

D-4990 – Low Energy Operator

Initial Adjustments:

The door has several options that are enabled with dip switches. This may be confusing and wrong settings may cause improper door operation. But in all cases the door should open with the switches set to all off. A possible exception here is if an electric strike does not open and the door is locked. A second exception is if the operator is an in-swing. For an in-swing door type DIP SW3 should be ON.

NOTE: Before considering any initial adjustments, PLEASE ensure the operator has been installed to the proper template requirements for the respective application. D-4990 – Push Side or D-4990T Pull Side

- 1.) Turn power switch to off.
- 2.) Check mechanical closer settings. These include close speed, back check, latch check and spring force. When these are properly set the door moves smoothly manually. If these are set at too high a value the automatic door operation can be compromised. All of these should be properly set from the factory.
- 3.) POTs 4,5,6,7 should be set to the middle of their range. *(Factory Default)*
- 4.) POT2 should be set completely counter clockwise. *(Factory Default)*
- 5.) Advance POT1 about ¼ turn clockwise from it fully counterclockwise point.
- 6.) Shut the door that the operator is attached to.
- 7.) When the door power switch is turned on the motor drive will move backward to the point where it pushes on the shut door – as if to shut it.
- 8.) Then the motor drive will return to a position called “Ready”. The motor drive is ready to open the door.
- 9.) Set the function switch to “Hold Open”.
- 10.) The door should open but it will be open at less than 90 degrees.
- 11.) With the door at this hold open position vary POT 4 so that the door is stationary.
- 12.) Move the function switch to Day.
- 13.) At this time the orange LED should be glowing. The numeric display should indicate “-2”
- 14.) When the door open switch is pressed the yellow LED should glow. The door should move open. The numeric display should show “-4” while the door moves open.
- 15.) It should show “-5” for ~2 seconds during the last 10 degrees of door travel. Then when the door is fully open the display should show “-6”.
- 16.) After about 5 seconds the door should return to closed. During the door closing the numeric display should show “-7”.
- 17.) When the door is closed the numeric display should show “-2”.

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Initial Adjustments Cont'd:

Door Position Adjustment:

- 1.) To make the door move open to a full 90 degrees the technician needs to adjust POT 2.
- 2.) To do this, change the POT2 position by about 5 degrees and check the new position by opening the door. The door must be cycled to check the adjustment.

Door Open Time Adjustment:

Cycle the door open. It should rest at full open for a few seconds with the initial setting made to POT1. The amount of time it rests in full open can be varied from 0 to about 25 seconds. This is done by increasing or decreasing the setting of POT1. The door must be cycled to check the adjustment.

Back Check Adjustment:

As described above, the door display shows “-4” when the door is opening from 0 to about 80 degrees. This last part of door travel is called the back check region. When the door is moving through back check the controller will display “-5” briefly and then it will show “-6”. If POT 5 is properly set the door moves smoothly through the back check region. The time the door is in the back check region should not be more than 2 or 3 seconds. But it is possible that POT 4 is set so low that the door does not travel through this region completely. If that happens the numeric display will show “-5” for about 10 seconds. To remedy this problem increase the POT 4 setting.

Open Door Speed Adjustment:

To adjust opening door speed or opening door time the technician can vary the setting of POT6. If this is set too low the door will prematurely act as it is obstructed. This is indicated when the numeric display shows “-8”. See below.

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Initial Adjustments Cont'd:

Door does not Open Completely and Numeric displays Shows “-8”

If the door shows a “-8” then the controller has tried to open the door but it sensed an obstruction. This sensed obstruction maybe due to many things. One possible remedy is to increase the setting of POT6.

Another Possible remedy is to lower the operator spring setting. If neither of these fix the issue there may be a mechanical problem. Inspect the operator mechanism and drive mechanism for smooth operation.

Door Does Not Open When Push Plate is activated:

- 1.) For the door to respond to push plate commands the Orange LED must be on. This LED will not be on in Night Mode or Hold Open Mode. It should glow when the door function switch is moved to Day.
- 2.) If the push plate is properly wired the Yellow LED will glow when the push plate is pressed. If this does not happen the technician should check the push plate wiring.
- 3.) To test the controller the technician can use the test switch on the PC board. If the Orange LED is glowing and the Test Switch (SW2) is depressed the door should open.

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Initial Adjustments Cont'd:

Electric Strike:

- 1.) For the electric strike to work it should be connected according to the manual drawing Figure 1.7.
- 2.) The power supply should be a DC power supply. AC power supplies will not work and may actually damage the controller.
- 3.) The controller output is rated at up to 24 VDC and can switch up to 1 Amp continuous current.
- 4.) DIP SW2 ON enables electric strike operation. This will cause the controller to activate the electric strike and also to wait 0.5 seconds before pushing the door open.
- 5.) With DIPSW2 on the numeric display will show a opening sequence of “-2” (closed) “-3” **electric strike** , “-4” opening , “-5” back check and “-6” full open.
- 6.) For the case of a Secure Strike, the Technician should also set DIPSW1 to ON.
- 7.) Stanley supplies a power supply rated at 24 VDC and 0.5 Amp that works with most electric strike types and also fits inside the header enclosure.