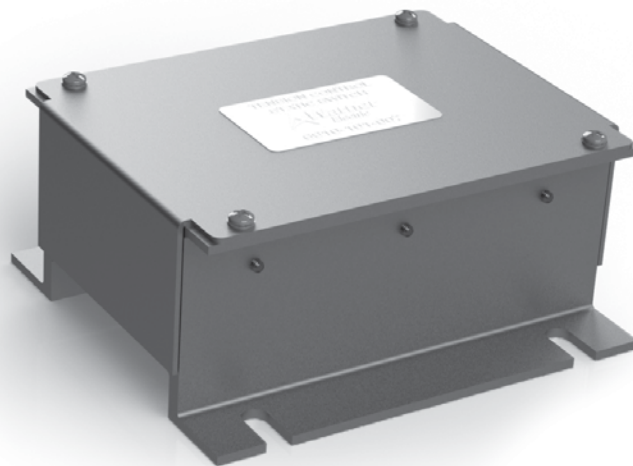


# Static Switch Assembly TCS-210/TCS-220/TCS-310/TCS-320

Installation & Operation Manual

P-281-WE  
819-0360



## INTRODUCTION

The Warner Electric Static Switch Assembly is a solid-state switching circuit that controls the braking function of the Tension Control System.

The Assembly provides electronic switching between the control and Modular Tension Brake to prevent control damage or intermittent shutdown.

The Assembly works only with the Modular Tension Brake and TCS-210, TCS-220, TCS-310, and TCS-320 controls. It does not work with other Warner Electric Tension Control Systems.

Follow the installation instructions in this manual carefully to ensure safe, reliable operation. All stated or implied manufacturer warranties are voided if this product is not installed in accordance with these instructions.

## SPECIFICATIONS

**Part Number:** 6910-101-007

### Ambient

**Temperature:** +32° F to +120° F (0° C to + 49° C)

**Outputs:** Dual channel, up to 4 magnets per channel.

**Switching:** Mechanical dry contact relays or solid-state isolated OPTO-couplers.

**Contact Ratings:** 60 VDC at 15 ma minimum.

**Size:** 5.05" Hx 5.65" Wx 2.58" D

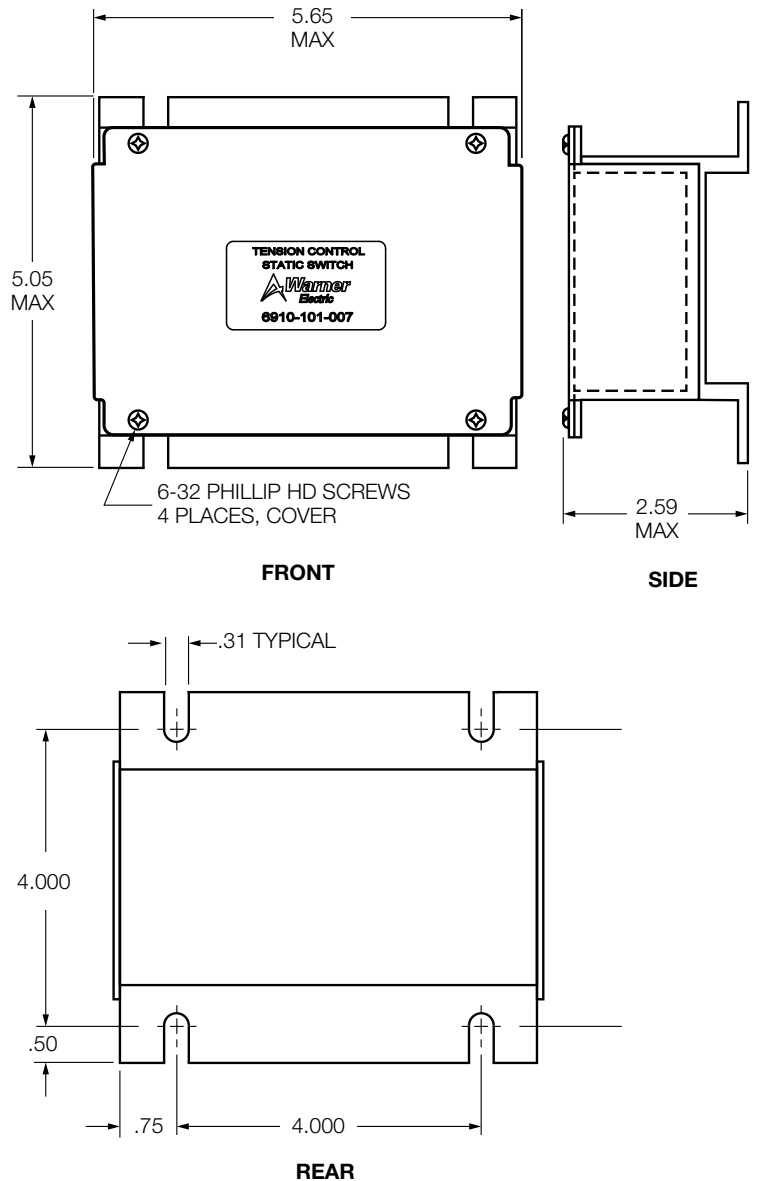
## GENERAL INFORMATION

The control chassis is rated NEMA 1 and should be installed in a clean area which is free of foreign material, dust, grease, or oil that will affect its operation. The chassis should be grounded. Switch inputs, outputs, or control wiring are not at ground potential and should be considered "floating", unless both sides of the AC input power to either the TCS-167 or TCS-168 Power Supply are disconnected.

## INSTALLATION

Mount the Assembly and the tension control and brake where wiring can be done easily.

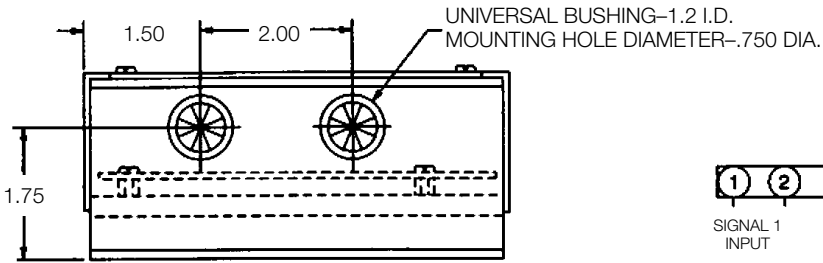
Refer to Figure 1 for mounting dimensions.



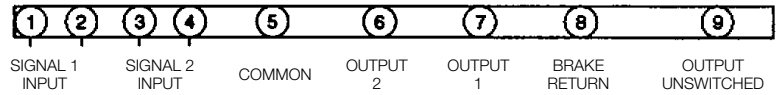
**Figure 1**  
**Mounting Dimensions**

# WIRING

The Static Switch Assembly will be wired through the two conduit openings in the bottom of the housing.

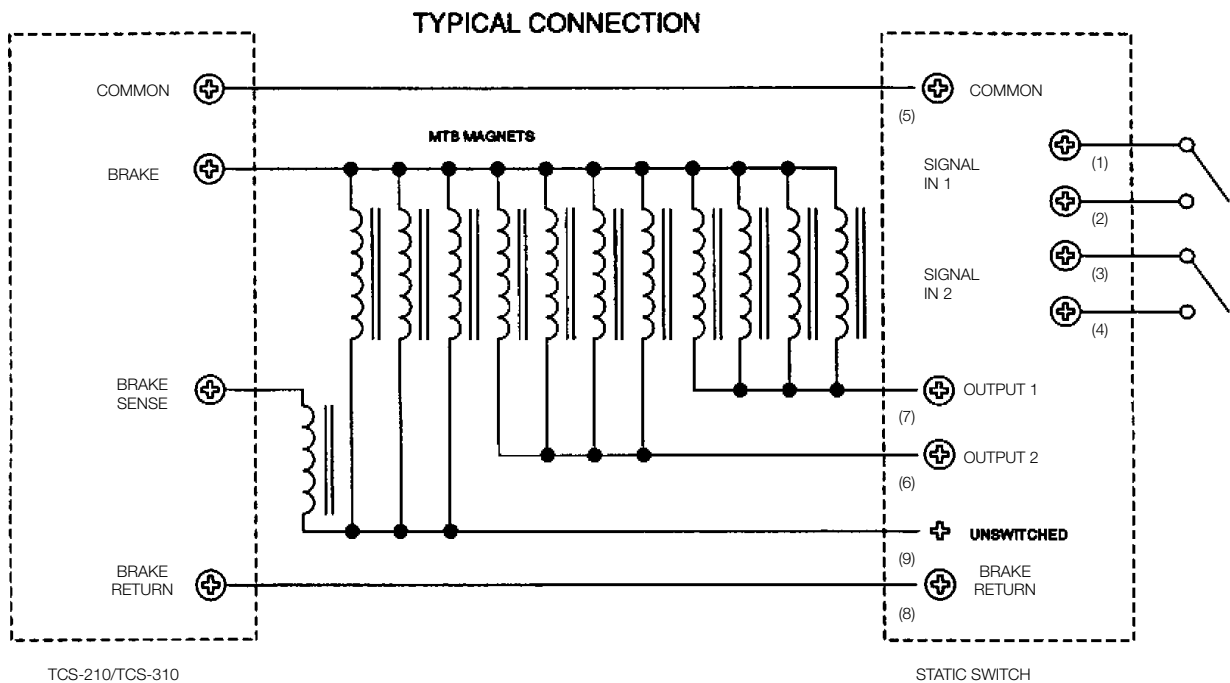


**Figure 2**  
**Wiring Hole Locations**



**Figure 2**  
**Terminal Block Wiring Designations**

Typical wiring connections are shown in Figure 3. When wiring either a TCS-310 or TCS-320 Splicer Control, two (2) Static Switch Assemblies are required, one each for channels “A” and “B”.



**Figure 3**  
**Typical Wiring Connections**

## TROUBLESHOOTING

The Static Switch Assembly will provide trouble-free operation when properly installed, wired, and used. The following chart will provide troubleshooting information should a problem occur.

### Symptom A: No output to brake magnets on any channel.

Probable Cause	Suggested Solution
Improperly wired static switch or tension control system	<ul style="list-style-type: none"><li>- Check wiring from tension control to static switch.</li><li>- Check wiring from static switch to brake.</li><li>- Check wiring of input switching devices.</li></ul>
Faulty tension control	<ul style="list-style-type: none"><li>- Check tension control system.</li><li>- Check for power to and from power supply.</li><li>- Check for power to tension control.</li><li>- Check fuses.</li><li>- Check switching circuits to tension control.</li></ul>

### Symptom B: Output on unswitched circuit, but not on outputs 1 and 2.

Probable Cause	Suggested Solution
Improperly wired outputs 1 and 2 on static switch	<ul style="list-style-type: none"><li>- Check static switch wiring of outputs 1 and 2 and correct if necessary.</li><li>- Check brake magnet wiring at brake and correct if necessary.</li></ul>
Improperly wired or defective input switching circuits-	<ul style="list-style-type: none"><li>- Check to insure that input signal switching circuits are present and properly wired.</li><li>- Check that switching devices are operating; contact closure is necessary to activate outputs.</li></ul>

### Symptom C: Outputs on unswitched circuit, and 1 and 2 cannot be turned off.      Mechanical Data:

Probable Cause	Suggested Solution
Improperly wired switching inputs on 1 and 2	<ul style="list-style-type: none"><li>- Check signal inputs 1 and 2 for proper wiring.</li><li>- Check that proper switching device is being used.</li></ul>
Defective switching input device	<ul style="list-style-type: none"><li>- Check that switching device being used is switching properly.</li><li>- Check that wiring on switching device is properly connected. Contacts must open to disable outputs.</li></ul>

If you are unable to solve the problem, replacing the assembly is recommended. If this still fails to correct the problem, contact your local Warner Electric Distributor or Market Representative for further assistance.



## Warranty

Warner Electric LLC warrants that it will repair or replace (whichever it deems advisable) any product manufactured and sold by it which proves to be defective in material or workmanship within a period of one (1) year from the date of original purchase for consumer, commercial or industrial use.

This warranty extends only to the original purchaser and is not transferable or assignable without Warner Electric LLC's prior consent.

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A purchase receipt or other proof of original purchase will be required before warranty service is rendered. If found defective under the terms of this warranty, repair or replacement will be made, without charge, together with a refund for transportation costs. If found not to be defective, you will be notified and, with your consent, the item will be repaired or replaced and returned to you at your expense.

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