User Manual
ENGLISH

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

Phase Rotation Meter

Model 6612

ELECTRICAL TEST TOOLS

Measure Up
WITH AEMC® INSTRUMENTS

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.

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.

Serial #: _____

Catalog #: 2121.91

Model #: 6612

Please fill in the appropriate date as indicated:

Date Received: _____

Date Verification Due: _____

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1. INTRODUCTION

Thank you for purchasing an AEMC® Instruments **Phase Rotation Meter Model 6612**.

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.

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.
	Indicates Important information to acknowledge
	Ground/Earth
	AC or DC
	This product complies with the Low Voltage & Electromagnetic Compatibility European directives.
	In the European Union, this product is subject to a separate collection system for recycling electrical and electronic components in accordance with directive WEEE 2012/19/EU.

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 Precautions for Use ⚠

- This instrument complies with safety standard IEC 61010-1.
- For your own safety, and to prevent any damage to your instrument, you must follow the instructions given in this manual.
- This instrument can be used on CAT IV electrical circuits not exceeding 600 V with respect to earth. It must be used indoors, in an environment not exceeding pollution level 2, at an altitude of not more than 6562 ft (2000 m). The instrument can therefore be used in complete safety on (40 to 850) V three-phase networks in an industrial environment.
- For safety reasons, you must use only measurement leads having a voltage rating and category at least equal to those of the instrument and compliant with standard IEC 61010-031.
- Do not use if the housing is damaged or not correctly closed.
- Do not place your fingers near unused terminals.
- If the instrument is used other than as specified in this manual, the protection provided by the instrument may be impaired.

- Do not use this instrument if it seems to be damaged.
- Check the integrity of the insulation of the leads and of the housing. Replace damaged leads.
- Be prudent when working in the presence of voltages exceeding 60 VDC or 30 VRMS and 42 Vpp; such voltages can cause a risk of electrocution. The use of individual protections is recommended in some cases.
- Always keep your hands behind the physical guards of the probe tips or alligator clips.
- Always disconnect all leads from the measurement and from the instrument before opening the housing.

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

Phase Rotation Meter Model 6612 ..... **Cat. #2121.91**
Includes meter, (3) color-coded test leads (red, black, blue), (3) alligator clips (black), soft carrying case and a user manual.

1.5.1 Accessories and Replacement Parts

Soft carrying case.....**Cat. #2117.73**

Set of (3) color-coded leads with
(3) black alligator clips CAT III 1000 V 10 A..... **Cat. #2121.55**

2. PRODUCT FEATURES

2.1 Description

The Model 6612 Phase Rotation Meter is a handheld instrument designed to facilitate installing three-phase electrical power supply networks by allowing a rapid determination of the direction of phase rotation. The instrument will power up once leads have been connected to the source to be tested

2.2 Control Features

1	Test Lead Input Terminals
2	Phase Indicators L1, L2, and L3
3	Clockwise and Counterclockwise Rotation LED
4	Back Label - Instructions & Safety Information

3. OPERATION

3.1 Phase Rotation Direction

On a three-phase electrical network:

1. Connect the three leads to the instrument, matching the markings.
2. Connect the three alligator clips to the 3 phases of the network to be tested.
3. The display lights up, indicating that the instrument is in operation.
4. When the three phase indicators (L1, L2, and L3) are lit, the clockwise (or counterclockwise) rotation arrow indicates the direction of phase rotation.

WARNING: The wrong direction of rotation may be displayed if a lead is connected in error to the neutral conductor. Refer to the instrument's back label (see Figure 2 in § 3.3.1) for a summary of the various display possibilities.

3.2 Instrument Front

3.2.1 Faceplate

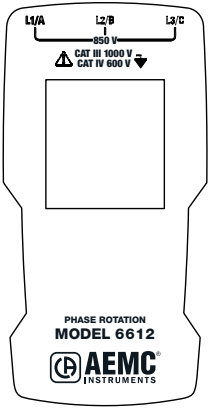

Figure 1

3.3 Instrument Back

3.3.1 Instruction Label/Safety Information

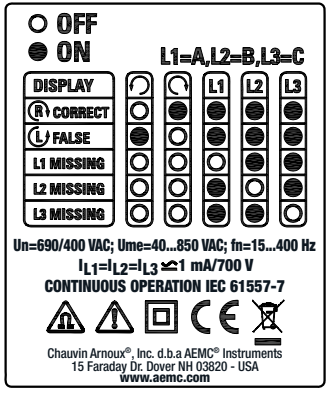

Figure 2

4. SPECIFICATIONS

4.1 Electrical

Operating Voltage	(40 to 850) VAC between phases
Frequency	(15 to 400) Hz
Test Current	1 mA
Power Source	Line Powered

4.2 Mechanical

Dimensions	(5.3 x 2.95 x 1.22) in (135 x 75 x 31) mm
Weight	4.83 oz (137 g)

4.3 Environmental

Operating Temperature	(32 to 104) °F (0 to 40) °C
Storage Temperature	(-4 to 122) °F (-20 to 50) °C; RH < 80 %

4.4 Safety

Safety Rating	CAT IV 600 V, 1000 V CAT III IEC 61010-1, IEC 61557-7, Tightness : IP40 (as per IEC 60529 Ed.92)
Double Insulation	Yes
CE Mark	Yes

5. MAINTENANCE

5.1 Cleaning

WARNING: To avoid electrical shock or damage to the instrument, do not allow water to get inside of the case.

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

- Wipe the case with a soft cloth lightly moistened with mild, soapy water.
- Dry completely with a soft, dry cloth before using again.
- Do not allow water or other foreign substances into the case.
- Never use alcohol, abrasives, solvents or hydrocarbons.

5.2 Repair and Calibration

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

5.4 Limited Warranty

The instrument is warrantied 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.

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