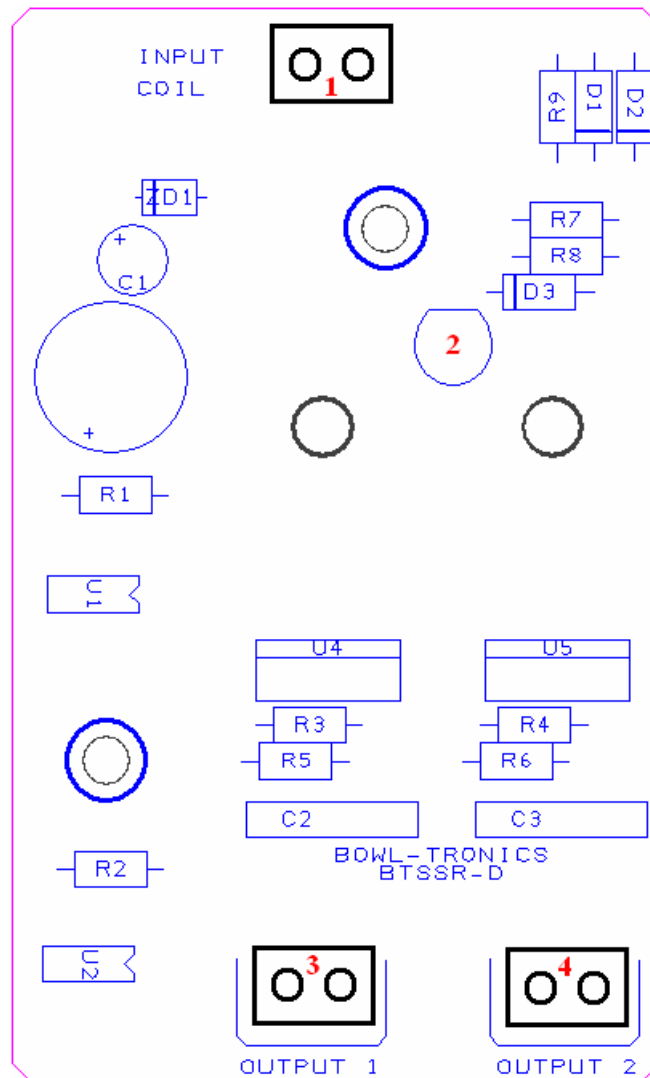


Bowl-Tronics Enterprises Incorporated

Address: 1115 Sherwood Ave.
Elgin IL. 60120
Website: www.bowl-tronics.com
E-mail: rick@bowl-tronics.com

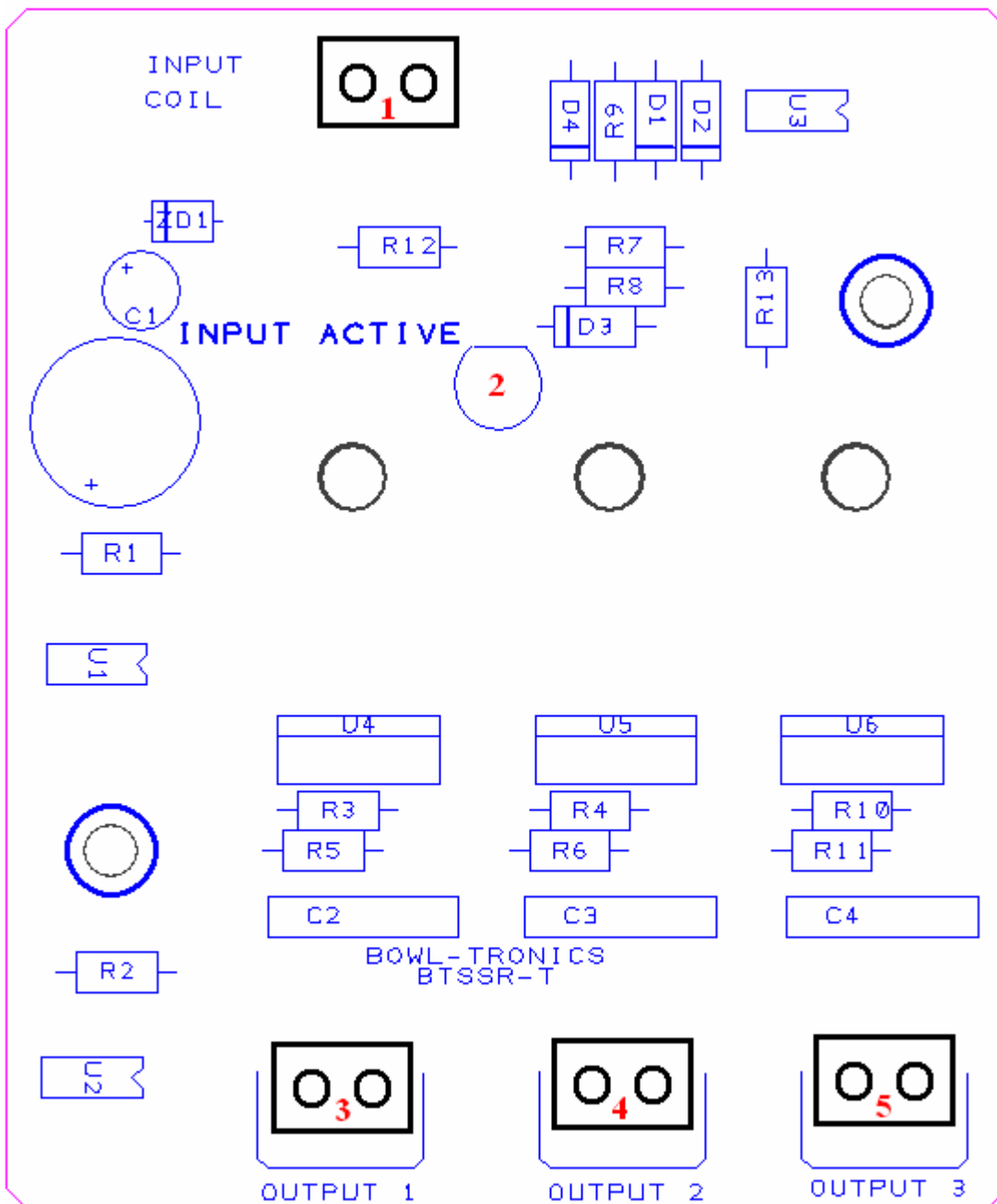
Phone: 847-741-4500
Fax: 847-741-0914

Solid-State Relay Manual (BTSSR-D & BTSSR-T)



PC Board Layout Description Table BTSSR-D:

1. 24 VAC input coil terminal connector (Wires from old relay coil)
2. 24 VAC Diagnostic LED (When lit 24 VAC has been applied)
3. Output number 1 terminal connector (Relay points)
4. Output number 2 terminal connector (Relay points)



PC Board Layout Description Table BTSSR-T:

1. 24 VAC input coil terminal connector (Wires from old relay coil)
2. 24 VAC Diagnostic LED (When lit 24 VAC has been applied)
3. Output number 1 terminal connector (Relay points)
4. Output number 2 terminal connector (Relay points)
5. Output number 3 terminal connector (Relay points)

Solid-State Relay Theory

The solid-state relay works just like conventional contact closure relay but with out the actual mechanical movement and arching of relay points. A device called a TRIAC performs the contact closure for the solid-state relay and a device called an optocoupler resembles the coil of the relay.

Installation Instructions (BTSSR-D & BTSSR-T)

Remember to remove power before performing any installation!!

The (BTSSR-D) has many uses; it's a double pole relay that can handle up to a 1 AMP switching current @ 220 VAC per relay. For example the (BTSSR-D) in a Brunswick "A" machine can be used as a reset relay and on an "A-2" machine a motor start relay. The (BTSSR-T) has the same characteristics as the (BTSSR-D) but has three pole output instead of two. For example it can be used as a motor start relay for a Brunswick "A" machine.

Installation Instructions "A" Machine Reset Relay (BTSSR-D)

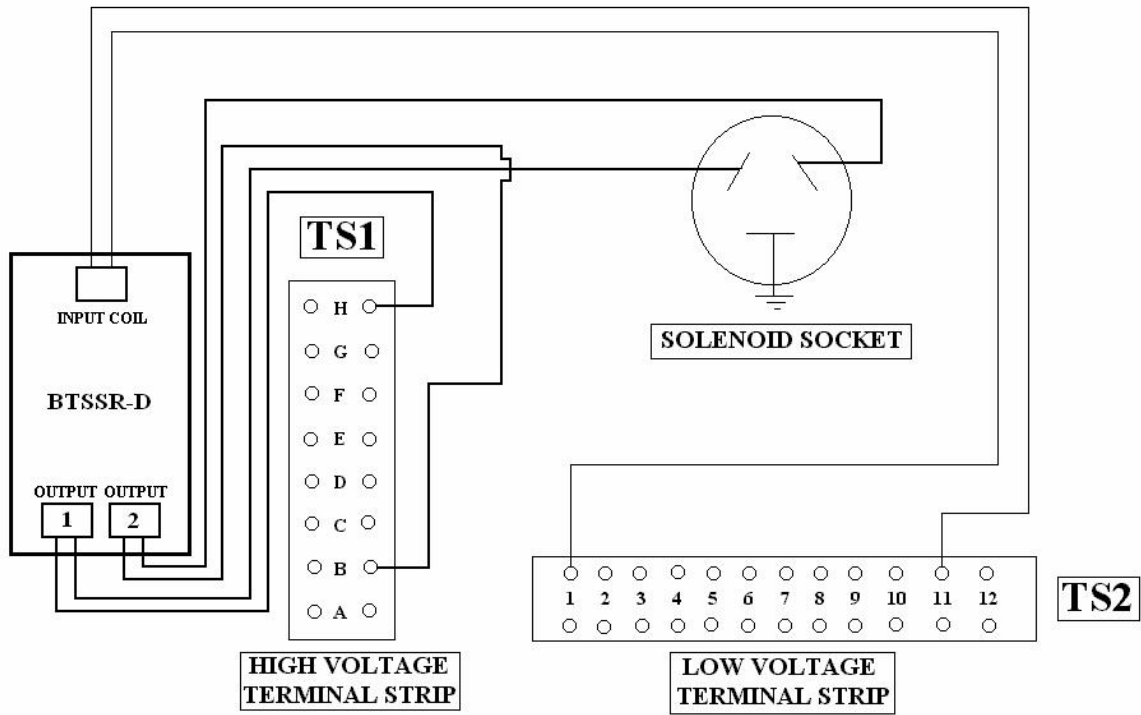
On an "A" machine as a reset relay, the wire coming from (TS2-9) will connect to one side of the input coil terminal connector. The wire coming from (TS2-11) will connect to the remaining side of the input coil terminal connector. The wire coming from terminal (H) will connect to one side of output terminal 1. The remaining side of output terminal 1 will connect to one side of the cycle solenoid socket. The wire coming from terminal (B) will connect to one side of output terminal 2. The remaining side of output terminal 2 will connect to the other side of the solenoid socket. *(See example on next page)*

Installation Instructions "A" Machine Motor Start Relay (BTSSR-T)

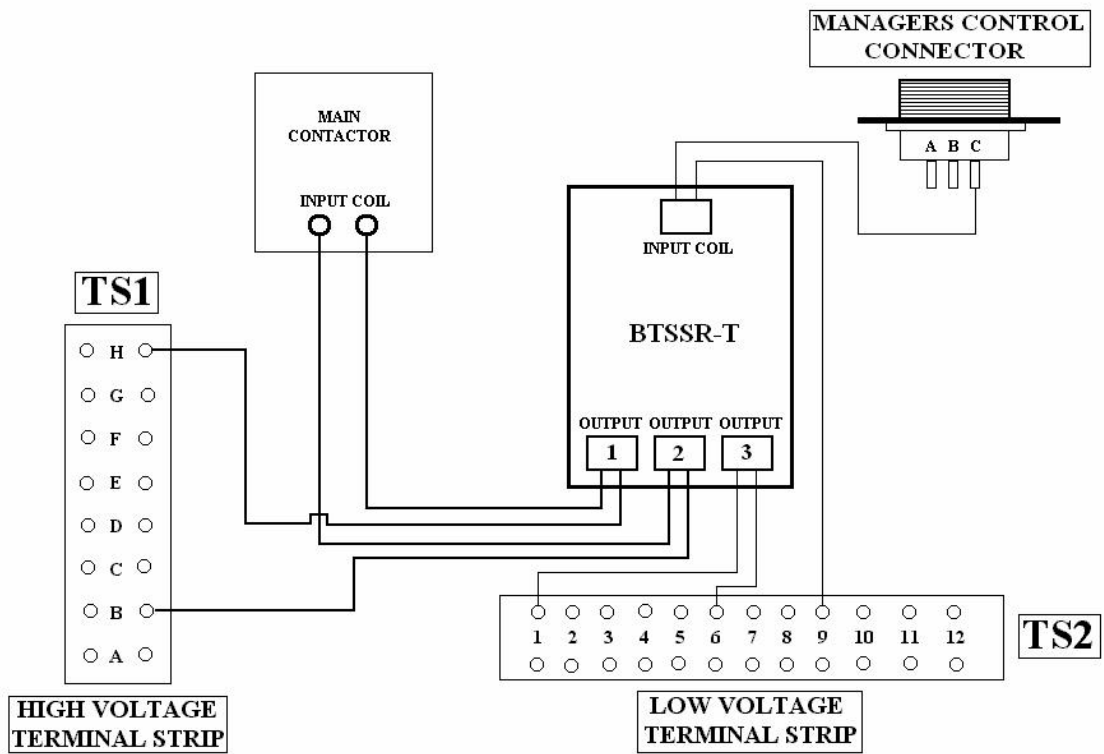
On an "A" machine as a motor start relay, the wire coming from (TS2-9) will connect to one side of the input coil terminal connector. The wire coming from (Terminal "C") of the managers control connector will connect to the remaining side of the input coil terminal connector. The wire coming from terminal (H) will connect to one side of output terminal 1. The remaining side of output terminal 1 will connect to one side of the main contactors coil. The wire coming from terminal (B) will connect to one side of output terminal 2. The remaining side of output terminal 2 will connect to the other side of the main contactors coil. The wire coming from (TS2-1) will connect to one side of output terminal 3. The remaining side of output terminal 3 will connect to (TS2-6). *(See example on next page)*

Installation Instructions "A-2" Machine Motor Start Relay (BTSSR-D)

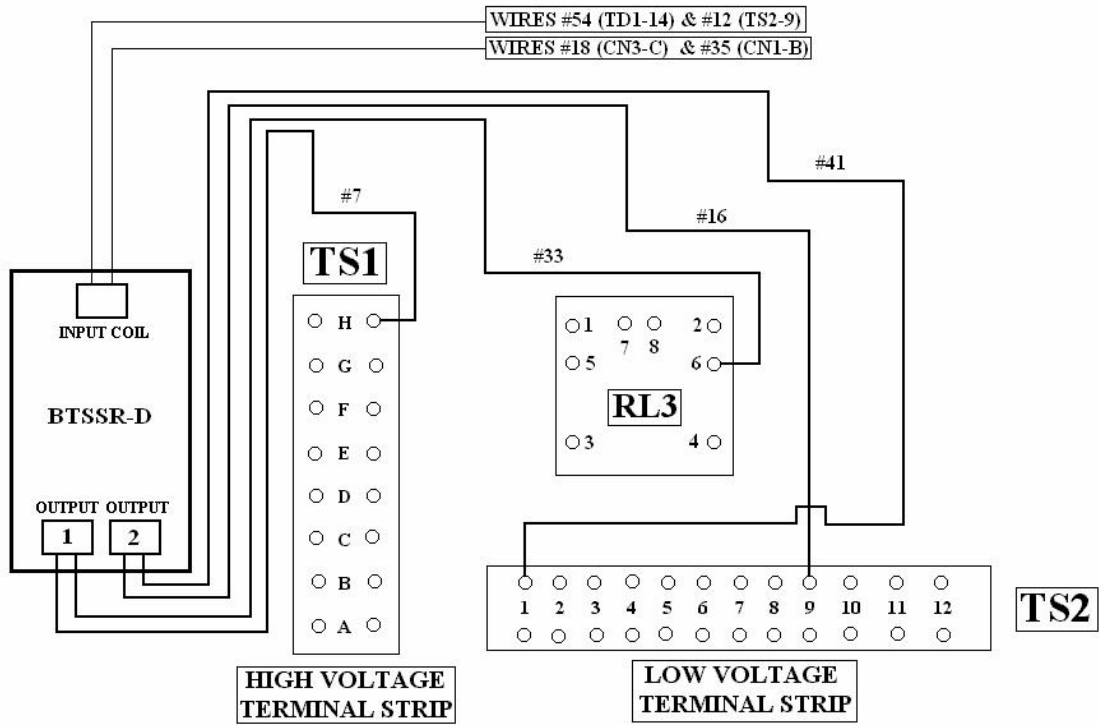
On an "A-2" machine as a motor start relay, wire 54 (TD1-14) and wire 12 (TS2-9) connect to one side of the input coil terminal connector. Wire 18 (CN3-C) and wire 35 (CN1-B) connect to the remaining side of the input coil terminal connector. Wire #7 (TS1-H) will connect to one side of output terminal 1. Wire #33 (RL3-6) will connect to the remaining side of output terminal 1. Wire #16 (TS2-9) will connect to one side of output terminal 2. Wire #41 (TS2-1) will connect to the remaining side of output terminal 2. *(See example on last page)*



"A" MACHINE
EXAMPLE CIRCUIT
RESET RELAY



"A" MACHINE
EXAMPLE CIRCUIT
MOTOR START RELAY



"A-2" MACHINE
EXAMPLE CIRCUIT
MOTOR START RELAY

For Repair Send Faulty Parts to:

Address: BOWL-TRONICS
1115 Sherwood Ave.
Elgin IL. 60120

Phone: 847-741-4500
Fax: 847-741-0914

Visit our web site at www.bowl-tronics.com

Notes:
