Genus AAH2455

Genus 3-Phase Multi-Function LCD Display Meter User Manual

Model: AAH2455 | Brand: Genus

1. Introduction

The Genus Three Phase Trivector Meter is an Electronic Energy Meter designed for accurate metering in 3 Phase 4 Wire & 3 Phase 3 Wire distribution systems. It is suitable for a wide range of applications including residential, industrial, and commercial complexes.

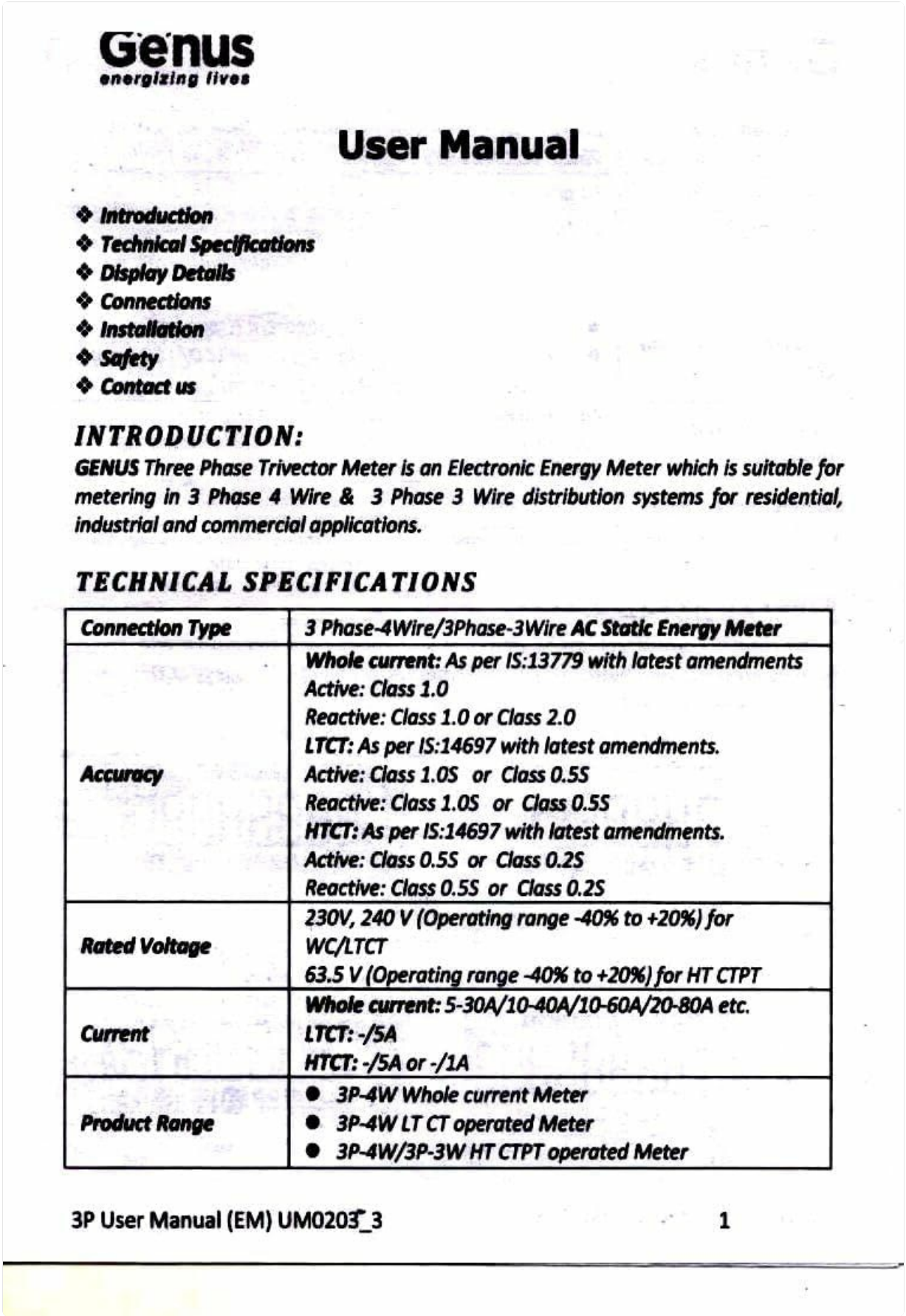
Figure 1: Genus 3-Phase Multi-Function LCD Display Meter with protective cover box.

2. Key Features

- **Multi-Function LCD Display:** Provides clear readings of various parameters.
- **Robust Construction:** Features a light-weight, dust-proof body with an elegant poly-carbonate casing and rugged construction, offering high resistance to UV radiation.
- **Wide Compatibility:** Compatible with all Electricity Boards across India.
- **Versatile Application:** Ideal for individual residential houses, apartments, commercial premises like shops, offices, and rented properties for both indoor and outdoor usage.
- **ISI-Marked:** Ensures compliance with quality and safety standards.

3. Technical Specifications

Below are the detailed technical specifications for the Genus 3-Phase Multi-Function LCD Display Meter.



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User Manual

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INTRODUCTION:

GENUS Three Phase Trivector Meter is an Electronic Energy Meter which is suitable for metering in 3 Phase 4 Wire & 3 Phase 3 Wire distribution systems for residential, industrial and commercial applications.

TECHNICAL SPECIFICATIONS

Connection Type	3 Phase-4Wire/3Phase-3Wire **AC Static Energy Meter**
Accuracy	**Whole current:** As per IS:13779 with latest amendments Active: Class 1.0 Reactive: Class 1.0 or Class 2.0 **LTCT:** As per IS:14697 with latest amendments. Active: Class 1.0S or Class 0.5S Reactive: Class 1.0S or Class 0.5S **HTCT:** As per IS:14697 with latest amendments. Active: Class 0.5S or Class 0.2S Reactive: Class 0.5S or Class 0.2S
Rated Voltage	230V, 240 V (Operating range -40% to +20%) for WC/LTCT 63.5 V (Operating range -40% to +20%) for HT CTPT
Current	**Whole current:** 5-30A/10-40A/10-60A/20-80A etc. **LTCT:** -/5A **HTCT:** -/5A or -/1A
Product Range	● 3P-4W Whole current Meter ● 3P-4W LT CT operated Meter ● 3P-4W/3P-3W HT CTPT operated Meter

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Figure 2: Excerpt from User Manual showing Technical Specifications.

General Specifications

Parameter	Value
Connection Type	3 Phase-4 Wire / 3 Phase-3 Wire AC Static Energy Meter

Parameter	Value
Voltage Rating	3x240V (Operating range -40% to +20%)
Current Rating	3X(20-100) Amp
Frequency	50Hz
Impulse Rate	3200 imp/kWh
Accuracy Class	Class-1.0
Display Type	LCD with Backlit (Seven Segment Display with Icons)
Communication Interface	Optional Optical Port (IEC 62056-11 or IrDA Port or IR Port), RS232/RS485 for AMR/RMR
Operating Temperature	As per relevant IS standards
Dimensions (Approx.)	25.3 x 23 x 12.2 cm
Item Weight	1.85 kg

Test Certificate

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Genus Power Infrastructures Ltd,Haridwar

3Phase-4Wire,AC Static Energy Meter

3P 4W,20-100A,240V,50Hz,CL-1

Routine Test Report As Per

IS 13779:2020

TEST CERTIFICATE

Meter Sr No: AAH2455 **Date:-06/05/2023**

1.Limits Of Error Measurement

Active Energy Measurement

LOAD	PF	PHASES	% Error
Imax	UPF	Combined	-0.02
	0.5Lag	Combined	-0.33
	0.866Lead	Combined	-0.10
Ib	UPF	Combined	-0.20
	0.5Lag	Combined	-0.08
	0.866Lead	Combined	-0.05
10% of Ib	UPF	Combined	-0.05
	0.5Lag	Combined	-0.09
	0.866Lead	Combined	-0.03
5% of Ib	UPF	Combined	-0.50

Reactive Energy Measurement

LOAD	PF	PHASES	% Error
Ib	UPF	Combined	-0.17
	0.5Lag	Combined	-0.04
	0.866Lead	Combined	-0.16
10% of Ib	0.5Lag	Combined	-0.27
	0.866Lead	Combined	-0.27
5% of Ib	UPF	Combined	0.22

Sr. no.	TEST	CLAUSE	Results
2.	AC High Voltage test	CL 12.7.6.3	OK
3.	Insulation resistance test	CL 12.7.6.4	OK
4.	No Load Condition test	CL 12.13	OK
5.	Starting Condition test	CL 12.14	OK

Testing Incharge:-Govind Kumar

Figure 3: Routine Test Report as per IS 13779:2020 for Meter Sr No: AAH2455.

4. Installation

Proper installation is crucial for the accurate and safe operation of the meter. It is recommended that installation be performed by a qualified electrician.

4.1 Physical Dimensions

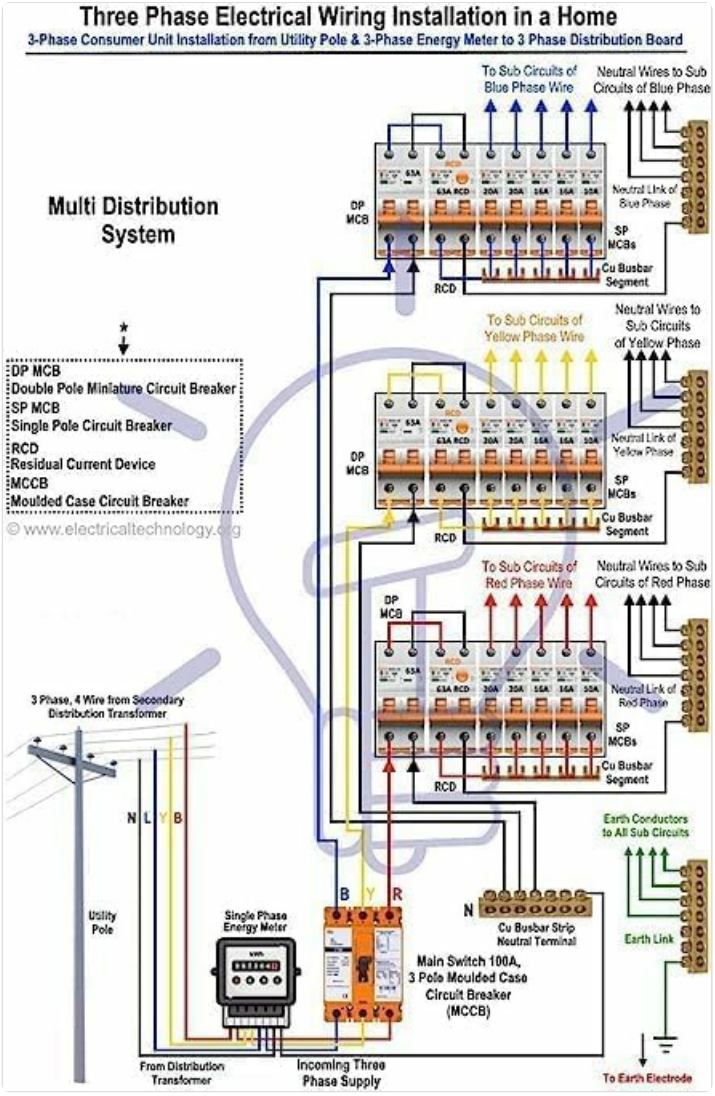

Figure 4: Meter dimensions for installation planning.

4.2 Wiring Connections

Refer to the following diagrams for correct wiring connections for different system types. Ensure all connections are secure and insulated.

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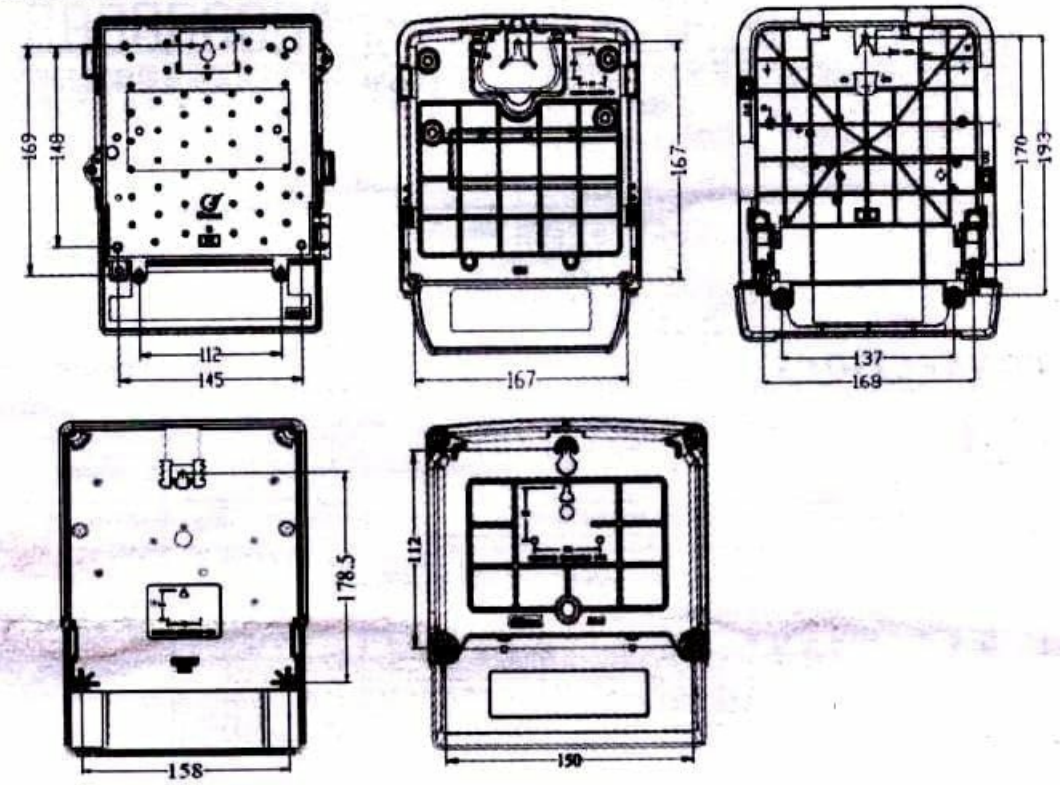
INSTALLATION:



SAFETY

1) Meter must not be operated beyond the specified limits, refer name plate for rating.
2) Ensure proper size and rating of conductors for installation.
3) Avoid contact with live terminals without proper insulation.
4) Avoid loose connection of conductors at the terminals.
Read this document completely before installation for mounting and operation details.

Figure 5: Wiring diagrams for 3-Phase, 4-Wire, and 3-Phase, 3-Wire systems.

Figure 6: Example of a Three Phase Consumer Unit Installation with Energy Meter.

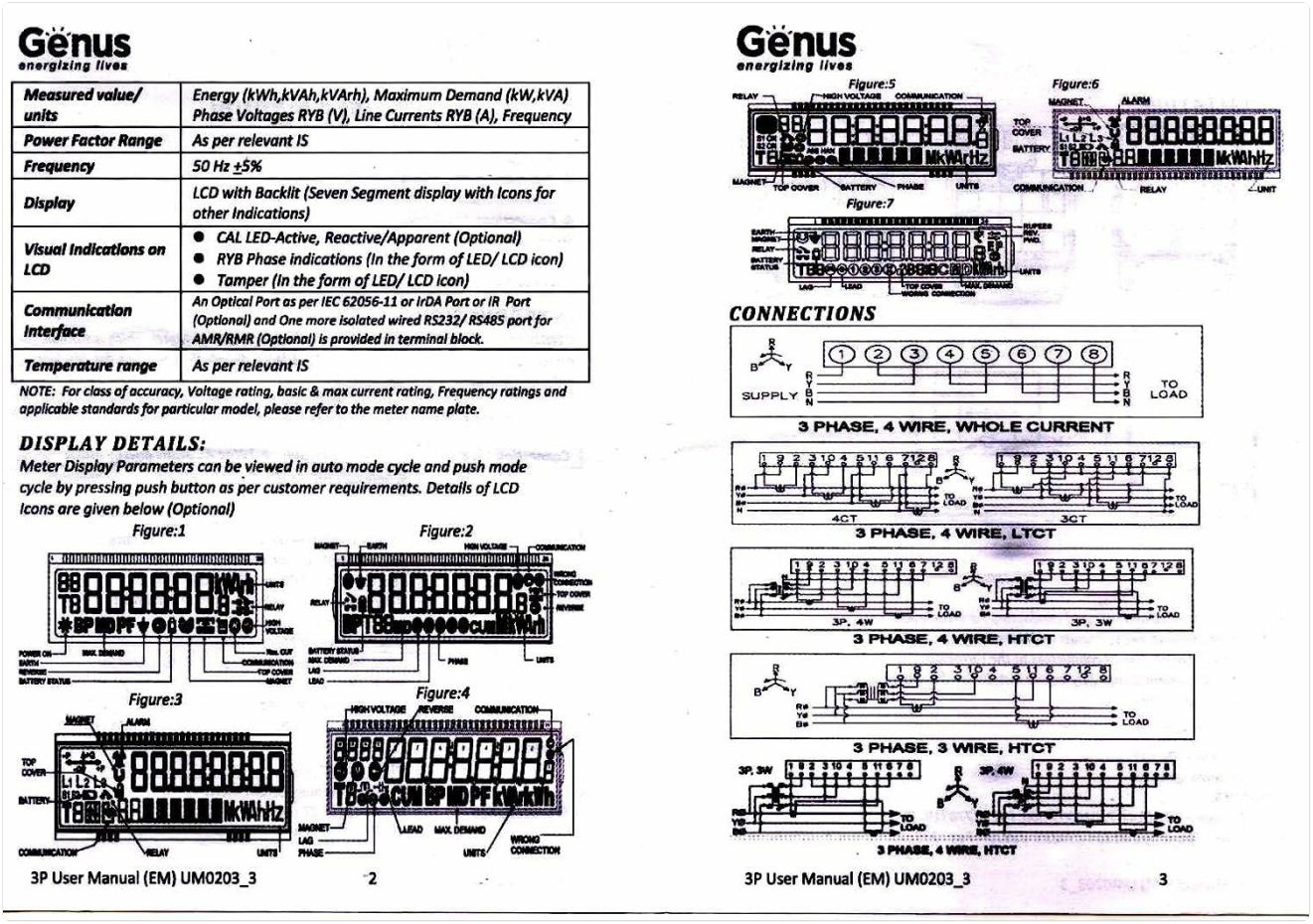
5. Operation and Display Details

The Genus meter features an LCD display that provides various measured parameters. These parameters can be viewed in an auto-mode cycle or by pressing the push button as per user requirements.

5.1 Visual Indications on LCD

The LCD provides visual indications for various states and measurements:

- **CAL LED:** Active/Reactive/Apparent (Optional)
- **RYB Phase Indications:** In the form of LED/LCD icons
- **Tamper Indication:** In the form of LED/LCD icon



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Measured value/ units	Energy (kWh,kVAh,kVArh), Maximum Demand (kW,kVA) Phase Voltages RYB (V), Line Currents RYB (A), Frequency
Power Factor Range	As per relevant IS
Frequency	50 Hz ±5%
Display	LCD with Backlit (Seven Segment display with Icons for other Indications)
Visual Indications on LCD	• CAL LED-Active, Reactive/Apparent (Optional) • RYB Phase indications (In the form of LED/ LCD icon) • Tamper (In the form of LED/ LCD icon)
Communication Interface	An Optical Port as per IEC 62056-11 or IrDA Port or IR Port (Optional) and One more isolated wired RS232/ RS485 port for AMR/RMR (Optional) is provided in terminal block.
Temperature range	As per relevant IS

NOTE: For class of accuracy, Voltage rating, basic & max current rating, Frequency ratings and applicable standards for particular model, please refer to the meter name plate.

DISPLAY DETAILS:

Meter Display Parameters can be viewed in auto mode cycle and push mode cycle by pressing push button as per customer requirements. Details of LCD Icons are given below (Optional)

Figure:1

Figure:2

Figure:3

Figure:4

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Figure:5

Figure:6

Figure:7

CONNECTIONS

3 PHASE, 4 WIRE, WHOLE CURRENT

3 PHASE, 4 WIRE, LTCT

3 PHASE, 4 WIRE, HTCT

3 PHASE, 3 WIRE, HTCT

3 PHASE, 4 WIRE, HTCT

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Figure 7: Excerpt from User Manual showing Display Details and Icons.

6. Maintenance

The Genus 3-Phase Multi-Function LCD Display Meter is designed for long-term, maintenance-free operation. To ensure optimal performance and longevity:

- Ensure the meter is kept clean and free from dust and moisture.
- Do not attempt to open or repair the meter yourself. This may void the warranty and poses a safety risk.
- Regularly inspect the meter and its connections for any visible damage or loose wiring.

7. Troubleshooting

If the meter is not functioning as expected, consider the following basic troubleshooting steps:

- **No Display/Power:** Check the main power supply to the meter and ensure all connections are secure.
- **Incorrect Readings:** Verify that the wiring connections match the diagrams provided in the installation section. Ensure the meter is correctly rated for your system.
- **Tamper Indication:** If a tamper indicator is active, it suggests an unauthorized attempt to interfere with the meter. Contact your electricity board or a qualified technician immediately.

For persistent issues, it is recommended to contact qualified personnel or customer support. Do not attempt to

repair the meter yourself.

8. Safety Guidelines

Adherence to these safety guidelines is paramount for preventing accidents and ensuring the longevity of the meter:

1. The meter must not be operated beyond its specified limits. Always refer to the nameplate for rating information.
2. Ensure the proper size and rating of conductors are used for installation.
3. Avoid contact with live terminals without proper insulation. Always disconnect power before working on the meter or its connections.
4. Ensure there are no loose connections of conductors at the terminals. Loose connections can lead to overheating and fire hazards.
5. Read this entire document completely before beginning installation, mounting, or operation.

9. Warranty Information

The Genus 3-Phase Multi-Function LCD Display Meter comes with a**1-Year Warranty** provided by Genus. This product is designed for a long working life of up to 10 years under normal operating conditions.
Please retain your purchase receipt for warranty claims. The warranty covers manufacturing defects and malfunctions under normal use. It does not cover damage due to improper installation, misuse, unauthorized repairs, or external factors.

10. Contact Information

For technical support, warranty claims, or any other inquiries regarding your Genus 3-Phase Multi-Function LCD Display Meter, please contact Genus customer service.
Please refer to the product packaging or the official Genus website for the most current contact details.

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

How do I lock a specific display page on the Genus AAH2455 3-Phase Multi-Function LCD Display Meter?

Based on the manual for the Genus AAH2455 3-Phase Multi-Function LCD Display Meter, there is no specific "lock" command mentioned to freeze a single parameter on the screen indefinitely. However, you can control how...

Read full answer