

## ATC SLA-230-ASA

# ATC SLA-230-ASA Monitor/Relay Instruction Manual

Model: SLA-230-ASA

## 1. INTRODUCTION

The ATC Diversified SLA Series Monitor/Relay is designed to provide critical protection for 3-phase electrical equipment. It safeguards against common power anomalies including phase loss, under voltage conditions, and incorrect phase reversal. This device ensures the operational integrity and longevity of connected machinery by monitoring the supply voltage and sequence, activating its internal relay only when conditions are within specified parameters.

This manual provides essential information for the safe installation, configuration, and operation of your SLA-230-ASA Monitor/Relay.

## 2. SAFETY INFORMATION

**WARNING:** Electrical shock hazard. Installation and servicing should only be performed by qualified personnel. Disconnect all power before installing or servicing this device.

- Always ensure power is disconnected at the source before handling the device or making any connections.
- Adhere to all local and national electrical codes during installation.
- Use copper wire with a 60°/75° C rating for control circuitry connections, especially for UL Listed units with field wiring terminals.
- Do not operate the device if it appears damaged.

## 3. PRODUCT FEATURES

The ATC SLA-230-ASA Monitor/Relay offers robust protection and versatile application:

- **Phase Loss Protection:** Detects and reacts to the loss of any phase in a 3-phase system.
- **Under Voltage Protection:** Monitors for voltage drops below a safe operating threshold.
- **Phase Reversal Protection:** Ensures correct phase sequence (ABC) to prevent damage to phase-sensitive equipment.
- **Adjustable Operating Voltage:** Features a screwdriver-adjusted setting for operating voltages between 190-270 VAC.

- **Octal Plug-in Design:** Facilitates easy installation and replacement.
- **Delta or Wye System Compatibility:** Can monitor both Delta and Wye electrical systems. Neutral connections are not required for Wye systems.
- **Visual Status Indicator:** An integrated LED glows when all line conditions are normal, providing immediate status feedback.
- **UL Listed:** The SLA Series is UL Listed under File Number E55826, ensuring compliance with safety standards.

## 4. INSTALLATION

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The SLA-230-ASA is designed for plug-in mounting, typically into an octal relay socket. Ensure the socket is securely mounted in a suitable enclosure.

1. **Power Disconnection:** Before beginning installation, ensure that all power to the circuit where the monitor/relay will be installed is completely disconnected and locked out.
2. **Socket Preparation:** Verify that the octal relay socket is correctly wired according to your system's requirements and local electrical codes. For UL Listed units, use copper wire with a 60°/75° C rating for control circuitry connections.
3. **Device Insertion:** Carefully align the pins of the SLA-230-ASA Monitor/Relay with the corresponding holes in the octal socket. Gently push the device into the socket until it is fully seated.
4. **Visual Inspection:** After insertion, visually inspect the connection to ensure the device is firmly in place and all pins are properly engaged.



Figure 1: Rear view of the SLA-230-ASA showing the octal plug-in pins.

**Note on Wye Systems:** When monitoring Wye systems, connections to the neutral line are not required for the proper functioning of the SLA-230-ASA.

## 5. SETUP AND CONFIGURATION

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The SLA-230-ASA features an adjustable operating voltage range, configured via a screwdriver adjustment on the front panel.



Figure 2: Front view of the SLA-230-ASA showing the adjustment dial.

1. **Locate Adjustment Dial:** Identify the adjustment dial on the front face of the monitor/relay. It is typically labeled with "MIN" and "MAX" indicators and the voltage range (e.g., 190-270 VAC).
2. **Adjust Voltage:** Using a small screwdriver, carefully turn the adjustment dial to set the desired operating voltage within the 190-270 VAC range. This setting determines the threshold for under-voltage detection.
3. **Power On:** Once the desired voltage is set, restore power to the circuit.
4. **Verify Operation:** Observe the LED indicator on the front panel. If all line conditions (phase sequence, voltage levels) are normal and within the set parameters, the LED should glow, indicating the internal relay is energized (picked-up).

**Important Note:** When a phase is lost while a motor is running, a condition known as regeneration can occur, inducing a voltage into the open phase. The SLA-230-ASA is designed to detect sufficient change to provide protection even under these conditions, provided it is properly adjusted.

## 6. OPERATING PRINCIPLES

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The ATC SLA-230-ASA continuously monitors the three-phase input voltage for specific conditions:

- **Normal Operation:** When the applied operating voltages are within the 190-270 VAC range and in the correct ABC phase sequence, the internal relay will energize (Pick-Up). The LED indicator on the front panel will glow, confirming normal conditions.
- **Abnormal Conditions:** The relay will de-energize (Drop-Out) if any of the following conditions occur:
  - **Incorrect Phase Sequence:** The phases are not in the expected ABC order.
  - **Phase Loss:** One or more phases are completely absent.
  - **Under Voltage:** The three-phase voltages fall below the set drop-out voltage threshold.

Upon de-energization, the relay's contacts will change state, typically used to trigger an alarm, shut down equipment, or initiate other protective measures in the control circuit.

## 7. SPECIFICATIONS

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### Technical Specifications for SLA-230-ASA

| Parameter               | Value                          |
|-------------------------|--------------------------------|
| Model Number            | SLA-230-ASA                    |
| Operating Voltage Range | 190-270 Volts AC (Adjustable)  |
| Coil Voltage            | 480 Volts AC (Max)             |
| Contact Current Rating  | 230 Amps                       |
| Connector Type          | Plug-In (Octal)                |
| Contact Type            | Normally Open                  |
| Mounting Type           | Plug In Mount                  |
| Operation Mode          | Automatic                      |
| Specification Met       | UL Listed (File Number E55826) |
| Item Weight             | 5.5 ounces                     |
| Package Dimensions      | 4.69 x 3.46 x 2.01 inches      |

## 8. MAINTENANCE

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The ATC SLA-230-ASA Monitor/Relay is designed for reliable, maintenance-free operation. However, periodic checks can help ensure continued performance:

- **Visual Inspection:** Periodically inspect the device for any signs of physical damage, discoloration, or loose connections.
- **Connection Integrity:** Ensure the device remains firmly seated in its octal socket.
- **Functionality Check:** If possible and safe to do so, periodically test the protective functions by simulating a fault condition (e.g., temporarily disconnecting a phase, if your system allows for safe testing). Observe if the LED indicator changes state and the relay de-energizes as expected.
- **Cleaning:** Keep the device free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners or solvents.

Always disconnect power before performing any inspection or cleaning.

## 9. TROUBLESHOOTING

This section addresses common issues you might encounter with the SLA-230-ASA Monitor/Relay.

| Problem                                                                 | Possible Cause                                                                                                                                                                                                        | Solution                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LED not glowing, relay not energized (no power to protected equipment). | <ul style="list-style-type: none"><li>No power to the device.</li><li>Incorrect phase sequence.</li><li>Phase loss detected.</li><li>Under voltage condition.</li><li>Device not properly seated in socket.</li></ul> | <ul style="list-style-type: none"><li>Verify main power supply to the circuit.</li><li>Check phase wiring for correct ABC sequence.</li><li>Measure voltage on all three phases to confirm presence.</li><li>Verify input voltage is above the set drop-out threshold. Adjust if necessary.</li><li>Ensure the monitor/relay is fully inserted into its octal socket.</li></ul> |
| LED glows, but protected equipment is not operating.                    | <ul style="list-style-type: none"><li>Issue with the protected equipment itself.</li><li>Wiring issue between the monitor/relay's contacts and the equipment's control circuit.</li></ul>                             | <ul style="list-style-type: none"><li>Troubleshoot the protected equipment independently.</li><li>Verify continuity and correct wiring of the control circuit connections from the monitor/relay.</li></ul>                                                                                                                                                                     |
| Inconsistent operation or false trips.                                  | <ul style="list-style-type: none"><li>Voltage adjustment set too close to normal operating voltage fluctuations.</li><li>Loose connections or poor contact.</li></ul>                                                 | <ul style="list-style-type: none"><li>Re-adjust the voltage setting to provide a sufficient buffer from normal fluctuations.</li><li>Inspect all wiring and the device's seating in the socket for secure connections.</li></ul>                                                                                                                                                |

If problems persist after attempting these solutions, contact a qualified electrician or the manufacturer for further assistance.

### ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

## Email

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**