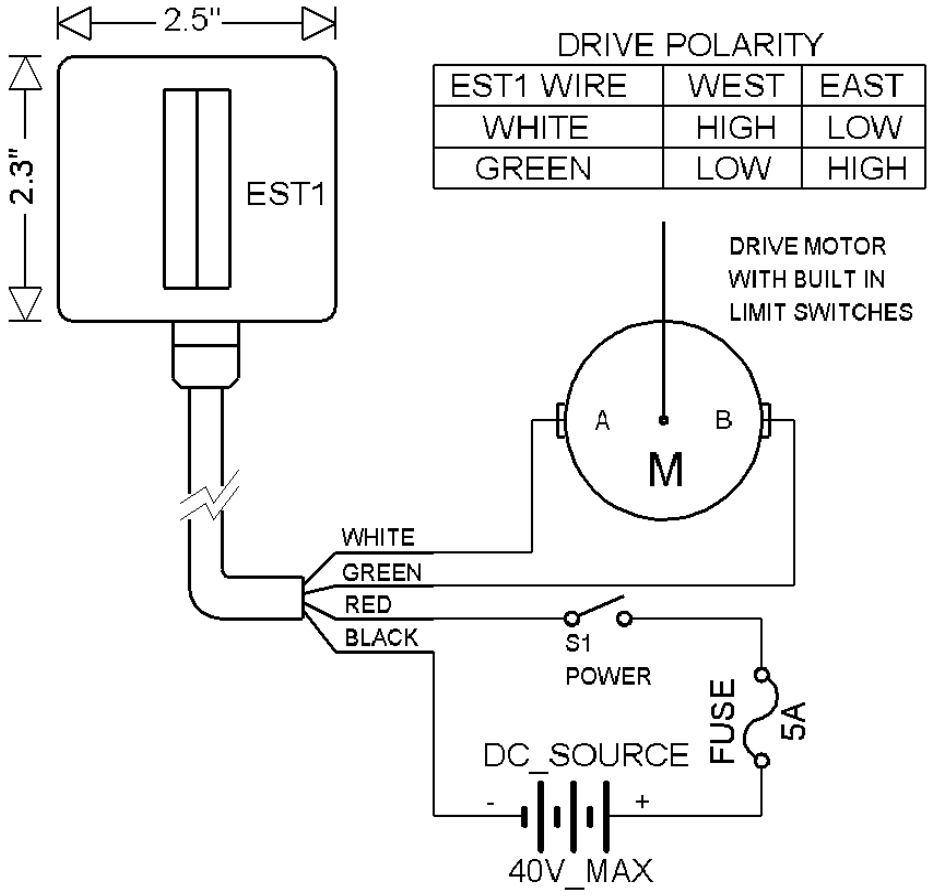

CONNECTION DIAGRAM

The EST1 is a single axis light seeking solar tracker control housed in a weatherproof enclosure. When mechanically affixed to a tracking array and connected to its drive motor, it will allow the array to track the unobstructed sun within a degree. The EST1 can be mounted anywhere on the tracking array as long as it receives unobstructed sun. The correct mounting orientation is with the cable end of the box pointed **south**. The drive motor or linear actuator ***must have built-in limit switches.***
Input voltage range: 10V minimum, 40V maximum.
Maximum motor run current: 10A (it can handle short pulses to 20A).
Supplied cable length (4 x #18): **2** ft. Depending on motor current and cable run length, connection to the EST1-10A should be made with 14 AWG or larger to minimize power robbing voltage drop.

There are three normal operating modes:

1) Tracking—there's enough sunlight for the tracker control to operate and it makes a position correction every 1-3 minutes to follow the sun's position. *For the first 5 minutes after power is applied, there is no delay in light response—this is to allow for ease of adjustment if the enclosure position is "trimmed" for accuracy.* After 5 minutes of power on, the control adds a 60 second delay to every correction event to reject transient light conditions.

2) Pause (status LED* flashes orange)—there's not enough sunlight hitting the light sensors to allow tracking so it waits in the last "good" position until the sunlight recovers or it gets dark enough to go into…

3) Park mode (status LED red)—it's getting kind of dark now and the tracker control is thinking maybe the day is over and it's time to send the array back to the east limit to wait for the dawn of a new day.

* The status led is visible from the east side of the enclosure.

If the output is overloaded, the status LED will flash RED and drive will be inhibited for 1 minute.

DO NOT use the cable strain relief for the purposes of mounting the tracker control because this can compromise the mechanical and hermetic integrity of the strain relief and cause failure.