

# Installation/Operating Instructions

## 220V AC AeroLift 25 by Draper

These Installation/Operating Instructions are available in the official language of the country where you purchase the product. Please contact your distributor to request a copy.

Vous pourriez demander les instructions d'installation et d'opération traduites dans la langue officielle du pays où vous achetez le produit. Veuillez demander à votre distributeur.

Die Gebrauchsanweisung für Installation und Konstruktion sind in der offiziellen Sprache des Landes, indem Sie das Produkt gekauft haben, vorhanden. Fragen Sie die jeweilige Verkaufs-Abteilung.

### ⚠ Caution

- 1 Read instructions completely before proceeding.
- 2 Follow instructions carefully. Installation contrary to instructions invalidates warranty.
- 3 Do not obstruct operation of AeroLift 25 with fingers or any object. Serious injury or damage could result.
- 4 It is not uncommon to overheat the motor during initial installation when setting limits. The motor is thermally protected and will stop working temporarily. DO NOT physically pull the unit down when this occurs. Once it has cooled to a safe temperature, it will begin operating again.
- 5 The AeroLift 25 is designed to accommodate ceiling suspended equipment. Equipment should not be allowed to rest on ceiling closure during operation. (Refer to section titled "Installing Projector.")
- 6 Entire bottom of unit must be unobstructed to permit proper operation.
- 7 Unit must be installed level (use a carpenter's level).
- 8 Unit operates on 220V AC current.

**Note:** Unit has been thoroughly inspected and tested at factory and found to be operating properly prior to shipment.

### Planning

- 1 Based on screen location and projector specifications, determine proper position for projector installation.
- 2 Confirm that there is adequate space for installation and operation. Minimum clearance above ceiling level varies according to height of projector, optional projector mounting bracket, optional ceiling closure and optional Environmental Air Space Housing.
- 3 Arrange to provide service access to the unit.
- 4 Total capacity of lift is 12 kgs, including closure, projector and bracket.

### As Soon As AeroLift 25 Arrives

- 1 Open carton and inspect for damage.
- 2 Locate the following parts:
  - A. The unit itself
  - B. Controls
  - C. Any optional equipment

### Hanging Unit

The AeroLift 25 is provided with four (4) mounting angles for suspending or direct mounting the unit from above or direct mounting from the sides. These angles provide up to 32 mm of adjustment (front to back). The AeroLift 25 is designed to fit between joists spaced 41 cm apart on center (assuming 51mm joists), and to close to approximately 102 mm, not including the projector, bracket or closure. The unit should be guy wired or blocked to prevent swinging. All installations should observe the following guidelines:

- 1 Installer must ensure that all fasteners and supports are of adequate strength to securely support AeroLift 25 and projector. It is recommended that hardware structure be able to hold at least four times the combined weight of the lift, projector, Environmental Air Space Housing, closure and ceiling material attached to closure.
- ⚠ Caution: DO NOT hang from, "ride" or pull down on the unit. This could create a failure and cause damage and/or injury.**
- 2 Fastening methods must be suitable for mounting surface, and securely anchored so that vibration or abusive pulling on unit will not weaken installation.
  - 3 Bottom of unit must be unobstructed after installation. Sufficient clearance must be allowed below projector or optional ceiling closure.
  - 4 Do not use unit to support adjacent ceiling, light fixtures, etc.
  - 5 Do not complete the ceiling below unit until electrical connections have been completed and unit has been operated successfully.
  - 6 Use slots on the projector plate and on the closure to adjust the unit to ensure proper alignment of ceiling closure relative to ceiling opening.

# DRAPER

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### Electrical Connections

Unit operates on 220V AC, 60 Hz. current.

The AeroLift 25 is shipped closed, with a temporary field connection provided in the form of a pigtail temporarily wired to the unit. After hanging the unit, make sure power is off and use this pigtail to temporarily connect the unit to power and to a switch, so the unit can be lowered to allow access inside.

**Please note: Make sure electrical supply has been disconnected before attempting to connect AeroLift 25 to electricity.**

Terminal strip for field connections is located inside a junction box on the end of the unit. Unit is shipped with internal wiring complete to the terminal strip. Once the unit has been lowered, turn off power and remove the J-box cover. The terminal strip is attached to the cover. Disconnect temporary pigtail from unit, then complete permanent wiring to electricity and to switches. Wire to connect unit to power supply and to switches should be furnished by installer. Connections should be made in accordance with wiring diagram, and wiring should comply with national and local electrical codes. All operating switches should be "off" before power is connected.

AeroLift 25 should be operated and checked prior to installing projector and/or optional ceiling closure.

### Operation

When unit is first operated, be cautious! If unit fails to operate when the switch is flipped "down", return switch to "off" and recheck electrical connections before proceeding. Cycle unit down and up several times to confirm satisfactory operation.

**220V Single Station Control** (CE Approved)—3-position UP-OFF-DOWN switch permits operation to be stopped at any point. Factory set limit switches automatically stop lift when fully down or fully up.

**220V Multiple Station Control** (Not CE Approved)—Switches are similar in appearance to Single Station Control. Lift stops when switch is released and may be restarted in either direction. Factory set limit switches stop lift automatically when fully up or fully down.

**24V Control** (CE Approved)—Three-button UP-STOP-DOWN switches stop at any point desired, operate in any sequence. Factory set limit switches automatically stop lift when fully up or fully down. Wireless controls—whether infrared or radio frequency—interface with low voltage control box.

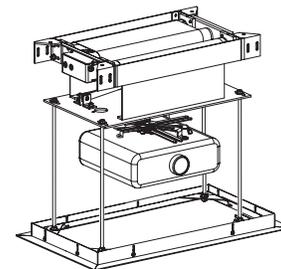
**RS232/Ethernet** (CE Approved)—Serial communication and network communication optionally available with wall switches, RF or IR remote.

**Key Operated Switching** (Not CE Approved)—Two kinds of key-operated switches are optionally available with this unit. ① The key-operated power supply switch controls power to the lift and switches. When it is "off", the switches will not operate lift. Key may be removed from the switch in "on" or "off" position. ② A three-position key switch permits the lift to be operated directly by key. In this case, the lift's operator must have a key.

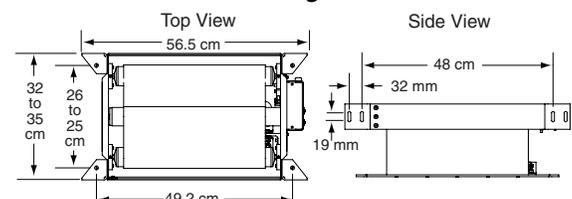
### Testing the Safety Limit Switches

The AeroLift 25 is equipped with a Safety Limit Switch (see "AeroLift 25—Limit Switch Adjustment (Bottom View)" diagram on page 3). This switch may be damaged during shipping or by rough handling on the job site. Once the AeroLift 25 has been installed in the ceiling, but before the projector and closure are attached, the **Safety Limit must be tested**. Use a screwdriver or other tool to press and hold the switch. While holding down the switch, have someone operate the unit. **If the unit works while the switch is depressed, the limit switch is broken and must be replaced**. Operating the unit without a functioning Safety Limit Switch could cause the unit's motor to continue operating after the lift is closed, leading to a failure and the possibility of damage or injury.

**Please Note: As weight is applied to the AeroLift 25, the projector plate may shift slightly. If this occurs, use setscrews on bottom of fabric roller brackets to compensate for shift and level projector plate.**



### AeroLift 25 Mounting Hole Dimensions



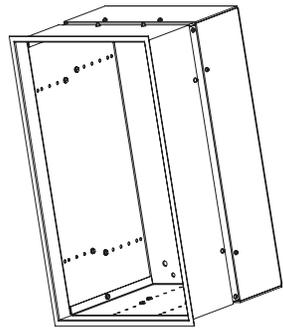
If you encounter any difficulties installing or servicing your AeroLift 25, call your dealer or Draper, Inc. in Spiceland, Indiana, 765-987-7999, or fax 765-987-7142.

## Installing Optional Environmental Air Space Housing

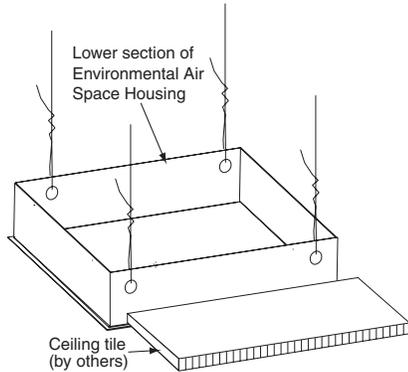
The Environmental Air Space Housing is shipped pre-assembled in its shortest position. The height of the housing can be adjusted by moving the screws to different mounting holes in side panels. The incremental adjustment for the top screw and bottom screw is 12.7 mm; the incremental adjustment for the rest of the screws is 25.4 mm. You can install the housing in a pre-assembled state or as separate components, which will require that the Environmental Air Space Housing be completely disassembled prior to installation. Please note that if the housing is to be installed in a space where there is no access from above the housing, then it is recommended that the AeroLift 25 be installed to the upper section prior to installing the housing. It is also recommended that an access panel be installed to allow future access.

- ① Install top section of housing using outer four holes located on top of upper section. If installing large housing, make sure housing is oriented properly to allow correct placement of lift within housing.
- ② If installing the large closure, attach brackets to bottom of projector plate (see drawing on page 3).
- ③ Attach AeroLift 25 to upper section of housing through the inner four holes in the upper section with the  $\frac{5}{16}$ " -18 x  $\frac{7}{8}$ " hex head screws,  $\frac{5}{16}$ " flat washers and lock nuts provided with housing. The lock nuts should be used **above** the Environmental Air Space Housing (one per screw).
- ④ Attach the two flat panels of the middle section across from each other with the clinch nuts to the outside of the housing.
- ⑤ Attach the two middle section panels with the formed ends across from one another.
- ⑥ Attach lower section of Environmental Air Space Housing.

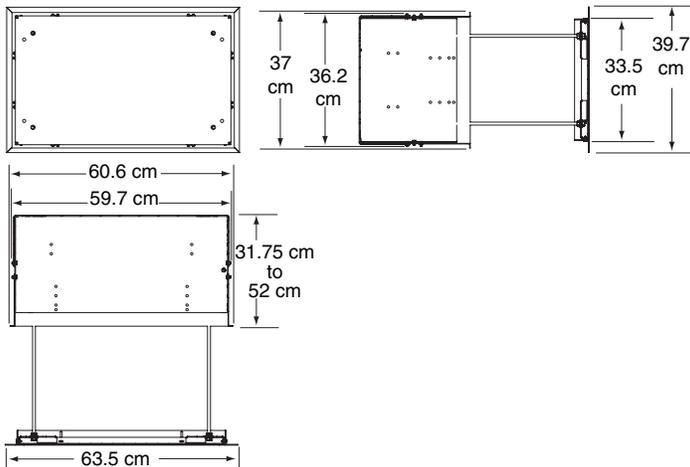
### Environmental Air Space Housing



### Ceiling Trim Kit



### Small Environmental Air Space Housing, Lift, and Closure Dimensions

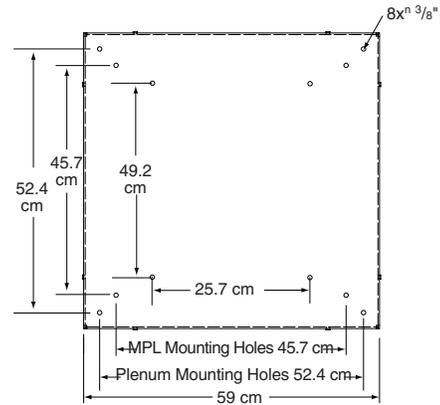


## Installing Optional Ceiling Trim Kit

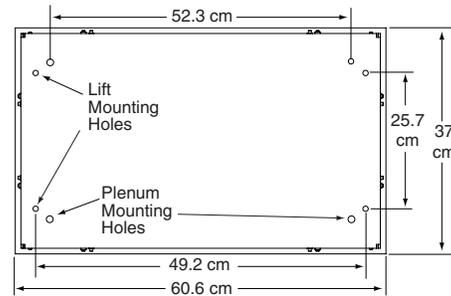
The AeroLift 25 is available with a ceiling trim kit, which consists of the lower section of the Environmental Air Space Housing and the optional closure panel.

- ① Install AeroLift 25 as previously described in these instructions.
- ② Install bottom section of housing in opening. This can be accomplished by suspending with wire or mounting directly to ceiling joists (if space permits).
- ③ Install projector and attach optional ceiling closure to AeroLift 25 (see instructions on page 3).

### Mounting Hole Spacing Large Environmental Air Space Housing

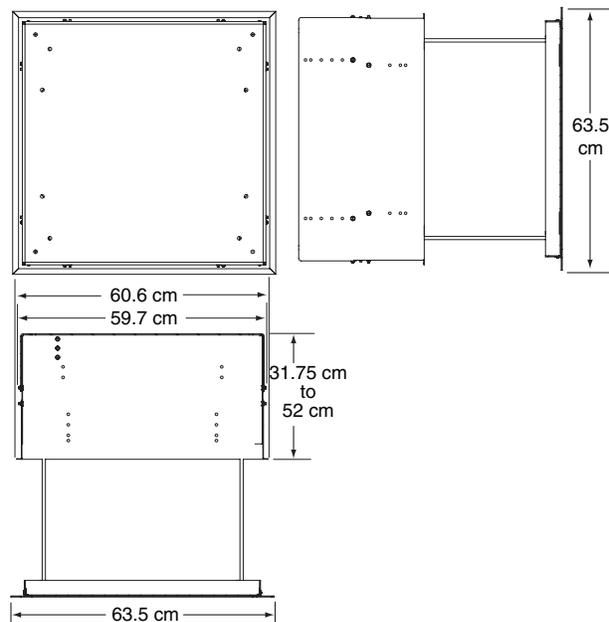


### Small Environmental Air Space Housing



(Top views shown)

### Large Environmental Air Space Housing, Lift, and Closure Dimensions



## Installing Projector

Generally, the video projector should be suspended from the bottom pan according to projector manufacturer's instructions or using optional SMS Low Profile Mount. If installing with a small closure, maximum projector size is 45.7 cm x 22 cm (w x h). If installing with a large closure, maximum projector size is 45.7 cm x 45.7 cm (w x h).

**The projector plate is not pre-drilled. When drilling initial holes for mounting projector, or if for any reason the hole placement must be changed, completely lower AeroLift before attempting to drill holes. When attaching projector or bracket to plate, make sure screws are short enough that they do not touch the motor/roller above the plate when lift is closed.**

Unit and projection system should be operated, checked and adjusted as necessary at this time (see below for limit adjustment procedures).

Video cables and/or power cord can be routed along the stabilizing arm. Cables must not interfere with lift operation.

**Warning:** Keep fingers & other objects away from ceiling closure when unit is operating. Serious injury or damage can result.

## Adjustments (see drawing at right)

**CAUTION:** Be sure all switches are in "off" position before adjusting limit switches. Always be prepared to shut lift off manually when new adjustment is being tested.

Limit switches for the AeroLift 25 are preset at the factory. The "Up" (closed) limit switch is set for fully closed. The "down" (show) limit switch is set for fully lowered. Once unit is in place, the "down" limit switch may need to be changed to stop the AeroLift 25 closer to the ceiling (that is, to raise the "down" position). Limit switches are located on the end of roller, and are accessible by removing the cover of the junction box at the left end of the unit, using a  $\frac{5}{16}$ " (8 mm) Allen wrench. To adjust the limit switches, use a  $\frac{3}{32}$ " (4 mm) screwdriver/allen wrench.

**Caution:** It is not uncommon to overheat the motor during initial installation when setting limits. The motor is thermally protected and will stop working until it has cooled to a safe temperature before it will start operating again. **DO NOT physically pull the unit down when this occurs.** Adjusting "Down" (show) position — "Down" position may be adjusted by turning the white limit switch adjustment socket. Turning the socket clockwise will stop the AeroLift 25 closer to the ceiling. Turning it counter-clockwise will cause the lift to stop at a lower point.

Adjusting "Up" (closed) position — Because the "up" ("closed") position is preset at the factory, Draper does not recommend changing this position using the limit switch. The "up" position of the closure may be adjusted by changing the length of threaded rod (see instructions for closure installation below). If necessary, however, "up" position may be adjusted by turning the yellow limit switch adjustment socket. Turning the socket counterclockwise creates a higher, or more fully closed position. Turning it clockwise creates a lower 'UP' (closed) position.

**Caution:** Make sure limit switch is set so that the AeroLift 25 motor is NOT still running after the lift is closed. If it continues to cycle once the lift is closed, a failure may occur, making the unit descend rapidly and causing damage and/or injury.

## Installing Ceiling Closure

If your AeroLift 25 is equipped with a ceiling closure system, it can be used as is, or in conjunction with a piece of existing ceiling tile.

Please refer to diagrams at right for these instructions.

① If installing with ceiling tile, you may need to cut tile so its overall dimensions are the same as (or slightly less than) the closure panel. Place tile into trim frame. Lay closure panel on top (back side) of ceiling tile, and tighten screws to hold in place.

② If installing large closure, attach brackets to bottom of projector plate (see drawing at right).

③ Attach  $\frac{5}{16}$ " (8 mm) threaded rods to slots in projector plate or brackets.

**Caution:** Make sure bolts and nuts attaching brackets to AeroLift are completely tightened.

④ Run unit "up" until bottom pan stops at highest position. Mark position on  $\frac{5}{16}$ " (8 mm) rods even with ceiling level and cut rods to length (removing from pan if convenient).

⑤ Run unit "down" until bottom pan stops at "show" position.

⑥ Attach closure to lower end of  $\frac{5}{16}$ " rods by slipping into four corner slots and secure with nuts above and below slots.

⑦ Run unit "up" again to highest position. Measure distance by which panel fails to reach required "closed" height for surrounding ceiling.

**Caution:** Make sure nuts are completely tightened.

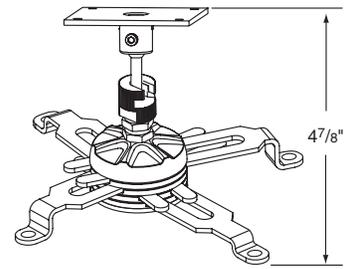
⑧ Run unit "down" then re-adjust mounting of  $\frac{5}{16}$ " (8 mm) rods in traveling grid to raise panel required distance.

⑨ Test unit operation to confirm that panel will stop in closed position just before touching ceiling.

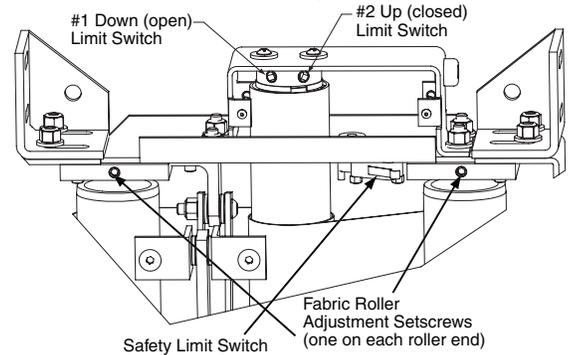
**Caution:** DO NOT hang from, "ride" or pull down on the unit. This could create a failure and cause damage and/or injury.

**PLEASE NOTE:** Immediately upon completion of the surrounding ceiling, unit should be operated to confirm that optional ceiling closure panel by Draper or by others stops  $\frac{1}{8}$ " short of touching ceiling in closed position. If closure panel touches, the motor may continue operating after the lift is closed. If it continues to cycle once the lift is closed, a failure may occur, making the unit descend rapidly and causing damage and/or injury.

## SMS Low Profile Mount with Universal Bracket



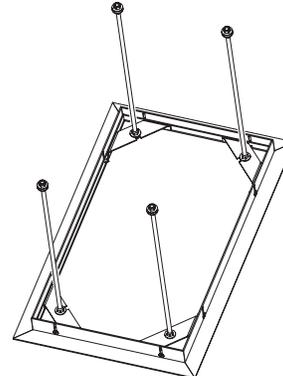
## AeroLift 25—Limit Switch Adjustment (Bottom View)



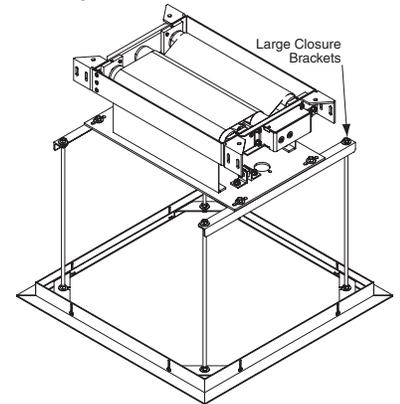
### Please Note:

If load is off-center of pan, you may need to adjust the pitch of the fabric rollers. One setscrew is provided on each end of both fabric rollers (see above drawing). Use these to adjust roller pitch to keep entire fabric panel taut, so load is evenly distributed. Use  $\frac{1}{8}$ " hex key to adjust.

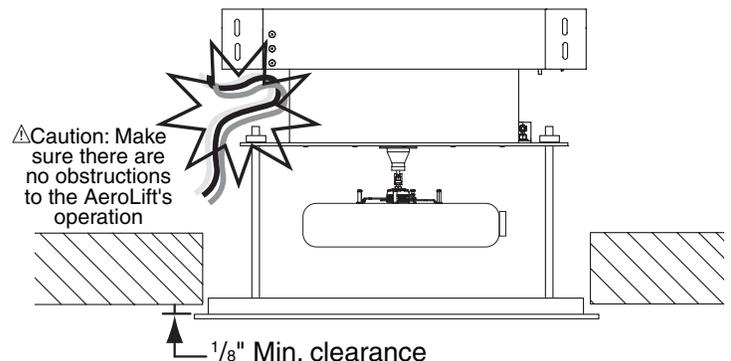
## AeroLift 25 Standard Closure



## AeroLift 25 with Large Closure and Brackets

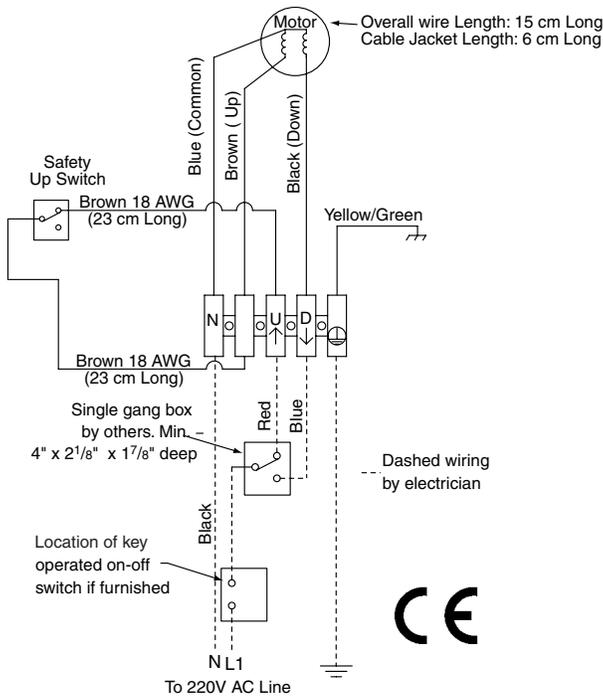


## AeroLift Clearance

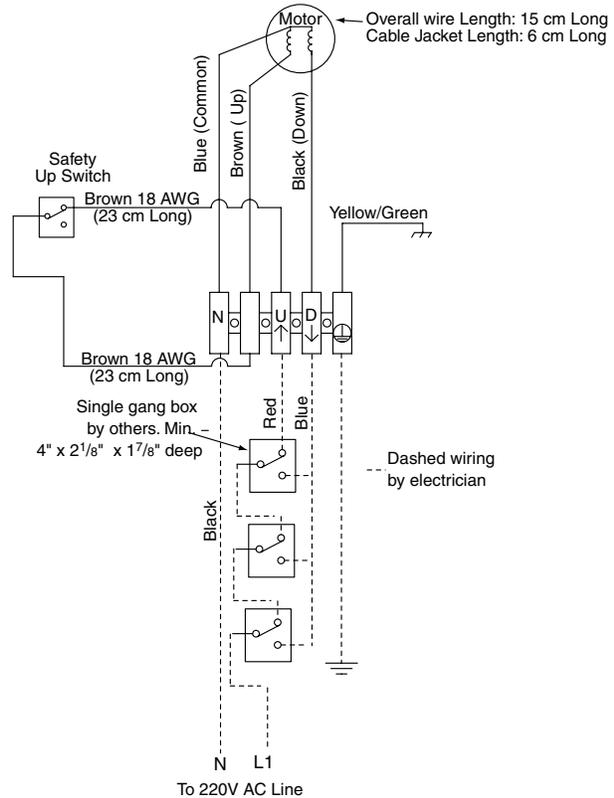


Wiring Diagrams

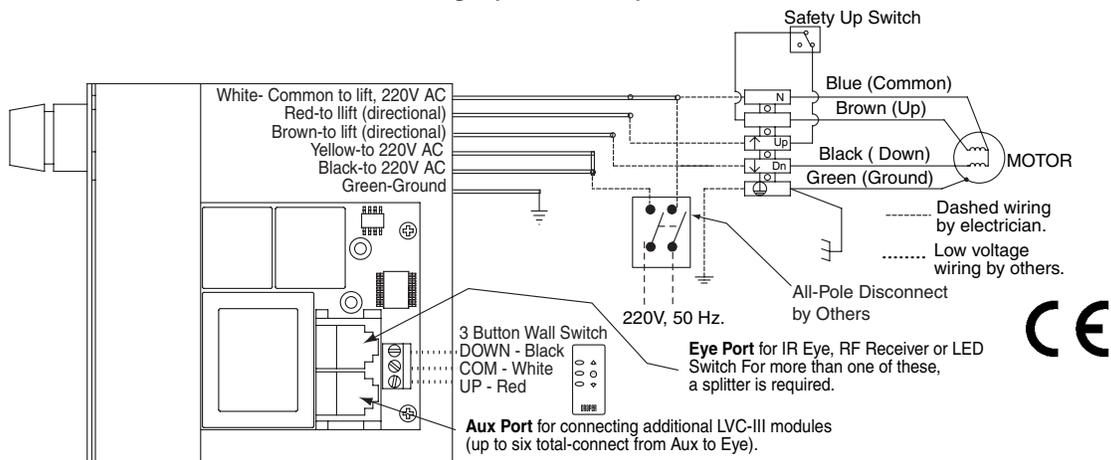
Single Station Control



Multiple Station Control  
(Not CE Approved)



Low Voltage (& Wireless) Control



See separate Serial Communication-RS232 Instruction sheet for enabling RS232 with the MC1.

MC1

