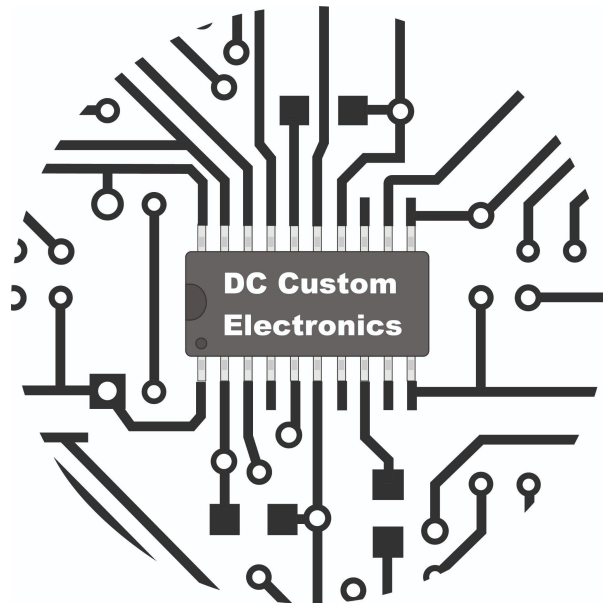


DC Custom Electronics

Semaphore signal user manual



General Use Instructions and wiring diagrams

DcCustomElectronics.com
DcCustomElectronics@gmail.com
+1 (623) 256 2021

1. Overview

The DCCE Scale semaphores are near exact scale fully functioning semaphore signals. A variety of signals are available such as three aspect red-yellow-green and two aspect red-green and yellow-green. There are also double semaphore options available as red-green over yellow-green with two mechanisms. For this instruction manual we will be focusing on the three aspect red-yellow-green semaphore.

2. Operation

To operate the semaphore signal simply connect the control inputs S1G or S1Y to 0V. If neither S1G or S1Y are connected to 0V then the semaphore will default to red and lower the arm to the correct position. When the semaphore is in transition the aspect can not be changed, for example if the semaphore is moving from red to green and part way the input is changed to yellow then the arm will travel all the way to green and then back down to yellow. This will also be the case for double signals.

3. Connections

There are 6 user connections on the logic board located inside the base of the semaphore. They are the following: Power + and Power - , S1G, S1Y, S1g and S2Y. Connections labeled S2(X) are only used for double semaphores. All single semaphores use S1 controls unless otherwise specified.

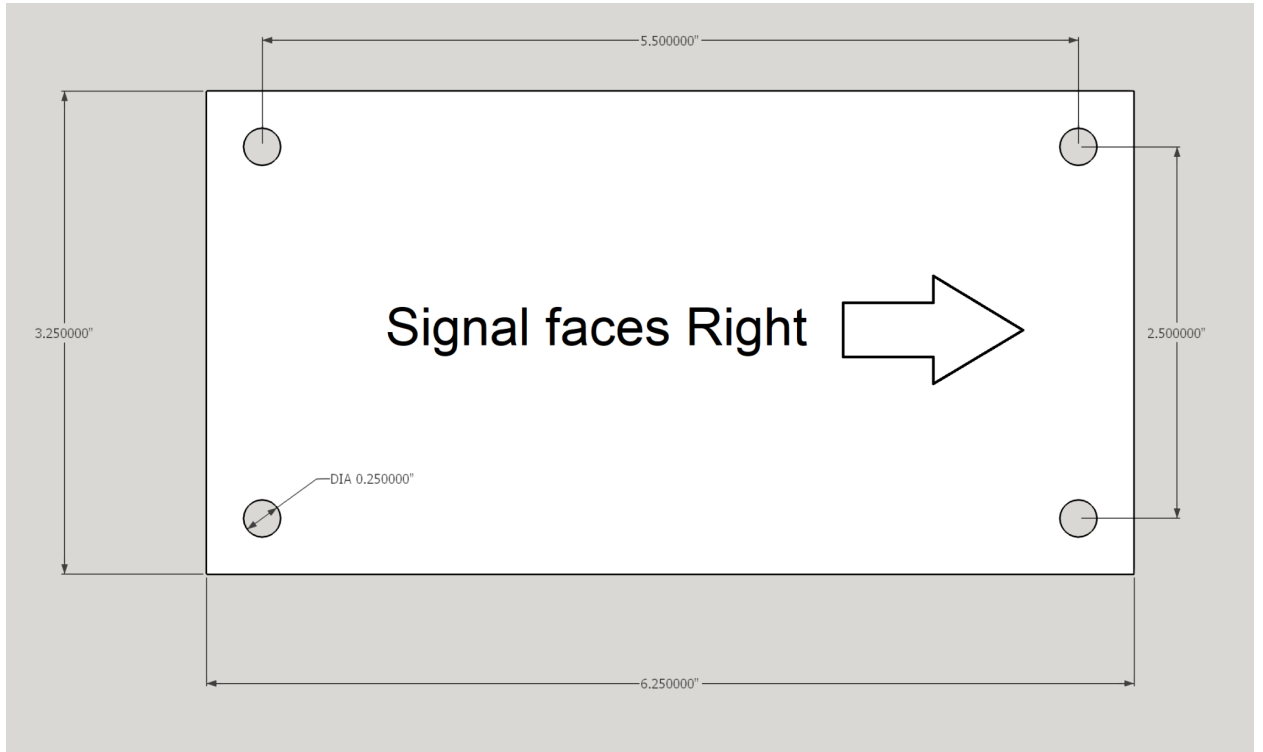
4. Power

All semaphores require 12-24 VDC.

65mA idle current @12V

100mA when in motion @12V

5. Mounting



6. Mounting the flag and lens casting

Locate the armature shaft at the top of the signal
Remove the 4-40 screw and nut from the shaft



Note that the shaft has a flat spot

Match the flat spot of the shaft with the flat spot in the hole on the lens casting and firmly press the lens casting onto the shaft. This may take some force to fully seat the lens casting. Then return the screw and nut to the shaft.

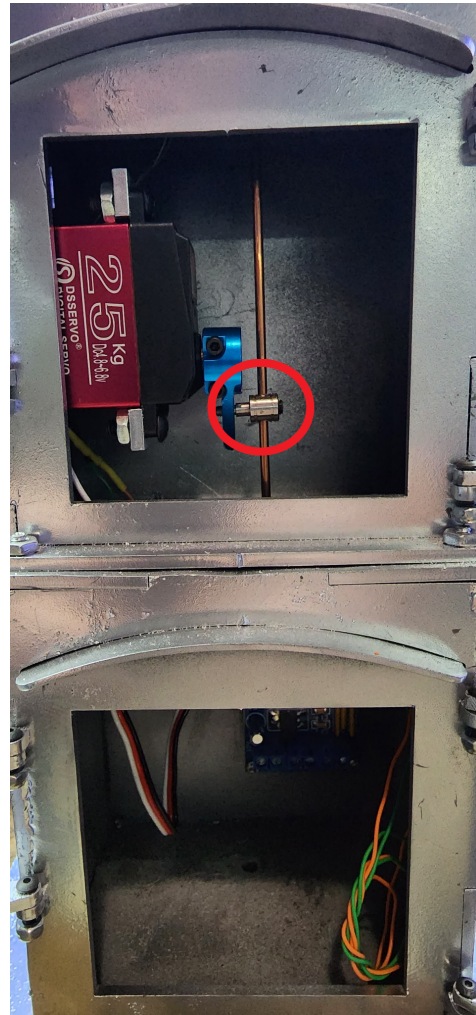


7. Adjustments

To make adjustments to the alignment of the signal head, Open the top signal cabinet door and locate the servo horn pivot.

Using an allen wrench loosen the set screw engaging the control rod.

Hold the control rod in the desired position and re-tighten the set screw.



8. Lenses

The lenses in the semaphore lens casting are made from 1/8th inch acrylic and are exactly 1 inch in diameter. Replacement lenses are available upon request at a small charge. To replace the lenses remove the lens casting from the shaft. Locate the three 8x32 cap head screws that hold the lens casting together and remove them using a 3/32 hex drive or allen wrench. The 3 layers of the lens casting will come apart. Replace the lenses as needed and screw the lens casting back together to retain the new lenses.

