

Di-LOG

...measurably better

Operating Instructions for AC/DC TRMS MULTIMETER



Instruction Manual
for DL9319BT (v1.1)

EN
61010-1

CAT IV
600V

Please read this manual before switching the meter on. Important safety information included.

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I. Certificate of conformity

As the manufacturer of the instrument listed below, we declare under our sole responsibility that the product:

Di-LOG DL9319BT

To which this declaration relates is in conformity with the relevant clauses of the following standards:

LVD & EMC

EN 61326

EN 61010-1

EN 61010-02-032

EN 61010-02-033

The instrument has been factory-calibrated during its manufacturing process, ensuring it fully conforms to our rigorous quality assurance procedures. This guarantees exceptional accuracy and reliability for all your measurement needs.

The safety and performance of this instrument is assured when operated within the specifications in this instruction manual.

The product identified above conforms to the requirements of the UK and EU directives for electrical Equipment (Safety) Regulations 2016 (Low Voltage Directive 2014/35/EU) and the Electromagnetic Compatibility Regulations 2016 (EMC Directive 2014/30/EU).

II. Safety

International Safety Symbol

This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.

Hazardous Voltage Symbol

This symbol, adjacent to a terminal, indicates that under normal use, hazardous voltages may be present.

Double insulation symbol

 Indicates the terminal(s) so marked must not be connected to a circuit ID] where the voltage with respect to earth ground exceeds the maximum safety rating of the meter.

Safety Notices

- Do not exceed the maximum allowable input range of any function.
- Do not apply voltage to meter when resistance function is selected.
- Set the function switch OFF when the meter is not in use.

WARNINGS!

- Set function switch to the appropriate position before measuring.
- When measuring voltage, do not switch the meter to current or resistance modes.
- When changing ranges using the selector switch, always disconnect the test leads from the circuit under test.
- Do not exceed the maximum rated input limits.

CAUTIONS

- Improper use of this meter can cause damage, shock, injury or death. Read and understand this user manual before operating the meter.
- Always remove the test leads before replacing the battery.
- Inspect the condition of the test leads and the meter itself for any damage before operating the meter. Repair or replace any damage before use.
- Use great care when making measurements if the voltages are greater than 30VAC RMS/42V Peak or 60VDC. These voltages are considered a shock hazard.
- Remove the battery if the meter is to be stored for long periods.
- Always discharge capacitors and remove power from the device under test before performing Diode, Resistance or Continuity tests.

II. Safety (Continued)

- Voltage checks on electrical outlets can be difficult and misleading because of the uncertainty of connection to the recessed electrical contacts. Other means should be used to ensure that the terminals are not Live following the Safe Isolation Procedure as set out in the Electricity at Work Regulation 1989.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

It is important to check the state of the battery before use and to replace it if necessary.

The meter has been designed in accordance with the safety regulations for electronic measuring instruments:

- **EN 61326**
- **EN 61010-1**
- **EN 61010-02-032**
- **EN 61010-02-033**

The meter may only be inspected and repaired by a qualified service technician for calibration and repair, please refer to section 19 for further information.

Please observe the below maximum input limits on all ranges:

Input Limit Function	Maximum Input
V - AC/DC	1000V AC/DC
Low Z	600V AC RMS/600VDC
µA, mA Current AC/DC	800mA 1000V fast acting fuse
10A Current AC or DC	10A 1000V fast acting fuse (10A for 30 seconds max. every 15 minutes)
Frequency, Resistance, Diode & Continuity, Duty Cycle & Capacitance	600V AC RMS/600VDC
Temperature	600V AC RMS/600VDC

III. Instrument & Manual Symbols

Symbols displayed on the instrument and in the instruction manual:



Warning! Warns of potential danger, and to comply with the instruction manual.



Caution! Dangerous voltage, potential risk of electrical shock.



Equipment protected throughout by double or reinforced insulation. Complies with IEC 536, class II



Suitable for live working.



CE Symbol of conformity confirms conformity with relevant EU directives. The meter complies with EMC directives (2004/08/ EC), the Low Voltage Directive (described in the standard EN 61010-1)



UKCA Symbol of conformity confirms conformity with relevant UK regulations. The meter complies with EMC regulations (SI 2016 No. 1091), the Low Voltage Regulation (described in the standard EN 61010-1)



The DL9319BT meets the standard (2012/19/EU) WEEE Directive in the UK & EU. This marking indicates that this product should not be disposed with other household wastes throughout the EC. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use your local authority return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.



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 follow the warnings and references contained herein can result in serious bodily injury or instrument damage. The respective accident prevention regulations established by the professional associations are to be strictly enforced at all times.

IV. Description: DL9319BT Specification

TRMS Digital Multimeter Specification	
	DL9319BT
Voltage range	0.1mV - 1000V AC
	0.1mV - 1000V AC+DC
	1mV - 1000V DC
LoZ AC Voltage	1mV - 1000V AC
Current range	0.1μA - 10.00A AC/DC
Resistance	0.1Ω - 60MΩ
Capacitance	10pF - 6000μF
Temperature	-20.0°C to 760°C
	-4.0°F to 1400°F
Frequency/Duty Cycle	0.001Hz- 9.999kHz / 20% - 90%
Audible Continuity	<300Ω @ <1mA
Auto Power Off	15 minutes
IP Rating	IP67
Safety rating	CAT III 1000V / CAT IV 600V
Dimensions	170mm x 75mm x 48mm
Weight (net)	386g
Power supply	4 x 1.5V AAA (supplied)
Supplied with	Test Leads, K-Type Thermocouple & Carry Case
EAN	5060082544873



CAT IV Applicable to test and measuring circuits connected at the source of the building's low-voltage MAINS installation.

V. Meter Description



1. Light Sensitive Backlit LCD Display
2. **RELATIVE / AC+DC** Button
3. **RANGE** Button
4. **MODE** Button
5. Rotary Function Switch
6. **10A** Input Terminal
7. **$\mu\text{A}/\text{mA}$** Input Terminal
8. **COM** Input Terminal
9. **V/ Ω /DIODE/CAP/Hz%/°C°F** Input Terminal
10. Backlight/**HOLD** Button
11. **PEAK/Flashlight** Button
12. **MIN/MAX/AVR** Button
13. Auto Backlight Sensor
14. Flashlight Lense

VI. Symbols Used on LCD Display



V	Volts
A	Amperes
~	Alternating current
≡	Direct current
-	Minus sign
Ω	Ohms
•••	Continuity
→	Diode test
F	Farads(capacitance)
Hz	Hertz(frequency)
%	Percent(duty ratio)
°F	Degrees Fahrenheit
°C	Degrees Centigrade
n	nano(10^{-9})
μ	micro(10^{-6})

m	milli(10^{-3})
k	kilo(10^3)
M	mega(10^6)
OL	Overload
☺	Auto Power Off
⚡	Low battery
AUTO	Autoranging
HOLD	Display hold
LOZ	Low impedance
MAX/MIN/AVG	Maximum/Minimum/Average
Peak	Peak hold
REL	Relative
AC+DC	AC+DC voltage
Bluetooth	Bluetooth

VII. Detailed Specifications: Range & Accuracy

Accuracy is stated at 65°F to 83°F (18°C to 28°C), less than 75% relative humidity

Function	Range	Resolution	Accuracy $\pm$ (% of reading + digits)
AC Voltage	6.000V	1mV	$\pm(1.0\% + 5)$
	60.00V	10mV	
	600.0V	0.1V	
	1000V	1V	$\pm(1.2\% + 5)$
Input Protection: 1000V AC RMS or 1000V DC Input Impedance: 10M AC voltage bandwidth: 50 to 1000Hz All AC voltage ranges are specified from 5% of range to 100% of range			
AC + DC Voltage	6.000V	1mV	$\pm(1.5\% + 20)$
	60.00V	10mV	
	600.0V	0.1V	
	1000V	1V	$\pm(1.5\% + 5)$
Input Protection: 1000V AC RMS or 1000V DC Input Impedance: 10M AC voltage bandwidth: 50 to 400Hz			
DC Voltage	600.0mV	0.1mV	$\pm(0.5\% + 8)$
	6.000V	1mV	$\pm(0.8\% + 5)$
	60.00V	10mV	
	600.0V	0.1V	
	1000V	1V	$\pm(1.0\% + 3)$
Input Protection: 1000V AC RMS or 1000V DC Input Impedance: 10M			

VII. Detailed Specifications: Range & Accuracy (continued)

Accuracy is stated at 65°F to 83°F (18°C to 28°C), less than 75% relative humidity

Function	Range	Resolution	Accuracy $\pm$ (% of reading + digits)
AC/DC Voltage(LO Z)	6.000V	1mV	$\pm(3.0\% + 30)$
	60.00V	10mV	
	600.0V	0.1V	
	1000V	1V	$\pm(3.0\% + 5)$
Input Protection: 600V AC RMS or 600V DC Input Impedance: Approx. 3k Ω AC voltage bandwidth: 50 to 400Hz All AC voltage ranges are specified from 5% of range to 100% of range			
Frequency	9.999Hz	0.001Hz	$\pm(1.0\% + 5)$
	99.99Hz	0.01Hz	
	999.9Hz	0.1Hz	
	9.999kHz	1Hz	
Input Protection: 600V AC RMS or 600V DC Sensitivity: >8V RMS			
Duty Cycle	20.0% to 80.0%	0.1%	$\pm(1.2\% + 2)$
Input Protection: 600V DC or 600V AC RMS Pulse Width: 0.1 to 100ms Frequency Range: 5Hz to 10kHz Sensitivity: >8V RMS			
AC Current	600.0 μ A	0.1 μ A	$\pm(1.0\% + 3)$
	6000 μ A	1 μ A	
	60.00mA	10 μ A	
	600.0mA	0.1mA	
	10.00A	10mA	$\pm(2.0\% + 8)$
Overload Protection: μ A/mA ranges: 800mA/1000V Fuse 10A range: 10A/1000V Fuse AC current bandwidth: 50 to 400Hz All AC current ranges are specified from 5% of range to 100% of range			

VII. Detailed Specifications: Range & Accuracy (continued)

Accuracy is stated at 65°F to 83°F (18°C to 28°C), less than 75% relative humidity

Function	Range	Resolution	Accuracy $\pm$ (% of reading + digits)
DC Current	600.0 μ A	0.1 μ A	$\pm$ (1.0% + 3)
	6000 μ A	1 μ A	
	60.00mA	10 μ A	
	600.0mA	0.1mA	
	10.00A	10mA	$\pm$ (1.5% + 3)
Overload Protection: μ A, mA ranges: 800mA/1000V Fuse 10A range: 10A/1000V Fuse			
Resistance	600.0 Ω	0.1 Ω	$\pm$ (1.5% + 5)
	6.000k Ω	1 Ω	
	60.00k Ω	10 Ω	
	600.0k Ω	100 Ω	
	6.000M Ω	1k Ω	
	60.00M Ω	10k Ω	$\pm$ (2.0% + 10)
Input Protection: 600V AC or 600V DC RMS			
Capacitance	60.00nF	10pF	$\pm$ (5.0% + 35)
	600.0nF	100pF	$\pm$ (3.0% + 5)
	6.000 μ F	0.001 μ F	
	60.00 μ F	0.01 μ F	
	600.0 μ F	0.1 μ F	
	6000 μ F	1 μ F	$\pm$ (5.0% + 5)
Input Protection: 600V AC RMS or 600V DC			
Temperature	-4°F to 1400°F	0.1~1°F	$\pm$ (1.0% + 9°F)
	-20°C to 760°C	0.1~1°C	$\pm$ (1.0% + 5°C)
Input Protection: 600V AC RMS or 600V DC			

Sensor: Type k Thermocouple

1. General Specifications

Insulation Enclosure	Class 2, Double insulated Double Moulded, IP67 water proof and dust proof
Diode Test	Test current 1mA typical, open circuit voltage 3V typical
Continuity	Test Audible signal if the resistance is approx. $<300\Omega$
Low Battery Indication	 is displayed
Display	6000 count LCD display
Over Range Indication	"OL" is displayed
Polarity	Minus symbol "-" is displayed for negative polarity
Measurement Rate	3 readings per second, nominal
Auto Power Off	After approx. 15 minutes of inactivity
Input Impedance	10M Ω AC/DC Voltage
Low Z	Approx. 3k Ω input impedance
AC Response	True RMS
AC Bandwidth	45Hz to 1000Hz
Batteries	4 x AAA 1.5V batteries
Fuses	800mA 1000V (6.3 x 32mm) fast blow 10A 1000V (10 x 38mm) fast blow
Operating Environment	32°F to 104°F (0°C to 40°C) at $<75\%$ relative humidity
Storage Environment	-4°F to 140°F (-10°C to 60°C) at $<80\%$ relative humidity
Operating Altitude	2000 meters maximum
Dimensions/Weight	170*75*48mm/386g
Safety	Complies with UL 61010-1 v.3 for measurement Category IV 600V and Category III 1000V, Pollution Degree 2

2. Instrument Buttons

2.1. How to Manually Select a Range

Enter Manual Range Mode

- Briefly press the **RANGE** button once.
- The “**AUTO**” indicator will disappear from the display.

Select Desired Range

- Each time you briefly press the **RANGE** button, the device will cycle through the available ranges.
- Stop when your desired range is shown.

Return to Autorange

- To exit manual mode and return to automatic ranging, press and hold the **RANGE** button until the “**AUTO**” indicator reappears.

NOTE: The **RANGE** button does not function in the following measurement modes: AC Amperes (AC A), Frequency Duty Cycle & Temperature

In these modes, the device automatically selects the appropriate range and manual ranging is disabled.

2.2. MODE / Bluetooth Button & Mobile APP

Switching Measurement Modes

- Briefly press the **MODE**  button to cycle through measurement options: AC or DC, Frequency or Duty Cycle, Resistance, Continuity, Diode Test, °C or °F (temperature units).

Bluetooth Functionality

- **To turn Bluetooth ON,** Press and hold the **MODE**  button until the  (Bluetooth) symbol appears on the display.
- **To turn Bluetooth OFF,** Press and hold the **MODE**  button again until the symbol disappears.

Tip: Bluetooth should be disabled when not in use to conserve battery power.

Mobile App Download

- For app download and more information, visit:

www.dilog.co.uk/mobile-apps

2. Instrument Buttons (continued)

2.3. RELATIVE Mode (REL) / AC+DC Button

RELATIVE Mode sets the current reading as a reference point (zero), so future measurements show the difference from that reference.

To Activate REL Mode:

- Momentarily press the **REL / AC+DC** button.
- The “**REL**” indicator will appear on the display.
- The screen will now show relative readings based on the stored reference.

To Exit REL Mode:

- Momentarily press the **REL / AC+DC** button again. The display returns to normal operation.

NOTE: When Relative mode is active, the meter disables its autoranging function. This means it will not automatically adjust to accommodate larger measurement differences. If the measured value exceeds the selected range, the display will show “**OL**” to indicate an overload. In such cases, you should exit Relative mode and manually select a higher range using the **RANGE** button. Additionally, the Relative function is not supported when measuring frequency, duty cycle, or temperature.

AC+DC Mode

AC+DC mode allows the meter to measure both the alternating current (AC) and direct current (DC) components of a signal, providing the effective **RMS** (Root Mean Square) value of the combined waveform. This function is particularly useful when measuring voltage in unfiltered rectifier circuits, where both AC and DC elements are present.

To activate AC+DC mode

- Press and hold the **REL / AC+DC** button until the “**AC+DC**” indicator appears on the LCD display.

2. Instrument Buttons (continued)

2.4. MAX / MIN / AVG Button

To activate **MAX/MIN/AVG** mode:

- Momentarily press the **MAX/MIN/AVG** button.
- The display will show "**MAX**", and the meter will hold and update the highest recorded value.

To view the minimum reading:

- Press the **MAX/MIN/AVG** button again.
- The display will show "**MIN**", and the meter will hold and update the lowest recorded value.

To view the average reading:

- Press the **MAX/MIN/AVG** button once more.
- The display will show "**AVG**", and the meter will display the running average of the readings.

To exit **MAX/MIN/AVG** mode:

- Press and hold the **MAX/MIN/AVG** button until the display returns to normal operation.

NOTE: When the **MAX/MIN/AVG** mode is active, the meter disables its autoranging function. If the measured value exceeds the selected range, the display will show "**OL**" to indicate an overload condition. In such cases, you should exit the **MAX/MIN/AVG** mode and manually select a higher range using the **RANGE** button. Additionally, the **MAX/MIN/AVG** function is not available when measuring frequency, duty cycle, or temperature.

2.5. Backlight / HOLD Button

To freeze the current reading on the display:

- Momentarily press the **HOLD** button.
- The "**HOLD**" indicator will appear on the LCD.
- The reading will remain fixed until **HOLD** is deactivated.

To exit **HOLD** mode and resume normal operation:

- Momentarily press the **HOLD** button again.
- The "**HOLD**" indicator will disappear.

To turn the backlight **ON**:

- Press and hold the **HOLD** button until the backlight activates.
- To turn the backlight **OFF**:
- Press and hold the **HOLD** button again until the backlight turns off.

2. Instrument Buttons (continued)

2.6. Auto Backlight

The meter features an automatic backlight function that activates when it detects low ambient light conditions. In dark environments, the backlight will turn on automatically without requiring manual input from the user. This feature ensures visibility of the display in dimly lit areas and operates independently of the backlight button

2.7. PEAK/Flashlight Button

The **PEAK** function is available when measuring AC voltage or current. It allows the meter to capture and display both the highest positive peak and the highest negative peak of the AC waveform, providing a clear view of the signal's extreme values.

Peak MAX (Highest Positive Peak):

- Momentarily press the **PEAK** button once.
- The display will show "**Peak MAX**", and the meter will capture and hold the highest positive peak of the AC waveform.
- The reading updates only when a new, higher positive peak is detected.

Peak MIN (Highest Negative Peak):

- Press the **PEAK** button a second time.
- The display will show "**Peak MIN**", and the meter will capture and hold the highest negative peak of the AC waveform.
- The reading updates only when a new, higher negative peak is detected.

Exit PEAK Mode:

- Press the **PEAK** button a third time.
- The meter will exit **PEAK** mode and return to normal AC measurement.

Note: **PEAK** mode is only available when measuring AC voltage or AC current.

Flashlight Feature – For Improved Visibility

Turn Flashlight ON:

- Press and hold the **PEAK** button until the flashlight turns on. Ideal for working in dark or low-light environments.

Turn Flashlight OFF:

- Press and hold the **PEAK** button again until the flashlight turns off.

3. AC/DC Voltage Measurements

To measure AC or DC voltage using the meter, follow these steps:

a. Set the Function Switch:

- Turn the rotary function switch to the **V_{AC} or V_{DC} / Hz%** position to enable voltage and frequency measurement modes.

b. Select AC or DC Mode:

- Momentarily press the **MODE**  button until either the **AC** (“~”) or **DC** (“=”) symbol appears on the LCD display, indicating the selected voltage type.

c. Connect the Test Leads:

- Insert the **black test lead** into the **COM** input terminal.
- Insert the **red test lead** into the **V** input terminal.

d. Apply the Test Leads to the Circuit:

- Touch the test lead probes to the circuit under test.
- For **DC voltage**, ensure the **red lead** contacts the **positive side** of the circuit and the **black lead** contacts the **negative side**.

e. Read the Measurement:

- Observe the voltage reading on the LCD display.

WARNING: Always follow EU & UK safety regulations and never work on or near live voltages unless absolutely necessary, ensuring all required precautions and protective measures are in place.

4. Frequency and % Duty Cycle Measurements

a. Set the rotary function switch:

- Turn the rotary dial to the **V_{AC} or V_{AC} / Hz%** position.

b. To select either frequency or % duty cycle:

- Momentarily press the **MODE**  button until the “Hz” or “%” symbol appears on the LCD display.

c. Connect the Test Leads:

- Insert the **black test lead** into the **COM** input terminal and the **red test lead** into the **V** input terminal.

d. Apply the Test Leads to the Circuit

- Touch the test lead probes to the circuit under test. Read the **frequency or % duty cycle** value on the LCD display.

5. Low Z Voltage Measurements

The Low Z (low impedance) setting is used to detect what's known as ghost voltage. Ghost voltages can appear on wires that aren't actually live, simply because they're running close to wires that are carrying current. This happens due to capacitive coupling, which can make it seem like a non-powered wire is connected to a genuine voltage source. By selecting the Low Z mode, the tester applies a load to the circuit. This helps to dissipate any phantom voltage, significantly reducing the reading if the wire isn't truly energised.

a. Set the Function Switch:

- Set the rotary function switch to the **Low Z** position.
- Momentarily press the **MODE**  button to select **AC** or **DC** voltage. The **AC** “~” or **DC** “=” symbol will appear on the LCD display.

b. Connect the Test Leads:

- Insert the **black test lead** into the **COM** input terminal and the **red test lead** into the **V** input terminal.

c. Apply the Test Leads to the Circuit:

- Touch the test leads to the circuit under test.
- If measuring **DC voltage**, touch the red test lead to the **positive side** of the circuit and the **black test lead** to the **negative side** of the circuit.

e. Read the Measurement:

- Read the voltage on the LCD display.

WARNING: Always follow EU & UK safety regulations and never work on or near live voltages unless absolutely necessary, ensuring all required precautions and protective measures are in place.

6. Capacitance Measurements

WARNING: Safely discharge capacitors before taking capacitance measurements.

To measure capacitance please follow these steps:

a. Set the Function Switch:

- Turn the rotary function switch to the **CAP** position.

b. Connect the Test Leads:

- Insert the **black test lead** into the **COM** input terminal.
- Insert the **red test lead** into the **CAP** input terminal

c. Apply the Test Leads to the Capacitor

- Touch the test lead probes to the terminals of the capacitor under test.

d. Read the Measurement:

- Observe the capacitance value on the LCD display.

7. AC/DC Current Measurements

To measure AC or DC current using the meter, follow these steps:

a. Insert the Test Leads:

- Insert the black test lead into the negative **COM** input terminal.

b. Select the Appropriate Range and Input Terminal:

i. For current measurements up to 10A:

- Set the rotary function switch to the **10A** position.
- Insert the red test lead into the **10A** input terminal.

ii. For current measurements up to 600mA:

- Set the rotary function switch to the **mA** position
- Insert the red test lead into the **μA/mA** input terminal.

iii. For current measurements up to 6000μA:

- Set the rotary function switch to the **μA** position.
- Insert the red test lead into the **μA/mA** input terminal.

c. Select AC or DC Current:

- Momentarily press the **MODE**  button until the **AC** (“~”) or **DC** (“=”) symbol appears on the LCD display.

d. Prepare the Circuit:

- Remove power from the circuit under test, then open the circuit at the point where you wish to measure current.

e. Connect the Meter in Series:

- Touch the test lead probes in series with the circuit being measured.
- For **DC current**, connect the **red probe** to the **positive side** and the **black probe** to the **negative side** of the circuit.

f. Apply Power:

- Restore power to the circuit.

g. Read the Measurement:

- Observe the voltage reading on the LCD display.

WARNING: Always follow EU & UK safety regulations and never work on or near live voltages unless absolutely necessary, ensuring all required precautions and protective measures are in place.

8. Resistance Measurements

WARNING: Never test resistance on a live circuit.

To measure resistance with the meter, follow these steps:

a. Set the Function Switch:

- Turn the rotary function switch to the $\Omega/\bullet\bullet\bullet/\rightarrow+$ position.

b. Select Resistance Mode:

- Momentarily press the MODE  button until the Ω symbol appears on the LCD display.

c. Connect the Test Leads:

- Insert the **black test lead** into the **COM** input terminal.
- Insert the **red test lead** into the **Ω** input terminal.

d. Connect the Test Leads to the Component:

- Touch the test lead probes to the component under test.
- If the component is installed in a circuit, it is best to disconnect one side before testing to avoid interference from other devices.

e. Read the Measurement:

- Observe the resistance reading on the LCD display.

9. Continuity Measurements

WARNING: Never test continuity on a live circuit.

To measure continuity with the meter, follow these steps:

a. Set the Function Switch:

- Turn the rotary function switch to the $\Omega/\bullet\bullet\bullet/\rightarrow+$ position

b. Select Continuity Mode:

- Momentarily press the MODE  button until the  symbol appears on the LCD display.

c. Connect the Test Leads:

- Insert the **black test lead** into the **COM** input terminal.
- Insert the **red test lead** into the  input terminal.

d. Connect the Test Leads to the Component:

- Touch the test lead probes to the component or conductor under test.

e. Read the Measurement:

- If the resistance is approximately 300 Ω or less, a beeper will sound and the resistance value will be shown on the LCD display.

10. Diode Measurements

WARNING: Never test diodes on a live circuit.

To measure continuity with the meter, follow these steps:

a. Set the Function Switch:

- Turn the rotary function switch to the $\Omega/\text{diode symbol}/\rightarrow\text{diode symbol}$ position

b. Select Continuity Mode:

- Momentarily press the MODE diode symbol button until the $\rightarrow\text{diode symbol}$ symbol appears on the LCD display.

c. Connect the Test Leads:

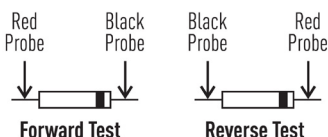
- Insert the **black test lead** into the **COM** input terminal.
- Insert the **red test lead** into the $\rightarrow\text{diode symbol}$ input terminal.

d. Connect the Test Leads to the Component:

- Touch the test lead probes to the component or conductor under test.

e. Read the Measurement:

- A forward-biased diode will typically display a voltage drop between **0.4V** and **0.7V**.
- A reverse-biased diode will display “**OL**” (overload), indicating no conduction.
- A shorted diode will show a reading near **0V** in both directions.
- An open diode will display “**OL**” in both directions.



11. Temperature Measurements

WARNING: Never make direct contact with the temperature probe on a live circuit.

To measure temperature with the meter:

a. Set the Function Switch:

- Turn the rotary function switch to the **°C /°F** position.

b. Select Temperature Unit:

- Momentarily press the **MODE**  button to select readings in either °F or °C.

c. Connect the Temperature Probe:

- Attach the temperature probe to the **banana plug adapter**, noting the **– and +** markings.
- Insert the adapter into the meter, ensuring the **– side** goes into the **COM** input terminal and the **+ side** goes into the **°C/°F** input terminal.

d. Measure the Temperature:

- Touch the tip of the temperature probe to the component or object being measured. Keep the probe in contact until the reading stabilises (about 30 seconds).

e. Read the Measurement:

- Observe the temperature reading on the LCD display.

12. Battery Replacement

To replace the batteries in the meter:

Lift the Tilt Stand:

- Raise the tilt stand to access the battery compartment.

Loosen the Screw:

- Use a Phillips screwdriver to loosen the single screw securing the battery/fuse cover.

Remove the Cover:

- Carefully remove the battery/fuse cover.

Replace the Batteries:

- Insert four x AAA batteries into the compartment.

Check Polarity:

- Ensure the batteries are installed with the correct polarity, as indicated inside the battery compartment.

Reinstall the Cover:

- Replace the battery/fuse cover and tighten the screw securely.

19. Maintenance & Cleaning

The maintenance and other services of this instrument must be carried out by the manufacturer or an approved service centre so not to invalidate the warranty. Test leads are classed as a wear and tear item and are available to purchase as an accessory. Please contact product support for more information. The outer casing should be regularly cleaned with either a dry or slightly damp cloth. Do not use detergents, especially if they contain abrasives or solvents.



13. Warranty & Calibration

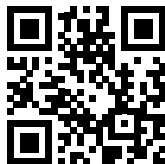
Di-LOG instruments are subject to stringent quality controls. If in the course of normal daily use a fault occurs we provide a 24 month warranty (only valid with proof of purchase). Faults in manufacture and material defects will be rectified by us free of charge, provided the instrument has not been tampered with and returned to us unopened. Damage due to dropping, abuse or misuse are not covered by the warranty.

Product Support
support@dilog.co.uk



To maintain the specified accuracy of the measurement results, the instrument must be recalibrated at regular intervals by Di-LOG. Di-LOG's service partner, Re-CAL Calibration, are the only authorised agent with the facility to adjust and service the DL9319BT digital multimeter. We recommend an annual recalibration period from the date of purchase.

Service & Calibration
www.recal.biz



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Notes

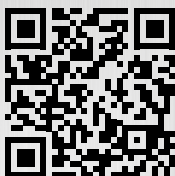
Notes

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AC/DC TRMS MULTIMETER Instruction Manual

Register your product with us to
keep in contact with the latest
updates and service reminders.



www.dilog.co.uk/register



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