

RCS Actuators

TDM50

Time Delay Module for Sure 24, 25 and 100

The TDM50 module will delay the spring stroke of a surepower actuator for up to 40 seconds. When the supply power de-energized, the TDM50 provides power to the motor brake to prevent it from releasing and starting the spring stroke.

This capability is used to:

- Prevent water hammering.
- Allow the pressure to drop in air handling systems before the damper closes.

Specifications

Power Supply: 115 VAC, 50/60 Hz.
 Rated Time Delay: Sure24 - 40 seconds, adjustable
 Sure25 - 20 seconds, adjustable
 Sure100 - 20 seconds, adjustable

Installation Instructions

1. Adjust the capacitor-mounting bracket (Figure 1) on the capacitor in order to fit the mounting space on the actuator gear plate. The terminal block should face the conduit entry. Mount the bracket to the plate with the 8-32 screw provided.
2. Remove the existing brake coil bridge rectifier, by cutting the two wires between the rectifier and the brake coil.
3. Strip the wires from the brake coil and connect to the TDM50 terminal strip as shown in Figure 3 on back page, wiring diagram 101-1014.

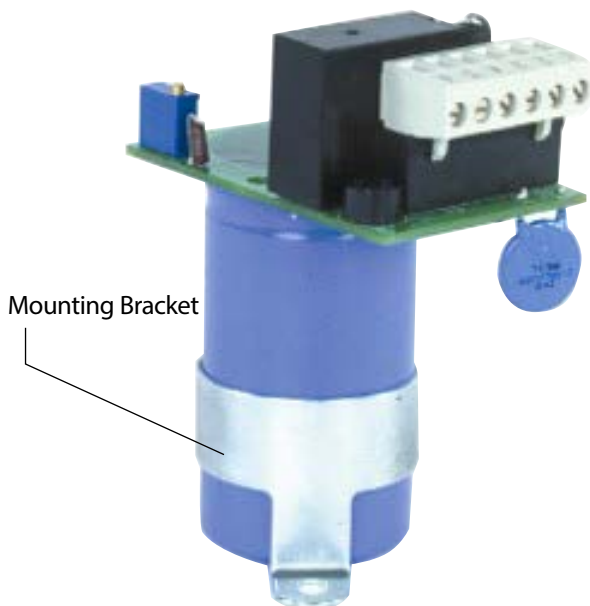


Figure 1

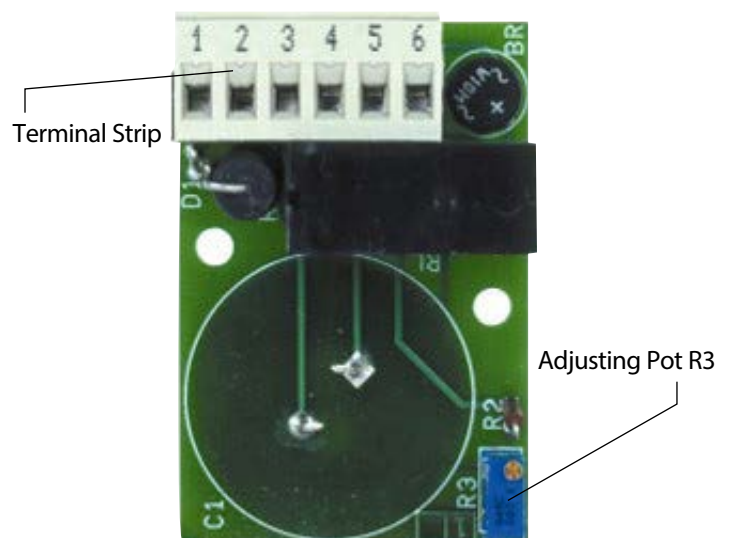


Figure 2

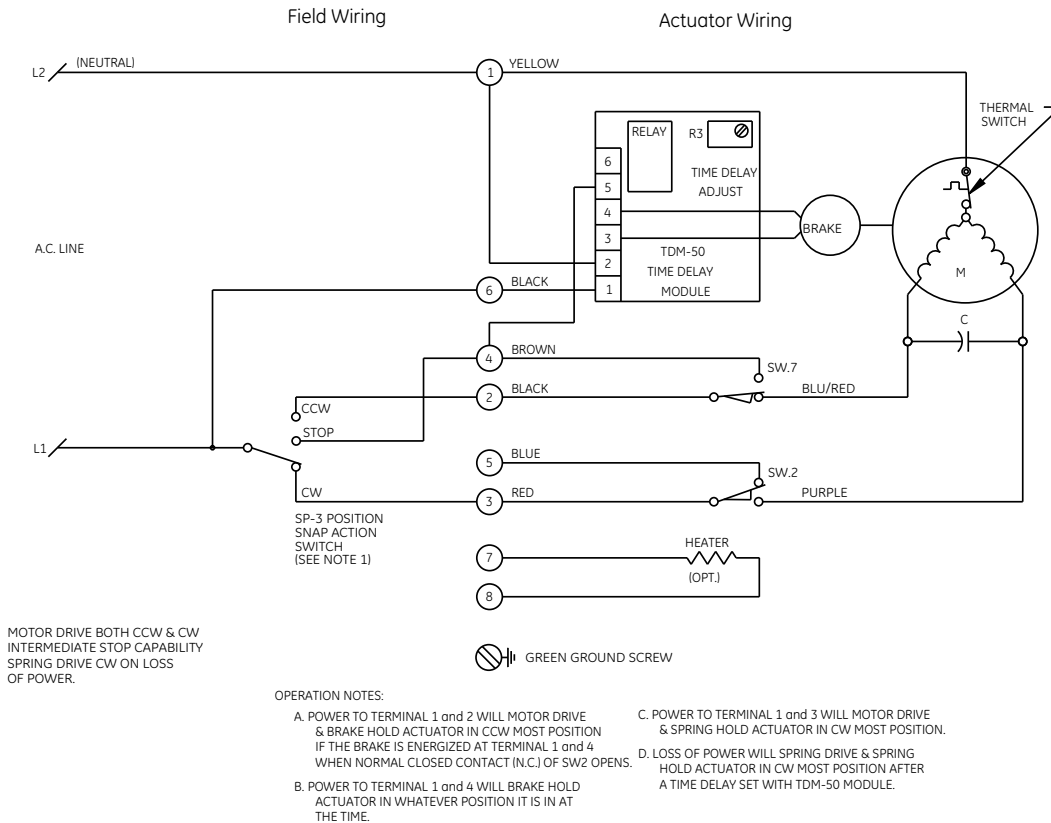


Figure 3

Calibration Instructions

Note: Time delay module, TDM50, is factory calibrated and should only be recalibrated if necessary!

Tools Required:

- One multimeter to read D.C. and A.C. voltages
- Stopwatch
- One small screwdriver

1. Verify that the power supply voltage to the actuator is 115 VAC, 1 Phase, 50/60 hertz.
2. Verify that all terminations are per the appropriate wiring diagram (101-1014).
3. Set the adjusting potentiometer R3 in mid-position (12 turns from either end).

4. Turn on the power to the actuator. Verify that the voltage at the terminals 1 (L1) and 2 (L2) is 115 VAC.
5. Check for at least +155 VDC between terminals 3 (-V) and 4 (+V).
6. Leave the actuator energized for approximately 60 seconds.
7. Turn off the power to the actuator and use the stopwatch to measure the elapsed time until the brake releases and the spring stroke occurs. It should be at least 40 seconds.

The time delay period can be adjusted with the trimming potentiometer R3, between 35 and 45 seconds. This time depends upon how long the actuator remains energized before the power is turned off.

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RCS Actuators

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TDM-50 Module Fact Sheet NGS.IPG.0025

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