

Elero Contact Sensing (CS) Motor Initial Setting and Adjustment Guide

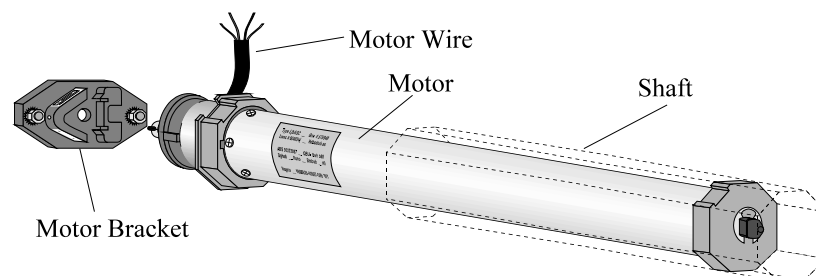
* For Elero 9/1, 9/1.8, 9/2.5, 9/3 & 9/4 Contact Sensing Motors

Important: Operate CS motors only when installed inside a shaft, and mounted into a complete panel box assembly. When the CS motor and shaft are mounted in the panel box, the shaft requires slight loose play (1/8" - 1/4" or 3mm - 6mm) in the side-to-side and up/down directions. CS motor setting or adjusting can be done with a tester cable by the installer, but any kind of hook-up to electrical switching systems must be performed by a licensed electrician.

General: Contact Sensing Motors

Contact Sensing (CS) motors do not contain limit switches. A rollshutter equipped with a CS motor halts in the 'up' position because the mechanical stoppers in the bottom profile will stop the curtain and this resistance is sensed by the motor. In the fully 'down' position the curtain is supported by the sill, and the relief of load is sensed by the motor and it subsequently shuts itself off. The CS motor has the benefit of never requiring any limit switch setting initially or any subsequent adjustments. In addition, if a rollshutter curtain equipped with a CS motor encounters an obstacle on its downward path, the resistance is sensed and the motor turns itself off before any damage is done to the rollshutter or the object. To get the rollshutter going again after such an encounter, just briefly switch to the 'up' direction to clear the curtain from the obstruction, then switch to 'stop', remove the object from the curtain path and continue by switching the rollshutter in the 'down' direction again. Another benefit of the CS motor is its built-in relay that will permit hooking up of more than one CS motor to a switching mechanism without running the risk of encountering damaging capacitor feedback.

Important: Always ensure that your switching mechanism has sufficient capacity for the combined amperages of all CS motors hooked up to it. Never hook up to any non-CS motors. Use only switching mechanisms provided by Talius.



Elero 9 - Series Contact Sensing Motor

Initial Set-Up

IMPORTANT: Do not apply power to the motor in either direction at this point, or until you are directed to.

1) During Assembly (Initial or Retrofit):

After assembling the CS motor into the panel box assembly, you should position the hanger slots of the shaft so that the installer can later easily clip in the hangers on site. This is how you do it: First, the motor needs to be in the shaft and the shaft should be properly installed in the panel box. Second, rotate the shaft with your hand as if the rollshutter curtain were moving in the “down” direction. Rotate until the shaft stops (usually only a small movement). Finally, switch your tester switch to the “up” direction and let the motor run until you have reached the desired position (hanger slots angled towards upper corner of panel box, farthest from the curtain).

Important: Do not rotate more than 360 degrees, which should be unnecessary anyway.

Ensure that the manufactured curtain height will reach up to the center of the shaft when the rollshutter curtain is fully closed. Supply sufficient hangers so that there will be one hanger at least every 12" (30cm) or less.

2) During Installation:

Mount the panel box, guide rails and sill. Drop the curtain into the guide rails. Slide the hangers on the curtain and clip the hangers into the appropriate flat slots on the shaft every 12" (30cm) or less. Install the concealed or surface mounted stoppers in or on the bottom curtain profile.

Important: For the next steps, it is important to let the motor shut itself off automatically when the curtain reaches the fully open or fully closed positions. Do not switch off the motor using the switch at either physical limit unless something is wrong.

Rotate the shaft with your hand as if the rollshutter curtain were moving in the “down” direction. Rotate until the shaft stops (usually only a small movement). Then, switch your tester switch to the “up” direction and let the motor run until the stoppers impact with the panel box and the motor shuts itself off. Next, switch to the “down” direction and let the motor run “down” until the curtain fully closes after reaching the sill and the motor shuts itself off. Run the curtain twice more “up” and twice more “down”, always letting the motor shut itself off on its own.

This is the reason for doing so: After three initial “up” and “down” movements, the micro-processor in the motor automatically learns where the upper and lower limits are approximately located. In the future, it will become extremely sensitive to shut-off pressure when it is within 80 degrees of rotation of the memorized limits. As a result, the stoppers will not impact so hard in the future in the upper position, and there will be no chance of the motor accidentally overturning in the “down” direction in case the hangers do not exert enough counter pressure.

Features you need to know:

At any time during a “down” movement, the rollshutter curtain can impact with an object and the exerted pressure will switch off the motor. Even if you impact with an object repeatedly at the same spot, the memory in the motor will not change.

Important: When setting the initial memory, the motor will only memorize a “down” limit after a minimum of 1 ½ rotations of the shaft. Furthermore, when the rollshutter is positioned at the “up” limit and you switch it to go “down”, the “down” shut-off sensor is not active until the shaft has rotated at least 180 degrees (½ turn). This feature is purposely built in so that the initial resistance of the curtain to enter the guide rails does not accidentally shut off the motor.

Warning: There is one small drawback to this feature: If the rollshutter covers an outward opening window and the sash is left open, the “down” moving curtain may impact with it right after it exits the panel box. The contact sensing feature does not kick in yet and therefore the motor does not shut off until after a 180 degree rotation, which means the curtain is beginning to bunch up inside the panel box. However, our tests and experiences show that this does not pose a problem. After the motor has shut off, run the curtain back “up”, close the window and the rollshutter will operate fine. It will not incur damage inside the panel box because the amount of curtain building up is too little.

Changing the CS Motor Memory:

Under normal circumstances you won’t ever need to change the memory of an installed CS motor. However, if you initially set the “down” limit incorrectly, or need to change a motor to another panel box, here is what you do.

Operate the rollshutter in the “up” direction. When the curtain reaches the midway point, grab the bottom profile by hand and apply downward pressure rapidly so that the motor shuts off on its own.

Note: It is important that your hand pressure is suddenly applied, not gradually, rather than the amount of pressure itself, or the motor will continue.

After shut-off, switch to “down” for about 2" (5cm) of curtain travel, then continue back “up” until the motor impacts at the top and shuts itself off automatically. The motor is now ready for accepting a new memory for the “down” limit. Run the curtain three times “up” and “down” to set the new “down” limit desired, as above in the **During Installation** section.

Trouble Shooting:

Problem: During installation, you applied pressure the wrong way or you switched the motor inadvertently in a 'down' direction.

Solution: There is no cause for concern. Simply repeat the procedure in a correct manner as shown in the directions.

Problem: The curtain rolls up completely and keeps on rolling without stopping at the top.

Solution: You need to attach the mechanical stoppers. Your rollshutters come supplied with either two concealed stoppers that are inserted into the ends of the bottom profile, or two surface stoppers that are screwed onto the surface of the bottom profile, close to the guide rails and near the upper edge of the bottom profile. In some cases there are factory pre-marked drill holes for the surface stoppers on the bottom profile. The stoppers' function is to impact with the panel box in order to transfer pressure to the motor and make it stop. Surface stoppers impact with the bottom lid of the panel box. Therefore, ensure that you have attached the lid before running the unit fully up.