

# PURKEYS

A MISSION CRITICAL ELECTRONICS BRAND

## SAFEX<sup>®</sup> AUTO SAFE 480 VAC/30 AMPS

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## INSTALLATION GUIDE





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## GENERAL INFORMATION

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### Disclaimer:

These instructions assume knowledge of high voltage electrical components and should only be executed by trained and licensed professionals.

Installation must comply with electrical codes observed by local and state requirements.

Mission Critical Electronics and its subsidiaries assume no liability for injury or property damage due to failure to properly follow these instructions, or installations attempted by unqualified individuals.

### Equipment precautions:

1. Do not operate equipment with a damaged cord or plug; replace damaged components immediately.
2. Do not operate equipment if it has received a sharp blow, been dropped, or is otherwise damaged.
3. Do not disassemble the equipment. Incorrect reassembly may result in a risk of electric shock and fire.
4. To reduce the risk of electric shock, disconnect the equipment from the AC source before attempting any maintenance or service.
5. The installed equipment must be wired to an over-current dedicated fuse or circuit breaker on an AC distribution panel with proper earth/safety ground. All wiring shall comply with UL recommendation, NEC, and local/state ordinances.
6. Never alter the AC cord or plug. Any modifications to the cord must be done by a qualified electrician. Improper cord/outlet connection may result in a risk of electrical shock.

### Product description and use:

The Auto Safe No-Load Dropout Switch is a safety device designed to protect personnel from electric shock.

It may be installed wherever a “shore line” is connected to provide 480 volt AC power to a vehicle.

The Auto Safe interrupts the power as soon as the shore line is disconnected either automatically by the vehicle mounted Auto Eject, or manually by an operator.

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Note that the Auto Safe remains energized only if it detects a vehicle mounted connection to the Auto Eject.

## Tools needed:

- Torque screwdriver capable of reading 25 – 45 in-lbs
- 5/32” hex bit for torque screwdriver
- 1/4” flat-blade bit for torque screwdriver
- Phillips screwdriver
- 7/16” wrench / socket
- 1/2” wrenches
- Wire crimpers
- Step ladder (to reach a height of 8ft)

## Tools needed for concrete building mounting:

- Hammer drill
- 3/8” masonry drill bit
- 1/4” masonry drill bit
- 3/8” six-point socket + driver

## Tools needed for wood frame building mounting:

- Standard drill
- 15/64” drill bit
- 5/32” drill bit

## Supplies needed:

**For concrete buildings:** (4) 5/16” concrete anchors

**For wood frame buildings:** (4) 1/4” lag screws and (1) 3/8” stainless steel lag style eye bolt

## INSTALLATION

### Auto Safe Mounting

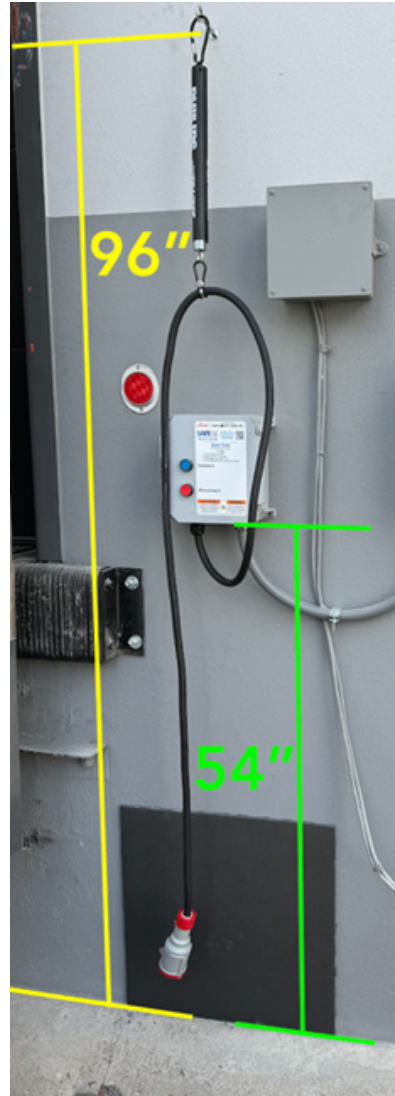
#### WARNING:

- Drilling or modification of the Auto Safe enclosure voids warranty.
- Failure to utilize all four mounting points voids warranty.

Step 1: Determine your mounting location for the Auto Safe.

- Enclosure should be mounted 4ft - 6in above ground level.
- Enclosure should be mounted to the right of the bay door it will serve.

Step 2: Have a helper hold the Auto Safe in place and mark the four 1/4" mounting hole locations on the building.



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## Step 3a: For concrete/brick/stone buildings:

- Utilizing a hammer drill and 3/16" masonry bit, drill four pilot holes approximately 3 - 4" deep.
- Install Auto Safe to wall utilizing four 1/4" x 2-3" length concrete anchors.

NOTE: Do NOT use plastic anchors for mounting of Auto Safe.



## Step 3b: For wood framed buildings:

- Locate a wall stud or reinforced wall area.
- Utilizing a 5/32" drill bit, drill four pilot holes approximately 2" deep into the studs/reinforcements.

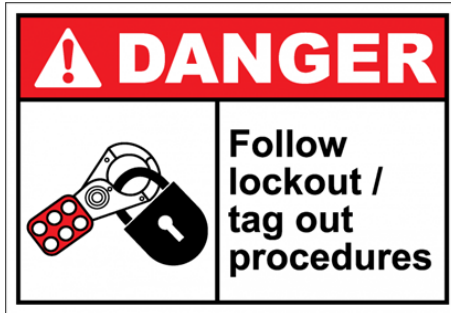
Install Auto Safe to wall utilizing a 7/16" socket to tighten the four lag screws.



## Auto Safe Wiring

### WARNING:

- Ensure the circuit is switched off.
- Practice proper “Lockout/Tagout” procedures before attempting to wire the system.



### General precautions:

1. A dedicated power supply circuit should be used in accordance with local and state electrical codes and National Electrical Codes (NEC).
2. Ensure that the entire system is properly grounded.
3. Use a properly sized circuit breaker (30A – 480 V) to protect equipment against short circuit and overload conditions.
4. Observe all local and state code requirements.

### Personal precautions:

1. Someone should be within range of your voice or close enough to come to your aid when working with or near electrical equipment.
2. Wear complete and appropriate clothing and eye protection during the installation and service process.
3. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with electrical equipment. Failure to do so can cause severe burns or injury.





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Step 1: Remove enclosure cover by twisting the four cover wings 90 degrees away from Auto Safe utilizing a #2 Phillips screwdriver.

NOTE: The cover may require moderate pull force to separate from the casing due to the internally molded cover seal.



Step 2: Run the 480 V wiring to the AC inlet port on bottom of Auto Safe.

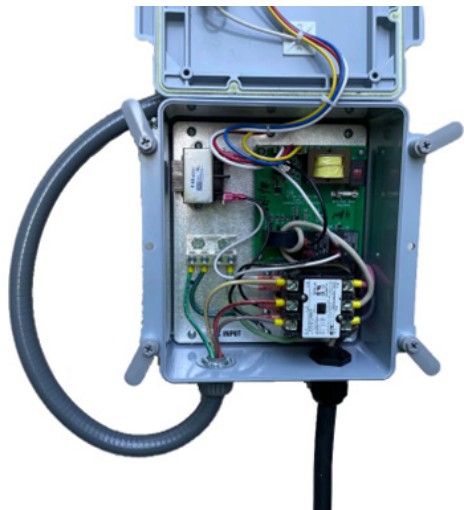
The hole size is 1.05" to accommodate a 3/4" (nominal) conduit connector.

Ensure all 480 V wiring conduit and connectors are rated for use in wet locations and install per manufacturers specification and in line with electrical codes at local and national levels.

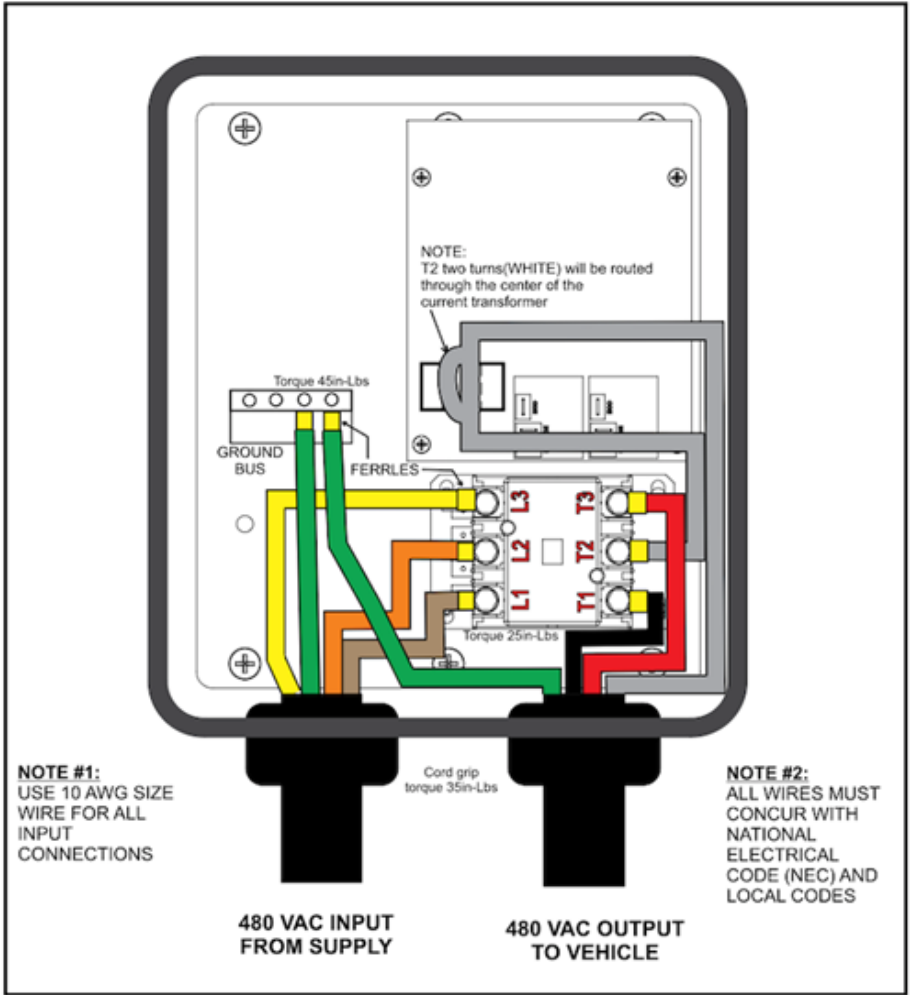
Step 3: Cut 480 V input wires to length. Strip wires and crimp supplied ferrules to wire ends.

Step 4: Torque L1, L2, and L3 contactor screws to 25 in-lbs.

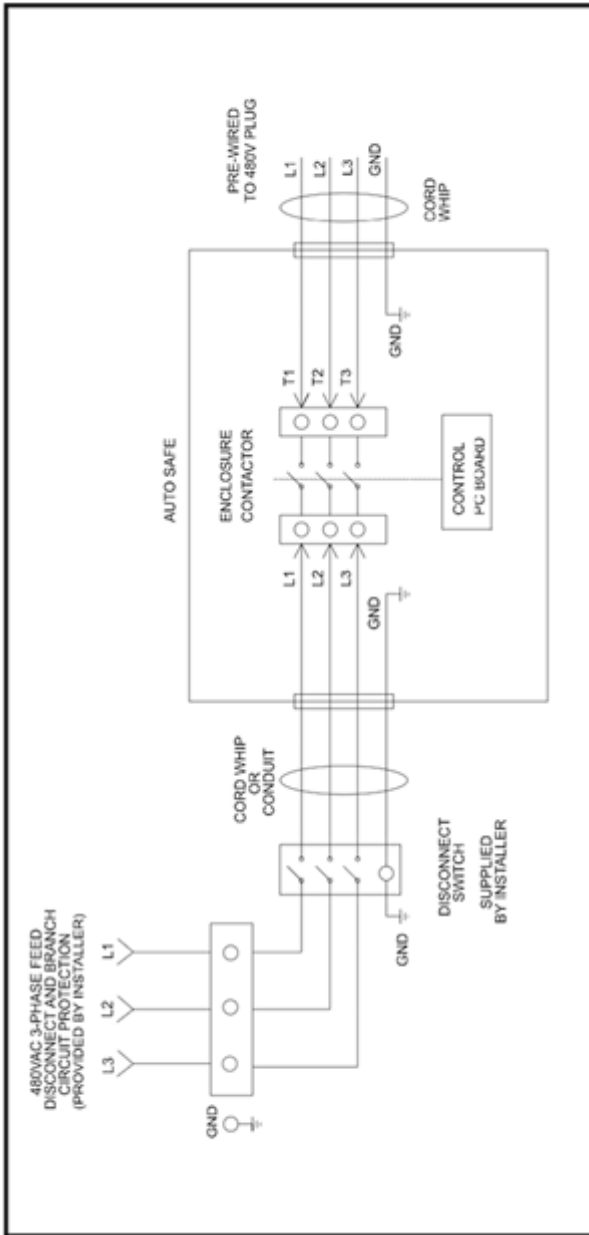
Torque ground wire to grounding bar utilizing a 5/32" hex bit to 45 in-lbs.



# Wiring Diagrams



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Step 5: Reinstall cover to enclosure and turn on circuit breaker.

## CABLE MANAGEMENT INSTALLATION

### Concrete/Brick/Stone Buildings

Step 1: Drill a 3/8" hole to accommodate the included concrete anchor (~4" deep)

**The hole should be drilled approximately 8ft above ground level.**

Insert the concrete anchor into the hole.



Step 2: Ensure anchor is fully inserted, then utilizing a 1/2" wrench, tighten the nut **two to three full turns** to expand the sleeve anchor.

**CAUTION – Over tightening the nut may cause bolt failure.**



Step 3: Thread the eye bolt into the coupler until it bottoms out against the threads of the concrete anchor.

Step 4: Finally, tighten the jam nut against the threaded coupler.



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## Wood Framed Buildings

For wood framed buildings, utilize the included 3/8" stainless steel lag style eye bolt.

Step 1: Locate a wall stud and drill a 15/64" mounting hole approximately 8ft above ground level.

Step 2: Install the lag style eye bolt (not included).



## Hanging the Cord

Step 1: Clip the spring onto the eye bolt.

Step 2: Use the included cable clamp and 1/4" nut, bolt, and washers (7/16" wrench size) to attach the cord to the spring.

**NOTE: Typical installations will attach the cushioned clamp 5 - 6 ft from the plug end.**

Ensure your attachment location will hold the cable off of the ground.



## Plug Protection Via Anti-Crash Cone

Install the included two-piece anti-crash cone around the plug-side of the Auto Safe 480 V wiring.

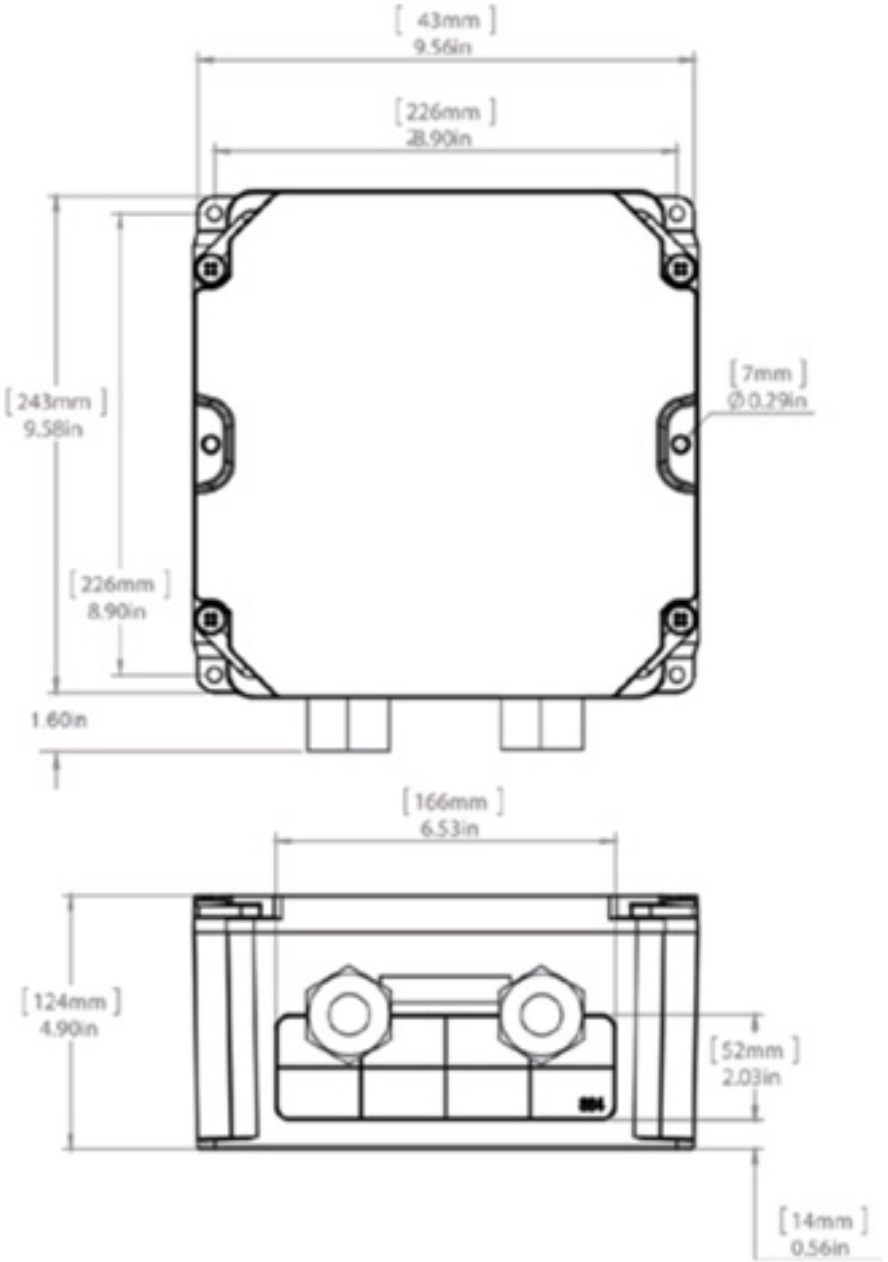


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## TECHNICAL SPECIFICATIONS

Input Power:	480 volts, 60 Hz, (30 A Max Contactor Rating)
Enclosure F1 Fuse:	0.1A, FA, 5X20mm, Littlefuse, p/n: 0216.100HXP
Screw Torque Contactor:	25 in-lbs
Operating Temp:	-25C to 50C (UL 40C max)
SCCR:	5KVA
Enclosure Rating:	NEMA 4X
Connector Rating:	IP44
Certifications:	UL 508A (E520352.NIMX7)
Weight:	7 pounds

# OUTLINE DRAWING





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## INSTALLATION RECORD

Date installed:

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Installed by:

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Site address:

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Dock number (if applicable):

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## LIMITED COMMERCIAL WARRANTY POLICY

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MCE Purkeys FE, LLC (hereafter “Purkeys”), warrants each product to be free of defects in material or workmanship under normal use and service. This warranty is for the benefit of Original Equipment Manufacturers, Dealers, Warehouse Distributors, Fleets, or other End Users (hereafter “Customers”) and covers products manufactured and/or branded by Purkeys and sold new to Customers either directly by Purkeys or by its authorized dealers, distributors, or agents. The length of the Warranty Period is 36 months. Products from other manufacturers, that are branded by said manufacturer, will carry the manufacturer’s original stated warranty.

The warranty period commences on the in-service or install date and is not transferable. Failure to provide the in-service or install date on the warranty claim form will cause the warranty period to begin on the date the part was manufactured, or date of sale recorded on the original sales invoice, whichever is earlier.

A completed warranty claim form should accompany all parts submitted to Purkeys for consideration for repair or replacement under warranty. The submitted claim form should contain all of the information required. Lack of a properly or fully completed claim form will result in delay or denial of warranty claim. Claims must be submitted no later than 30 days after part is removed. An RMA# should be requested prior to returning any product for warranty consideration. Please contact the Purkeys’ Warranty Department to request an RMA# at [warranty@purkeys.net](mailto:warranty@purkeys.net) and to provide your warranty claim information.

This warranty does not apply if, in sole judgment of Purkeys, the product has been damaged or subjected to accident, faulty repair, improper adjustment, improper installation or wiring, neglect, misuse, or alteration or if the product failure is caused by defects in peripheral vehicle components or components attached to the Product or failure of a part not manufactured by Purkeys.

This warranty shall not apply if any Purkeys product is used for a purpose for which it is not designed or is in any way altered without the specific prior written consent of Purkeys. ANY product alleged by a Customer to be defective must be inspected by Purkeys as a part of the warranty claims process in order to confirm that the part has failed as a result of a defect in material or workmanship.

Transportation for products and parts submitted to Purkeys for warranty consideration must be prepaid by Customer. Repaired or replaced products and or components will be returned to Customer pre-paid by Customer or “freight collect” to the address provided by Customer in the warranty claim form. No charge will be made for labor or material in effecting such repairs.

The Warranty provided by Purkeys hereunder is specifically limited to repair or replacement of the Product as Purkeys deems most appropriate in its sole discretion. No labor reimbursement will be provided. Purkeys neither assumes nor authorizes any other person to assume on its behalf any other warranty or liabilities in connection with Purkeys products. The Warranty does not apply to fuses or other “consumable” or maintenance items which are or may be a part of any Purkeys product.

**THIS WARRANTY DOES NOT APPLY TO LOSS OF VEHICLE OR EQUIPMENT, LOSS OF TIME, INCONVENIENCE, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. PURKEYS SPECIFICALLY DISCLAIMS AND SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES arising out of or from the use of Purkeys products by the Customer.**

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, INCLUDING COMMON LAW WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, AND ANY OTHER EXPRESS OR IMPLIED WARRANTIES. ALL OTHER SUCH WARRANTIES ARE SPECIFICALLY DISCLAIMED.**

This Limited Commercial Warranty Policy supersedes all previous Warranty Policies issued by Purkeys.

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***WATT Keeps You Trucking***