Di-LOG
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operating manual

DL6507

AC LEAKAGE CURRENT CLAMP METER

EN
61010-1
CAT II
600V

CE

Introduction / Scope of Supply

The DL6507 is a universal, multi-purpose electrical measuring instrument. It comply with the standards DIN VDE 0411 and EN 61010, and provide safe, reliable operation. The clamp meter is a valuable tool for all sorts of measurements in both trade and industry.

- 3 ¾ digit liquid-crystal display
- Manual range selection for current, voltage, resistance measurements
- Clamp opening 30 mm
- Switches off automatically
- Integral memory for readings
- Evaluates MIN/MAX values
- Zero-setting
- Relative value function

The Clamp Meter DL6507 is supplied complete with leads. After unpacking, check that the instrument is complete, and that all accessories are present.

Scope of supply:

1 pce Clamp Meter DL6507
2 pce. test leads with probes (red/black)
2 pce. battery 1,5V IEC LR6
1 pce. holster
1 pce. Instruction Manual

References marked on instrument or in instruction manual:

⚠ Warning of a potential danger, comply with instruction manual.

☞ Reference. Please use upmost attention.

⚠ Caution! Dangerous voltage. Danger of electrical shock.

Symbol for the marketing of electrical and electronic equipment (WEEE Directive 2002/96/EC).

Continuous double or reinforced insulation complies with category II IEC 536.

CE Conformity symbol, the instrument complies with the valid directives. It complies with the EMV Directive (89/336/EEC), Standards EN 50081-1 and EN 50082-1 are fulfilled. It also complies with the Low Voltage Directive (73/23/EEC), Standard EN 61010-1 is fulfilled.

⚠ The instruction manual contains information and references, necessary for safe operation and maintenance of the instrument.

PRIOR TO USING THE INSTRUMENT THE USER IS KINDLY REQUESTED TO THOROUGHLY READ THE INSTRUCTION MANUAL AND COMPLY WITH IT IN ALL SECTIONS.

⚠ Failure to read the instruction manual or to comply with the warnings and references contained herein can result in serious bodily injury or instrument damage.

Transport and Storage

Please keep the original packaging for later transport, e.g. for calibration. Any transport damage due to faulty packaging will be excluded from warranty claims.

In order to avoid instrument damage, it is advised to remove batteries when not using the instrument over a certain time period. However, should the instrument be contaminated by leaking battery cells, you are kindly requested to return it to the factory for cleaning and inspection.

Instruments must be stored in dry and closed areas. In the case of an instrument being transported in extreme temperatures, a recovery time of minimum 2 hours is required prior to instrument operation.

Safety

The Clamp Meter DL6507 has been manufactured and tested to comply with the safety regulations for electronic measuring equipment contained in DIN VDE 0411 and EN 61010, and left our works in a safe condition.

To maintain this condition, the user must observe the safety instructions contained in this Instruction Manual.

⚠ To avoid electric shock, safety measures must be observed when working with voltages higher than 120 V (60 V) DC or 50 V (25 V) RMS AC. The values in brackets apply to medical and agricultural applications.

- ⚠ Before each measurement make sure that the test leads and the instrument are undamaged.
- ⚠ Only handle test leads and probes on the grips provided. Avoid touching probes under any circumstances.
- ⚠ The relevant safety regulations for electrical plant and equipment must be observed during all operations.
- ⚠ The instrument must only be used in the specified ranges.
- ⚠ Before opening the instrument, it must be disconnected from all circuits.
- ⚠ Protect the instrument from prolonged exposure to direct sunlight.

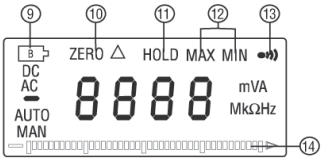
Appropriate Usage

The instrument may only be used under those conditions and for those purposes for which it was conceived. For this reason, in particular the safety references, the technical data including environmental conditions and the usage in dry environments must be followed.

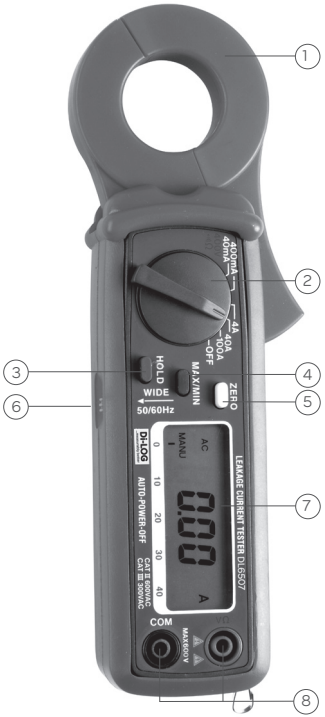
- ⚠ The instrument may only be opened by an authorised service technician, e.g. for fuse replacement.

Controls and Connections

1. Induction coil (clamp)
2. Selector switch, for type of measurement
3. Data hold button, to memorise reading
4. MIN/MAX value
5. Zero setting / relative value function
6. Frequency range select switch
7. Digital display
8. Input socket, for measuring voltage and resistance, and for continuity and diode testing
9. Battery Symbol
10. Zero Point / Relative Value Symbol
11. Hold symbol (Data Hold is active)
12. MIn/ Max Symbol
13. Continuity Symbol
14. Analogue Bargraph



Controls and Inputs



Preparation and safety measures

Fitting the battery

Before using the instrument, the battery must be fitted. This is carried out as follows:

- Separate the instrument from any circuit, and remove the test leads.
- Open the housing by removing the screw on the rear face.
- Fit a new battery (type 9 V IEC LR6), taking care that the polarity is correct. Make sure that no wires are trapped between the 2 halves of the housing, and close it again.
- The instrument is now ready for use.

⚠ The selector switch must be turned to the desired type of measurement before the probes are connected to the circuit.

⚠ Before switching to a new function, the probes must always be removed from the circuit.

⚠ Use the instrument only if clean and dry surroundings. Dirt and moisture reduce the effectiveness of the insulation, with consequent danger of electric shock, especially when dealing with high voltages.

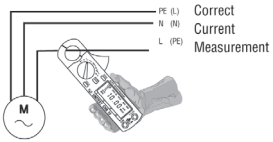
⚠ Use the instrument only if the specified ranges. Before making measurements, verify that the instrument is functioning properly, for example by testing on a known voltage or current. Make sure that the test leads are undamaged.

Current Measurements

⚠ Never measure currents in uninsulated conductors carrying more than 250 V!

⚠ Only handle test leads and probes on the grips provided. Avoid touching the probes under any circumstances.

- Turn selector switch (2) to "[AC]"
- Open the clamp, and close it round the conductor. Make sure that the clamp properly encircles the conductor, and that there is no air gap between the jaws.



☞ If the display is not visible during measurement, press the "HOLD" button (3) to retain the display. The clamp can then be removed from the conductor and the stored value read.

Voltage measurements

⚠ Do not connect more than 600 V AC / DC to the input sockets. Exceeding these values can endanger the operator, and may result in damage to the instrument.

⚠ Before switching to a new function, disconnect the probes from the circuit.

⚠ Only handle test leads and probes on the grips provided. Avoid touching the probes under any circumstances.

- Turn selector switch (2) to 400V
- Plug the black test lead into the "COM" socket and the red lead into the "VΩ" socket
- Connect the probes to the circuit and read the display

☞ If the display is not visible during measurement, press the "HOLD" button (3) to retain the display. The probes can then be removed from the conductor and the stored value read.

Resistance measurements

⚠ Disconnect the circuit from all sources of supply and check that it is at zero voltage.

- Turn selector switch (2) to "VΩ"
- Plug the black test lead into the "COM" socket and the red lead into the "+" socket
- Connect the probes to the circuit and read the display

☞ If the display is not visible during measurement, press the "HOLD" button (3) to retain the display. The probes can then be removed from the conductor and the stored value read.

MIN/MAX and peak values

The MIN/MAX button can be used to find either the largest or the smallest value of a series of measurements. Pressing the MIN/MAX button activates first the MIN mode, so that the smallest value is selected. Pressing it a second time changes to MAX mode, for the largest value. Pressing the button a third time returns the instrument to normal operation.

6.0 Maintenance

Provided it is used in accordance with the Instruction Manual, the instrument needs no special maintenance.

Cleaning

If the instrument is dirty after daily usage, it is advised to clean it by using a humid cloth and a mild household detergent.

Prior to cleaning, ensure that instrument is switched off and disconnected from external voltage supply and any other instruments connected (such as circuit, control instruments, etc.).

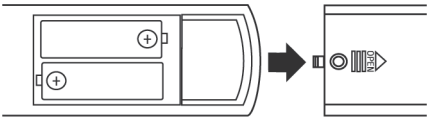
Never use acid detergents or dissolvants for cleaning.

Changing the battery

If the symbol for Battery appears in the upper left corner of the display, the battery must be changed.

This is carried out as follows:

- Remove the DL6507 from any circuit, and remove the test leads.
- Switch the instrument off
- Open the housing by removing the 3 screws on the rear face.
- Remove the old battery
- Fit a new battery (type 9 V IEC LR6), taking care that the polarity is correct. Make sure that no wires are trapped between the 2 halves of the housing, and close it again.
- The instrument is now ready for further use.



PLEASE CONSIDER YOUR ENVIRONMENT WHEN YOU DISPOSE OF YOUR BATTERIES. THEY BELONG IN A RUBBISH DUMP FOR HAZARDOUS WASTE.

⚠ If an instrument is not used over an extended time period, the batteries must be removed. Should the instrument be contaminated by leaking battery cells, the instrument has to be returned for cleaning and inspection to the factory.

Calibration Interval

The instrument has to be periodically calibrated by our service department in order to ensure the specified accuracy of measurement results. We recommend a calibration interval of one year.

Technical data
(at 23° C % 5° C, max. 75 % rel. humidity)

Display:
3¾, LCD incl. functions and symbols

Bargraph:
40 segments

Range Selection:
manual/ frequency: automatic.

Auto-Power-Off: approx. 30 min.
The device can be turned on after ca. 10 seconds.

Overload Indication:
The left digit is blinking

Measuring rate:
20 measurements/sec. (Bargraph)
2 measurements/sec. (LCD)

Max. Conductor size: ca. 30 mm

Overvoltage Category: CAT II, 600 V

Pollution degree: 2

Height above MSL.: Up to 2000 m

Battery display: At low battery

Power supply: Battery 1,5 V IEC LR6 (alkaline)

Current Consumption: Approx. 10 mA

Operation temperature: -10° C ... 50° C

Storage temperature: 20° C ... 60° C

Humidity: < 75 % relative humidity

Dimension: 183 x 63,6 x 35,6 mm

Weight: ca. 190g

Current AC

Range	Resolution	Accuracy 50 Hz/60 Hz	Accuracy 40 Hz ... 1 kHz
AC A 0 – 40 mA	10 µA	±(1,5 % rdg. +3 D)	±(2,0 % rdg. +5 D)
AC A 0 – 400 mA	100 µA	±(1,5 % rdg. +3 D)	±(2,0 % rdg. +5 D)
AC A 0 – 4 A	1 mA	±(1,5 % rdg. +3 D)	±(2,0 % rdg. +5 D)
AC A 0 – 40 A	10 mA	±(1,5 % rdg. +3 D)	±(2,0 % rdg. +5 D)
AC A 0 – 50 A	0,1 A	±(1,5 % rdg. +5 D)	±(2,0 % rdg. +5 D)
AC A 50 – 60 A	0,1 A	±(3,0 % rdg. +5 D)	±(3,5 % rdg. +5 D)

Voltage AC

Range	Resolution	Accuracy 50 Hz/60 Hz	Accuracy 40 Hz ... 1 kHz
0..400 V	0,1 V	±(1,0 % rdg. +3 D)	±(2,0 % rdg.± 4 D)

Resistance

Range	Resolution	Accuray	Overload Protection
400 Ω	0,1 Ω	±(1 % rdg.+3 D)	600 V AC

Continuity

Range	Resolution	Beep	Overload Protection
40-400 Ω	0,1 Ω	< 38,0 Ω	600 V AC

24 Month Warranty

Di-Log instruments are subject to stringent quality controls. If in the course of normal daily use a fault occurs we will provide a 24 month warranty (only valid with invoice).

Faults in manufacture and materials defect will be rectified by us free of charge, provided the instrument has not been tampered with and returned to us unopened.

Damage due to dropping abuse or misuse is not covered by the warranty.

Outside the warranty period we offer a full repair and re-calibration service.

Maintenance

WARNING Do not attempt to repair or service your meter unless you are qualified to do so and have the relevant calibration, performance test and service information. To avoid electrical shock or damage to the meter do not get water inside the case.

Periodically wipe the case with a damp cloth and mild detergent. Do not use chemical solvent.

Clean the input terminals with cotton bud, as dirt or moisture in the terminals can affect readings.

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