



M1 MILLIOHM METER®

Custom-designed laboratory-grade electronic test instruments for aviation and aerospace industries.

BCD Electronics Ltd. is the original equipment manufacturer (OEM) of the highly sophisticated M1 Milliohm Meter® ground support bonding and grounding instrument. We also provide accessories for the M1 Milliohm Meter®.

30 YEARS
OF PRECISION

About BCD Electronics Ltd.

Established in 1994, BCD Electronics Ltd. is a Canadian manufacturer of high quality, laboratory-grade, precision measuring instruments for aviation, aerospace, laboratory testing, and other industries.

All products are manufactured and serviced at our facilities in Burnaby, British Columbia, Canada. BCD Electronics Ltd. sells and ships our products directly to customers around the world to maximize efficiency and customer satisfaction.

Product and Customer Service

As an original equipment manufacturer, BCD Electronics provides prompt professional product and customer service. We provide complete recalibration, recertification, and repair services to factory standards.

Certifications

- ISO 9001 registered
- NIST accuracy certified
- UL913 flightline approved
- CE certified
- MIL-STD-461G approved

BCD Electronics Ltd.

221 – 3823 Henning Drive
Burnaby, BC, V5C 6P3, Canada
T+1.604.433.2447
F+1.604.433.1448

Website: bcdelectronics.com

Office: administration@bcdelectronics.com

Sales and Service: service@bcdelectronics.com

Technical: technical@bcdelectronics.com

M1 MILLIOHM METER®



The M1 Milliohm Meter® is a handheld ground support bonding and grounding meter. It measures low electrical resistance where portability, safety, high precision, and ease of use are demanded and is used to ensure the regulated conformity of electrical bonding for structural and safety purposes.

SPECIFICATIONS

Operation:

- Fully automatic
- Store up to 128 readings
- RS 232 data communications port

Instrument Range:

0.00 to 19 999 Milliohms

Test Accuracy:

- M1: Within 0.1% of readings, +/- 1 display count
- M1B, M1-25: Within 0.1% of readings, +/- 3 micro-ohms, +/- 1 display count

Instrument Resolution:

- M1: 0.00 to 19 999 Milliohms, 4-1/2 digit display
- M1B, M1-25: 0.000 to 19 999 Milliohms, 4-1/2 digit display

Test Current:

- M1, M1B: 100mA DC
- M1-25: 25mA DC

Test Voltage:

- Maximum 2.4 volts internally limited

Battery:

- 6" C" cell pack, specified for UL913 and charger
- Nominal 7.5 volts operation

Charger:

Manufactured for the M1 Meter, no substitutes:

- Source, 90-260VAC, 50-60Hz, 30 watts
- Complete charge within 2 hours.
- Leave connected for continuous conditioning

Temperature:

Operating: -20°C to +40°C

Humidity:

0 – 95%

Weight:

- Instrument – 2 lbs.
- Instrument Kit – 11 lbs.

Certifications:

- ISO 9001:2015 registered
- NIST accuracy certified
- UL913 flightline approved, Class 1, Division I, Groups C and D, T3A
- CE International certified
- MIL-STD-461G for RS 103 radiated susceptibility, electric field.

Note: For maximum performance maintain tips sharp and clean.

M1 MILLIOHM METER® FEATURES

The M1 Milliohm Meter® represents major innovation and advancement in modern industrial instrumentation design. It is fast, light, and convenient to use. The readings on the face of the meter are internally processed and stored. Measurements are made by the four-wire or Kelvin probe method.

All measurements are displayed in milliohms. It is easy to use, there are no conversions, and you do not have to zero the meter or compensate for cables.

The meter is automatic and self-ranging, always displaying the test measurements on the most appropriate scale that contains the reading, so there is never any need for the operator to change scales or ranges.

The meter will only display a reading when the necessary electrical continuity criteria are met, ensuring accurate and reliable measurements with no chance of incorrect readings. The meter gives accurate, stable values, without fluctuation.

A reading cannot be accidentally lost without the operator making the conscious choice by either taking another reading or turning the power off. The meter also has an internal memory capable of storing up to 128 readings, which can be recalled and/or downloaded at a later time.

The M1 Milliohm Meter® uses a rechargeable 6" C" NiCad cell battery pack with special features that extend battery life for many years under normal working conditions and proper care.

For a comprehensive list of product features, explore our website at bcdelectronics.com, or contact us directly at +1.604.433.2447 or via email at service@bcdelectronics.com.

ACCESSORIES

Accessories for the M1 Milliohm Meter®

M1-Prob



Standard remote probe

In situations where the body of the meter is too large to allow its two probe tips to make contact with the workpiece, two of the remote probes may be used. The measurements are then made with each hand holding only a small remote probe. This method is also very helpful when using the meter on a test bench.

M1-Prob-Long



Long remote probe

A longer version of the Standard Remote Probe, the Long Probe measures 8.19" (208mm) in length, providing additional reach when the workpiece to contact is deep or in a narrow space. This can be used in conjunction with the Standard Remote Probe or the meter nose itself.

M1-Ext



Remote probe extension cable

You can attach one or several M1 extension cables to extend your reach to measure between larger distances. Each cable allows 4' (1.2m) usable extension.



Chargers

M1-CHG3

- Conditioning Charger Set for North America
- 115VAC, includes power adaptor

M1-CHG-PA

- Power adaptor only for conditioning charger

M1-GPWR

- Conditioning Charger Set –International
- 90-240VAC, international plug set, includes power adaptor



Tips

Standard Tips

Our standard tip is our top choice and is most commonly used.

M1-TIPS-STD

Flat and Round Tips

Flat and rounded tips are recommended for delicate or easily scratched surfaces.

M1-TIPS-FLT, M1-TIPS-RND

Long and Narrow Tips

Opting for a longer tip provides an extended reach while choosing a narrower one is ideal for navigating exceptionally tight spaces.

M1-TIPS-LNG, M1-TIPS-NRW

M1 MILLIOHM METER® MODELS

	Standard M1-G*	Standard M1-R*	M1B	M1-25
Features	<ul style="list-style-type: none"> • Measures low electrical resistance. • Portable and lightweight. • Intrinsically safe. • Internal memory. • Green display⁽¹⁾ 	<ul style="list-style-type: none"> • Everything our M1 offers. • Red display⁽¹⁾. 	<ul style="list-style-type: none"> • Everything our M1 offers. • Greater maximum display resolution of 0.001 milliohms. • Green display⁽¹⁾. 	<ul style="list-style-type: none"> • Everything our M1 offers but with 25 milliamps DC. • Very low test current, specially designed for use with highly volatile tasks such as weapon systems and rocket propulsion.
Fully Automatic • Stores 128 readings – RS • 232 data port	✓	✓	✓	✓
Range 0.00 to 19999 milliohms	✓	✓	✓	✓
Resolution 0.00 to 19999 milliohms	✓	✓	Greater resolution of 0.001 milliohms.	✓
Accuracy <0.1% of readings	✓	✓	✓	✓
Current 100 milliamps DC	✓	✓	✓	25mA test current
Voltage 2.4 volts internally limited	✓	✓	✓	✓
Bluetooth®	Optional	Optional	Optional	
Temperature operating -20°C to +40°C	✓	✓	✓	✓
Qualifications • ISO 9001 registered • NIST accuracy certified • UL913 flightline approved • CE certified	✓	✓	✓	✓

*The difference between the standard M1-G/R and M1B Meter is in the display resolution only. If the additional resolution has not been specified or is not required for your applications, the standard unit would likely be the best choice.

(1) We provide a variety of display colour options, allowing you to choose based on your personal preference.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by BCD Electronics Ltd. is under license. Other trademarks and trade names are those of their respective owners.