

COMMAND LIGHT
COMMAND LIGHT TFB-
HM3 Traffic Flow Board



COMMAND LIGHT TFB-HM3 Traffic Flow Board Instruction Manual

[Home](#) » [COMMAND LIGHT](#) » COMMAND LIGHT TFB-HM3 Traffic Flow Board Instruction Manual 

Contents

- 1 COMMAND LIGHT TFB-HM3 Traffic Flow Board
- 2 Product Usage Instructions
- 3 LIMITED WARRANTY
- 4 General Description and Specifications
- 5 Operation
- 6 Installation
- 7 Mounting
- 8 Maintenance
- 9 Troubleshooting
- 10 Wiring Schematics
- 11 Documents / Resources
 - 11.1 References
- 12 Related Posts



COMMAND LIGHT TFB-HM3 Traffic Flow Board



Specifications

- Model: TFB-HM3
- Manufacturer: Command Light
- Address: 3842 Redman Drive Fort Collins, CO 80524
- Phone: 1-[800-797-7974](tel:800-797-7974)
- Website: www.CommandLight.com

Product Usage Instructions

Installation

Before installing or operating the TFB-HM3, please read the user manual thoroughly.

Operation

1. Ensure the product is connected to a power source compatible with its requirements.
2. Turn on the TFB-HM3 using the designated power switch.
3. Adjust the flood lighting angle and intensity as needed.

Warranty Information

The TFB-HM3 comes with a five-year limited warranty against defects in materials and workmanship. Please read the warranty terms carefully for details on repair and replacement coverage.

Contact Information

If you encounter any issues with your TFB-HM3, please contact Command Light at info@commandlight.com or call 1-[800-525-5224](tel:800-525-5224) for assistance.

FAQ

• **Q: What should I do if my TFB-HM3 malfunctions within the warranty period?**

- A: Contact Command Light immediately for diagnosis and repair under the warranty terms. Be prepared to provide the serial number and details of the issue.

• **Q: Does the warranty cover damage due to improper installation?**

- A: No, damage caused by improper installation is not covered under the warranty. Please ensure proper installation procedures are followed.

THANK YOU

Please allow us to express a simple thank you for investing in a COMMAND LIGHT product. As a company we are dedicated to producing the very best and most versatile flood lighting package available. We take great pride in the quality of our work and hope that you will find many years of satisfaction from the use of this equipment.

Should you have any problems with your product please do not hesitate to contact us.

COMMAND LIGHT

- 3842 Redman Drive Fort Collins, CO 80524
- **PHONE:** 1-[800-797-7974](tel:800-797-7974)
- **FAX:** 1- [970-297-7099](tel:970-297-7099)
- **WEB:** www.CommandLight.com

PERSONAL RESPONSIBILITY CODE

The member companies of FEMSA that provide emergency response equipment and services want responders to know and understand the following

1. Firefighting and Emergency Response are inherently dangerous activities requiring proper training in their hazards and the use of extreme caution at all times.
2. It is your responsibility to read and understand any user's instructions, including purpose and limitations, provided with any piece of equipment you may be called upon to use.
3. It is your responsibility to know that you have been properly trained in Firefighting and/or Emergency Response and in the use, precautions, and care of any equipment you may be called upon to use.
4. It is your responsibility to be in proper physical condition and to maintain the personal skill level required to operate any equipment you may be called upon to use.
5. It is your responsibility to know that your equipment is in operable condition and has been maintained in accordance with the manufacturer's instructions.
6. Failure to follow these guidelines may result in death, burns or other severe injury,

Command Light	PHONE:	1- 800-797-7974
3842 Redman Drive	FAX:	1- 970-297-7099
Fort Collins, CO 80524	WEB:	www.CommandLight.com

LIMITED WARRANTY

Five Year

Command Light products* come with an industry-leading, five-year warranty against any defects in materials and workmanship when used and operated for a period of five years. The responsibility of Command Light under this limited warranty is limited to the repair and replacement of parts found to be defective by Command Light.

*This warranty excludes light producing components (bulbs, lasers, LEDs), which may come with their own manufacturer's warranty. We can help you obtain warranty information for these components as needed.

Any parts damaged in shipping or by improper installation, abuse, overloading or accident of any type are NOT covered by this warranty. If equipment has been damaged in transit, a claim should be made against the carrier within three days, as we assume no responsibility for such damage.

If during this five-year warranty period, you have any malfunctions unrelated to misuse, accident, neglect or normal wear-and-tear, please take the following steps to have your light tower serviced under the Command Light warranty.

1. Contact us immediately for initial diagnosis at info@commandlight.com or [800-525-5224](tel:800-525-5224); or if parts are needed, please contact parts@commandlight.com. You can also use the form below to submit your warranty claim.
2. You will need to have immediate access to the light tower and the serial number. This process can be done by individuals with little mechanical ability and involves pushing buttons and telling us what the light tower is doing (or not doing).
3. We then send parts (if needed) and have an authorized technician dispatched (if needed) with a written work authorization number and a base number of hours allotted to do the repair. Hourly rates for service are to be determined at the time of authorization by Command Light; travel time is paid at a maximum of 50% of the authorized service rate.
4. While the technician completes the repair, we remain available for service support and to extend the original time allotted, if additional issues arise. Immediate support cannot be guaranteed unless a time is scheduled prior to service.
5. Let us know when the repair is completed and reference the work authorization number. Email an invoice to info@commandlight.com or parts@commandlight.com or use the Completed Repair Submission form below. If you are unable to create an invoice, email us for instructions for payment. Make sure any parts we have requested to be returned have been shipped back to the provided shipping address. If a return label is issued, it must be used.
6. Finally, we will pay by mailing a check or crediting the account of the person, department or company doing the repair. Payments will not be made until all requested parts have been returned.

Please contact us as soon as problems arise in order to execute our warranty. We must have knowledge of the issue and provide a work authorization in order to pay or reimburse labor or travel time. Any unauthorized service voids this warranty. No work is authorized until written consent is provided by Command Light.

Breakage or Damage During Shipment

- The transportation company is fully responsible for all shipping damage and will resolve problems promptly if you handle it correctly. Please read these instructions carefully.
- Examine the contents of all shipping cases. If you find any damage, call your transportation agent at once and have them make a description on the freight or express bill describing the damage and the number of pieces.

Then contact us and we will send you the original bill of lading. Also promptly contact the transportation company and follow their procedure for filing a claim. Each company will have a unique procedure to follow.

- Please note, we cannot and will not enter claims for damages. If we filed claim here, it would be sent to your local freight agent for verification and investigation. This time can be saved by you filing the claim directly. Every consignee is on the ground floor, in contact with the local agent who inspects the damaged goods, and thus, each claim can be given individual attention.
- Since our goods are packed to comply with the regulations of all railroad, truck, and express companies, we cannot allow deduction from any invoice because of any damage, however, be sure to file your claim promptly. Our goods are sold F.O.B. factory. We take receipt from the transportation company certifying that the goods were delivered to them in good order and our responsibility ceases.
- It is seldom that any breakage or damage occurs in any of our shipments and in no case will the customer be out any expense if they follow the above instructions.
- Be sure to keep all damaged goods subject to examination of the truck or express company inspector, who may call on you some time later. These damaged goods, of course, will belong to them, and they will inform you what to do with them. If you dispose of these damaged goods, your claim may not be paid.

Warning

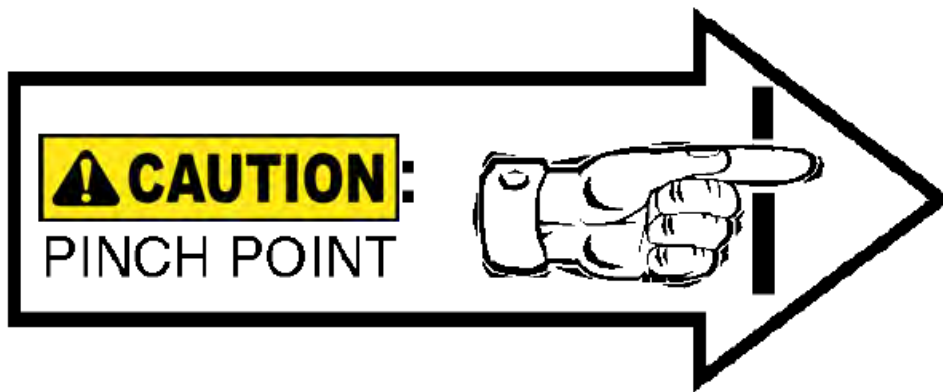
Product Safety Precautions



- Never operate the Command Light TFB-HM3 near overhead high voltage power lines. The Command Light TFB-HM3 is manufactured from electrically conductive materials.
- Do not use the Command Light TFB-HM3 for uses other than its intended purpose.
- Do not move emergency vehicle with the light extended. Visually verify that the tower is completely nested before moving vehicle.
- Do not change tower position while people are located within its operating envelope. There are numerous pinch points that can cause serious bodily injury.
- Do not use a high-pressure washer or subject the tower to high volumes of water when cleaning.
- Never use the Command Light TFB-HM3 as a lifting device or mobile arm.
- Do not use a Command Light TFB-HM3 that has been damaged or is not fully functional, including non-working

indicator lamps.

- Never hold any part of the Command Light TFB-HM3 with a hand or foot while it is in motion.
- The Command Light TFB-HM3 has numerous pinch points. Keep loose clothing, hands and feet clear of moving parts.



General Description and Specifications

Caution

The TFB-HM3 is designed to provide versatile traffic control with quick precision. As with any electromechanical device, take precautionary steps to ensure safe operation.

Model #	Description	Minimum Power Requirements
TFB-HM3	Horizontal Message Board	38 Amps, 12 VDC

- The vehicle provides power for the 12 VDC circuitry. The umbilical corded control unit is powered via 12 VDC eliminating hazardous voltage levels within the hand held control box.
- The TFB-HM3 is manufactured to provide years of service with a minimum of maintenance.

Operation

Raising the tower from the nested position

Using the control box, raise the lower stage. Control switches are of momentary action style and must be held in the “on” position to actuate the stages.

The TFB-HM3 has an override system that precludes rotation of the flow board until the lower stage has elevated substantially enough from the nested position. When the lower stage is below this safety limit, the following conditions exist

- Flow board is prevented from rotating.
- Prevents the lower stage from moving down if flow board is not centered.

Returning the tower to the nested position

The TFB-HM3 is equipped with an Autopark function as a standard feature. Releasing the Autopark button acts as an “Emergency Stop” and will cancel the Autopark sequence.

Autopark Sequence

Press and hold the black Autopark button on the controller. The Autopark sequence begins

1. Flow board begins rotation to the center position.
2. Once flow board is centered, rotation stops, green center indicator illuminates, and lower stage begins retracting.
3. After lower stage has fully retracted, red nest indicator and flow board will be extinguished.

Installation

Caution

- The TFB-HM3 must be installed by a designated installation facility or by an EVT certified Level FA4 Technician. All safety precautions must be thoroughly understood before installation. Please consult the factory for additional installation information assistance.
- Improper installation can cause overheating of electrical power wires that could catch fire and void the warranty.
- Ensure all wiring is properly protected with correct sized breakers and fuses before connecting to the power source.
- Verify all connected electrical components are able to handle the load for this light tower as listed in the Technical Specifications on page 15.

If in doubt, contact Command Light at 1-[800-797-7974](tel:800-797-7974) or info@commandlight.com.

Installation Kit

Included with the TFB-HM3 is an installation kit. Verify that the kit contains the following items

- (1) 25 feet of 6GA Red & Black cable
- (1) Pre-wired HOLSTER BOX w/cover
- (1) 25 feet of 22GA-20 conductor cable
- (1) Handheld Controller
- (1) Small hardware parts bag with:
 - (4) mounting spacers
 - (4) 5/16-18 nylon lock nuts
 - (4) large diameter flat washers
 - (4) 1/4" flat washers
 - (3) 1/2" 90° sealing connector w/nut
 - (4) 5/16-18 X 2 1/2" bolts
 - (8) 5/16" flat washers
 - (2) 1/4-20 X 5/8" Phillips pan head machine screws
 - (2) 1/4-20 nylon lock nuts

Tools Required

- Lifting device (crane, forklift, block and tackle, etc.)
- Sling for lifting
- Drill
- 21/64", 17/64" drill bits

- Hole punch for metal with 7/8" diameter capacity
- Phillips head screwdriver, #2
- Command Light flat blade screwdriver (included with light)
- 7/16" and 1/2" combination wrenches and/or ratchet and 7/16" and 1/2" sockets 8" adjustable wrench
- Tongue and Groove Pliers
- Wire stripper or razor blade knife
- Solder-less wire connector crimp tool
- Silicone based gasket sealer, RTV™ recommended

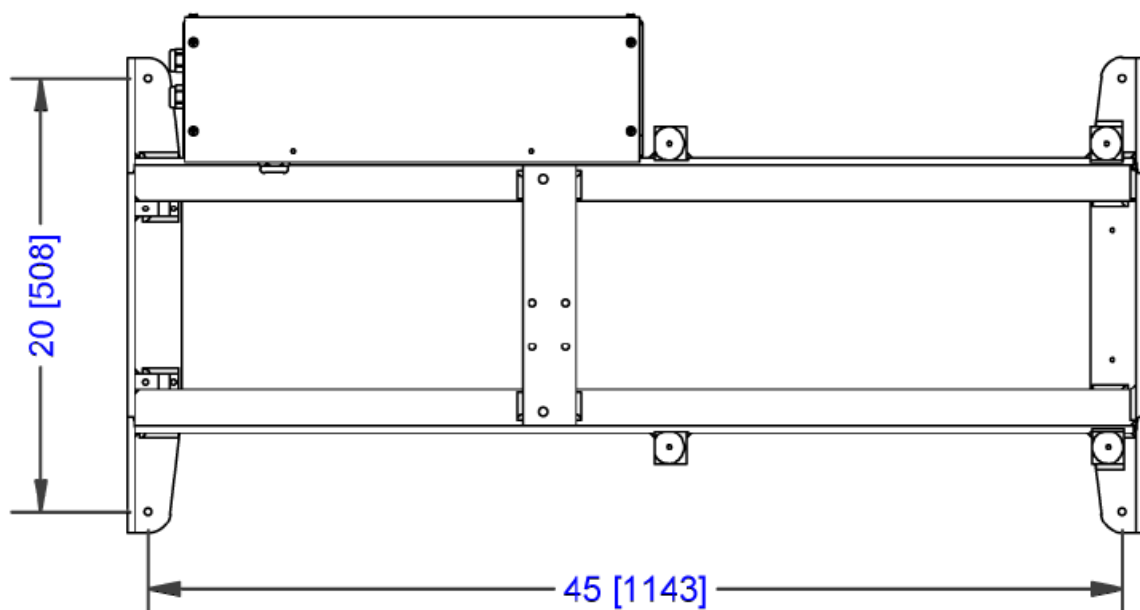
Installation Notes

Warning

- The TFB-HM3 weighs approximately 275 pounds. Use mechanical assistance such as a forklift or crane to lift the light into installation position.
- Use the provided fender washers under the mounting surface to distribute the weight load evenly.
- When routing the connecting electrical wires take care to avoid sharp bends, hot components or other hazards to the wire.
- The TFB-HM3 is not designed to be operated in a raised position while the vehicle is in motion. The TFB-HM3 includes warning circuit wiring to enable a warning device.

Location Requirements

The standard TFB-HM3 can be mounted on any location that is 49" x 24". The surface should be flat or have only a slight crown. For a recessed installation allow for a minimum of 66" x 56". Consult with factory before construction of recessed installation. Verify all dimensions before installation to assure proper operation of light will not infringe on other installed components. For all other installations refer to the dimensional drawing included in this guide that represents your particular model of tower. The drawings reflect the dimensions of the "working envelope" of a typical tower. Endure sufficient clearances are incorporated in your installation to allow for variations (vehicle body flex, environmental conditions, future servicing needs, etc.)



- Four mounting bolts are required. Additional holes may be drilled in the frame ends if necessary to clear

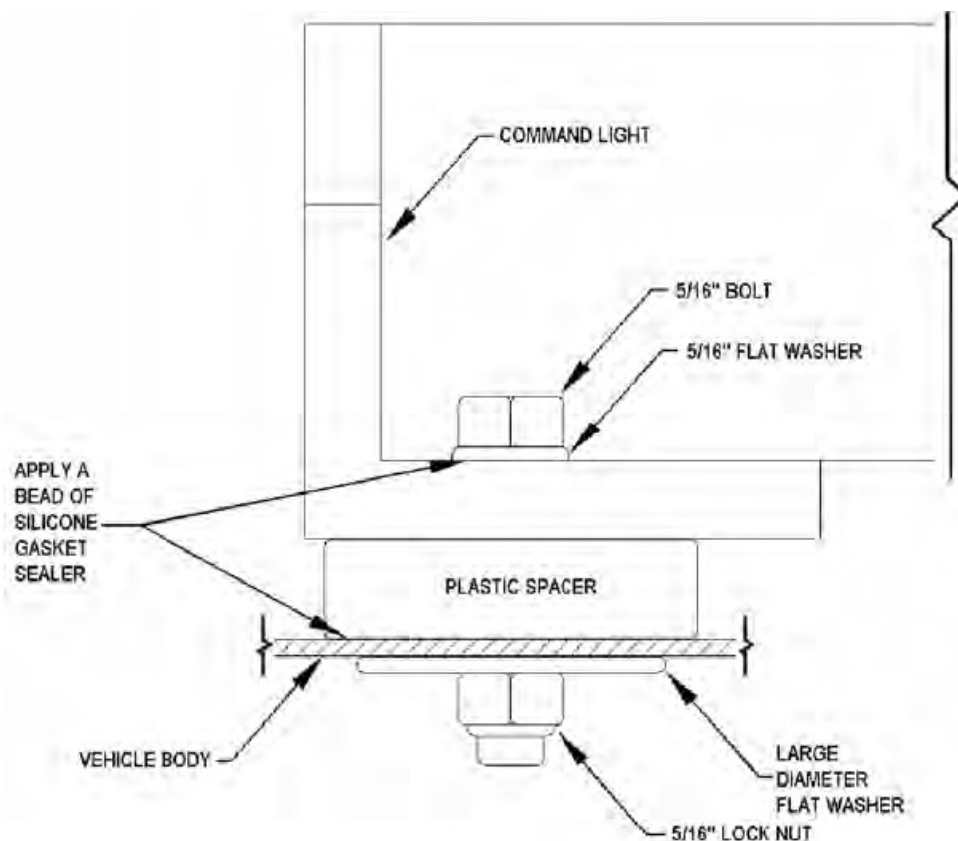
obstructions.

- Access holes for the power cord cabling should be in close proximity to the entrance box on the tower. Installing the cords with a sweeping 90° or 180° bend will provide better results.
- The control box holster should be mounted in an area shielded from the weather. Allow a minimum of 10" clearance above the control box holster mounting location for easy access to the controller.

Mounting

Place the provided spacers in the location of the tower mounting holes. The spacers may be modified to conform to the contour of the mounting location.

- Remove any obstructions below the mounting surface such as headliners.
- Attach any necessary lifting attachments to the TFB-HM3.
- Slowly lift the TFB-HM3 and check for balanced lifting. Lower and make any necessary adjustments to the lift points.
- Lift and place the TFB-HM3 into position above the spacers. Before placing the full weight of the tower on the spacers, align spacers with the holes in the end frame castings.
- Drill 21/64" holes in the mounting surface using the end casting holes as a template.
- Fasten the tower using the provided hardware. To assure a weather-tight installation apply a thin bead of silicone based gasket sealer to the base of the spacer and underside of bolt head.
- Remove any lifting straps and devices from the TFB-HM3.
- Locate and drill the wire feed holes.

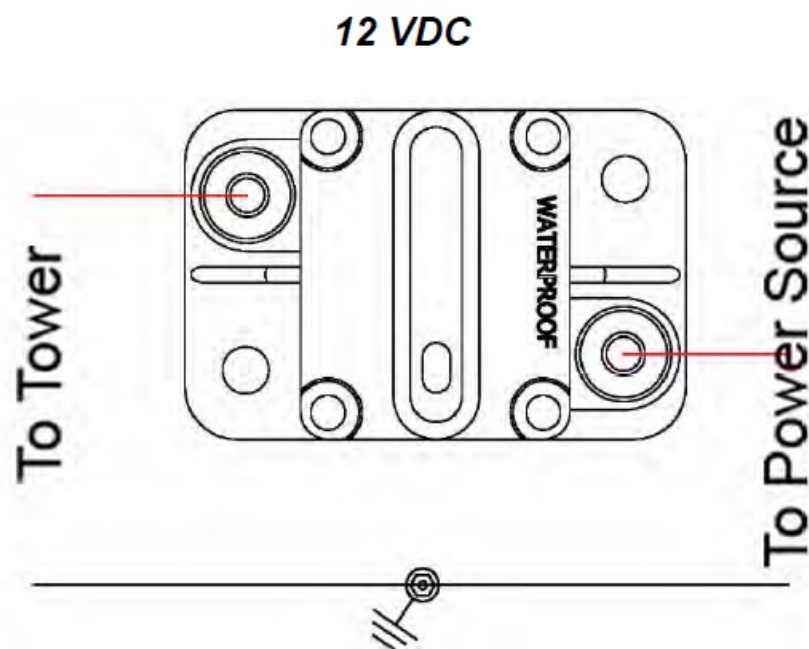


Control Box Holster Mounting

- Using the holster as a template, mark locations of holes.
- Drill 17/64" mounting holes.
- Drill any holes required to route the control wire from the control box to the TFB-HM3. Mount holster box with provided hardware.

Electrical Wiring

- **Please Note:** Detailed internal wiring schematic for the tower is found in the pages at the end of this document.
- Run the control wire from the control box holster to the TFB-HM3.
- Run the power wire from the breaker box or generator to the TFB-HM3. A 30 Amp breaker is recommended on a TFB-HM3.
- Make the control cable connections in the TFB-HM3 relay box by matching each control wire to its same color on the connector block of the TFB-HM3 relay box.



Warning Device Installation

- The TFB-HM3 nest sensor can be used to activate a warning device when the light is extended. Typically the vehicle will have a light or buzzer that activates when the compartment doors are open.
- The connector for hooking up a warning device is located in the holster box that holds the controller.

Maintenance

Cleaning

- The TFB-HM3 is constructed with corrosion resistant aluminum and stainless steel fasteners. To further enhance corrosion resistance all exposed surfaces receive a powder coated paint finish. To assure years of trouble free service periodically clean all external surfaces with a mild detergent solution and a gentle spray of water. DO NOT USE A HIGH-PRESSURE WASHER, which will force water into sensitive electric circuitry.
- Lamp lenses may be cleaned with any commercially available glass cleaner.

- The actuators is a sealed unit and does not require adjustment or lubrication. They also have a slip-clutch to compensate for minor stroke tolerances at the limits of its travel as well as internal limit switches. The actuator may produce a ratcheting sound at each end of the stroke which is normal. The actuator should not be made to ratchet excessively, this can lead to premature actuator clutch failure.
- All pivot points on the TFB-HM3 have self-lubricating thermal polymer or brass bushings. Periodic cleaning with a moisture displacing cleaner and soft bristle brush, without disassembly, to remove accumulated dirt and debris will minimize wear.

Power Failure

The TFB-HM3 can be retracted manually if power to the unit is lost. If power loss is temporary, reestablishing power may be easier than manually retracting the tower.

Disconnect power source from the TFB-HM3.

Rotate to Center

Locate the silver plug located on the actuator below the actuator's motor. Use the provided hex tool (6mm hex bit) to remove silver plug. Be sure to not lose this plug. Use the same hex tool inserted into the opening to drive the internal gears of the actuator. Be sure to replace the silver plug after this actuator is adjusted to center.

Retract the Lower Stage

Due to structural needs, the lower actuator cannot be manually adjusted. To lower the tower, first ensure flow board is rotated as close as possible to center to avoid impacts. At least one person must hold the flow board to prevent it from dropping. Once the weight of the flow board is relieved from the lower actuator, remove the pin attaching it to the base by removing one of the E-Clips on the lower actuator pin. Using a brass pin, drive the actuator pin out, again, making sure the weight of the flow board is held by assistants. Once the end of the actuator is free from the base, lower the flow board until it seats as much as possible. Strap the flow board down for transportation.

Troubleshooting

Problem	Possible Cause	Solution
Unit will not extend	No power to the unit	Check power input connections. Ensure 30 Amp input breaker has not been tripped.
	Incorrect installation	Refer to installation instructions.
Upper stage will not rotate	Lower stage not raised above safety limit	Raise lower stage higher.
	Rotation motor failure.	Consult with factory.
Flow board will not illuminate	Refer to Wanco Manual.	
Unit will not nest	Flow board not centered	Raise lower stage higher. Center flow board (green light illuminated)
	Unit being operated on a slope >15°	Level Truck. If problem persists, rotate flow board to center, using a pike pole, hold unit centered while lowering to nest position.
No rotation	Check safety limit sensor, bad, etc.	Contact factory for replacement part.
Auto parking off Center	Center switch out of adjustment	Contact factory for replacement part.

Override Circuit

- The TFB-HM3 has an override circuit to allow the user to lower the tower no matter what state the sensors or rotation actuator are in. This is a failsafe for if a sensor fails in the field and the tower still has power.
- Ensure the flow board is centered as closely as possible, and all users are clear of pinch points. Disconnect the rotation actuator after flow board is centered. If the rotation actuator has failed, either manually rotate to center as in the power failure section or disconnect the rotation actuator.
- To activate the override circuit, hold both the Auto Park button and the actuator lift switch in the down position. After 5 seconds, the lower actuator will retract while both switches are held and stop upon release.

Technical Specifications – Standard HM3 Model

Dimensions (with strobe and ½” mounting spacers) – May vary by model and options

	Height(Depth)	Length	Width	
Retracted	16.5”	70”	73”	
Extended	64”	80”	73”	
Recessed installation	12”	86”	79”	Minimums

Weight: 275 pounds

Wiring

- **Main Power** VDC 6GA Red & Black 25’ provided

- **Control wiring** 22/20 PVC Jacketed 25' provided

Current Draw / Power Requirements

Fixture	Average
TFB-HM3	12 VDC/38 amps

Lift and rotation actuators will cause higher current draw during use.

Motor Duty Cycle

(All motors thermally protected, specifications are to thermal relay trip)

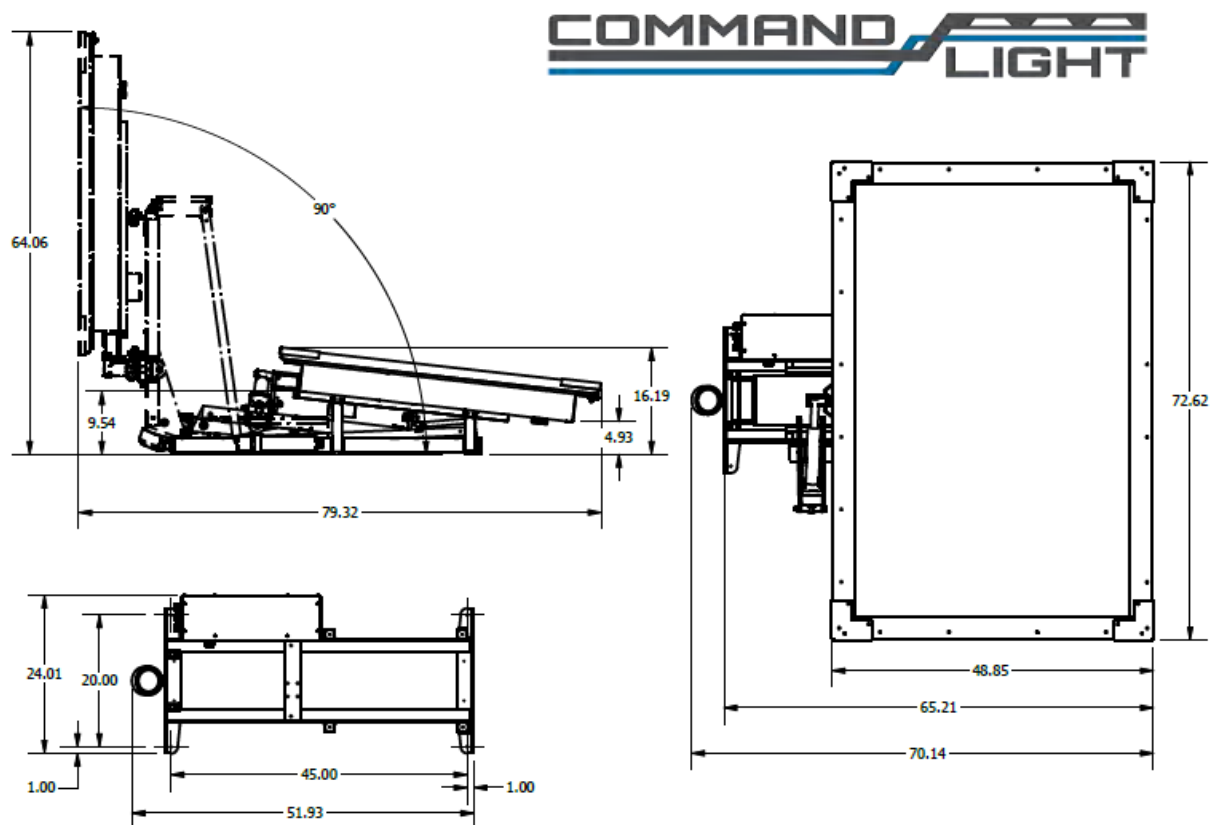
- **Lower stage** 1:3 (90 seconds maximum per 5 minutes)
- **Rotation** 1:3 (90 seconds maximum per 5 minutes)

Motor Speed

- **Lower stage** 0.5 inch per second 14 seconds to full extension
- **Rotation** 0.5 inch per second 14 seconds to full extension

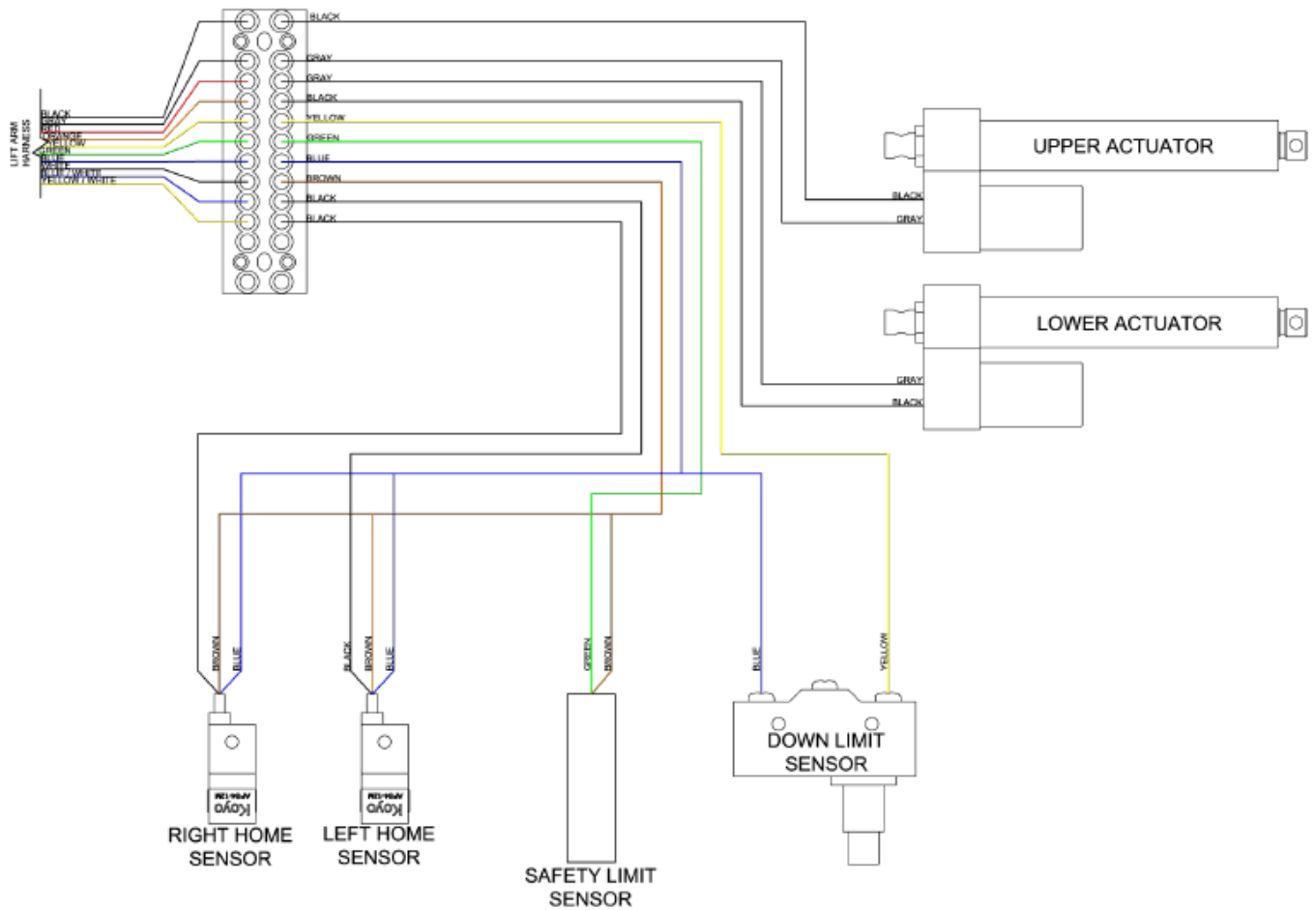
Operation

Angle of vehicle 15° maximum incline



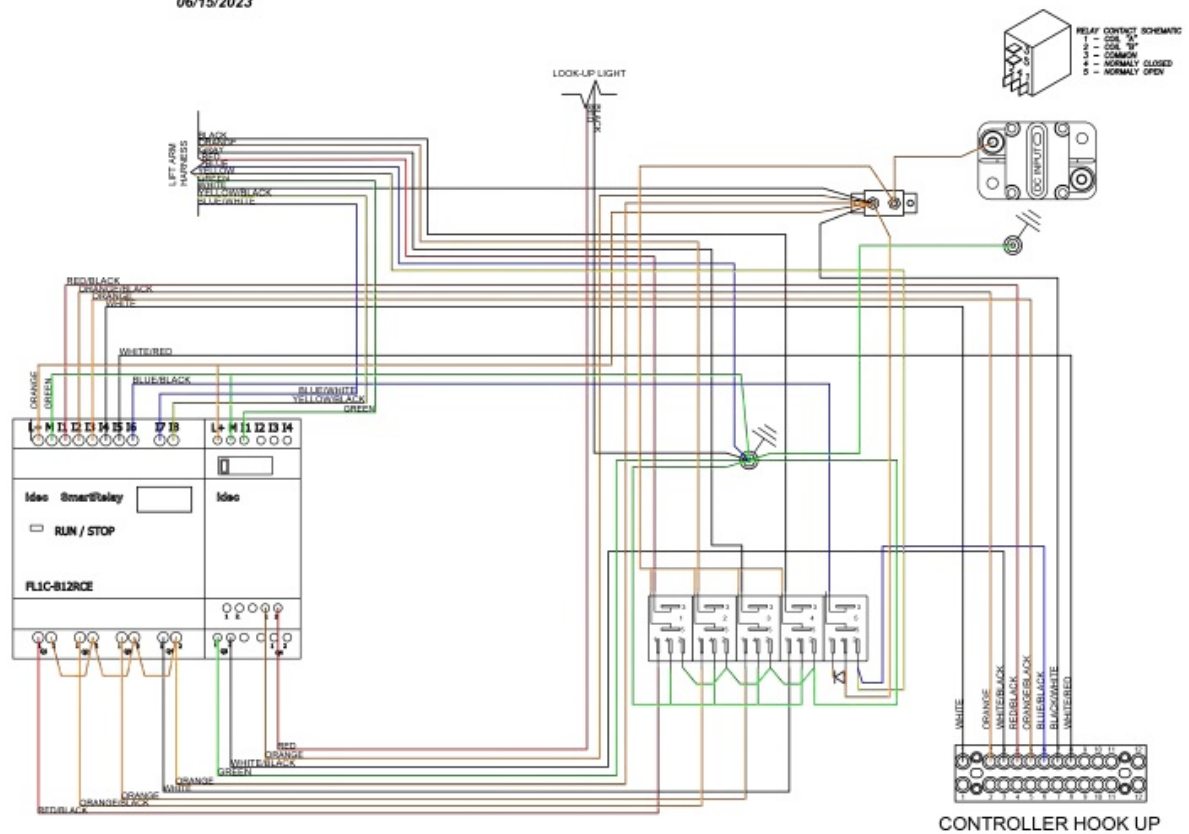
Wiring Schematics

09 / 25 / 2015



TFB HM3 - RELAY BOX WIRE SCHEMATIC

06/15/2023





COMMAND LIGHT TFB-HM3 Traffic Flow Board [pdf] Instruction Manual TFB-HM3 Traffic Flow Board, TFB-HM3, Traffic Flow Board, Flow Board, Board

References

- [User Manual](#)

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