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GGKLVWMA TOVPD3-63VA

GGKLVWMA TOVPD3-63VA Din Rail 3 Phase Adjustable Over and Under Voltage Protector Relay with Current Protection User Manual

Model: TOVPD3-63VA | Brand: GGKLVWMA

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the GGKLVWMA TOVPD3-63VA Din Rail 3 Phase Adjustable Over and Under Voltage Protector Relay with Current Protection. This device is designed to safeguard electrical equipment from damage caused by voltage fluctuations and overcurrent conditions in three-phase systems.

It features adjustable protection parameters for over-voltage, under-voltage, and over-current, along with asymmetry and phase sequence protection. Please read this manual thoroughly before installation and operation to ensure proper use and safety.

2. Safety Information

WARNING: Electrical shock hazard. Installation and maintenance should only be performed by qualified personnel.

- Always disconnect power before installing or servicing the device.
- Ensure all wiring connections are secure and comply with local electrical codes.
- Do not operate the device if it appears damaged.
- Verify correct voltage and current ratings before connecting to the system.
- This device is designed for indoor use in a dry environment.

3. Product Overview

The TOVPD3-63VA is a compact Din Rail mountable protector relay. It continuously monitors the voltage and current of a three-phase system and disconnects the load if parameters exceed or fall below set thresholds. Once conditions return to normal, the device automatically reconnects the load after a configurable delay.

Key Features:

- Adjustable Over-voltage Protection
- Adjustable Under-voltage Protection
- Adjustable Over-current Protection
- Asymmetry Protection
- Phase Sequence Protection

- Adjustable Active Time and Reconnect Time
- Manual Voltage and Current Calibration
- Digital display for real-time voltage and current readings.

Component Identification:

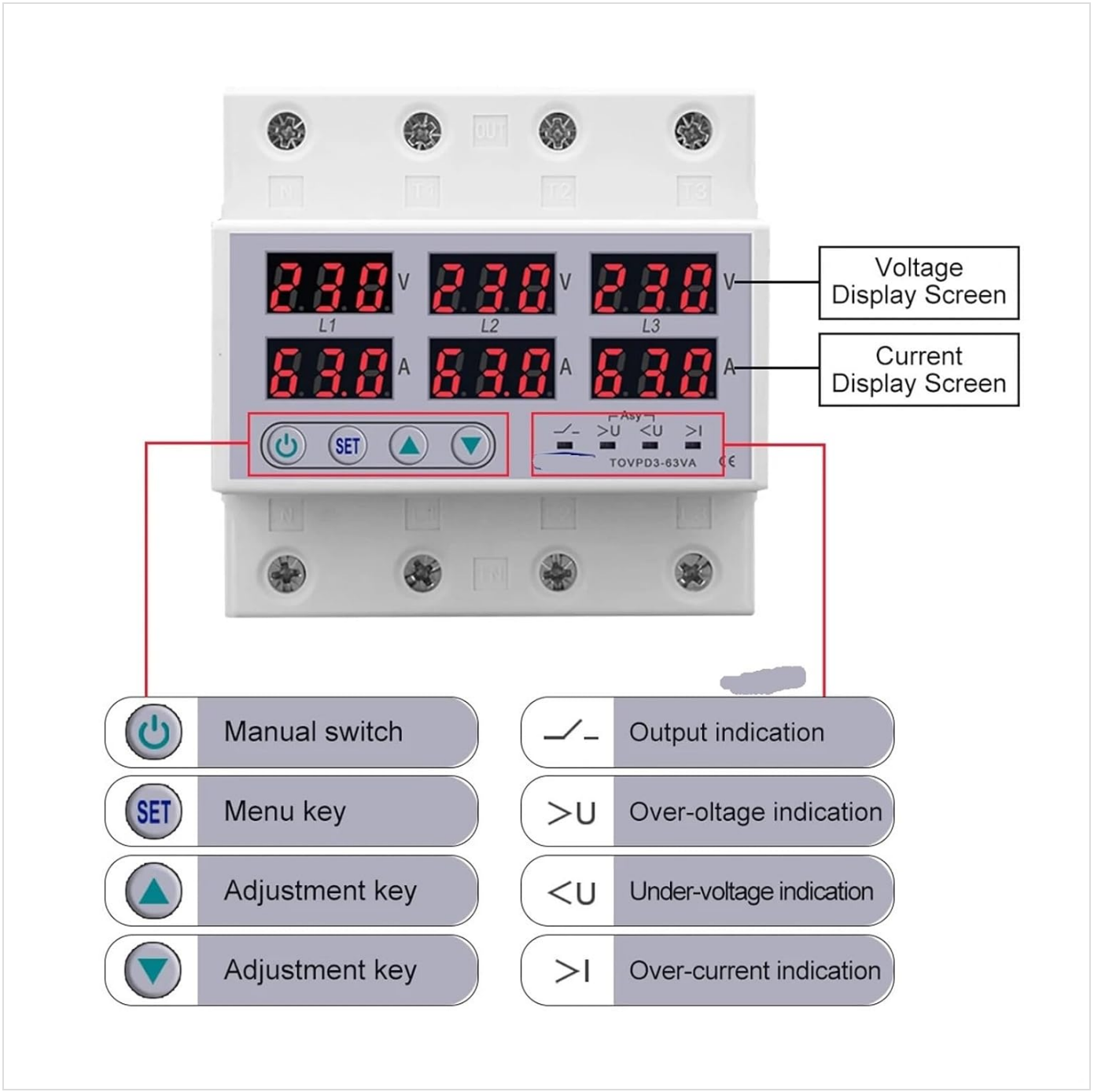


Figure 3.1: Front panel diagram illustrating the Voltage Display Screen, Current Display Screen, Manual Switch, Menu Key (SET), Adjustment Keys (Up/Down arrows), Output Indication, Over-voltage Indication (>U), Under-voltage Indication (<U), and Over-current Indication (>I).



Figure 3.2: Front view of the protector relay, showing the digital displays for voltage and current, and control buttons.

4. Specifications

Parameter	Value
Current Rating	63 Amps
Mounting Type	DIN Rail Mount
Operation Mode	Automatic
Coil Voltage	120 Volts (for 63A With N 3X120V variant)
Maximum Switching Current	63 Amps
Package Dimensions	1.18 x 0.79 x 0.39 inches

Item Weight	1.76 ounces

*Note: Specific voltage configurations (e.g., 3*220V+N, 3 Phase 380V) depend on the purchased variant. The 63A With N 3X120V variant displays each phase at 120V.*

5. Setup and Installation

5.1 Mounting:

The TOVPD3-63VA is designed for DIN rail mounting. Securely attach the device to a standard 35mm DIN rail within an electrical enclosure.

5.2 Wiring Connections:

Refer to the terminal markings on the device for correct wiring. Ensure all connections are tight and properly insulated.

- **Input Terminals (IN):** Connect the incoming three-phase power supply (L1, L2, L3) and Neutral (N) if applicable to the corresponding input terminals.
- **Output Terminals (OUT):** Connect the protected load to the corresponding output terminals (T1, T2, T3) and Neutral (N) if applicable.
- Ensure the correct voltage variant is used for your system (e.g., 3*220V+N, 3 Phase 380V).



Figure 5.1: Side view showing the input (IN) and output (OUT) terminals for wiring connections.

6. Operating Instructions

After successful installation and power-up, the device will display real-time voltage and current readings. Use the control buttons to access and adjust protection parameters.

6.1 Button Functions:

- **Power Button ( ):** Manual switch for turning the output on/off.
- **SET Button:** Enters parameter setting mode and cycles through parameters.
- **Up Arrow (▲):** Increases the value of the selected parameter.
- **Down Arrow (▼):** Decreases the value of the selected parameter.

6.2 Parameter Settings:

Press the **SET** button to enter the parameter setting mode. Use the **Up** and **Down** arrows to adjust values. Press **SET** again to confirm and move to the next parameter. The device will automatically save settings after a few seconds of inactivity in setting

mode.

Code	Parameter	Range/Description
P1	Power On Time	1-500 seconds
U1	Over Voltage Threshold	230-300V
U2	Over Voltage Recovery	220-295V
U3	Over Voltage Recovery Time	1-500 seconds
U4	Over Voltage Power Off Delay	0.1-30 seconds
U5	Under Voltage Threshold	140-210V
U6	Under Voltage Recovery	145-215V
U7	Under Voltage Recovery Time	1-500 seconds
U8	Under Voltage Power Off Delay	0.1-30 seconds
U9	Voltage Deviation	-9.5 to 9.5%
U10	Asymmetry Threshold	20-99V
U11	Phase Sequence Protection	On/Off
C1	Over Current Threshold	3-63A
C2	Over Current Recovery Time	1-500 seconds
C3	Over Current Power Off Delay	0.1-30 seconds
C4	Current Deviation	-9.5 to 9.5%
C5	Continuous Over Current Times	1-20, or Off

7. Maintenance

The TOVPD3-63VA is designed for minimal maintenance. Regular inspection is recommended to ensure optimal performance.

- **Cleaning:** Keep the device clean and free from dust. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Connections:** Periodically check all wiring connections for tightness and signs of corrosion.
- **Environment:** Ensure the operating environment remains within specified temperature and humidity ranges.

8. Troubleshooting

If the device is not functioning as expected, consider the following:

- **No Display/No Power:** Check the incoming power supply and wiring connections. Ensure the manual switch is in the ON position.
- **Device Trips Frequently:** Review your set over-voltage, under-voltage, and over-current thresholds. They might be set too sensitively for your application. Check for actual voltage/current anomalies in your system.
- **Load Not Reconnecting:** Check the recovery time settings (U3, U7, C2). Ensure the fault condition has cleared and the system voltage/current is within normal operating parameters.
- **Incorrect Readings:** If readings appear inaccurate, consider performing a manual calibration if supported by the device (refer to parameter U9, C4).

- **Phase Sequence Error:** If U11 (Phase Sequence Protection) is ON and an error occurs, verify the correct phase order of your input supply.

If issues persist, consult a qualified electrician or contact customer support.

9. Warranty and Support

For warranty information or technical support, please refer to the documentation provided with your purchase or contact the seller directly. Keep your purchase receipt as proof of purchase.

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Email

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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.

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