

AC/DC Current Probe Model MR6292



CURRENT MEASUREMENT PROBES

Copyright© Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments. All rights reserved.

No part of this documentation may be reproduced in any form or by any means (including electronic storage and retrieval or translation into any other language) without prior agreement and written consent from Chauvin Arnoux®, Inc., as governed by United States and International copyright laws.

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
15 Faraday Drive • Dover, NH 03820 USA
Phone: (603) 749-6434 or (800) 343-1391 • Fax: (603) 742-2346

This documentation is provided **as is**, without warranty of any kind, express, implied, or otherwise. Chauvin Arnoux®, Inc. has made every reasonable effort to ensure that this documentation is accurate; but does not warrant the accuracy or completeness of the text, graphics, or other information contained in this documentation. Chauvin Arnoux®, Inc. shall not be liable for any damages, special, indirect, incidental, or inconsequential; including (but not limited to) physical, emotional or monetary damages due to lost revenues or lost profits that may result from the use of this documentation, whether or not the user of the documentation has been advised of the possibility of such damages.

Statement of Compliance

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments certifies that this instrument has been calibrated using standards and instruments traceable to international standards.

We guarantee that at the time of shipping your instrument has met the instrument's published specifications.

An NIST traceable certificate may be requested at the time of purchase, or obtained by returning the instrument to our repair and calibration facility, for a nominal charge.

The recommended calibration interval for this instrument is 12 months and begins on the date of receipt by the customer. For recalibration, please use our calibration services. Refer to our repair and calibration section at www.aemc.com/calibration.

Serial #: _____

Catalog #: 2129.86

Model #: MR6292

Please fill in the appropriate date as indicated:


Date Received: _____

Date Calibration Due: _____



Chauvin Arnoux®, Inc.
d.b.a AEMC® Instruments
www.aemc.com

TABLE OF CONTENTS







1. INTRODUCTION	5
1.1 INTERNATIONAL ELECTRICAL SYMBOLS	5
1.2 DEFINITION OF MEASUREMENT CATEGORIES (CAT)	5
1.3 PRECAUTIONS FOR USE 	6
1.4 RECEIVING YOUR SHIPMENT	6
1.5 ORDERING INFORMATION	6
2. PRODUCT FEATURES	7
2.1 DESCRIPTION	7
2.2 MR6292 FEATURES	8
3. SPECIFICATIONS.....	9
3.1 ELECTRICAL.....	9
3.2 MECHANICAL	9
3.3 ENVIRONMENTAL	10
3.4 SAFETY	10
4. OPERATION	11
4.1 MAKING MEASUREMENTS	11
4.2 OPERATION EXAMPLES	12
5. MAINTENANCE.....	13
5.1 CLEANING.....	13
5.2 REPAIR AND CALIBRATION.....	13
5.3 TECHNICAL ASSISTANCE	14
5.4 LIMITED WARRANTY	14
5.4.1 Warranty Repairs.....	14

1. INTRODUCTION

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

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

1.1 INTERNATIONAL ELECTRICAL 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 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 PRECAUTIONS FOR USE

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.

1.4 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, giving a detailed description of any damage. Save the damaged packing container to substantiate your claim.

1.5 ORDERING INFORMATION

AC/DC Current Probe Model MR6292

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

Includes user manual.

Order Accessories and Replacement Parts Directly Online

Check our Storefront at www.aemc.com/store for availability

2. PRODUCT FEATURES

2.1 DESCRIPTION

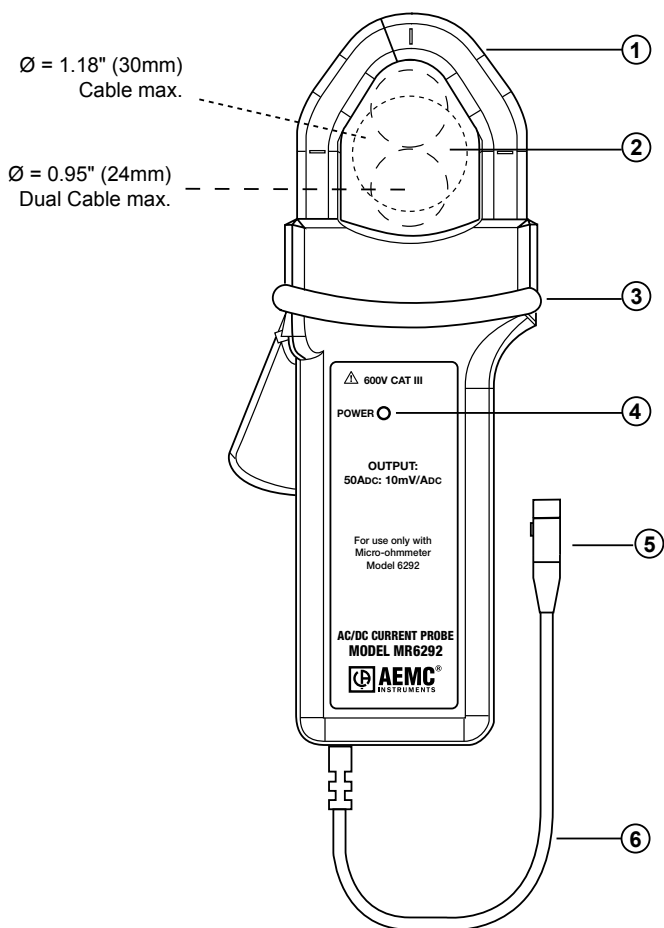
The AC/DC Current Probe Model MR6292 is an accessory for the AEMC® Instruments Micro-Ohmmeter Model 6292. The Model MR6292 probe is required for using the Model 6292 to take measurements in BSG (both sides grounded) mode.

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 as 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) ADC

Accuracy: (1 to 50) ADC: 1.5 % reading \pm 0.2 A

Output Signal: 10 mV/ADC

Load Impedance: > 100 k Ω / 100 pF

Insertion Impedance: 0.39 m Ω @ 50 Hz, 58 m Ω @1000 Hz

Working Voltage: 600 VRMS

Common Mode Voltage: 600 VRMS

Influence of Adjacent Conductor: < 10 m 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: (-10 to +55) °C

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

Temperature Influence: $\leq 300 \text{ }^{\circ}\text{ppm} / \text{ }^{\circ}\text{K}$ or $1 \% / 10 \text{ }^{\circ}\text{K}$
 $\leq 0.2 \text{ A} / \text{ }^{\circ}\text{K}$ on Zero

Operating Relative Humidity:

(10 to 35) °C: $90 \pm 5 \% \text{ RH}$ (without condensation)

(40 to 55) °C: $70 \pm 5 \% \text{ RH}$ (without condensation)

Humidity Influence: (10 to 90) % RH @ reference temperature $\leq 0.1 \% \text{ R}$

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 Drive that ships with the instrument.

4.1 MAKING MEASUREMENTS

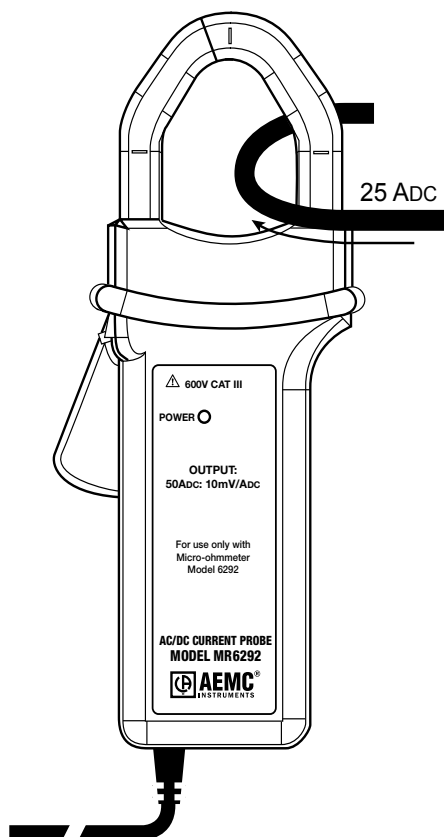
1. Plug the probe into the Model 6292.
2. Turn the power to the Model 6292 **ON**.
3. The green LED on the Model MR6292 should be lit. If the LED does not come ON or goes OFF after a few minutes; check to ensure that the Model 6292 instrument is still powered ON, and that the Model MR6292 is securely 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 Drive).
5. Clamp the probe onto 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 ADC in the direction of the arrow
- Model 6292 displays $I_g = 25\text{ A}$



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



WARNING: 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 repair@aemc.com 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: Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments

15 Faraday Drive ▪ Dover, NH 03820 USA

Phone: (800) 945-2362 (Ext. 360) / (603) 749-6434 (Ext. 360)

Fax: (603) 742-2346

E-mail: repair@aemc.com

(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:

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
Phone: (800) 343-1391 (Ext. 351)
Fax: (603) 742-2346
E-mail: techsupport@aemc.com ▪ www.aemc.com

5.4 LIMITED WARRANTY

The instrument is warrantied to the owner for a period of three 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.

Full warranty coverage and product registration is available on our website at www.aemc.com/warranty.html

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.

REGISTER ONLINE AT: www.aemc.com/warranty.html

5.4.1 Warranty Repairs

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

First, send an email to repair@aemc.com 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:

Chauvin Arnoux®, Inc. d.b.a. AEMC® Instruments
15 Faraday Drive, Dover, NH 03820 USA
Phone: (800) 945-2362 (Ext. 360) ▪ (603) 749-6434 (Ext. 360)
Fax: (603) 742-2346 ▪ E-mail: repair@aemc.com

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.

NOTES:



02/24
99-MAN 100402 v06