

## Reliance Controls R510A

# Reliance Controls R510A Pro/Tran2 Outdoor 50-Amp 10-Circuit Manual Transfer Switch

Model: R510A

## INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Reliance Controls R510A Pro/Tran2 Outdoor 50-Amp 10-Circuit Manual Transfer Switch. Please read this manual thoroughly before attempting any installation or operation. Proper understanding and adherence to these instructions will ensure optimal performance and safety.

## SAFETY INFORMATION

**WARNING: Electrical shock hazard. Installation and service must be performed by a qualified electrician. Failure to follow these instructions can result in serious injury or death.**

- Always disconnect power at the main service panel before working on the transfer switch or any associated wiring.
- Ensure all local and national electrical codes (e.g., NEC ANSI/NFPA 70, UL 1008) are strictly followed during installation.
- This transfer switch is designed for outdoor use. Ensure proper sealing and weather protection for all conduit entries.
- Do not operate the transfer switch if it is damaged or if any wiring is exposed.
- Keep children and unauthorized personnel away from the transfer switch.

## PRODUCT OVERVIEW

The Reliance Controls R510A Pro/Tran2 is a manual transfer switch designed to safely connect a portable generator to your home's electrical system. It allows you to power up to 10 essential circuits during a power outage, preventing dangerous backfeeding into the utility grid.



Figure 1: Front view of the R510A transfer switch with the door open, revealing the internal circuit breakers and two watt meters at the top.



Figure 2: Side view of the R510A transfer switch, showing the CS6375 50-Amp power inlet with its protective cover open, and the flexible conduit for wiring.

## Key Components:

- **Painted Steel Cabinet:** Durable enclosure for outdoor installation.
- **10-Circuit Breakers:** Allows connection of up to 10 individual household circuits.
- **Manual Transfer Mechanism:** Safely switches selected circuits between utility and generator power.
- **CS6375 Power Inlet:** 50-Amp inlet for connecting a generator cord.
- **Watt Meters:** Integrated meters to monitor generator load.

## SETUP AND INSTALLATION

**IMPORTANT:** Installation must be performed by a qualified electrician in accordance with all applicable electrical codes.

1. **Location Selection:** Choose a suitable outdoor location for the transfer switch, close to your main service panel and where the generator will be operated. Ensure it is accessible and protected from direct impact.

2. **Mounting:** Securely mount the transfer switch to a sturdy surface using appropriate hardware.
3. **Wiring to Main Panel:** Connect the transfer switch to your main service panel. This involves running circuits from the main panel to the transfer switch and connecting the generator input. The pre-wired flexible conduit simplifies this process.
4. **Generator Inlet Wiring:** Ensure the CS6375 power inlet is correctly wired to the transfer switch. This inlet is designed for a 50-Amp generator connection.
5. **Circuit Selection:** Identify the 10 essential circuits you wish to power with your generator (e.g., refrigerator, furnace, lights, well pump). These circuits will be disconnected from the utility and reconnected to the transfer switch.
6. **Final Connections and Testing:** After all wiring is complete and verified, restore power and test the functionality of the transfer switch according to the operating instructions.

## OPERATING INSTRUCTIONS

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Follow these steps to safely operate your manual transfer switch during a power outage:

1. **Prepare Generator:** Place your portable generator in a safe, well-ventilated outdoor area, away from windows and doors. Ensure it is properly fueled and maintained.
2. **Connect Generator:** Plug your 50-Amp generator cord into the CS6375 power inlet on the transfer switch.
3. **Start Generator:** Start your generator according to its manufacturer's instructions and allow it to warm up.
4. **Transfer Circuits:** For each circuit you wish to power, move its corresponding switch on the transfer panel from the 'LINE' (utility) position to the 'GEN' (generator) position. Observe the watt meters to balance the load and avoid overloading the generator.
5. **Monitor Load:** Continuously monitor the watt meters to ensure the total load does not exceed the generator's capacity.
6. **Return to Utility Power:** When utility power is restored, first move all transfer switches from 'GEN' to 'LINE'. Then, shut down your generator and disconnect the generator cord.

## MAINTENANCE

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The Reliance Controls R510A transfer switch requires minimal maintenance. Regular inspection is recommended to ensure continued safe operation.

- **Annual Inspection:** Have a qualified electrician inspect the transfer switch annually. This includes checking all electrical connections for tightness, inspecting the enclosure for damage or corrosion, and verifying proper operation of the transfer mechanism.
- **Keep Clean:** Keep the exterior of the transfer switch clean and free of debris. Do not use harsh chemicals or abrasive cleaners.
- **Inlet Cover:** Ensure the CS6375 power inlet cover is securely closed when not in use to protect against moisture and debris.

## TROUBLESHOOTING

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| Problem | Possible Cause | Solution |
|---------|----------------|----------|
|---------|----------------|----------|

| Problem                            | Possible Cause                                                                                                                                                                                   | Solution                                                                                                                                                                                                                                                |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No power to circuits when on 'GEN' | Generator not running or not producing power.<br>Generator cord not fully connected.<br>Generator circuit breaker tripped.<br>Transfer switch circuit breaker tripped.<br>Overload on generator. | Check generator fuel, oil, and start procedure.<br>Ensure generator cord is securely plugged into inlet.<br>Reset generator's main breaker.<br>Reset the tripped breaker on the transfer switch.<br>Reduce load on generator; turn off some appliances. |
| Watt meters show no reading        | No load on generator.<br>Faulty meter.                                                                                                                                                           | Turn on appliances connected to the generator.<br>Contact a qualified electrician for inspection.                                                                                                                                                       |
| Transfer switch feels hot          | Overloaded circuits.<br>Loose electrical connections.                                                                                                                                            | Reduce load on the generator.<br>Immediately disconnect power and have a qualified electrician inspect all connections.                                                                                                                                 |

## SPECIFICATIONS

- **Model:** R510A Pro/Tran2
- **Brand:** Reliance Controls
- **Operation Mode:** Manual
- **Current Rating:** 50 Amps
- **Operating Voltage:** 125 Volts (AC)
- **Circuit Type:** 10-way
- **Power Inlet:** CS6375 (50-Amp)
- **Enclosure Material:** Painted Steel Cabinet
- **Dimensions (H x W x D):** 13 x 12 x 5 inches
- **Approximate Weight:** 25 lbs
- **Certifications:** UL Listed to UL Standard 1008, suitable for use in accordance with NEC ANSI/NFPA 70 Article 702.
- **Country of Manufacture:** United States

## WARRANTY AND SUPPORT

The Reliance Controls R510A Pro/Tran2 Manual Transfer Switch includes a full manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your product or visit the official Reliance Controls website.

For technical support, parts, or service inquiries, please contact Reliance Controls customer service. Contact information can typically be found on the manufacturer's website or on the product packaging.

### ASK A QUESTION ABOUT THIS MANUAL

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and use this page's manual context to help answer it.

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