

**1) INSTALLATION:**

**A. Mounting:**

Use (4) 1/4" mounting holes on back plate. ①

**B. Air and Liquid Connections:**

1. Attach air line to 1/8" Male barbed fitting air inlet. ②

2. Attach discharge line(s) to 1/8" NPT Female liquid outlet(s). Use pipe sealant on all NPT connections. ③

**2) OPERATION:**

**A. Start up procedure (must be done in a clean environment):**

1. Fill reservoir with fluid to be pumped. ④

2. Set air inlet pressure recommended: 40 to 125 PSI @ 72° F. ②

3. Set the air cycle rate by Cycle Timer per instruction. (see reverse side) ⑤

4. Pump shipped at full volume .012 setting. (It is recommended to prime system at full volume).

5. Pump is ready to operate.

6. Pump will automatically fill lines upon operation.

**B. Liquid Output Adjustment: ⑥**

1. Set liquid output using adjust stem (using small flat head screw driver).

2. Use the adjust stem atop each feed in conjunction with the air cycle rate (Individual conditions may vary).

3. Each clockwise turn of the adjust stem reduces output by:

.002 cubic inches, .03 cubic centimeters, .001 ounces.

4. Maximum output, per cycle, per feed, with adjust stem backed completely out:

.012 cubic inches, .20 cubic centimeters, .007 ounces

# Installation Instructions

## TR-6 Programmable Plug-In Time Delay Relays

**TR Series B**  
Revision D  
April 2003

READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE.

### WARNING

Potentially hazardous voltages are present. Turn off all power supplying this equipment before connecting or disconnecting wiring.

### SPECIFICATIONS

Input Voltage: See Product Nameplate for actual voltage.  
 AC: +10/-15%, 50/60Hz. DC: +10/-15%.  
 Output Contact Rating: 10A Resistive @ 240VAC/28DC  
 1/2 HP @ 240VAC, 1/3 HP @ 120VAC  
 Temperature Range: 12-120V Input: -28° to 65°C (-20° to 150° F)  
 240V Input: -28° to 50°C (-20° to 122° F)  
 Reset Time: Off Delay/Single Shot/Watchdog: 40ms minimum  
 All other Functions: 100ms minimum

### DUAL KNOB UNITS

Dial Setting	Timing Range
A	0.6 - 2.5 Sec.
B	1.5 - 5 Sec
C	2.5 - 10.5 Sec.
D	5 - 21 Sec.
E	10 - 42 Sec.
F	0.4 - 1.4 Min.
G	0.7 - 2.8 Min.
H	1.5 - 5.5 Min.
I	3 - 11 Min.
J	5.5 - 22.5 Min.
K	11 - 45 Min.
L	0.4 - 1.5 Hr.
M	0.8 - 3 Hr.
N	1.5 - 6 Hr.
O	3 - 12 Hr.
P	6 - 24 Hr.

### DIMENSIONS

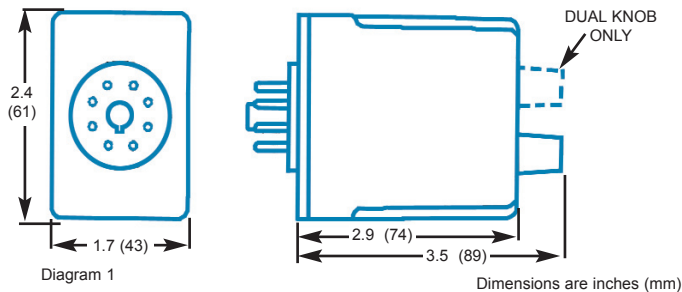


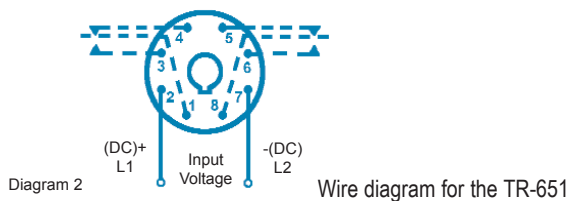
Diagram 3

### INSTALLATION

Mount the appropriate 8 pin (Product Number 70169-D) or 11 pin (Product Number 70170\_D) octal socket in a suitable enclosure. Use one or two #12-22 solid or stranded wire with sockets, with a recommended terminal tightening torque of 6-7 in-lbs (maximum of 12 in-lbs). Set the time delay as described at right. Wire the socket per below or as shown on the side of the timer. Plug unit into socket.

### WIRING

A wiring diagram is provided on the side of the time delay relay. Or use the wiring diagram below:



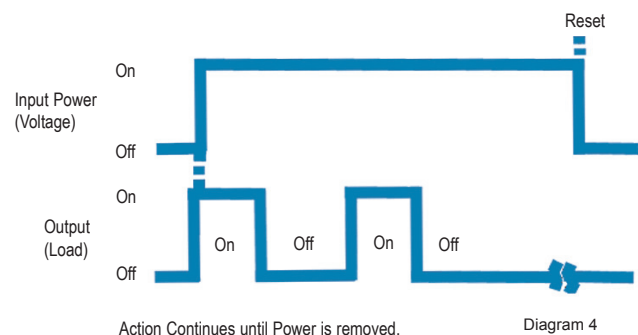
### SETTING THE TIME DELAY

Programmable Products (Product Number begins with TR-6)  
 All TR-6 Series programmable products have one or two 16-position rotary switches for selecting one of the 16 built-in time ranges (see diagram 3). First, determine the desired time range from the Timing Range Chart located on the tip of the case (single knob units) or on the side of the case (dual knob units), or from the tables below. Position the rotary switch to the letter that matches the desired time range. Those products with two rotary switches (dual knob units) can have different ON & OFF time ranges selected. **DO NOT CHANGE THE SETTING OF THESE SWITCHES WITH POWER APPLIED TO THE UNIT.** Finally, adjust the time delay within the programmed time range by rotating the knob located on the tip of the unit. Note: the tick marks are for reference only.

### TROUBLESHOOTING

If the unit fails to operate properly, check that all connections are correct per diagram 2. For DC Input Voltages, make sure the polarity matches diagram 2. Use the descriptions of how each function operates on back of this sheet as a guide to determine if the unit is operating properly. If problems continue, contact Oil-Rite at 920-682-6173 for assistance.

### REPEAT CYCLE STANDARD TR-651 ON/OFF DELAY



Upon application of input voltage, the relay contacts transfer and a preset delay begins. At the end of the preset delay, the relay contacts drop out and remain in that condition for a second, independently adjustable preset time. At the end of this time, the relay contacts pull in and the sequence repeats until input voltage is removed.