RELIANCE CONTROLS

STANDBY POWER FURNACE SWITCH

Easy/Tran® TF

Congratulations on your purchase of the Reliance Controls Easy/Tran TF furnace transfer switch. Reliance has been manufacturing transfer switches and equipment in Racine, Wisconsin since 1982 and has been producing high-quality electrical equipment for nearly 100 years. Reliance is the Loadside® transfer switch used in nearly 90% of the installations done by professional electricians. Your transfer switch is UL 1008 listed, C-UL listed, and meets all requirements of the 2002 National Electrical Code.

TOOLS NEEDED FOR INSTALLATION

1. Power Drill
2. Wire Stripper and Cutter (10 to 14 gauge)
3. Insulated Screwdrivers
   (#2 Phillips, ¼" Flat Tip or #2 Square Tip depending on your load center)
4. Hammer
5. Marking Pencil
6. Tape Measure
7. Three Wall Anchors
8. Battery Powered Lighting during Installation
9. A Non-Contact Voltage Detector (optional)

PARTS LIST for *Easy / Tran TF* FURNACE TRANSFER SWITCH

15 Amp (TF151) or 20 Amp (TF201) Single-Circuit Transfer Switch
2 Yellow Wire Connectors

SAFETY SYMBOLS USED IN THIS MANUAL

⚠ Danger

⚠ Warning

⚠ Caution

Danger indicates an imminently hazardous situation that, if not avoided, could result in death or serious injury.

Warning indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

Caution indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

Reliance Controls Corporation is not responsible for damage or injury caused by incorrect installation of this transfer switch.

⚠Warning Improper installation of the transfer switch could cause damage or personal injury by electrocution or fire. Installation must be performed by a qualified electrician, or others knowledgeable of electrical systems, in compliance with all applicable electrical codes.

⚠Warning Reliance transfer switches covered in this manual should not be used for electric water heaters, clothes dryers, electric ranges, central air conditioners or other appliances or systems that may exceed the capacity of the product.

Transfer switches are required for use with portable generators by Article 702 of the 2002 National Electrical Code

NEMA®

Member of the National Electrical Manufacturers Association

KEY COMPONENTS OF THE RELIANCE CONTROLS FURNACE TRANSFER SWITCH FOR PORTABLE GENERATORS

Branch-Rated Circuit Breaker

The circuit breaker is either a 15 Amp (TF151) or 20 Amp (TF201) push-to reset branch-rated circuit breaker that protects the branch circuit when the toggle switch is in the GEN position. In the LINE position, the branch circuit is protected by the furnace breaker in the load center

Panel Light

This light is powered by the generator only

Toggle Switch

This switch allows you to select either GEN (generator) or LINE (utility) as the power source for the furnace circuit breaker that has been wired through the transfer switch. The OFF position generally is not used, as a switch in the OFF position removes the furnace circuit both from generator and utility power

Power Inlet

This allows you to connect to your generator and power your furnace using a standard three prong 15A extension cord for the TF151 and a 20A for the TF201.

Pre-Wired Flexible Conduit Whip

Contains two hot, one neutral and one ground wire required to make connections between the furnace transfer switch and the furnace circuit breaker in your load center. Each wire is color-coded for easy identification.

INSTALLATION INSTRUCTIONS

A. Mounting the *Easy/Tran* ® TF

1. Loosen the front plate by removing one screw on the front and loosening the two screws on the bottom. Tilt the front plate forward to access the mounting holes in the back of the cabinet.
2. Position the *Easy/Tran TF* so that its bottom center is about 18 inches from the bottom center of your load center. The end of the flexible conduit whip should be lined up with a 1/2" knockout hole on the bottom of your load center (Figure 2).
3. Mark the position of the three mounting holes of the transfer switch with a pencil.
4. Anchor the *EasyTran TF* to the wall with two appropriate anchors.
5. Tilt front plate back into the cabinet and attach with the screws in Step 1.

NOTE: Do not attempt to bend the flexible conduit whip beyond its structural capabilities.

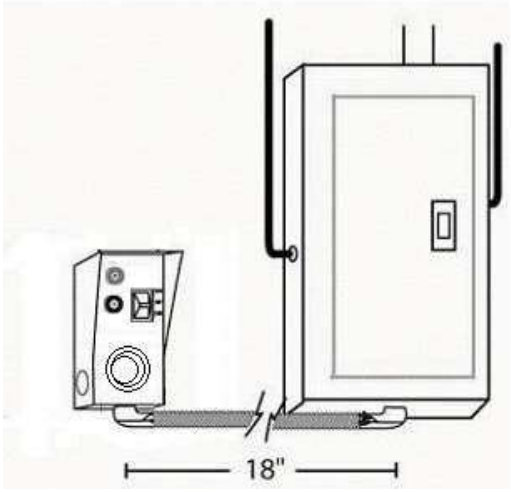

Figure 2

B. Connecting the Flexible Conduit Whip to Your Load Center

1. Set up battery-powered lighting to clearly illuminate your work area.
2. Turn off the main utility breaker (Figure 3).

⚠ Danger

Even with the main power switch turned off, the wires on the utility side of the main breaker are still live and contact with them can cause serious injury or death.

3. Remove the cover of your load center. Keep in mind that the wires on the utility side of the main breaker are still live and if contacted could cause serious injury or death. If available, use a non-contact voltage detector to insure that the power is off on the non-utility side of the main breaker.
4. Remove the appropriate knockout hole in the bottom of your load center with a screwdriver and hammer. (See step A-1 above.)
5. Insert all four of the wires extending from the end of the flexible conduit whip through the knockout hole. Fasten the conduit connector attached to the whip into the knockout hole using the nut provided.

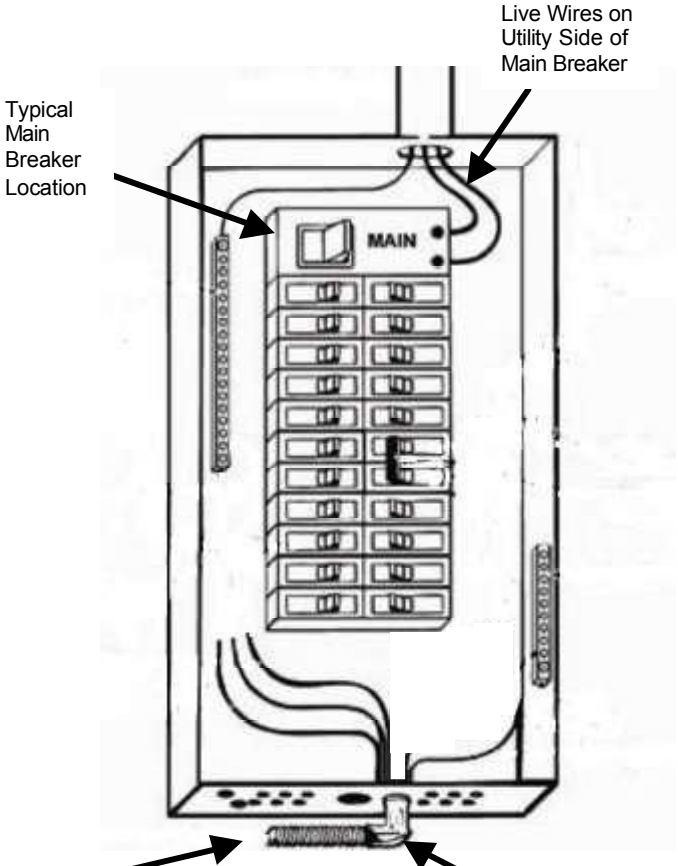

Figure 3

C. Connecting the Neutral and Ground Wire

1. Find the white wire (Neutral) and the green wire (ground) among the wires from the transfer switch that you have inserted into the load center.
2. Strip approximately 5/8" from the end of the white wire. Locate the neutral bar and partially unscrew a terminal screw on the bar. Insert the stripped end of the wire into the side of the bar under the screw and retighten the screw. (Figure 4)
3. Locate the ground bar. (It should be labeled.) Connect the green wire to the ground bar in the same way as in step #2. In service entrance load centers, the ground bar and neutral bar are frequently the same; if so, the ground and neutral wires can be connected to either.

Figure 4

D. Connecting a 120 Volt Furnace Circuit

1. Turn off the furnace circuit breaker. Disconnect the wire that is attached to it.
2. Find the black and red wires from the *Easy/Tran TF*.
3. Cut the red wire at a length convenient for it to reach to the furnace circuit breaker. Strip 5/8" from the end of the wire. Connect the **red** wire to the furnace **circuit breaker** and retighten the screw on the breaker.
4. Cut the black wire from the transfer switch to a length convenient for attaching it to the wire you removed from the furnace circuit breaker in #1. Strip 5/8" from the end of the wire.
5. Insert both wires—the one removed from the furnace circuit breaker and the black wire from the furnace relay—into a yellow wire connecter. Tighten the connection and push the connected wires back into the wiring compartment of the load center.

This completes the wiring of the *Easy/Tran TF.*

Proceed to Section E.

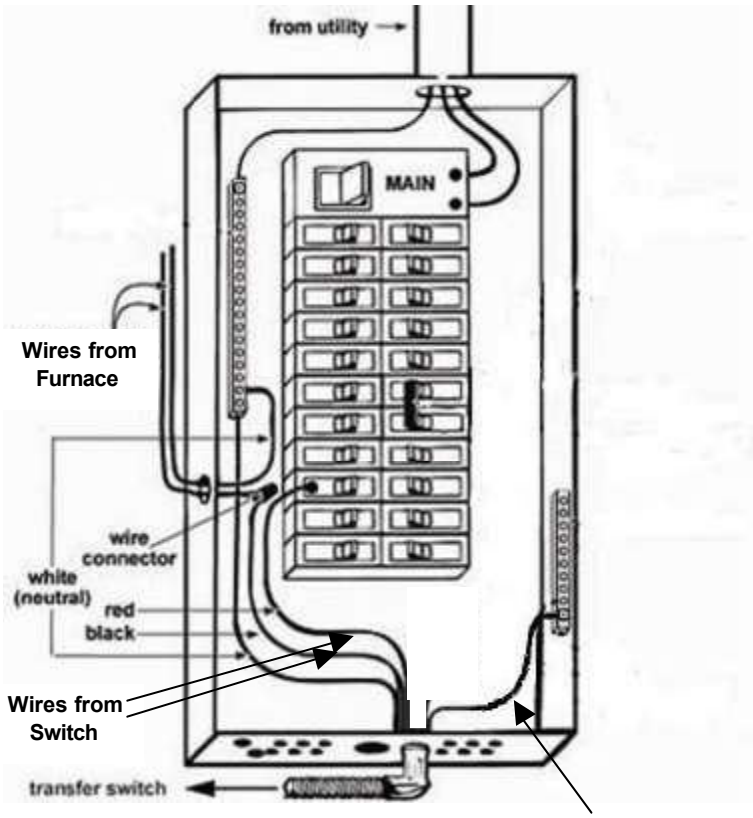

Figure 5

E. Finishing Up

After you have completed the steps in Sections A through D, complete the installation by doing the following:

1. Turn the furnace circuit breaker in your load center back on.
2. Turn on the main breaker.
3. Position the toggle switch on the *Easy/Tran TF* to the LINE position.

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OPERATING INSTRUCTIONS

⚠Warning

You want your generator to be ready when you need it -- so, it is important to perform the following steps once a month:

- Start and run generator power through your transfer switch circuits.
- Keep your fuel tank filled with fresh fuel.

With your Reliance Controls *Easy/Tran TF* installed, it is not necessary to turn off any of your load center breakers when starting your generator, even when utility power is fully functional. This is because the double throw break-before-make action of the furnace relay prevents feeding generator power to the utility and, conversely, prevents feeding utility power back to your generator.

A. Transferring from Utility Power to Generator Power in an Emergency

1. Make sure that the toggle switch on the *Easy/Tran TF* is in the LINE position.
2. Plug the appropriate extension cord into the appropriate receptacle on your generator.
3. Plug the female end of the extension cord into the *Easy/Tran TF*.
4. Start your generator outdoors and let it warm to a point where it is running evenly.
5. Turn the toggle switch on the furnace relay to the GEN position.

B. Transferring back to Utility Power When the Power Is Restored

1. Move the toggle switch on the *Easy/Tran TF* back to the LINE position.
2. Turn off your generator.
3. Unplug the extension cord.

SPECIFICATIONS

		TF151	TF201
Maximum Watts		1875	2500
Maximum Combined Load @ 125 Volts AC (Amps)		15	20
Maximum Load per Circuit from Generator (Amps)		15	20
Maximum Load per circuit from Load Center (Amps)		20	20
Wattmeters		No	No
Number of Knockouts Available 1/2" or 3/4"		2	2
Cabinet Dimensions H x W x D (inches)		7 1/2" x 7" x 4 1/2"	7 1/2" x 7" x 4 1/2"
Cabinet Type (NEMA)		1	1