

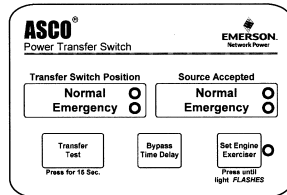
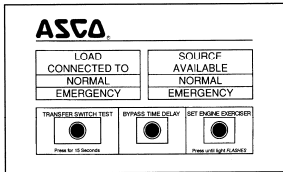
Group 1 to Group G Controller Retrofit Kit Installation

ASCO® Series 300 Automatic Transfer Switches

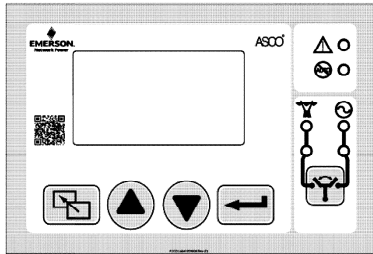
ASCO® Series 386 Non-Automatic Transfer Switches

Overview

These kit instructions explain how to convert older Series 300 ATSS with a Group 1 Controller to the newer Group G Controller. The converted ATS will provide most of the same features as the new Series 300 ATS.



Group 1 Door Controls (original and newer styles)



Group G Door Controls in retrofit kit



Group 1 Controller (left), Group G Controller(right) with covers removed

Group G Controller Retrofit Kits	ATS Voltages
955717	115-120 V
955717-001	208-480 V
955717-002	550-600 V

Kit Contents

The Group G Controller conversion kits include:

- Group G Controller
- Transfer switch dual harness adapter
- Door controls to fit into original door opening. (display and ribbon cable)
- Group G Controller User’s Guide 381333-400
- Group 1 to G Retrofit Kit Instructions 381339-313

⚠ DANGER

Hazardous voltage capable of causing shock, burns, or death is used in this transfer switch. Deenergize both Normal & Emergency power sources before installing the kit.

1 – Installation

1. Remove the Group 1 Controller and door controls. Verify that all power is off. Unplug the transfer switch harnesses from the controller, then remove the controller and door controls. Keep all hardware.
2. Install harness adapter onto the Group G Controller. Use three screws supplied to attach transfer switch harness adapter onto the left side of the Group G Controller. Then connect the plug.

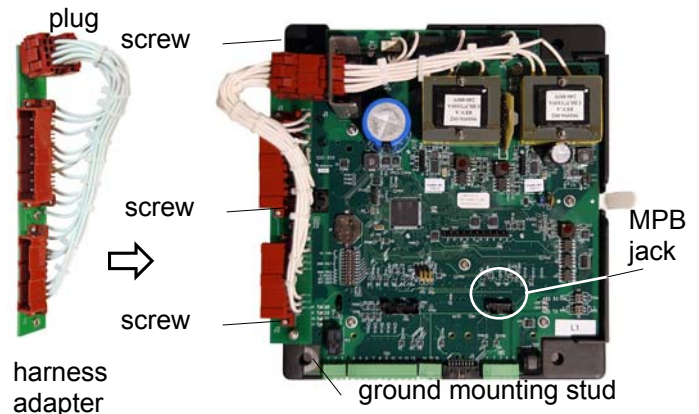


Figure 1. Harness adapter and controller details.

3. Install the Group G Controller onto the door. Mount the Group G Controller onto the same door studs that held the Group 1 Controller just removed. The lower left mounting stud grounds the controller.
4. Install the new door controls and connect it. Mount the new door controls into the door opening. Connect keyed ribbon cable to controller MPB jack.
5. Reconnect the transfer switch harnesses. Plug in the transfer switch harnesses into the harness adapter on the left side of the Group G controller.
6. Proceed to **2—Voltage Checks**. Refer to transfer switch nameplate for ATS voltage. See User’s Guide 381333-400 for Group G settings.

381339-313

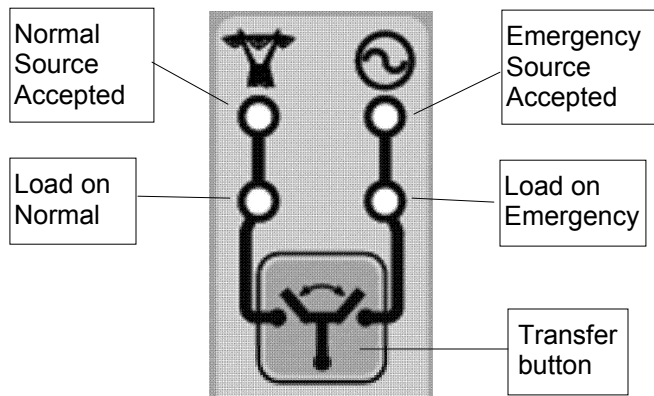


Figure 2. Four status lights and transfer button.

The four transfer switch status lights and transfer button are arranged vertically on the retrofit kit door controls.

A light comes on when:

- Normal source accepted light (top left)
- Emergency source accepted light (top right)
- Load on normal [transfer switch in normal position]
- Load on emergency [transfer switch in emerg. position]

2 – Voltage Checks

First check the nameplate on the transfer switch. The rated voltage must be the same as normal and emergency line voltages. The Group G controller voltage settings must match those on the transfer switch nameplate.

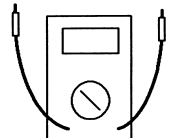
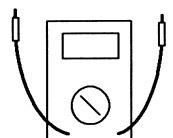
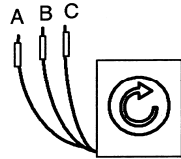
Refer to User’s Guide 381333-400, Appendix A-1, A-2. The pick up and drop out settings are shown on page2-2.

DANGER

Use extreme caution when using a meter to measure voltages in the following steps. Do not touch power terminals; shock, burns, or death could result!

Perform steps 1 through 6 at the right. Observe the indicator lights. See Figure 2.

* If necessary, adjust the voltage regulator on the generator according to the manufacturer’s recommendations. The transfer switch will respond only to the rated voltage specified on the transfer switch nameplate.

1	Close the normal source circuit breaker. The normal source accepted and the load on normal lights should come on.	
2	Use an accurate voltmeter to check phase to phase and phase to neutral voltages present at the transfer switch normal source terminals.	
3	Close the emergency source circuit breaker. (Start generator, if necessary.) The emergency source accepted light should come on.	
4	Use an accurate voltmeter to check phase to phase and phase to neutral voltages present at the transfer switch emergency source terminals.*	
5	Use a phase rotation meter to check phase rotation of emergency source; it must be the <u>same</u> at the normal source.	
6	Shut down the engine-generator, if applicable. The emergency source accepted light should go off. Then put the starting control selector switch (on the generator set) in the automatic position. Close the enclosure door.	

Continue to **3 – Electrical Operation** on next page.

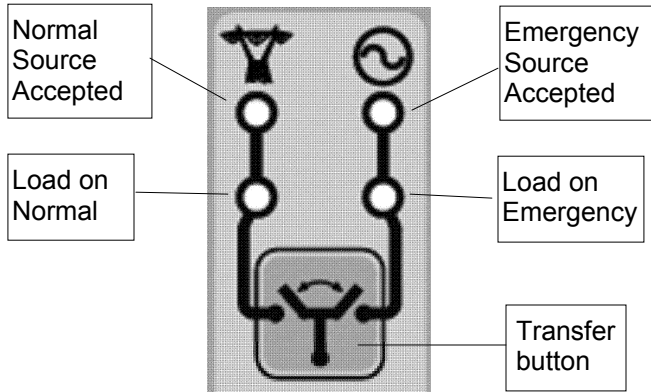


Figure 3. Transfer button; observe the lights.

3 – Electrical Operation

This procedure will check the electrical operation of the transfer switch. Refer to User’s Guide 381333-400 for Control Overview on page 1-1.



Close the transfer switch enclosure door and tighten the screws before you test electrical operation.

Perform steps 1 through 5 at the right. Observe the status lights. See Figure 3.

NOTE: For 3NTS manually start the emergency generator at the generator. Then press the transfer button for load transfer. If the inphase transfer feature is activated, transfer may not occur immediately. Transfer will occur when the phase relationship between sources is correct. Press the transfer button again for load retransfer to normal, then manually stop the generator at the generator.

Also see User’s Guide 381333-400 for inphase transfer and time delay settings in the controller.

This completes the functional test of the transfer switch. Leave the engine-generator starting control in the automatic position.

1	The normal source must be available and the generator must be ready to start. Check that the normal source accepted light is on.	
2	For 3ATS press the transfer button. The engine should start and run within 15 seconds. For 3NTS the generator must be started manually at the generator.	
	The emergency source accepted light should come on.	
3	For 3ATS the transfer switch should transfer to the emergency position. The load on emergency light should come on and the load on normal light should go off. For 3NTS press the transfer button for load transfer.	
	If the transfer to emergency delay is used, the transfer occurs after a time delay. For immediate transfer (bypass timer) press the transfer button again.	
4	For 3ATS the transfer switch should transfer back to the normal position. The load on normal light should come on and the load on emergency light should go off. For 3NTS press the transfer button for load retransfer.	
	If the retransfer to normal delay is used the retransfer should occur after a time delay. For immediate retransfer (bypass timer) press the transfer button again.	
5	For 3ATS the unloaded running delay keeps the generator running for a cool-down period. Then the generator should stop and the emergency source accepted light should go off. For 3NTS manually stop the generator at the generator (after a cool-down period).	

Communication Settings (if required)

If RS485 communication was used in the Group 1 Controller, set *Emulate Grp1* in the Group G Controller. See page 2-5 in User’s Guide 381333-400.

Retrofit Kit Installation Record

Retrofit Kit Number _____

Installation Date _____

Transfer Switch Serial Number _____

Transfer Switch Catalog Number _____

Automatic Transfer Switch

Non-Automatic Transfer Switch

Installer's Name _____

Installer's Company _____

Customer Name _____

Customer Company _____