

Di-LOG

...measurably better

operating manual

DL6506

MINI AC/DC
CLAMP-ON METER



EN
61010-1
CAT II
600V

CE

Safety Information

This manual contains information that must be followed for operating the meter safely and maintaining the meter in a safe operating condition. If this meter is not used in the manner specified, the protection provided may be impaired.

-  **Warning!** Warns of potential danger, refer to the instruction manual to avoid personal injury or damage to the meter.
-  **Caution!** Dangerous voltage. Danger of electrical shock
-  Continuous double or reinforced insulation complies with IEC536, class II
-  **CE** Symbol of conformity, confirms conformity with relevant EU directives. The meter complies with EMC directives (89/336/EEC). Specifically standards EN 50081-1 and EN 50082-1 as well as the Low Voltage Directive (73/23/EEC) described in the standard EN 61010-1.

The meter has been designed in accordance with the safety regulations for electronic measuring instruments, EN 61010-1, IEC 61010

Voltages above 75V DC or 50V AC may constitute a serious shock hazard.

Before using the meter casing check for physical damage to the casing in particular around the connectors. If the case is damaged do not use the meter.

Safety Information

Check the test leads for damaged insulation or expose metal. Check the leads for continuity. Replace damaged leads with identical model or specification before using the meter.

Where applicable use GS38 approved leads (not supplied) these are available from Di-Log. When using test leads keep fingers behind the finger guards.

Do not apply more than the rated voltage, as marked on the meter between the terminals or between any terminal and ground.

Before making a measurement ensure that the rotary switch is set to the appropriate range. Do not turn the rotary switch whilst making a measurement.

Use the appropriate terminals, function and range for your measurements. If the value to be measured is not known use the maximum measurement position and reduce the range step by step until a satisfactory reading is obtained.

Do not use or store the meter in an environment of high temperature, humidity, fumes, vapour, gaseous, inflammable and strong magnetic field. The performance and safety of the use may be compromised in such circumstances.

Disconnect circuit power and discharge all high voltage capacitors before testing resistance, continuity, diodes, capacitance or current.

Safety Information

Before measuring current check the meters fuses and turn off power to the circuit before connecting the meter to the circuit.

Replace the battery as soon as the low battery indicator appears. If the battery is low the meter may give false readings.

Turn the meter power off when not in use. Remove the battery if the meter is in use for a long period.

Constantly check the battery as it may have leaked. A leaking battery will damage the meter.

The meter may only be opened by a qualified service technician for calibration and repair.



Features

- High resolution to 1mA AC
- 3-2/3 digit (2400 count) LCD display
- White LED backlight
- Built-in non-contact AC voltage detector plus torch
- Autoranging with auto power off
- 18mm Jaw opening

Specifications

Display:

3-2/3 (2400 count) Digit LCD with white LED backlight

Polarity: Minus sign (-) indicates negative polarity

Current sensor: Hall effect sensor type

Overload indication: "OL" displayed on the LCD

DCA zero adjust: One touch zero key

Display rate: 2 readings/second, nominal

Battery: Two 1.5V AAA batteries

Low Battery indication: "BATT" displayed on the LCD

Auto OFF: approx. 7 minutes

Operating conditions:

32 °F to 86 °F (0 °C to 30 °C) 90%RH; 86 °F to 104 °F (30 °C to 40 °C) 75%RH; 104 °F to 122 °F (40 °C to 50 °C) 45%RH

Storage conditions: - 14 °F to 140 °F (-30 °C to 60 °C); < 90% Relative Humidity

Altitude: Operate at less than 3000 meters

Weight: 175g including battery

Dimensions: 164 x 65 x 32mm

Jaw opening: 18mm

Standards: EN61010-1, EN61010-2-032 Category II 600V, Category III 300V

Specifications

Range Specifications

Function	Range	Resolution	Accuracy (of reading)
DC Current	2A	1mA	$\pm(2.8\% + 10 \text{ digits})$
	80A	100mA	$\pm(3.0\% + 8 \text{ digits})$
AC Current (50/60Hz)	2A	1mA	$\pm(3.0\% + 10 \text{ digits})$
	80A	100mA	$\pm(3.0\% + 8 \text{ digits})$
Non-Contact AC Voltage	100VAC to 600VAC 50/60Hz		



Specifications

Meter Description

1. Current sensor jaw
2. Torch button
3. Rotary function switch
4. Data HOLD and Backlight key
5. LCD display
6. Clamp trigger
7. One-touch DCA ZERO key
8. Non-contact AC voltage indicator light
9. Non-contact AC voltage detector probe tip

Input Limits

Function	Maximum Inputs
AC Current	80A
DC Current	±80A

AC Current Measurements

1. Set the Function switch to the ACA range.
2. Press the jaw trigger and clamp around, fully enclosing a single conductor. Do not allow a gap between the two halves of the jaw. Refer to the diagram at right for the correct way to enclose a single conductor.
3. Read the ACA value on the LCD.



wrong



correct

DC Current Measurements

1. Set the Function switch to the DCA range.
2. Press the ZERO key to null the meter display.
3. Press the Trigger to open the current sensor Jaw.
4. Fully enclose the conductor to be measured.
Do not allow a gap between the two halves of the jaw.
5. Read the DCA value on the LCD.

Non-Contact AC Voltage Measurements

Warning:

RISK OF ELETROCUTION. BEFORE USE, ALWAYS TEST THE VOLTAGE DETECTOR ON A KNOWN LIVE CIRCUIT TO VERIFY PROPER OPERARTION.

1. Touch the probe tip to the hot conductor or insert into the hot side of the electrical outlet.
2. If AC voltage is present, the detector light will illuminate.

Note:

The conductors in electrical cord sets are often twisted. For best results, rub the probe tip along a length of the cord to assure placing the tip in close proximity to the live conductor.

Note:

The detector is designed with high sensitivity. Static electricity or other sources of energy may randomly trip the sensor. This is normal operation.

Operations

Torch

Press and hold the top button to turn the torch on.

Release the button to turn the torch off.

Data Hold

To freeze the current reading on the LCD, press the "Hold Backlight" key. The word HOLD will appear on the LCD while the meter is in the Data Hold mode. To release the Data Hold function and return the meter to normal operation, press the "Hold Backlight" key again. The word HOLD will switch off.

Backlight display

Press and hold the "Hold Backlight" key for more than 2 seconds to turn on the backlight. This will also activate the Data Hold function. To release the Data Hold function and return the meter to normal operation, press the Data Hold key momentarily. To turn off the backlight, press and hold the "Hold Backlight" key for more than 2 seconds.

Auto Power Off

The auto off feature will turn the meter off after 7 minutes.

Battery Replacement

1. When the low battery symbol appears on the LCD the batteries must be replaced.
2. Power down and remove the rear battery compartment Phillips screw.
3. Lift off the battery compartment cover and replace the two 1.5V AAA cells.
4. Replace compartment cover and secure the screw.

Warranty & Maintenance

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 you 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 terminal with cotton bud, as dirt or moisture in the terminal affect readings.

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