

Selector Logic Requirements Rev 1

The MHTAL Controller board requires seven selector inputs for proper operation:

LU = Level Up	P1 = Verifies Car is at Position 1	P4 = Verifies Car is at Position 4
LD = Level Down	P2 = Verifies Car is at Position 2	
DZ = Door Zone	P3 = Verifies Car is at Position 3	

The inputs are 24VDC active low; meaning that 24VDC Reference must be present at the appropriate controller terminal to turn on the input.

Up Travel Logic Sequence:

- When an up call is registered, the “UP”, “RP” and “HS” computer outputs will be activated.
- Each time **UL** is activated along with **DZ** the selector will increment one level
- When the selector increments to the landing where the call is registered, the “HS” computer output will deactivate and the car will continue up the hoistway at leveling speed.
- To stop the car after it is running in leveling speed **UL** turns off while **DZ** remains on. The “UP” computer output is deactivated then after 3 seconds “RP” computer output is deactivated.

Down Travel Logic Sequence:

- When a down call is registered, the “DN”, “RP” and “HS” computer outputs will be activated.
- Each time **DL** is activated along with **DZ** the selector will decrement one level
- When the selector decrements to the landing where the call is registered, the “HS” computer output will deactivate and the car will continue down the hoistway at leveling speed.
- To stop the car after it is running in leveling speed **DL** turns off while **DZ** remains on. The “DN” computer output is deactivated then after 3 seconds “RP” computer output is deactivated.

Releveling (Hydro Only)

After the car has stopped at floor level in response to a call, the car will re-level up when **UL** and **DZ** are on together, and will stop when **LU** is off. The car will re-level down if **DL** and **DZ** are on together, and will stop when **DL** is off. Releveling is deactivated for single speed and VVVF winding drums.

Positive Encoding:

The MHTAL Controller board achieves positive encoding via four independent positioning magnets. Door Lock outputs will be activated only when a positioning magnet is present.

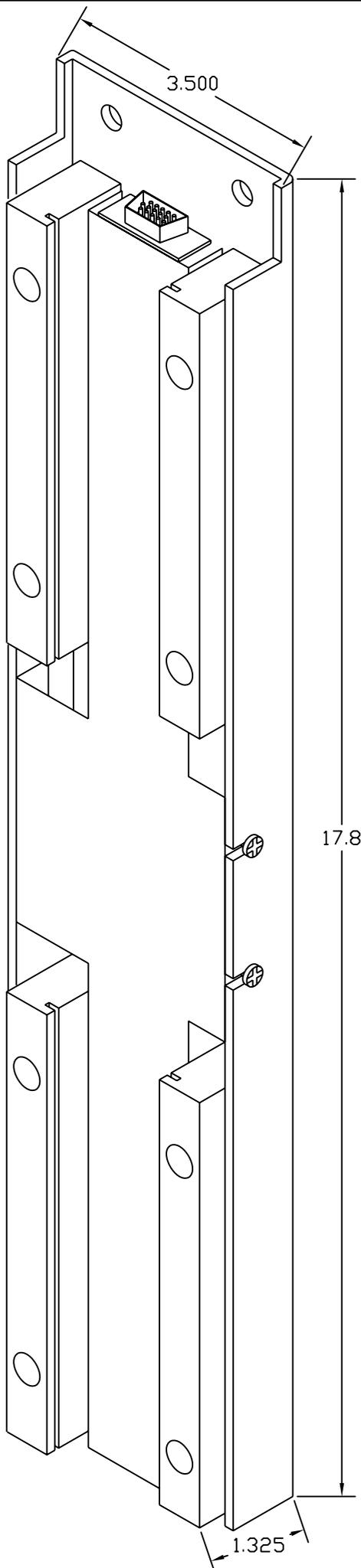
Short Floors: The minimum travel distance is 12 inches.

Short Floor Up Logic Sequence from floor A to floor B:

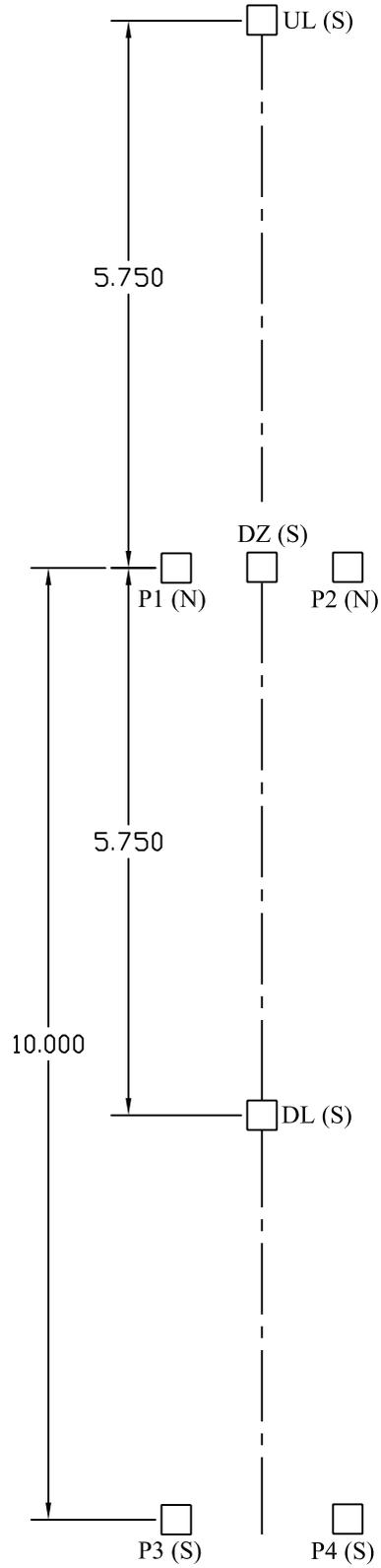
- When an up call is registered, the “UP” and “RP” computer outputs will be activated.
- Before the car moves the computer will have the following signals from the selector: **DZ** on, **PA** on.
- Once the car moves away from floor A, the computer will see the following selector signals:
 - **DL** on, **UL** on, **PA** off, **DZ** off, **DZ** on, **PB** on, **DL** off then **UL** off.
- Stop the car when **UL** turns off. The “UP” computer output is deactivated then after 3 seconds “RP” computer output is deactivated.

Short Floor Down Logic Sequence from floor B to floor A:

- When a down call is registered, the “DN” and “RP” computer outputs will be activated.
- Before the car moves the computer will have the following signals from the selector: **DZ** on, **PB** on.
- Once the car moves away from floor B, the computer will see the following selector signals:
 - **UL** on, **DL** on, **PB** off, **DZ** off, **DZ** on, **PA** on, **UL** off then **DL** off.
- Stop the car when **DL** turns off. The “DN” computer output is deactivated then after 3 seconds “RP” computer output is deactivated.



SENSOR SPACING



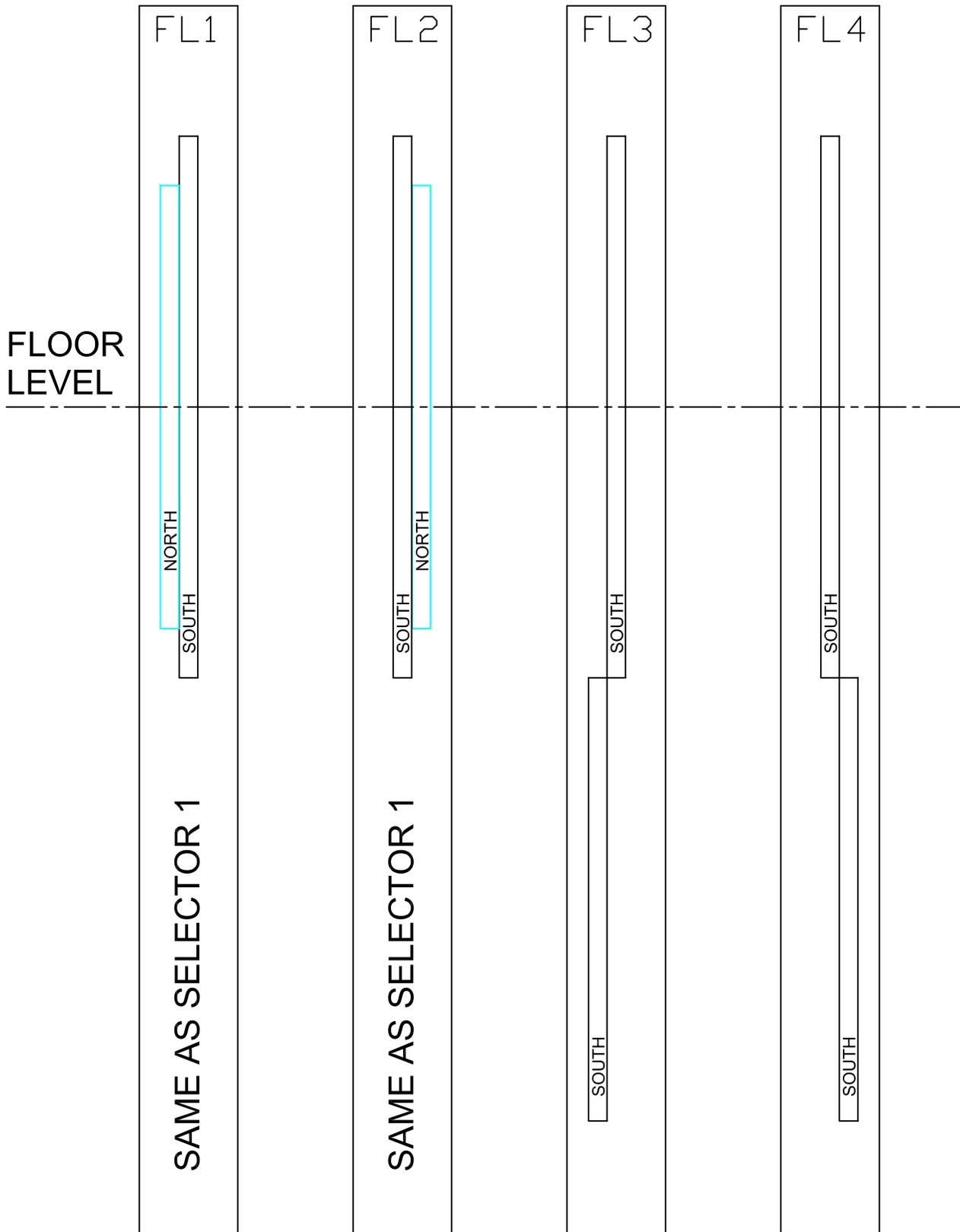
Electro Mech Industries, Inc.

SIZE A	FSCM NO.	DWG NO. SEL2	REV
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SCALE: None

SHEET

SELECTOR 2 MAGNET CONFIGURATIONS



After magnets are positioned, trim as necessary to avoid a "yo-yo" effect during arrival to a floor.

Terminal & Final Limit Switch Kit

INSTALLATION INSTRUCTIONS

Part Number: LECLIMSWKITUFL

Kit Contains:

- 1- Switch Bracket w/ 3 pre-wired switches
- 2- Left handed Cams & Securing Plates
- 1- Right handed Cam & Securing Plate
- 6- 10-32 Screws
- 2- #10 Self tapping Screws

Installation Procedure:

1. Secure Switch Bracket to Selector Head using #10 Self Tapping Screws
2. Rotate Switch arms 90 degrees towards back of Selector Head
3. Secure LTL Cam to 2" tape using 10-32 Screws
4. Secure UTL Cam to 2" tape using 10-32 Screws
5. Secure UFL Cam above UTL Cam using 10-32 Screws

Wire Color Codes:

- UTL: RED (UPPER TERM. LIMIT)
- LTL: YEL (LOWER TERM. LIMIT)
- TLC: BLK (TERM. LIMIT COMMON)
- FL1: ORG (FINAL LIMIT)
- FL2: ORG (FINAL LIMIT)

Note: Length of all wires is 6 feet

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