

## L384

## Swan™ System

The Swan<sup>™</sup> System is an electrically retractable video screen system - a collaborative effort between Polar Focus, Motion Laboratories, and Stagemaker Hoists. The Swan System is designed to functionally link two hoists as a group. Using data from a hoist mounted absolute encoder, the system can achieve multiple target positions while maintaining a level condition with tight tolerance during movement.

The Swan<sup>™</sup> System provides synchronous up and down hoist control for precision video equipment with delicate components, such as electric screenboxes or video walls. The motor control system has four programmable target or soft limit positions: a top storage position, a high show position, a low show position, and a service position at stage level. As the screenbox or video wall is moved, the load will retain synchronous level to tolerances of 1/16" of an inch, either during travel or at the intermediary stopping positions. Swan System is available in both permanent and portable configurations.





The Swan<sup>™</sup> System permanent configuration uses a single master component box mounted to a wall, a control box mounted to a wall, and two flying boxes that are mounted at the hoist locations. All four boxes must be interconnected by conduit.

The Swan System permanent configuration uses a single master component box mounted to a wall, a control box mounted to a wall, and two flying boxes that are mounted at the hoist location. The hoists are connected for both applications by two cables, the first is a power and control cable, the second is an encoder cable. Either motor will not run without its mated motor, also running in exact synchronous operation. If one motor has a disconnected cable, the other motor will immediately stop before the load can get out of level beyond 1/16".

Both motors will make occasional clicking noises as one motor stops very briefly to allow the other motor to resynchronize. An effective analogy is two soldiers marching down the road and one soldier reaches a pothole. The second soldier adjusts his stride so that the two soldiers can continue their march together.

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The system allows the user to detect motor loss or unconnected hoist, detection of encoder loss or unconnected encoder, as well as detection of incorrect phase.

The unit has an emergency stop, PLC control, position programming, fault indication, and a key switch manual override for individual hoist control. The system employes a phase reversing contactor circuit, and 25 foot hand-held pendant with a group run switch and an emergency stop control. The system is designed to inhibit run functions until all safety criteria have been satisfied.

The Swan System has a 3.5 inch backlit touch screen HMI that allows the user to edit target position names and enter target position values, reset faults, enable the run page and re-level. Users can view the current position and target position, view the encoder and set home.

Polar Focus provides this system as a complete engineered transition between a roof structure and a video screen box or video wall. Roof attachment, secondary roof structure, PE stamped drawings for any US state are part of this complete package. A site survey service for more complex installations is also available.

Call our Audio Rigging Consultants for more information at (413) 586-4444.



The Swan<sup>™</sup> System has an E-Stop, PLC Control, Position Programming, Fault Indication and Key Switch Manual Override for individual hoist control.

Overall Length: 15" (381 mm) Overall Height: 5.25" (133.4mm, 3 RU) Overall width: 19" (482.6 mm) Weight: 31.5 lbs (14.3kg) Primary Material: Alloy Steel Finish: Black Powder Coat

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