

User Manual
ENGLISH



AC/DC Current Probe Model MR6292



CURRENT PROBE

Measure Up
WITH AEMC INSTRUMENTS



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Catalog #: 2129.86

Model #: MR6292

Please fill in the appropriate date as indicated:

Date Received: _____

Date Calibration Due: _____



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1. INTRODUCTION

Warning

These safety warnings are provided to ensure the safety of personnel and proper operation of the instrument.







- Read this instruction manual completely and follow all the safety information before attempting to use or service this instrument.
- Use caution on any circuit: Potentially high voltages and currents may be present and may pose a shock hazard.
- Read the safety specifications section before using the Model MR6292. Never exceed the maximum working voltage ratings given.
- Safety is the responsibility of the operator!
- Never open the back of the instrument while connected to any circuit or input.
- ALWAYS connect the Model MR6292 to the Micro-Ohmmeter Model 6292 instrument before clamping the probe onto the sample under test.
- Always inspect the probe and lead prior to use. Replace any defective parts immediately.
- NEVER use the Model MR6292 on electrical conductors rated above 600 V.

1.1 INTERNATIONAL ELECTRICAL SYMBOLS

Thank you for purchasing an AEMC® Instruments AC/DC Current Probe Model MR6292.

For the best results from your instrument and for your safety, you must read the enclosed operating instructions carefully and comply with the precautions for use. Only qualified and trained operators should use this product.

Symbols:

	Signifies that the instrument is protected by double or reinforced insulation
	CAUTION - Risk of Danger! Indicates a WARNING . Whenever this symbol is present, the operator must refer to the user manual before operation
	Indicates a risk of electric shock. The voltage at the parts marked with this symbol may be dangerous
	This is a type A current sensor. This symbol signifies that application around and removal from HAZARDOUS LIVE conductors is permitted
	Important information to acknowledge
	This product complies with the Low Voltage & Electromagnetic Compatibility European directives (73/23/CEE & 89/336/CEE)

1.2 DEFINITION OF MEASUREMENT CATEGORIES (CAT)

CAT IV corresponds to measurements performed at the primary electrical supply (< 1000 V).

Example: primary overcurrent protection devices, ripple control units, and meters.

CAT III corresponds to measurements performed in the building installation at the distribution level.

Example: hardwired equipment in fixed installation and circuit breakers.

CAT II corresponds to measurements performed on circuits directly connected to the electrical distribution system.

Example: measurements on household appliances and portable tools.

1.3 RECEIVING YOUR SHIPMENT

Upon receiving your shipment, make sure that the contents are consistent with the packing list. Notify your distributor of any missing items. If the equipment appears to be damaged, file a claim immediately with the carrier and notify your distributor at once with a detailed description of any damage. Save the damaged packing container to substantiate your claim.

1.4 ORDERING INFORMATION

AC/DC Current Probe Model MR6292

(for use with Micro-Ohmmeter Model 6292 only) **Cat. #2129.86**

Includes user manual.

2. PRODUCT FEATURES

2.1 DESCRIPTION

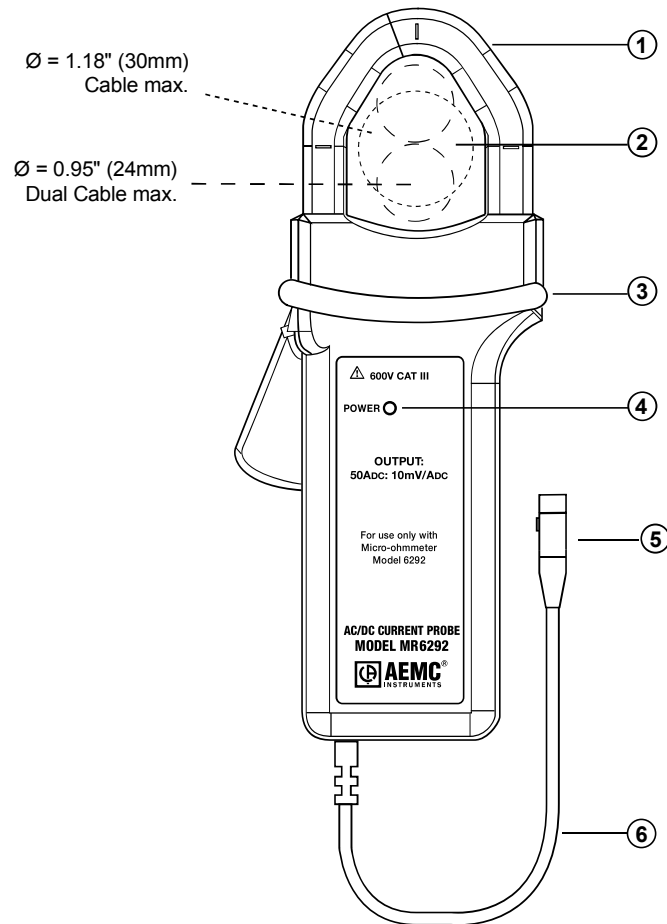
The AC/DC Current Probe Model MR6292 is an accessory for the AEMC® Instruments Micro-Ohmmeter Model 6292. The Model MR6292 probe is required for using the Model 6292 to take measurements in BSG (both sides grounded) mode.

The probe is designed to meet the latest safety and performance standards. The probe's hook-shaped jaws enable you to "pry" into or "hook" onto cables (it will accept 2 x 500 MCM) or small bus bars.

The Model MR6292 uses Hall effect technology. All electronics are self-contained in the handle. The output of the probe is 10 mV/A. No battery is required; the probe operates via voltage provided by the Model 6292.

The probe has a proportional mV output for direct reading on the Model 6292.

2.2 MR6292 FEATURES



1. Jaws
2. Conductor
3. Protective non-slip guard
4. Green light (ON when connected to the Model 6292)
5. Lead, 5 ft (1.5 m)
6. 5-pin XLR connector

3. SPECIFICATIONS

3.1 ELECTRICAL

Measurement Range: 1 to 50 A_{DC}

Accuracy: 1 to 50 A_{DC}: 1.5 % reading ± 0.2 A

Output Signal: 10 mV/A_{DC}

Load Impedance: > 100 kΩ / 100 pF

Insertion Impedance: 0.39 mΩ @ 50 Hz, 58 mΩ @1000 Hz

Working Voltage: 600 V_{rms}

Common Mode Voltage: 600 V_{rms}

Influence of Adjacent Conductor:
< 10m A/A at 50 Hz at 23 mm from the probe

Influence of Conductor in Jaw Opening: 0.5 % reading

Power Source: Powered by Micro-Ohmmeter Model 6292

3.2 MECHANICAL

Jaw Opening: 1.2 in (31 mm)

Maximum Cable Diameter: One 1.18 in (30 mm) or two 0.95 in (24 mm) or two bus bars (1.2 x 0.4) in (31.5 x 10) mm

Dimensions: (8.8 x 3.82 x 1.73) in (224 x 97 x 44) mm

Weight: 15 oz (440 g)

Output: 4-conductor shielded cable with 5-pin XLR connector

Zero Adjustment: Automatic zero by Model 6292

Case Protection: IP30 per IEC 529

Drop Test: 1.0 m on 38 mm of oak on concrete; test according to EN 61010

Mechanical Shock: 100 G, test per IEC 68-2-27

Vibration: Test per IEC 68-2-6

Handle: UL 94 V0

Jaws: UL 94 V0

3.3 ENVIRONMENTAL

Operating Temperature Range: (14 to 131) °F (-10 to +55) °C

Storage Temperature Range: (-40 to 176) °F (-40 to +80) °C

Temperature Influence: ≤ 300 ° ppm / °K or 1 % / 10 °K
 ≤ 0.2 A / °K on Zero

Operating Relative Humidity:

(10 to 35) °C: 90 ± 5 % RH (without condensation)

(40 to 55) °C: 70 ± 5 % RH (without condensation)

Humidity Influence: (10 to 90) % RH @ reference temperature ≤ 0.1 % R

Altitude: Operating: (0 to 2000) m
Non-operating: (0 to 12,000) m

3.4 SAFETY



Electrical:

EN 61010-2-32, 600 V CAT III, Pollution: 2

Electromagnetic Compatibility:

EN 50081-1 Class B

EN 50082-2 Electrostatic discharge IEC 1000-4-2

Radiated field IEC 1000-4-3

Fast transients IEC 1000-4-4

Magnetic field at 50/60 Hz IEC 1000-4-8

4. OPERATION

The Model MR6292 probe is used in conjunction with the Micro-Ohmmeter Model 6292 to perform measurements in BSG (both sides grounded) mode. For additional information about using the Micro-Ohmmeter Model 6292, refer to the user manual on the USB Stick that ships with the instrument.

The Model DL913/914 front panel interface enables you to:

- View measurements in real time
- View instrument information and settings, including time/date, IP address, battery status, and others
- Start and stop recording sessions and enable or disable Wi-Fi

4.1 MAKING MEASUREMENTS

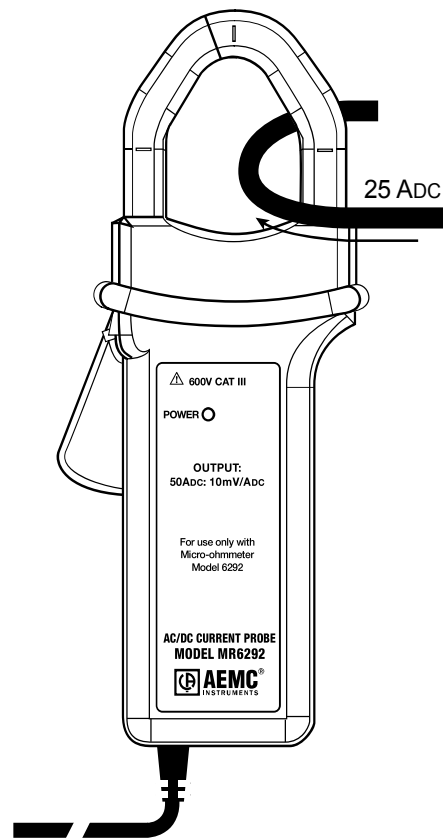
1. Plug the probe into the Model 6292.
2. Turn the power to the Model 6292 ON.
3. The green LED on the Model MR6292 should be lit. If the LED does not come ON or goes OFF after a few minutes; check to ensure that the Model 6292 instrument is still powered ON, and that the Model MR6292 is securely plugged into the instrument's socket.
4. Set up a test on the Micro-ohmmeter Model 6292, as instructed by the instrument's user manual (located on the USB stick).
5. Clamp the probe on the ground conductor to be tested, then start the test. The Model 6292 will display the measured ground conductor current as the "I_g" reading on the instrument's LCD display panel.

R=100.0uΩ	
I_t=142A	I_g=8.0A
DURATION:	015/060s
10/20/13	03:25 PM

In the preceding example, the I_g measurement provided by the MR6292 probe is 8.0 A.

4.2 OPERATION EXAMPLES)

- Conductor carrying 25 A_{DC} in the direction of the arrow
- Model 6292 displays I_g = 25 A.



5. MAINTENANCE

The device does not contain any parts that can be replaced by untrained or unaccredited personnel. Any unauthorized work or part replacement with equivalents may seriously compromise safety.

5.1 CLEANING



Before cleaning, disconnect all inputs to prevent possible electric shock.

The instrument should be cleaned periodically to keep the LCD clear and prevent the buildup of dirt and grease around the instrument's buttons.

- ◆ Clean the body of the instrument with a damp and soapy cloth
- ◆ Do not submerge the instrument in water
- ◆ Do not use solvents

5.2 REPAIR AND CALIBRATION

To ensure that your instrument meets factory specifications, we recommend that it be sent back to our factory Service Center at one-year intervals for recalibration or as required by other standards or internal procedures.

For instrument repair and calibration:

You must contact our Service Center for a Customer Service Authorization Number (CSA#). Send an email to [requesting a CSA#](#), you will be provided a CSA Form and other required paperwork along with the next steps to complete the request. Then return the instrument along with the signed CSA Form. This will ensure that when your instrument arrives, it will be tracked and processed promptly. Please write the CSA# on the outside of the shipping container. If the instrument is returned for calibration, we need to know if you want a standard calibration or a calibration traceable to N.I.S.T. (includes calibration certificate plus recorded calibration data).

Ship To:

(Or contact your authorized distributor.)

Contact us for the costs for repair, standard calibration, and calibration traceable to N.I.S.T. _____



NOTE: You must obtain a CSA# before returning any instrument.

5.3 TECHNICAL ASSISTANCE

If you are experiencing any technical problems or require any assistance with the proper operation or application of your instrument, please call, e-mail or fax our technical support team:

5.4 LIMITED WARRANTY

The instrument is ~~warranted to the owner~~ for a period of two years from the date of original purchase against defects in manufacture. This limited warranty is given by AEMC® Instruments, not by the distributor from whom it was purchased. This warranty is void if the unit has been tampered with, abused, or if the defect is related to service not performed by AEMC® Instruments.

Please print the online Warranty Coverage Information for your records.

What AEMC® Instruments will do:

If a malfunction occurs within the warranty period, you may return the instrument to us for repair, provided we have your warranty registration information on file or a proof of purchase. AEMC® Instruments will repair or replace the faulty material at our discretion.



5.4.1 Warranty Repairs

What you must do to return an Instrument for Warranty Repair:

First, send an email to [requesting a Customer Service Authorization Number \(CSA#\)](#) from our Service Department. You will be provided a CSA Form and other required paperwork along with the next steps to complete the request. Then return the instrument along with the signed CSA Form. Please write the CSA# on the outside of the shipping container. Return the instrument, postage or shipment pre-paid to:

Caution: To protect yourself against in-transit loss, we recommend that you insure your returned material.



NOTE: You must obtain a CSA# before returning any instrument.



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