IR** transmission, it prints the ticket that confirms the testing data, **certifying your own work.**

By the Tester **TS1007**, you can read all of the events that occurred in the probe, such as:

1) The type of probe
2) The serial number of the probe.
3) The status of current work, **WAITING** (warm up) - **READING DATA** - **FAULT** - **ALARM.**
4) How many times the voltage has been On/Off.
5) How many times it issued an alarm.
6) The status of the current calibration.
7) How many times the correction has been made.
8) How many operating days remain before the substitution of the sensing element.

Before Beginning

Thank you for choosing the **DUOMO (UK) LTD** digital tool, model **TS1007.**
This manual is designed to help you get the maximum functionality and efficiency automatic of the product . Read these instructions carefully before use and always keep them within hands reach while using the instrument.
The illustrations and the text of the screens shown in this manual may differ from the actual screens.

Warnings

Verify that the package contains the items listed below.
a) USB Cable for charging battery
b) Connection cable between probe and **TS1007**
Certificate of Guarantee.
To prevent damage to the product or injury to you and the other person, before using the tester, read very carefully and entirety the following warnings safety rules.

Keep in a way that anyone who uses the device can consult them before.

For your safety
Immediately turn off the appliance in the event of malfunctioning.
In the event you detect smoke or a pungent or unusual odour coming from the appliance or power supply iImmediately turn off the device,and send to the nearest Service Centre.
Do not try to dismantle the appliance.
Contact with internal components of the detector can cause injury. In the event of faults, the product should only be repaired by qualified personnel.
If the device breaks due to a fall or other accident, please consult the service center for repair.
Use the correct cables supplied.
To ensure the product complies with standards, for terminal input and output connection only use the cables supplied for this purpose or those sold separately by **DUOMO (UK) LTD**
Avoid contact with liquid crystals.
In the event the display breaks, pay attention not to injure yourself with the glass fragments and avoid the liquid crystals coming in contact with your skin, eyes or mouth

Precautions

To achieve long, satisfactory use of the **TS1007** digital device, use and store it in compliance with the following precautions.

ENSURE the device is intact after removing it from the packaging.
Any use other than the designed use of the detector is considered improper and **DUOMO (UK) LTD** declines all liability for any damage caused to people, animals or property.

Do not allow it to get wet.
The device is not waterproof and can be seriously damaged if immersed in water or exposed to high levels of humidity.
Do not drop it.
Heavy knocks on hard surfaces and strong vibrations can damage the device.
Avoid strong magnetic fields.
This detector should not be used or stored near radiation or strong magnetic fields. Static electricity or magnetic fields generated by devices such as radio transmitters can cause interference during measurements..
Avoid abrupt temperature fluctuations.
Sudden temperature variations can cause condensation and the batteries could supply lower voltage.
Over a certain temperature (approx + 45°C) the monitor becomes black. To restore visibility place it in a fridge for a few minutes to allow it to cool..
Cleaning
Never clean the appliance using chemical products. If necessary, wipe with a damp cloth.

Technical specifications

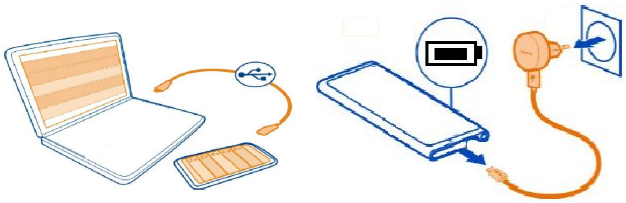
Powered by Lithium Polymer battery ..... 3.7 V.cc built-in
Consumption during other detection.....3 mA
Consumption during printing.....4 mA
Battery autonomy according to functions .....380 hour approx
Battery charging ..... Via USB port from PC
Battery charging .....External from 5 V. cc 350mA
Recharge control .....Controlled by micro-processor
Time to recharge exhausted batteries .....8 hours
Battery charging and consumption control.....On Display
Alphanumeric display .....Alpha numeric
Events storage ..... one until the instrument is turned off
Compatible probes.....SGM595, SGM533, SG895, SG800, CO100Ar, HCF100, SGF series, CXM200/Q

Auto power off..... after 1 hour of stand-by

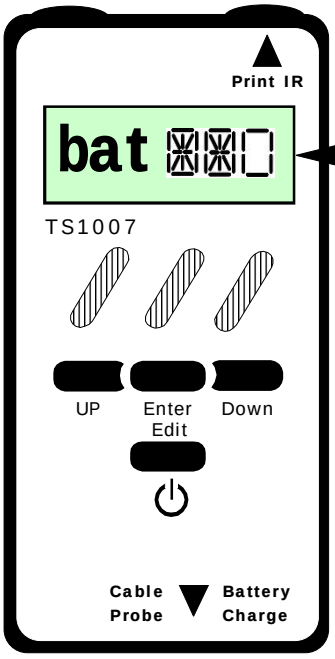
Operating temperature ..... -10° C ÷ + 45° C
Working humidity not condensed .....from 0 to 90%
Printing..... **by IR port**
Electromagnetic Compatibility ..... CE
Dimensions and weight ..... 60 * 140 *24mm 180g

Attention!
All measurements taken with **batteries in need of recharge can give false measurements.**

Battery Charging



Recharge from PC **Recharge from AC 230V**

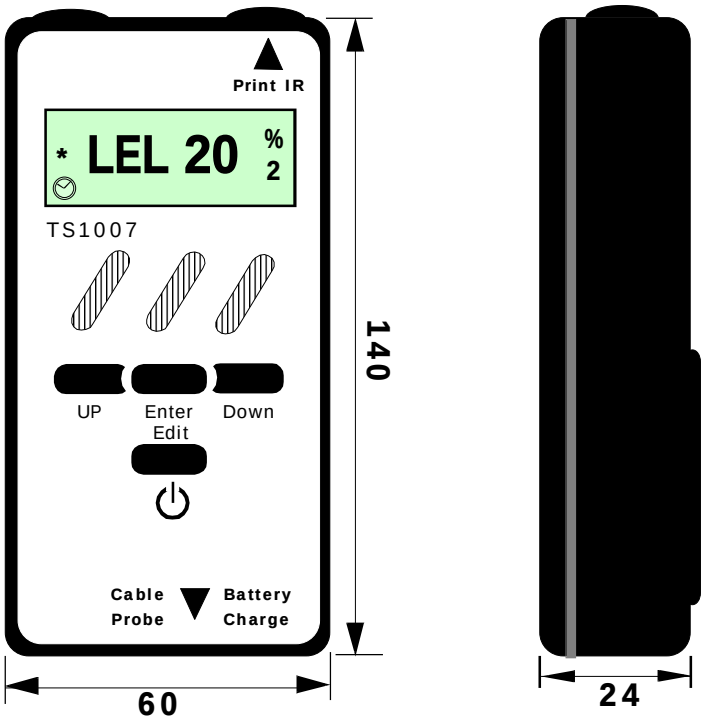


Indicator of the level of residual battery

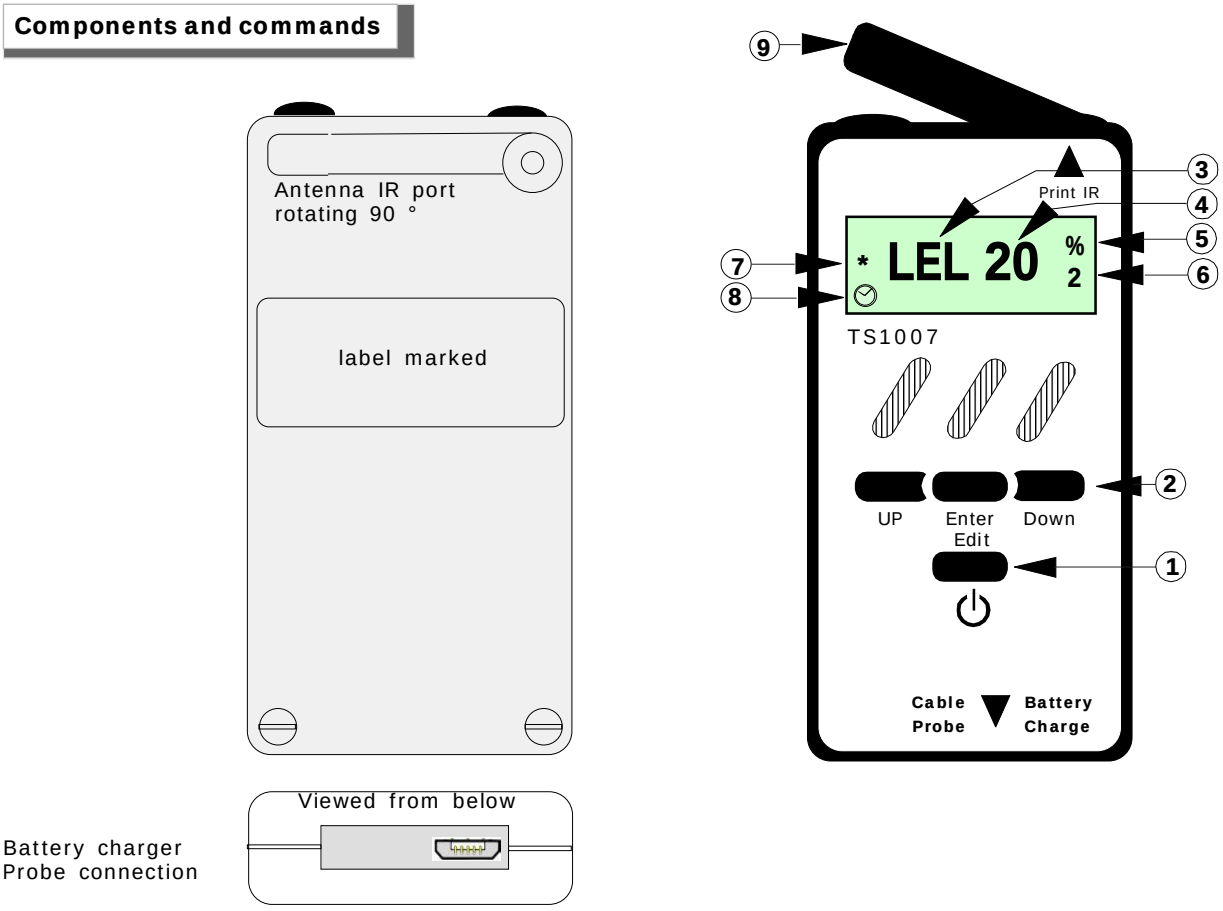
Technical data of LITHIUM POLYMER Battery
Nominal voltage of the battery pack **3,7V.** , current **1200 mA.**
Operating time 380 hours approx with charged batteries
Battery charging time approx 6 hours.
N.B. Do not recharge the battery in an ATEX zone

First turned on of Tester TS1007
On purchase the batteries are not fully charged.
Before using, charge the batteries for at least 6 hours..
Charging from PC
Connect the battery charger connector to the micro USB port on the lower part of the instrument, and connect this to the USB port of PC.
While charging the battery level indicator will indicate the charge status of the batteries.
Charging with a voltage 230V
Connect the battery charger connector with the power supply unit to the micro USB port on the lower part of the instrument, and then connect the battery charger to a power socket..
While charging the battery level indicator will indicate the charge status of the batteries.
Use
The battery must never be exposed to a temperature over + 40 ° C
To ensure an optimal service life, use at room temperature.
If used at both low and high temperatures its service life may be diminished

Measures



Components and commands



Button functions

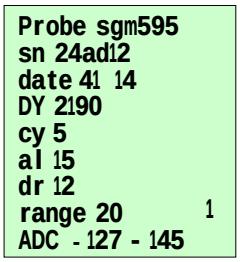
1)Button on/off TS1007.
To turn on or off the TESTER, press the button for 5 seconds.
2) Group of navigation buttons on the tester
a) "DOWN" button: Pressing this button will scroll through the pages down. (see instructions 6)
b) "ENTER" button: Pressing the button on page 1 you access to:
1) Check the model of the device connected
2) Serial number
3) Week and year of manufacture
4) The estimated remaining days of working
5) Turn on cycles
6) Alarms detected
7) Corrections carried out
Pressing the **"ENTER"** button on *page 3* **(PRINT)**, you start the printing
Pressing the **"ENTER"** button on *page 4* **(TAR 175)**, is used to change the TAR according to the requirements by pressing, you will notice the flashing, and pressing **"UP"** or **"DOWN"** increases or decreases the value.
Pressing the **"ENTER"** button on *page 5* **(NEW),** is used to reset the device to the factory data resetting the counters.
Pressing the **"ENTER"** button on *page* 6 (**SAVE),** is used to save permanently the modified data
c) "UP" button: pressing this button will scroll through the pages to the top. (see instructions 6)
Check the status of the battery.
Pressing simultaneously the buttons **"UP"** and **"DOWN"** the word BAT appears on the display followed by three segments; Full segments: battery charging. Empty segments: low battery

DISPLAY

Il display of **TS1007** is alphanumeric and is used to display the following information:
3) Unit of measure **"LEL"** for explosive gas; **"ppm"** for the toxic gas, the exchange is done automatically according to the type of probe.
4) Percentage reading, indicates the quantity of gas dispersed in the environment.
N.B. The word **"FAULT"** replaces the reading of the percentage of gas in case of failure of the probe.
5) The symbol of **"%"** turns on only when it is read the explosive gas.
6) Reading page number; the tester contains from 1 to 7 pages according to the model.
7) The icon **"CRAWL with a line"** turns on when the tester is not connected to the probe tested.
8) The clock icon, indicates that the probe tested is in a wait state **"WARMUP".**
9) The directional antenna that contains the item **"IR"** transmission to the printer.

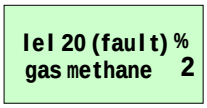
Description of the screens

PAGE 1 to scroll the reading press "ENTER"



Displays: **"Probe"** The type of probe or device
Displays: **"SN"** The serial number
Displays: **"DATE"** The week and year of manufacture
Displays: **"Dy"** the remaining days at the end of the operating cycle.
Displays: **"Cy"** How many times the probe has been turned on.
Displays: **"AL"** How many times is gone into alarm.
Displays: **"DR"** How many corrections have been done
Displays: **"RANGE"** The operating range if at 20 or at 100% of LEL
Displays: **"ADC"** A scrolling to the normalized value, coming out of the gas cap, modifying these data compromises the functioning and is reserved for authorized technicians.

To see the next page, press **"DOWN"**



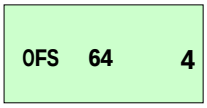
PAGE 2 to scroll the reading press "ENTER"

Displays the percentage of gas dispersed in the environment, can be expressed in: **% of LEL** or in **ppm**. In case of failure appears only **"FAULT"**
Displays the type of gas for which the probe has been calibrated

To see the next page, press **"DOWN"**

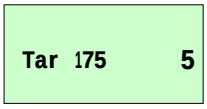
PAGE 3

PRINT to print, point the **IR** transmitter toward the printer and press **"ENTER"**



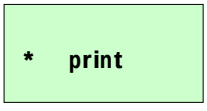
PAGE 4

Modification: **"OFFSET"** changes the deviation of the value of zero defined during calibration.



PAGE 5

Modification: **"TAR"** multiplicative factor depending on the type of gas.



Every time you disconnect the tester from the probe appears **"PRINT"**.
The **TS1007** has loaded in memory the data stored in the probe and asked to print them.
If you do not want to print, turn off the tester or connect it to another probe.

Printer recommended

Duomo Ltd. recommend a printer with infrared receiving 8 bits (1 start, error 4) Infrared 940nm, 33 kHz

Sample Print

DUOMO (UK) LTD

Mod. SGM595
S/N: 15115d
Prod. Week : 9/2014
Remaining days: 2190
LEL: 10%
Power on cycles: 1
Alarm count; 0
Drift count: 0

date.....
sign.....

Problems and solutions

If the device does not turn on..
Check that the battery is charged, if it is not, recharge it

If the device does not detect
Check that the cables are well plugged in and make contact.

If the device does not print
Check that the instrument is in line with the printer.
Check that the printer is turned on and is in line with the instrument.

In the event other problems arise, directly contact a specialist and/or authorised **technician** or your **DUOMO (UK) LTD dealer**.

INSURANCE. This device is insured by the SOCIETÀ REALE MUTUA for the PRODUCT'S GENERAL LIABILITY up to a maximum of 1,500,000.00 EURO against damages caused by the device in case of failures in functioning.

WARRANTY. The warranty term is 2 years from manufacturing date, in agreement with the following conditions. The components acknowledged as faulty will be replaced free of charge, excluding the replacement of plastic or aluminium cases, bags, packing, batteries and technical reports.
The device must arrive free of shipment charges to **DUOMO (UK) LTD.**
Defects caused by unauthorized personnel tampering, incorrect installation and negligence resulting from phenomena outside normal functioning shall be excluded from the warranty.
DUOMO (UK) LTD is not liable for possible damage, direct or indirect, to people, animals, or things; from product faults and from its enforced suspension of use.

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CE RoHS Compliant IP40 Made in Italy

Tester TS1007 *Styling by b&b design*

Purchase date	Stamp and signature of the dealer
Registration number	

In agreement with its continuous development policy, **DUOMO (UK) LTD** reserves the right to modify its products without notice.

The brand products **DUOMO (UK) LTD** comply with European Directives ROHS 2002/95/EC, REACH 1907/2006, BATTERIES AND ACCUMULATORS 2006/66/EC RAEE 2003/96/EC

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