

## 43191680-105 Auxiliary Switch

### INSTALLATION INSTRUCTIONS

## APPLICATION

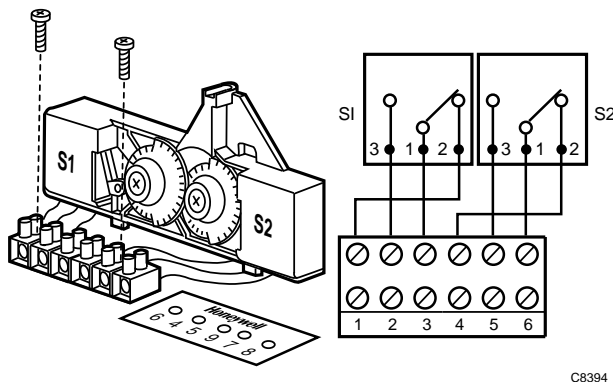
The 43191680-105 Dual Auxiliary Switch provides two independent, spdt switching functions. Switching points are adjustable over the full length of the actuator stroke; for example, the switch can be used to switch pumps at any point or to provide remote indication of any specific stroke position. These switches are used with valve actuators as shown in Table 1. The switches are furnished factory wired to the terminal block. Fig. 1 illustrates the parts furnished with this switch and the wiring connections.

### IMPORTANT

*These switches are rated at 24 Vac maximum.*

**Table 1. Applicable Actuators for 43191680-105 Dual Auxiliary Switches.**

Actuator	Spring Action on Power Failure
ML6425A	Extends stem
ML6425B	Retracts stem
ML7425A	Extends stem
ML7425B	Retracts stem



**Fig. 1. Auxiliary switch parts and wiring.**

## INSTALLATION

### When Installing this Product...

- 1 Read these instructions carefully. Failure to follow them could result in the equipment not operating properly.
- 2 Check the part numbers in the preceding section to be sure that the product is suitable for your application.
- 3 The installer must be a trained, experienced service technician.
- 4 After completing installation, use these instructions to check product operation.

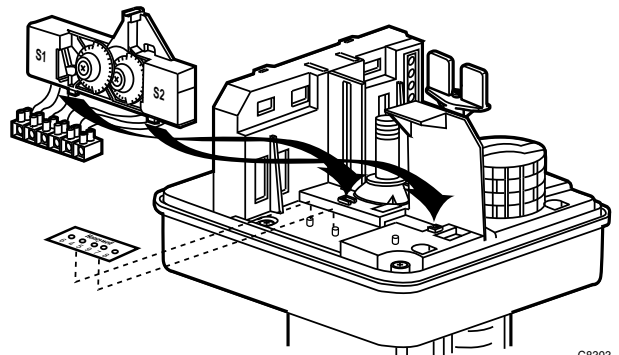


### CAUTION

Disconnect the power supply to the auxiliary potentiometer and actuator before beginning installation to prevent electrical shock or equipment damage.

### Mounting, Connecting, and Adjusting

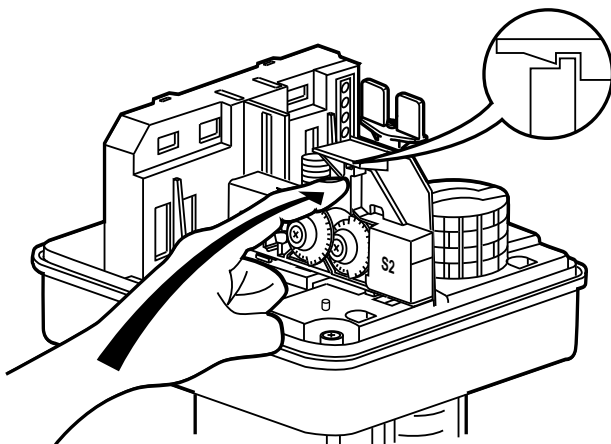
- 1 Remove actuator cover.
- 2 Mount the auxiliary switch assembly and terminal label on the actuator base. Make sure the two tabs on the bottom of the switch assembly slip snugly into the slots provided. See Fig. 2.



**Fig. 2. Installing auxiliary switch assembly.**

- 3 Secure auxiliary switch assembly by pressing top back until assembly snaps into place. See Fig. 3.

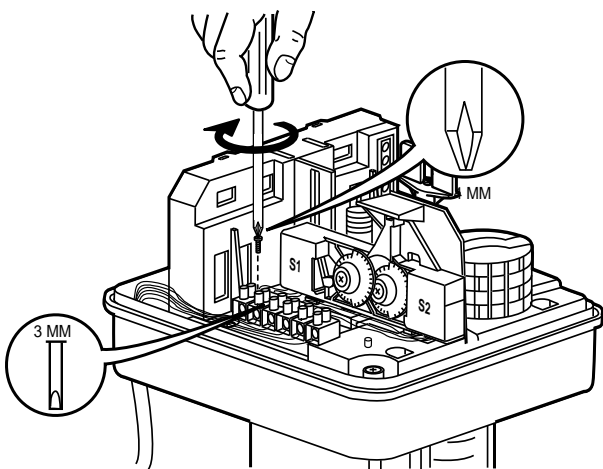




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**Fig. 3. Securing auxiliary switch assembly.**

- 4 Secure terminal block and terminal label with Phillips head screws. See Fig. 4 .



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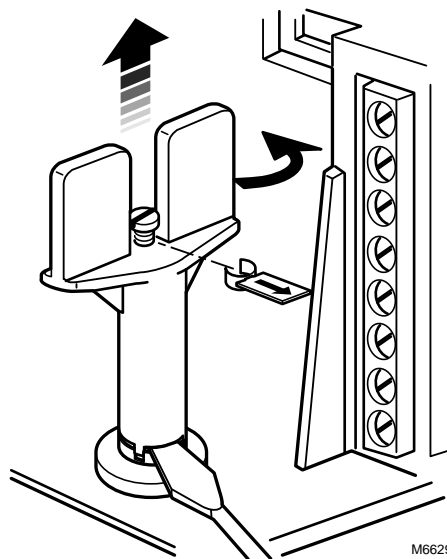
**Fig. 4. Securing terminal block and label.**



## CAUTION

The manual spring handle is under tension and could turn quickly when lifted resulting in injury to fingers pinched between the handle and plastic casing. Maintain handle orientation while lifting and remove fingers quickly when releasing.

- 5 Remove manual spring handle retaining clip, if necessary, and lift and release the handle. See Fig. 5. The easiest way to perform this operation safely is to:
- Remove the retaining clip (shipping stop) and discard.
  - Wedge a small, flat-bladed screwdriver under the manual spring handle at the point marked in Fig. 5 and pry up the handle.



M6629

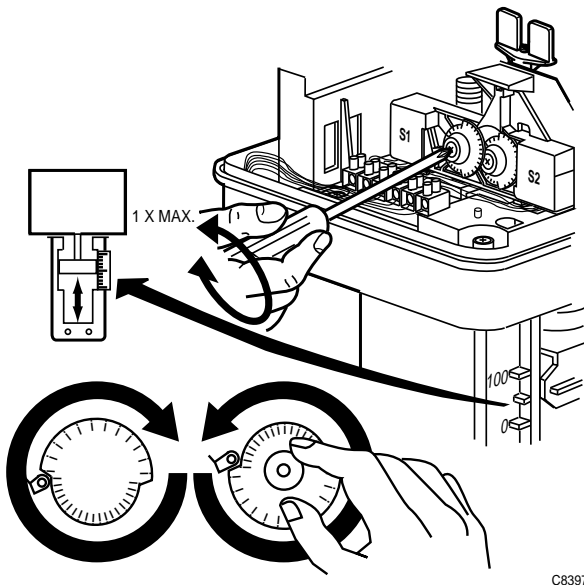
**Fig. 5. Removing spring retaining clip and releasing manual spring handle.**

- 6 Adjust switching point for each switch. See Fig. 6.

- Using manual spring handle on the actuator, adjust the actuator shaft to the required switching point for Switch S1.

**NOTE:** Turning the spring handle clockwise extends the actuator shaft. When the shaft gets to the required position, press the handle down to hold the shaft in position. Turning the spring handle requires two hands, one to turn the handle and the other to hold it in place on each consecutive turn. Observe the preceding caution and release the handle only as noted in the preceding Step 5.

- Loosen the Phillips head set screw on the cam for Switch S1, set the cam to the required position, and tighten the set screw.
- Repeat the preceding Steps 6a and 6b for Switch S2.



**Fig. 6. Adjusting switching points.**

### Wiring

Route field wiring in through the conduit opening in the bottom of the actuator, connect to the switch assembly terminal block according to the job drawings, and replace the actuator cover. See Fig. 1 for terminal identification.



### CAUTION

Disconnect the power supply to the auxiliary switches and actuator before wiring to prevent electrical shock or equipment damage.

All wiring must comply with local codes, regulations, and ordinances.

### CHECKOUT

Drive actuator shaft fully up and fully down and check the function of the auxiliary switches in the control system.

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