

## KEYSIGHT TECHNOLOGIES (AGILENT HP)

# 4338B

The Keysight Technologies (formerly Agilent HP) 4338B is a high-speed, precise AC milliohm meter designed for dry-circuit measurements of low-resistance components. Operating at a test signal frequency of 1 kHz, it is optimized for characterizing switches, batteries, relays, cables, connectors, and printed circuit boards where contact resistance is critical.

## SPECIFICATIONS

### General

|                               |                                                           |
|-------------------------------|-----------------------------------------------------------|
| Interfaces                    | GPIB, Handler interface                                   |
| Display                       | Character LCD with selectable 3, 4, or 5-digit resolution |
| Warm-up Time                  | 30 minutes                                                |
| Recommended Calibration Cycle | 1 year                                                    |
| Display Resolution            | 3, 4, or 5 digits                                         |

### Physical

|                       |                                                            |
|-----------------------|------------------------------------------------------------|
| Power Supply          | 90 V to 132 V or 198 V to 264 V, 47 Hz to 66 Hz, 45 VA max |
| Operating Temperature | 0 to 55 °C °C                                              |
| Dimensions (W×H×D)    | 320 mm × 100 mm × 300 mm mm                                |
| Weight                | 4.5 kg                                                     |

### Measurement Performance

|                               |                                                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------|
| Measurement Parameters        | R (AC resistance), X (reactance),  Z  (impedance magnitude), L (inductance), Q (quality factor) |
| Resistance Measurement Range  | 10 $\mu\Omega$ to 100 k $\Omega$                                                                |
| Maximum Resistance Resolution | 10 $\mu\Omega$                                                                                  |
| Base Accuracy                 | $\pm 0.4\%$                                                                                     |
| Test Signal Frequency         | 1 kHz                                                                                           |
| Test Signal Current Range     | 1 $\mu\text{A}$ , 10 $\mu\text{A}$ , 100 $\mu\text{A}$ , 1 mA, 10 mA                            |
| Open Circuit Voltage Limit    | 20 mV peak max                                                                                  |
| Range Selection Modes         | Auto, Hold                                                                                      |

## Measurement Speed and Timing

|                               |                                  |
|-------------------------------|----------------------------------|
| Short Mode Measurement Speed  | 34 ms                            |
| Medium Mode Measurement Speed | 70 ms                            |
| Long Mode Measurement Speed   | 900 ms                           |
| Trigger Modes                 | Internal, Manual, External, GPIB |
| Trigger Delay Time Range      | 0 to 9999 ms                     |
| Averaging Range               | 1 to 256                         |

## Measurement Support and Functions

|                        |                                                                              |
|------------------------|------------------------------------------------------------------------------|
| Error Correction       | Open/Short correction                                                        |
| Contact Check Function | Checks for open test leads or high contact resistance                        |
| Save/Recall States     | Up to 10 instrument configuration states                                     |
| Comparator Function    | HIGH/IN/LOW sorting for primary parameter, PASS/FAIL for secondary parameter |

## Display and Controls

|                      |           |
|----------------------|-----------|
| Front Panel Key Lock | Available |
|----------------------|-----------|

## Environmental Conditions

|                           |                         |
|---------------------------|-------------------------|
| Operating Humidity Range  | 95% RH or less at 40 °C |
| Storage Temperature Range | -40 to +70 °C           |

## Physical Characteristics

|                          |                                     |
|--------------------------|-------------------------------------|
| Rack Mount Compatibility | Yes (with optional rack mount kits) |
|--------------------------|-------------------------------------|

## Power Requirements

|                   |                |
|-------------------|----------------|
| Line Frequency    | 47 Hz to 66 Hz |
| Power Consumption | 45 VA max      |

## Measurement Support

|                           |          |
|---------------------------|----------|
| Cable Length Compensation | 0 m, 1 m |
|---------------------------|----------|

## Measurement Safety

|                          |              |
|--------------------------|--------------|
| Maximum Input DC Voltage | ±42 V DC max |
|--------------------------|--------------|

## Interfaces

|                                |                                                         |
|--------------------------------|---------------------------------------------------------|
| Handler Interface (Option 001) | 36-pin Amphenol connector                               |
| Analog Output (Option 002)     | DC voltage output proportional to the measurement value |

## Inputs & Outputs

|                        |                             |
|------------------------|-----------------------------|
| External Trigger Input | BNC (rear panel), TTL level |
|------------------------|-----------------------------|

Measurement Ranges

|                                   |                      |
|-----------------------------------|----------------------|
| Inductance (L) Measurement Range  | 10 nH to 15.91 H     |
| Phase Angle (θ) Measurement Range | -180.00° to +180.00° |
| Impedance ( Z ) Measurement Range | 10 μΩ to 100.00 kΩ   |
| Reactance (X) Measurement Range   | 10 μΩ to 100.00 kΩ   |

Test Signal

|                                |     |
|--------------------------------|-----|
| Test Signal Frequency Accuracy | ±2% |
|--------------------------------|-----|

Measurement Functions

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| Deviation Measurement | Δ (absolute difference), Δ% (percentage difference) |
|-----------------------|-----------------------------------------------------|

Interfaces & Software

|                  |                                                       |
|------------------|-------------------------------------------------------|
| Command Language | SCPI (Standard Commands for Programmable Instruments) |
|------------------|-------------------------------------------------------|

TECHNOLOGY

AC Milliohmeter (Dry Circuit)

APPLICATIONS

Low resistance testing of switches, batteries, relays, connectors, and PCB tracks

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.