# Introduction / Comments:

Install Instructions for Interior Lighting In Topper for Chevy Colorado

**Note:**

Read all instructions prior to installation. Review the Adrian Steel **GENERAL PRECAUTIONS PAGES (56638)** before attempting installation. Only personnel familiar with using electrical best practices should perform this install. Reference **ELECTRICAL BEST PRACTICES MANUAL (54479)** before attempting installation.







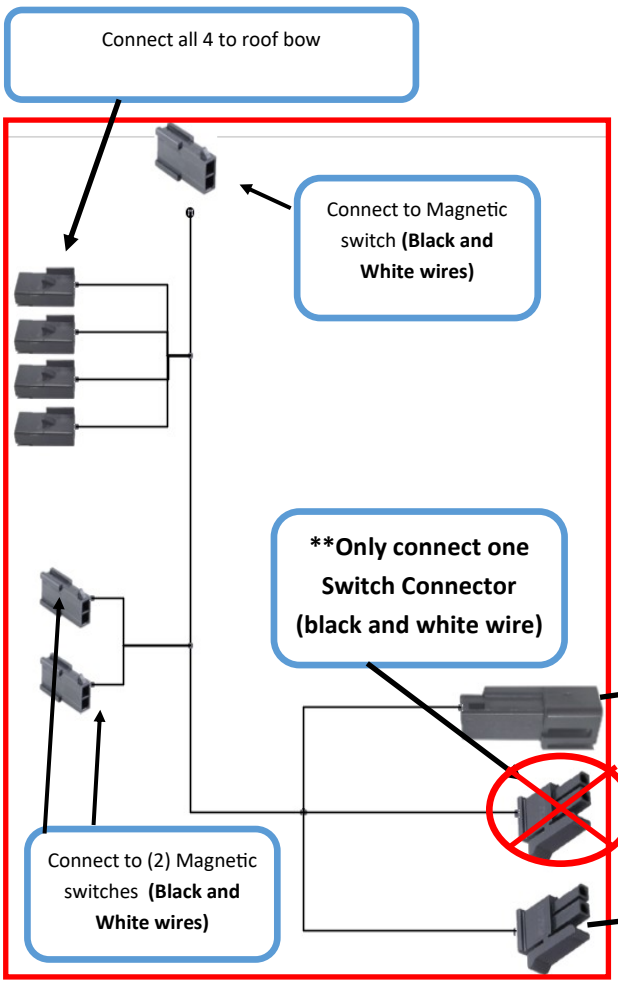
# Installation Instructions for Interior Lighting In Topper for Chevy Colorado

****Please Read Statement Below Before Moving Forward****

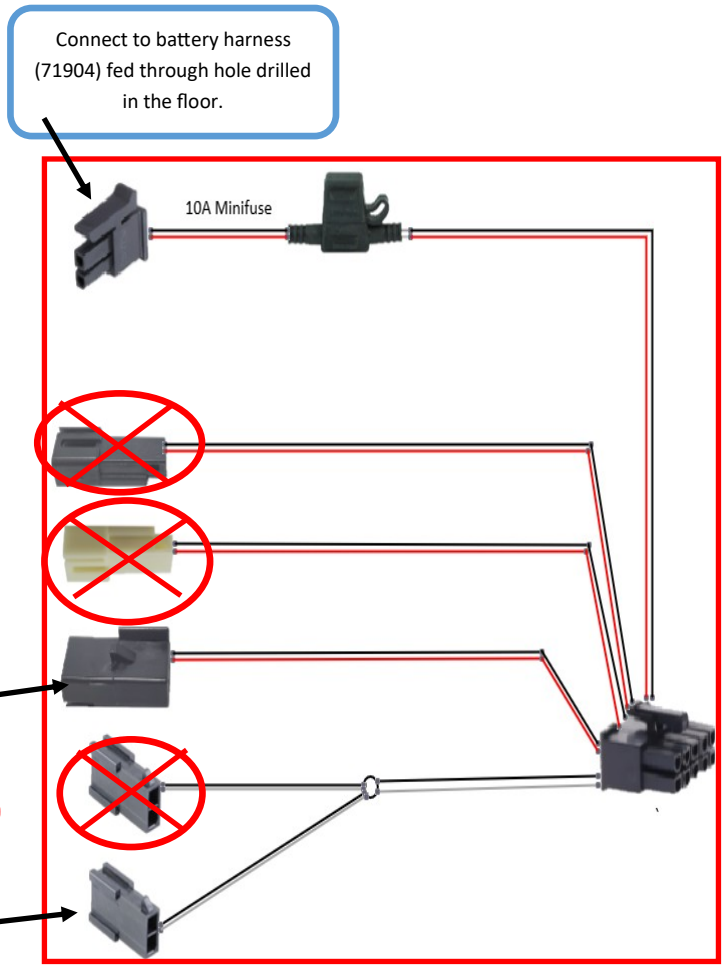
These plug and play kits are completely modular and can be configured in many different ways. Placement of lights will be determined by sales order drawings/customer ask. Therefore, these instructions are for the most standard configurations, and for reference only.

# Overall Harness Design

## 74546 Harness




## 71902 Harness








## Tools Required:

Screwdriver

Power drill, 3/8” step drill bit



# Components:

Please note all these components may not be used in every install.
Only install what you have. Refer to the order drawing.
Integrated Truck Solution Kit 76845 components are denoted with a red star.

















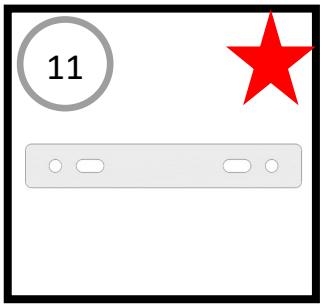


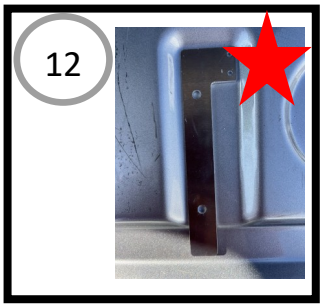
| | Part Number | Description | Qty |
|---|---|---|---|
| 1 | 71902 | TLM Module/Harness | 1 |
| 2 | 71904 | TLM to Battery Harness | 1 |
| 3 | 74546 | TLM to Lights | 1 |
| 4 | 63481 | Roof Bow Harness #1 | 3 |
| 5 | 63482 | Roof Bow Harness #2 | 1 |
| 6 | 65346 | 24” Strip Light | |
| 7 | 65347 | 36” Strip Light | 1 |
| 8 | 65348 | 48” Strip Light | |
| 9 | 63480 | Dome Light | 2 |
| 10 | 71907 | Magnetic Switches | 3 |
| 11 | 73414-W | Magnetic Switch Bracket Spacer | 3 |
| 12 | 73415-W | Magnetic Switch Rear Bracket | 1 |
| 13 | 73416-W | Magnetic Switch Side Bracket | 2 |

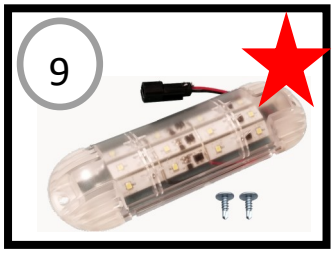


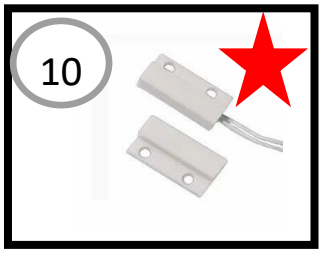


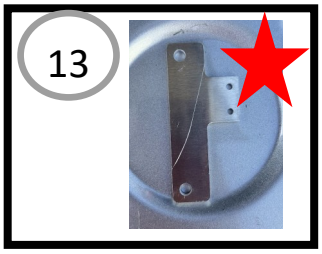





**The purpose of plug and play lighting is to be completely modular. Due to this feature, refer to the order drawing for all exact lighting placements. These installation instructions are for most cases and for reference. Reference the instructions for only what you are installing.**

**Harness pictures are for reference only.**

# Light Kit's Offered:

## Part Numbers/Kit Contents:

**76845 Integrated Truck Solution:**

Includes: (2) 36" strip lights on both sides of the side doors and 2 dome lights in the top, on the roof bows. Refer to all components denoted with a ★ and quantity in blue parenthesis on page 3.

**76846 (1) 36" Rear strip light on the back door**

Includes: (1) 36" strip light, (1) roof bow harness #1, (1) TLM Module, (1) TLM to Battery Harness, (1) TLM to Lights Harness, (1) Magnetic Switches Bag

**76848 (1) 36" Strip light on the driver side only**

Includes: (1) 36" strip light, (1) roof bow harness #1, (1) TLM Module, (1) TLM to Battery Harness, (1) TLM to Lights Harness, (1) Magnetic Switches Bag

**76847 (1) 36" Strip light on the passenger side only**

Includes: (1) 36" strip light, (1) roof bow harness #2, (1) TLM Module, (1) TLM to Battery Harness, (1) TLM to Lights Harness, (1) Magnetic Switches Bag

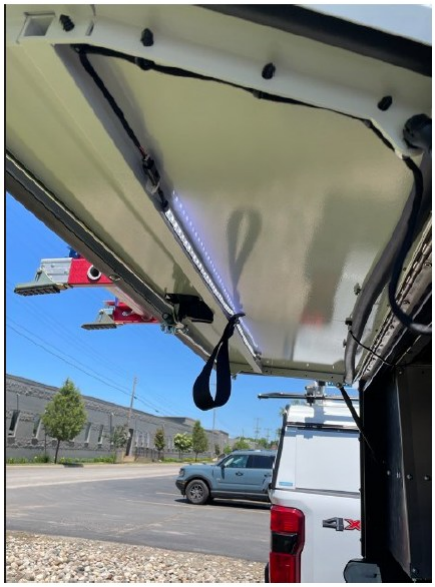
**76849 (3) 36" Strip lights—rear, driver, and passenger side**

Includes: (3) 36" strip light, (1) roof bow harness #2, (2) roof bow harness #1, (1) TLM Module, (1) TLM to Battery Harness, (1) TLM to Lights Harness, (1) Magnetic Switches Bag

**Driver's Side Strip Lights**



Rear Side



**Passenger's Side Strip Lights**



# Walk-In Topper Interior Lighting Kits Offered:

## Part Numbers/Kit Contents:

### 77622 Integrated Truck Solution:

Includes: (2) 36” strip lights on both sides of the side doors and 2 dome lights in the top, on the roof bows.

### 77623 (1) 36” Strip Light on Passenger Side Only

Includes: (1) 36” strip light, (1) roof bow harness #1, (1) TLM Module, (1) TLM to Battery Harness, (1) TLM to Lights Harness, (1) Magnetic Switches Bag

### 77476 (1) 36” Strip Light on Driver Side Only

Includes: (1) 36” strip light, (1) roof bow harness #1, (1) TLM Module, (1) TLM to Battery Harness, (1) TLM to Lights Harness, (1) Magnetic Switches Bag

### 76488 (2) 36” Strip Lights on Driver & Passenger Side

Includes: (2) 36” strip lights, (1) roof bow harness #1, (1) roof bow harness #2, (1) TLM Module, (1) TLM to Battery Harness, (1) TLM to Lights Harness, (1) Magnetic Switches Bag

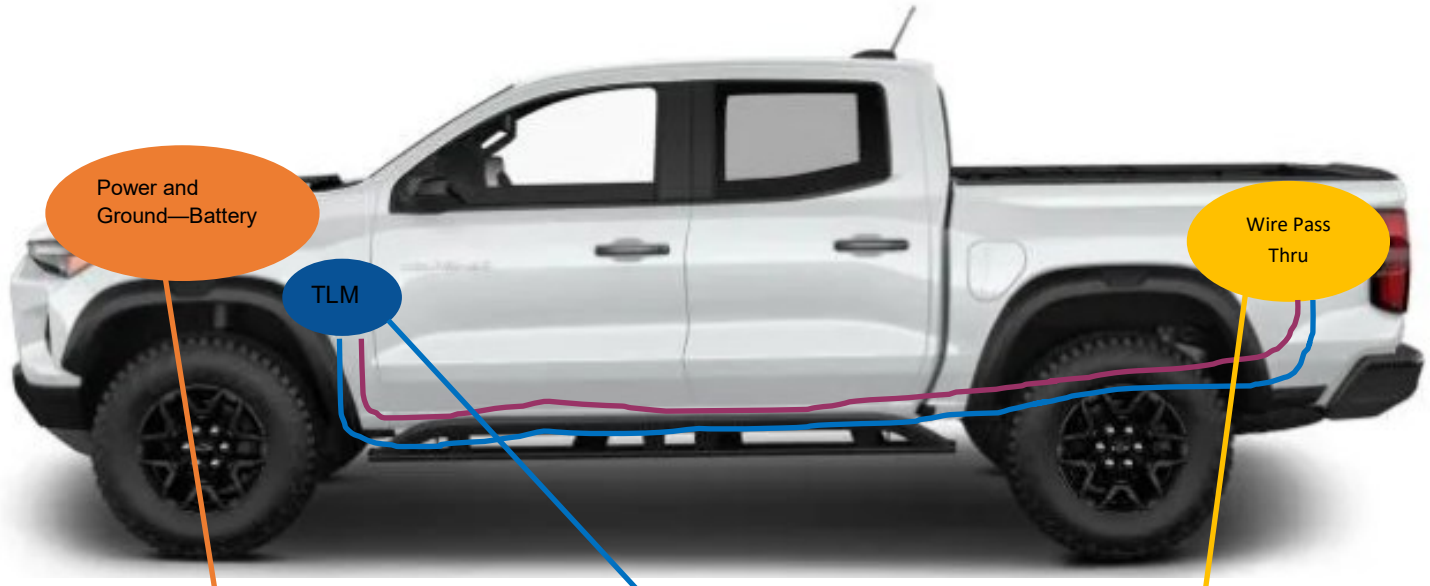
Driver Side



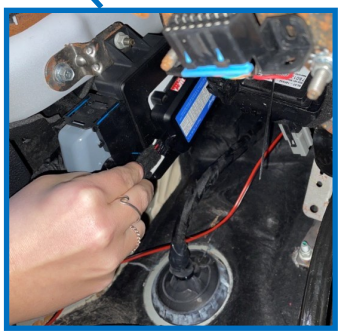
Passenger Side



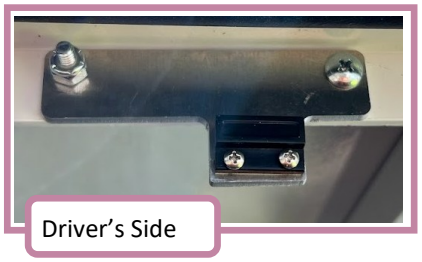
# Routing Overview: Chevy Colorado

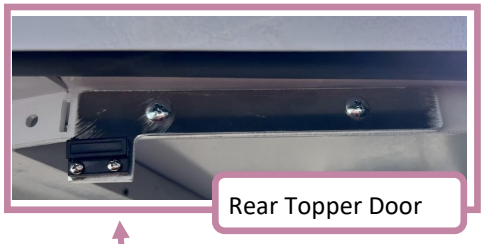




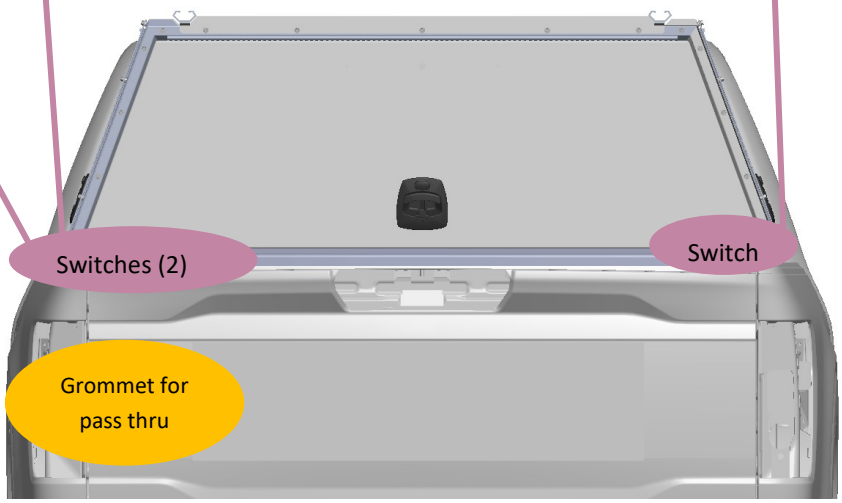











| Color | Key - Items |
|---|---|
| Orange | Power and Ground Location |
| Blue | Harness Routing From TLM To |
| Purple | Switches And Switch Harness |
| Yellow | Bed Wire Pass Thru |

# Light Placements:

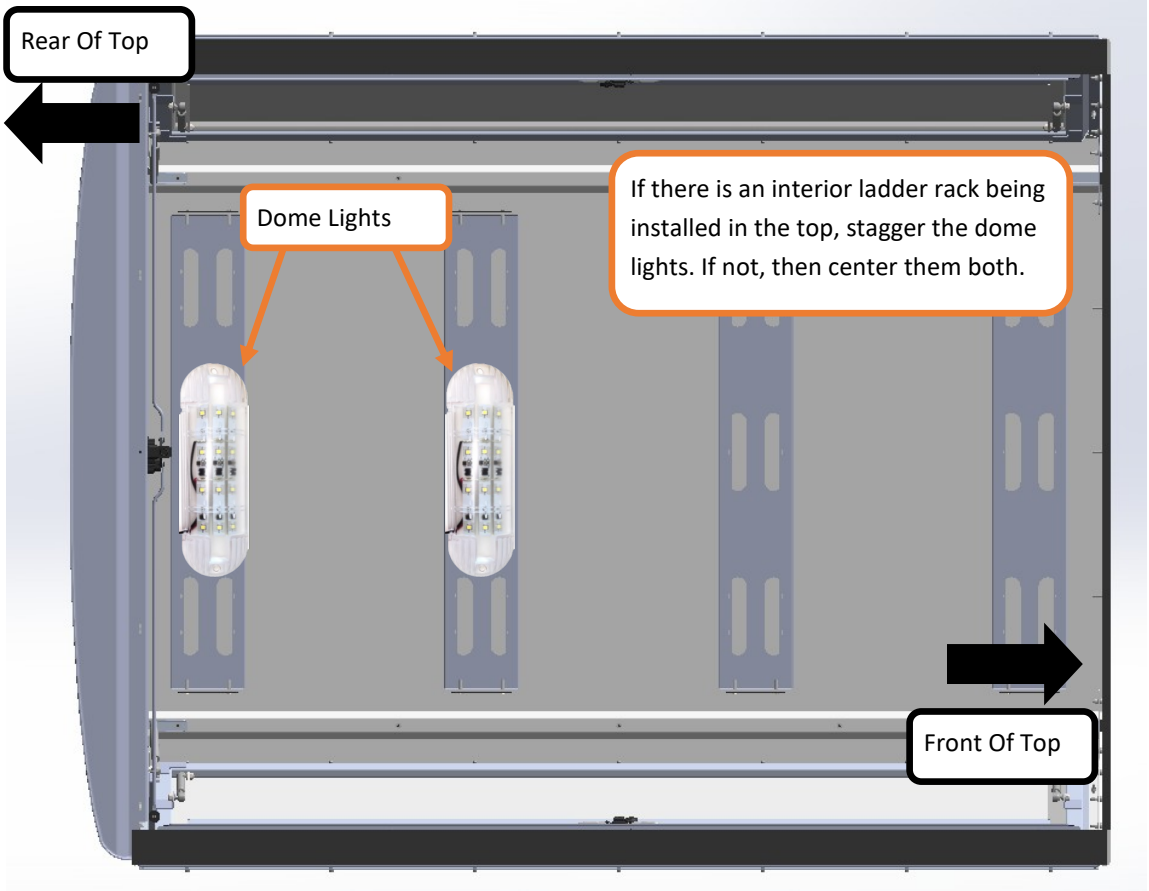
Please refer to the order drawing—not all lights will be used every install. These are modular and created to work depending on customer needs.

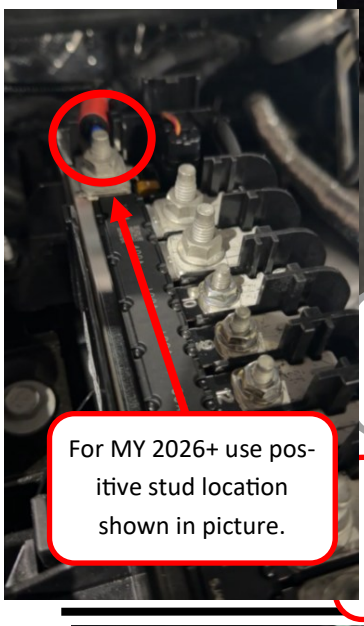
Driver's Side

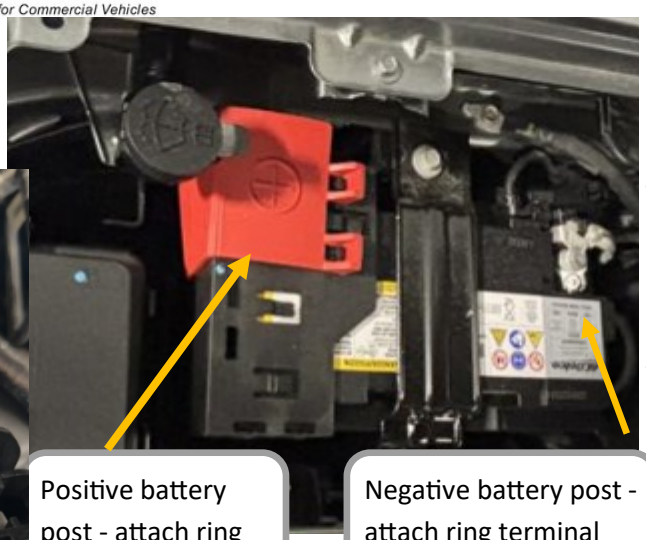



Passenger's Side






## Step 1:

**Battery-**

- Open the hood and locate the battery. Locate the power harness 71904. Remove the inline fuse in the fuse holder. Do not place fuse back into holder until after the install is complete.
- Connect the red wire ring terminal to the positive battery post shown in the picture to the left. Torque the nut to 55 lb.in (6.2Nm). Do not over tighten.
- Connect the black wire ring terminal to the negative battery post shown in the picture to the left. Torque the nut to 97 lb.in (11Nm). Do not over tighten.

**Do not un-bolt the battery terminal clamps from the battery.**



## Step 2:

- Route the connector end along the underside of the cab filter (red line) to the firewall.
- To tuck the wiring under the filter, stick zip ties through the red circled area on the second image. Using zip ties, secure the wiring to hide it.
- Once the harness is routed to the driver side drop the harness to underneath the vehicle.

NOTE: Make sure that the wire harness is not fastened near anything that could damage the wire.



## Step 3:

- Remove the floor trim at the feet of the driver seat.
- Locate the spot circled and drill a hole you deem large enough to fit the power harness and the TLM harness.
- Feed the power harness from underneath the vehicle and into the cab.
- Make sure to fasten the wire harness underneath the vehicle so that it does not hang underneath the vehicle.

TLM Information:

Please note there is currently a REV A TLM and a REV B TLM. Please view the TLM top right corner to confirm which REV you have . Then follow the next instructions.

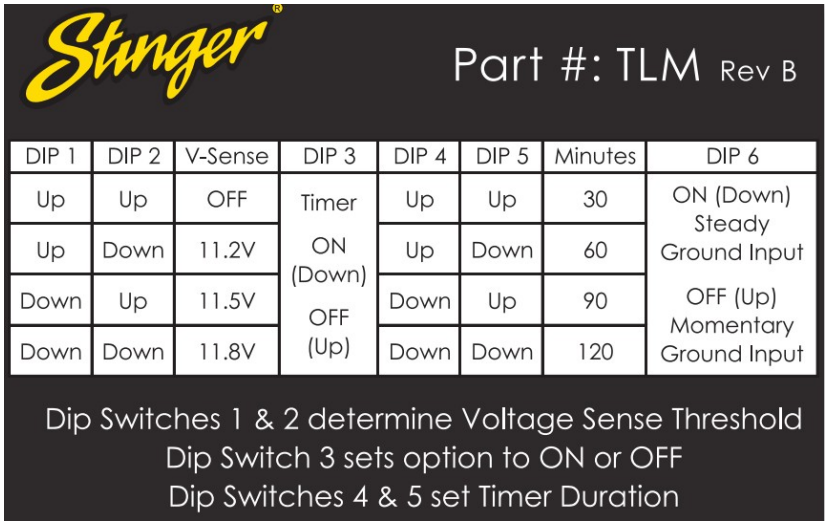
**REV A:**




**REV A DIP SWITCHES:**

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Down | Down | Down | Up | Up | Down |

**REV B:**




**REV B DIP SWITCHES:**

| 1 | 2 | V-Sense | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Down | Down | 11.8 | Down | Down | Up | Down |

**For Rev A follow the steps below:**





**Step 4:** Locate the Timer Low-Voltage Module (TLM) and harness — Part number: 71902

First, plug the harness into the module.

**Note:**

You will NOT use the cream colored connector or the matching black connector. You will be using the smaller black module output connector, one(1) switch harness connectors (black and white wires), and the black power supply connector.

*** Ensure that the fuse from the inline fuse holder has been removed until the end of the install.

Bring TLM to driver side, where power harness is fed through.



71904 fed through firewall, connected to TLM



74546 and 71902 Connections

Please reference page 2 for the following

connection information.

Locate the TLM to battery harness (71904) that has been routed through the firewall grommet and TLM power to light harness (74546).

On the 71904 harness, connect the black connector to the blunt red wire on the TLM. (Circled in red in first image, on top).

Plug the red and black connector on the 74546 to the mating connector on the 71902 (TLM), shown in the blue circle. Next, connect one of the switch connections (black and white wires) to one of the mating connections on TLM. Circled in yellow. The rest of the connectors will not be used.

***** You do NOT need to connect both switch connections.**

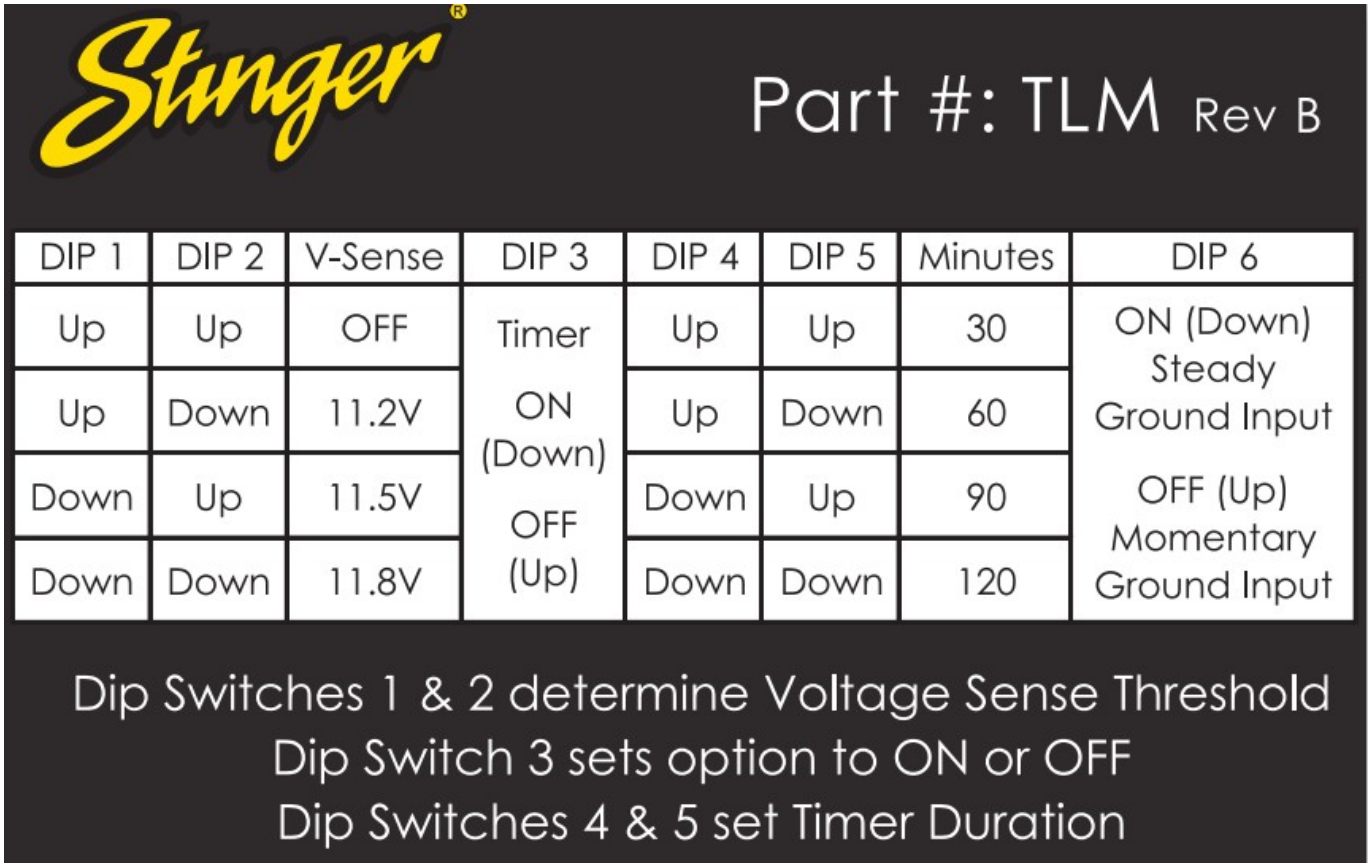
To set the dip switch to 90 minutes (default) follow the chart below:

If customer would like a time different that 90 minutes, use the dip switches to set the time. Chart is as follows:

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Down | Down | Down | Up | Up | Down |

| DIP 1 | DIP 2 | DIP 3 | DIP 4 | DIP 5 | Minutes | DIP 6 |
|---|---|---|---|---|---|---|
| Voltage Sense ON (Down) OFF (Up) | Timer ON (Down) OFF (Up) | Up | Up | Down | 30 | ON (Down) Steady Ground Input |
| | | Up | Down | Up | 45 | |
| | | Up | Down | Down | 60 | |
| | | Down | Up | Up | 90 | OFF (Up) Momentary Ground Input |
| | | Down | Up | Down | 120 | |
| | | Down | Down | Up | 150 | |

# TLM Rev B

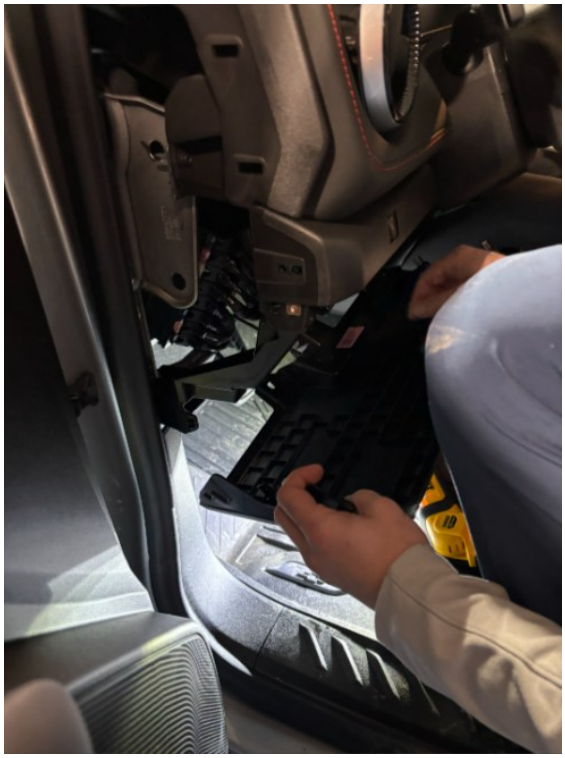



If topper lighting consists of only **1 Light Strip**, place dip switches in the following order:
(This is set for 90 minutes, if customer would like 30,60, or 120 minutes please set dip switches accordingly)

| 1 | 2 | V-Sense | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Down | Down | 11.8 | Down | Down | Up | Down |

If topper lighting consists of only **more than 1 Light Strip (all other light kits)**, place dip switches in the following order:
(This is set for 90 minutes, if customer would like 30,60, or 120 minutes please set dip switches accordingly)

| 1 | 2 | V-Sense | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Up | Down | 11.2 | Down | Down | Up | Down |



**Step 5:**

Locate the driver's side door sill area.

- Use a trim tool to remove the trim panels in the driver's step well and dash/kick panel.
- Use the adhesive tape supplied in the kit to stick the TLM to the side of the module up under the kick panel. Refer to the picture to the left for the TLM placement.
- Secure the TLM and wires with zip ties.
- Be sure the TLM is secured.

*** Picture is for location reference only.





**Step 6:**

Locate the hole drilled in the previous steps.

- Route the wire harness (74546) through the grommet, to the underbody of the truck.
- Silicone the grommet when done to ensure the wiring is in place.
- Route the harnesses rearward following the OEM wire harness on the frame. Be sure to pull wires taut.
- Continue routing the harness upward in the bed cavity, to the bed wire pass thru area.
- Secure the wiring with zip ties.

**DO NOT SECURE WIRING TO ANY BREAK LINES.**



**Step 7:**

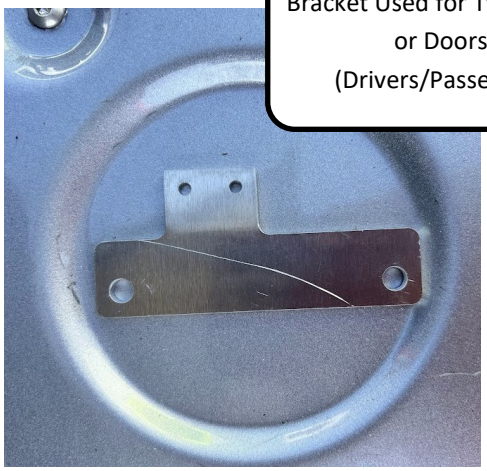
Locate the rear driver's side bed area.

- There is an oval shaped grommet for a pass thru. Using a 3/8" step drill bit, drill a hole into the plastic grommet and route the harnesses through the hole. Insert the bigger grommet supplied in the Brake Light kit into the bed frame pass through, this will be used for the interior light harness and Brake Light harness together.
- Tuck any excess wiring into the empty cavity underneath the bed frame. Use the supplied Tek screw and P-clip to secure the wire harness to the frame.



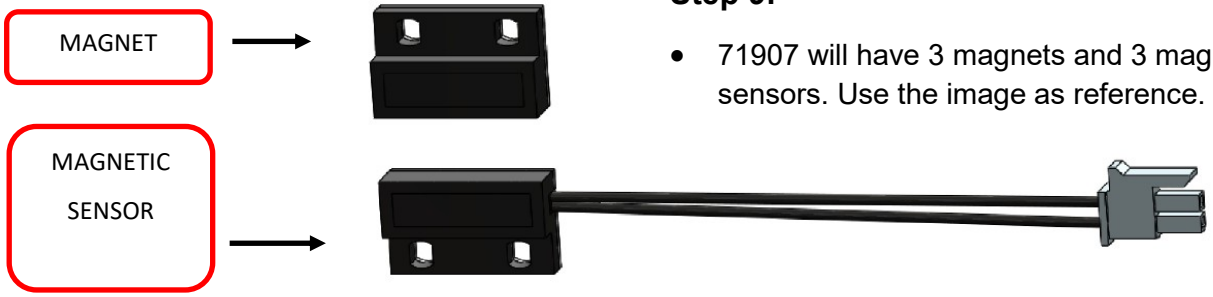
**Step 8:**

- Locate BAG71907, magnetic switches PN 71907 and magnetic switch brackets PN: 73414-W, 73415-W, 73416-W.
- Two small mounting brackets with two switch mounting points, will be used for exterior doors.




**Step 9:**

- 71907 will have 3 magnets and 3 magnetic sensors. Use the image as reference.












## Step 10: Install Magnetic Switch Brackets

- Using an alcohol wipe, clean brackets. After they are dry, locate one bracket for an exterior door. This first bracket will be for the driver side.
- Peel off plastic on backside of magnet. Place fasteners in magnet and secure magnet on bracket using both fasteners provided.
  For the driver side, the tab of the bracket will be on the left side for proper alignment.
- Place spacer bracket behind bracket with mounted magnet. Secure spacer and bracket to outside edge of topper.
- Line bracket up with first two holes after metal brace. Use the image to the left as reference.

**Secure mount with 10-24x.75 button head cap screws and 10-24 hex nuts.**

- For the passenger side, the tab of the bracket will be on the right side for proper alignment.
- Place spacer bracket behind bracket with mounted magnet. Secure spacer and bracket to outside edge of topper. Line bracket up with first two holes after metal brace. Use the image to the left as reference.
- For the rear side, place spacer and bracket on the left outermost side of the topper door.
- Secure after metal brace. Face bracket with tab pointing away from the vehicle.





**Step 11:**

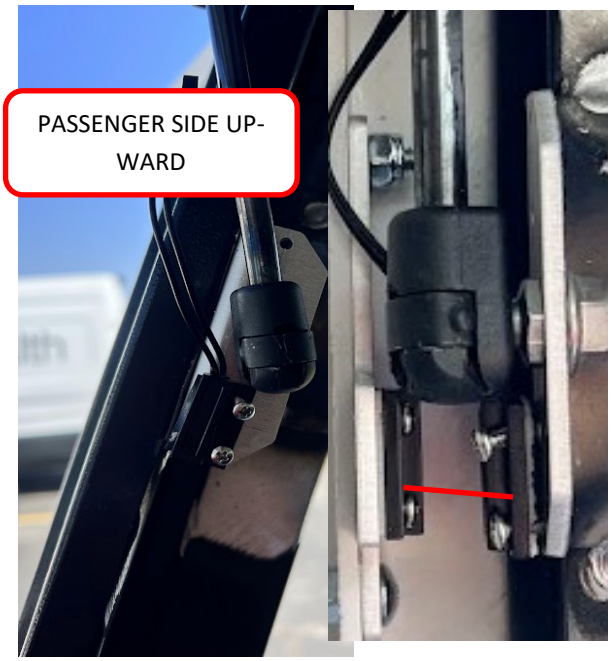
- Identify the door shocks on the topper doors. Both the driver and passenger sides should have pre-existing holes on the shock mounts for placing the magnetic switch.
- Start by cleaning the shock mount using an alcohol pad and remove any plastic film covering the back of switch.




**Step 12:**

- Locate driver's side door shock mounts. There will be two magnetic switches mounted to each side of the driver's side door shock mount.
- Position the magnetic switch along with its wires and connector.
- Place switch flush with edge of door shock mount as shown in the image. The driver side switch will have wires facing downward. The rear side switch will have wires facing upward.
- Using a screw driver secure the magnetic switches are in proper position.

Use the provided image as reference.




**Step 13:**

- Locate passenger side door shock mount. Secure magnetic switch on passenger side mount with wires facing upward.
- Make sure magnetic switches are face to face with one another! If they are not aligned they will not function properly. Refer to image for proper alignment.

# Walk-In Topper Magnetic Switch Instructions:

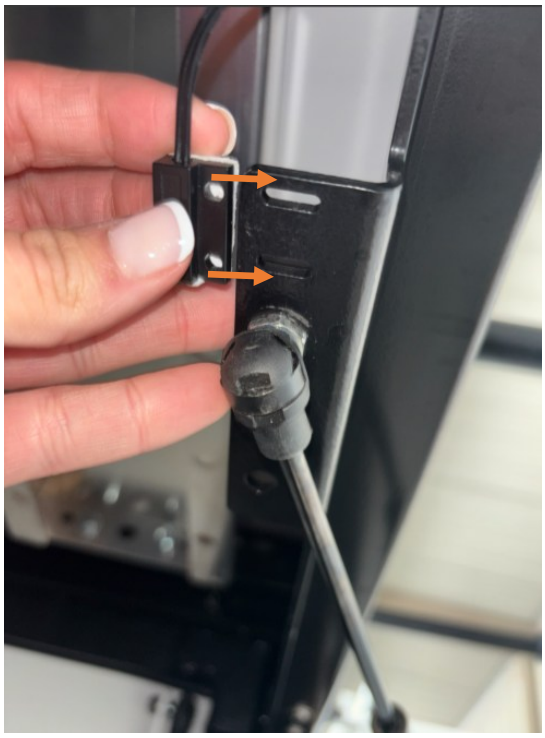
**Please follow the next two pages for mounting magnetic switches for the walk-in topper.**

**- BAG0989**

**- Bracket Part Number 77230**



# Walk-In Topper Magnet Bracket Install



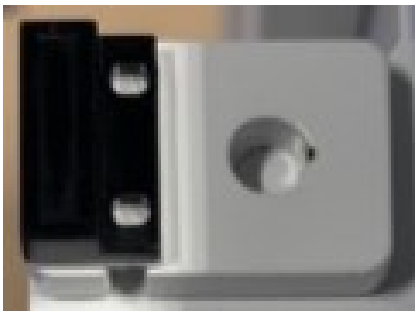
- Install Driver/Passenger side doors the same as the above pages.
- Mount magnetic switch sensor on the top part of door frame on the topper. Use the image to the left as reference.
- Plug in mating connector end to magnetic switch sensor to 71905. Circled in image on the bottom left.
- Place sensor end aligned with the holes.
- Secure sensor in place by removing sticky back paper, and use provided fasteners to mount in place. Be sure to clean the area with alcohol wipe before install.
- Use images below as reference for mounting the magnetic switch sensor.
- Secure harnesses using stud mounted zip ties.

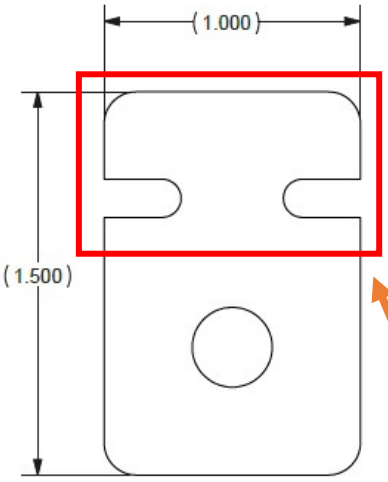
Top part of door frame





# Walk-In Topper Magnet Bracket Install






- Use the small bracket for the rear walk-in doors and use BAG0989 to secure it.
- Locate the 77230 bracket spacer and the magnet switch.
- Peel the sticky off the magnet and stick it to the bracket as shown in the images to the left. Make sure the holes in the magnet line up with the ones on the bracket.
- Locate the screws and place the bracket with the magnet switch on it and secure it to the top of the walk-in door as pictured below.
- Make sure the magnet switches line up so that they will properly work.
- Test functionality of magnetic switches.

Place the magnet in the location of the red rectangle. Make sure the holes line



**NOTE: The hole in the small bracket is not for mounting. This hole was designed for paint line purposes.**

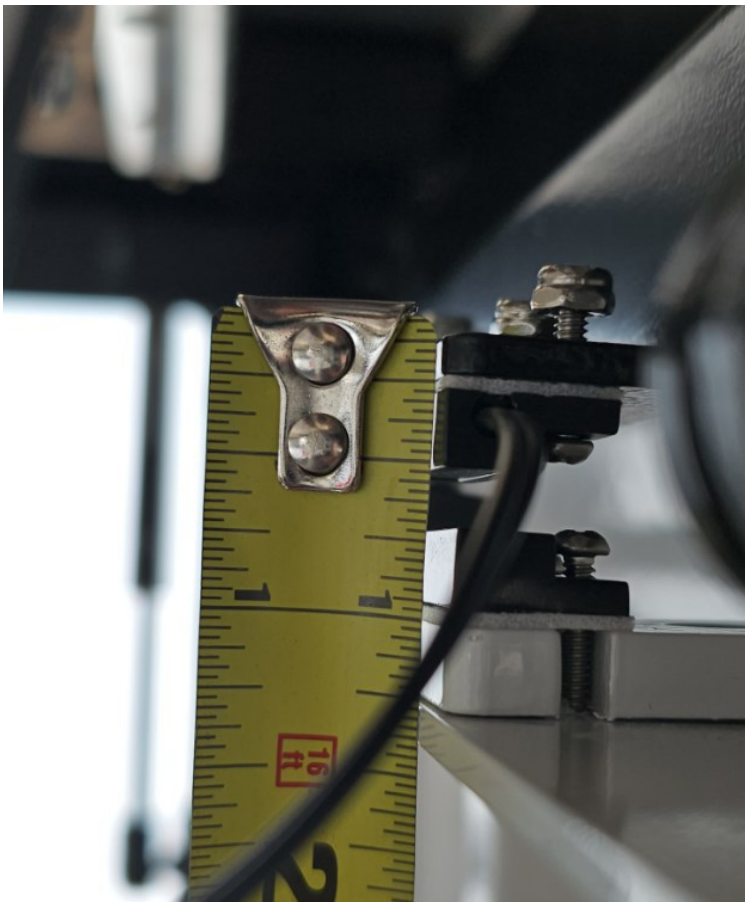
**After install check:**
Shut the topper door and ensure the magnetic switches are aligned. The two magnets must meet, face-to-face when the door is shut.

Line the bracket with the magnet switch with these



# Walk-In Topper Magnet Bracket Install Cont.

Note: The brackets should be lined up as shown below. They should also be spaced apart as shown on the measuring tape in the photo.







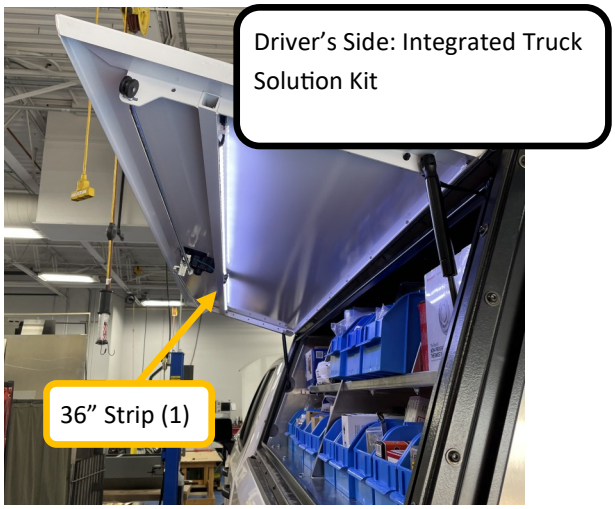
**Step 14:**

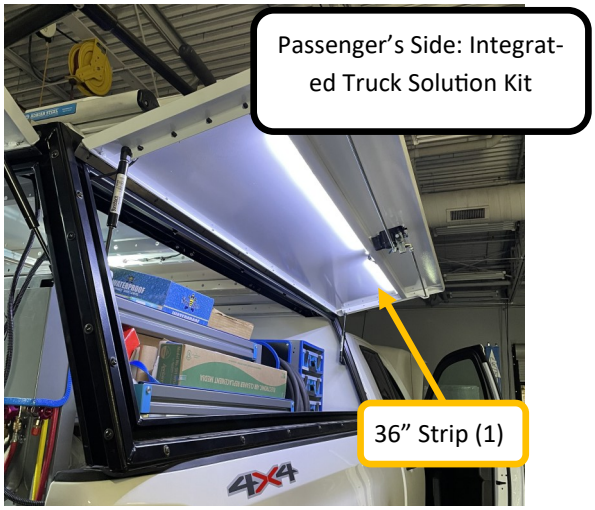
- After mounting magnetic switches, begin to pull harness through grommet in truck bed. Connect magnetic switches to harness.
- Pull the wiring upward to secure along the inside.
- **Using stud mounted zip ties** continue routing the harnesses in the corner of the topper, to the top front of the first roof bow.
- Identify 4 studs in channel and locate best position on harness. Place stud mounted zip tie on harness first, and secure. Then press stud mounted zip tie on stud between frame on topper.

**Step 15:**

- The harness end with connectors should end up between the first roof bow and the door frame on the driver side. See picture below for reference. Use the holes in the roof bows to secure wiring with zip ties.
- Be sure to not route any wires through holes in roof bows.
- Be sure to clean all surfaces with alcohol wipes before placing sticky backs.









**Step 16:** Install the lights.

- Locate the lights for the install. This will vary with customers so grab only what is called out on the sales order per vehicle.
- *** **Please note:** If there is an added door handle strap, the lights will need to be installed as high up on the channel as possible, to avoid the nut and bolt clamping on the light strip.
- Open the topper doors that are requiring lights.
- Locate the square tube running horizontal across the door. The side facing the interior of the top will be the side you will secure the lights to.

**Using the alcohol pads provided in the boxes, clean the entire inside wall of the square tube where the lights will stick to before installing. Be sure to let the tube dry.**

**Be sure to have the larger connector end of the lights towards the rear for connecting into the roof bow harnesses.**

**Step 17:**

**For the Integrated Truck Solution (76845)**

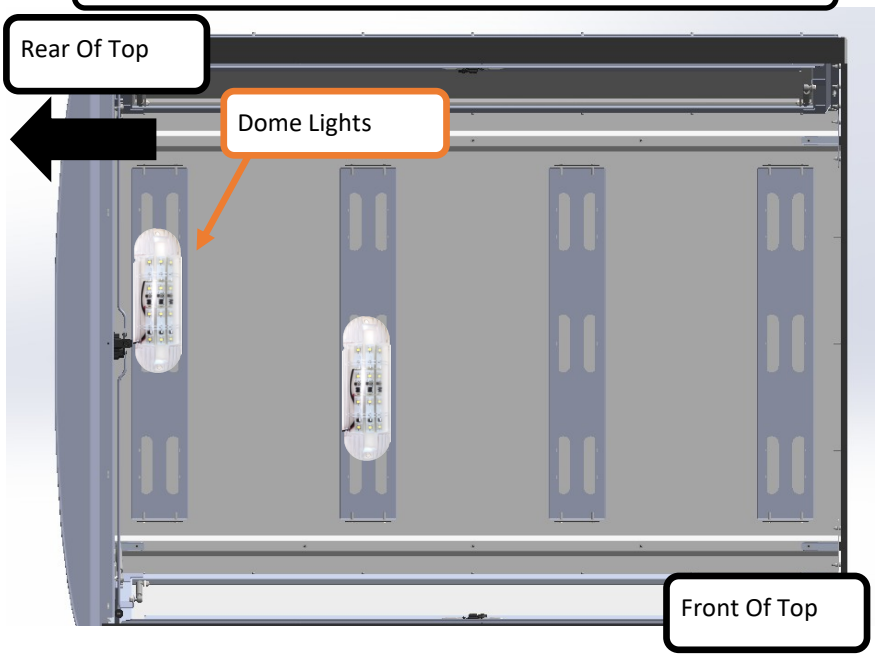
Locate the (2) dome lights.

**Be sure to clean the area that the lights will stick to carefully before installing. Use the alcohol pad provided in the boxes and let it dry before installing.**

If there will be an interior ladder rack installed, stagger the dome lights on the roof bows like shown. If not then please center the lights.

Note: Don't use the self tapper screws. Drill 2 holes and use nuts and bolts to secure Dome lights.

Integrated Truck Solution Kit With Interior Ladder Rack

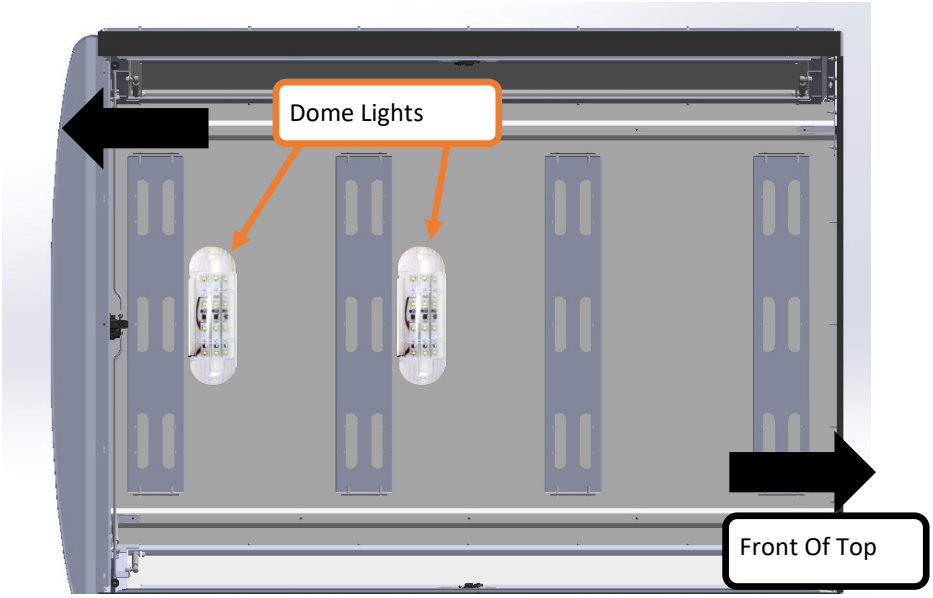



**Place dome light on roof bow as shown in images below:**



Please secure dome lights with (FAS-0022 10-24X0.75) screw, (FAS-0029 10-24) nut, and (FAS-0027) washer on roof bow.

Integrated Truck Solution Kit With No Interior Ladder Rack

















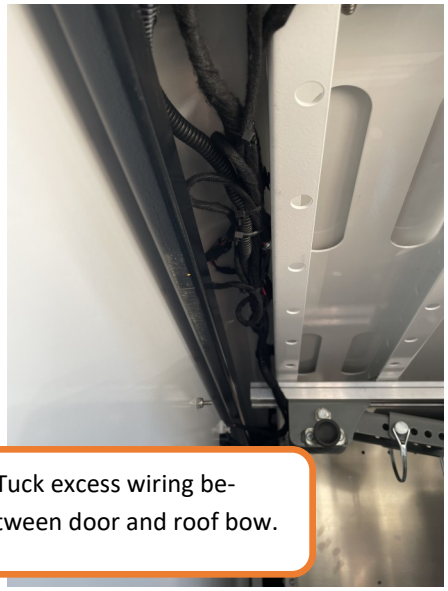

**Step 18: Roof Bow Harness Routing**

- Use roof bow harness #1 (63481) for routing the 2 dome lights and the strip lights on the driver's side door.
- Use roof bow harness #2 (63482) for routing to the strip lights on the passenger side.
- Utilize the existing holes in the doors and roof bows for securing the zip ties to. Clean topper surface in corner areas with alcohol pads. Begin to secure the harness using provided self adhesive tie mounts where necessary.

*****IMPORTANT:**

- Ensure while securing wiring to avoid all sharp edges. (Shown in image 3, circled in red). When wiring from the light strips to the roof bow, avoid sharp edges at the ends.
- When both side doors are open, allow very little slack on the wire, ensuring it is taut. However, while pulling wiring taut on the strip lights ensure the doors open and close without damaging the wires.
- Route the harnesses to the TLM harness (74546) and plug them in.
- Secure all the wires with zip ties and tuck neatly as possible between the first roof bow and the rear door edge.

Be sure all wiring is secured with zip ties.





**Step 19:** *** Testing of magnetic switches ***

Continue to route power to light harness PN 74546 to magnetic switches mounted on door shock mounts.

After plugging in the magnetic switches, be sure to secure the excess wiring using provided cable ties.

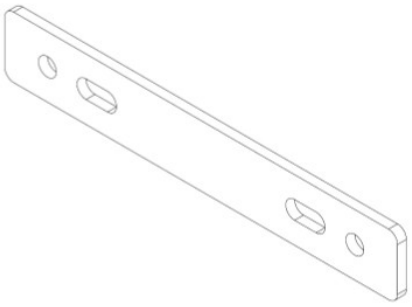
Once magnetic switches and all lights are plugged in, lights should be on.

To test and see if the magnetic switches are close enough to one another, open the tailgate of the truck and shut all of the topper doors.

Once all of the topper doors are shut, all of the lights should be off. If one topper door is open, the lights will remain on. In order for the lights to turn off, all of the topper doors must be shut.

Magnetic switches should be no more than 1/4” of an inch away from one another.

*** If the lights do NOT turn off when all of the doors are shut, preform next step below.





**Step 20:** Locate magnetic switch bracket spacer PN 73414-W.

Place **one or two bracket(s)** behind the pre-existing bracket on the topper door. This can be placed behind one bracket and then tested again.

Utilizing hardware provided, secure bracket behind magnetic switch bracket. This is ensure the magnetic switches are close enough for connectivity.

A spacer may be placed behind all magnetic switch brackets on the rear door and two side doors if deemed necessary.

Magnetic switches mounted on topper door must be **NO MORE** than 0.3” apart from each when the door is shut.







**Insert the fuses into the inline-fuse holders on the TLM harness (74546) and the power harness (71904).**

**The install is now complete.**

**Check that the lights come on when any of the 3 doors open.**

PART NUMBER
13905-0

## ITEM DESCRIPTION: WIRE TIE, NYLON 40Lb, 8.5” BLACK



MANUFACTURER: WAYTEK, INC. or equivalent
MANUFACTURERS PART NUMBER: 21093M or 21093C

SPECIFICATIONS: STANDARD CABLE TIE
BLACK, NYLON
8-1/2” LONG
TENSILE STRENGTH: 40.0 LBS
21093M = 1,000 quanity
21093C = 100 quanity

SPECIAL NOTES: PART NUMBER IS BLACK.

# SUPPLIED BY: THIS ITEM IS ADRIAN AVAILABLE!

## PURCHASED PRODUCT DATA SHEET (PPDS)

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ADRIAN STEEL
VAN AND PICKUP EQUIPMENT

**906 JAMES STREET**
**ADRIAN, MI 49221**
**517-265-6194**
**WWW.ADRIANSTEEL.COM**

**⚠ CAUTION ⚠**

**WHEN INSTALLING EQUIPMENT IN OR ON VEHICLES CHECK FOR FUEL TANKS, FUEL LINES, CONTROL LINES AND ELECTRICAL WIRING BEFORE DRILLING! ALWAYS USE DRILL BITS WITH INTEGRAL STOPS WHENEVER POSSIBLE!**

| DRAWN BY | DATE DRAWN |
|---|---|
| MDG | 10/26/2006 |
| ECN NUMBER | ECN DATE |
| 18021 | 11/13/2015 |
| PART WEIGHT | REV. LEVEL |
| 0.01 LBS. | D |

PART NUMBER
**13905-0**

PART NUMBER
**26618-0**

## ITEM DESCRIPTION: SILICONE, 1oz. TUBE



SPECIFICATIONS:
SU5005 RTV SILICONE
1oz. TUBE
CLEAR OR EQUIVILENT
SELF PIERCING CAP

SPECIAL NOTES:

## SUPPLIED BY: THIS ITEM IS ADRIAN AVAILABLE!

## PURCHASED PRODUCT DATA SHEET (PPDS)

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906 JAMES STREET
ADRIAN, MI 49221
517-265-6194
WWW.ADRIANSTEEL.COM

**⚠ CAUTION ⚠**

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| DRAWN BY | DATE DRAWN |
|---|---|
| JLC | 7/21/2001 |
| ECN NUMBER | ECN DATE |
| 16551 | 7/22/2014 |
| PART WEIGHT | REV. LEVEL |
| 0.02 LBS. | C |

PART NUMBER
**26618-0**

PART NUMBER
**26618-0**

## ITEM DESCRIPTION: SILICONE, 1oz. TUBE



SPECIFICATIONS:
SU5005 RTV SILICONE
1oz. TUBE
CLEAR OR EQUIVILENT
SELF PIERCING CAP

SPECIAL NOTES:

## SUPPLIED BY: THIS ITEM IS ADRIAN AVAILABLE!

## PURCHASED PRODUCT DATA SHEET (PPDS)

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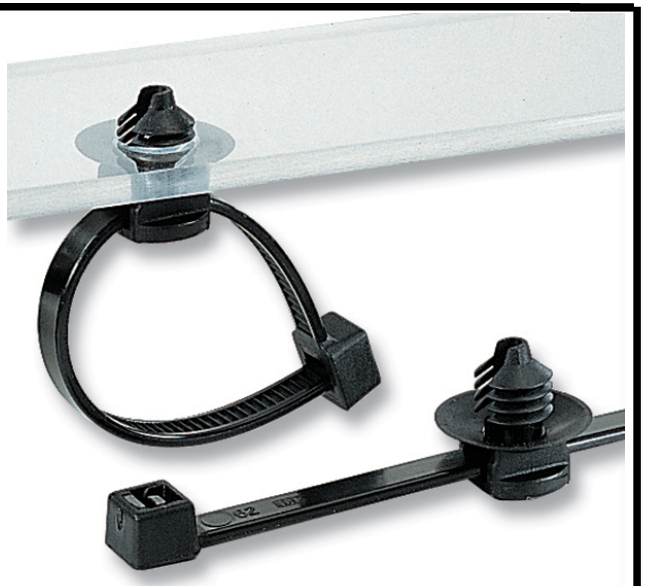
| DRAWN BY | DATE DRAWN |
|---|---|
| JLC | 7/21/2001 |
| ECN NUMBER | ECN DATE |
| 16551 | 7/22/2014 |
| PART WEIGHT | REV. LEVEL |
| 0.02 LBS. | C |

PART NUMBER
**26618-0**

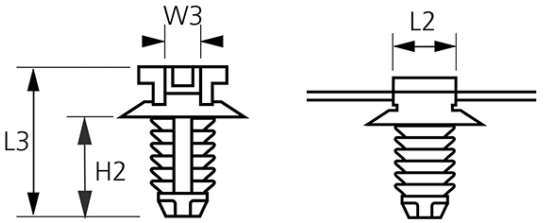
# PURCHASED COMPONENT KEY FEATURES

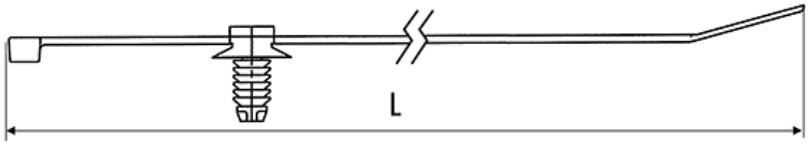
| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)<br>**N/A** |
| LOAD/RATING REQUIREMENT<br>**N/A** |
| MATERIAL REQUIREMENT<br>**N/A** |
| PACKAGING REQUIREMENT<br>**N/A** |
| OTHER REQUIREMENTS<br>• **Roof Bow #1** ***(Cargo area, first Roof bow after partition)***<br>• ***(5x) WIRE TIE W/CHRISTMAS TREE***<br>• ***1100mm Length*** |



***(5x)***




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## TOLERANCES & INSPECTION

*UNLESS OTHERWISE SPECIFIED*

**ALL BEND ANGLES ARE 90 DEGREES**

**ALL DIMENSIONS ARE IN INCHES.**

**REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION**

| FEATURES | HOLES/SLOTS | ANGLES |
|---|---|---|
| 0.0 = ± .125 | 0.0 = ± .062 | 0° = ± 2° |
| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

**Material Thickness: per ASTM Std.**
**Weld Callouts per AWS**

## RELEASE & REVISIONS

**INITIAL ECN:** 24359

**CURRENT ECN:** 24359

ECN DESCRIPTION:

**QE8539 RELEASE MODULAR DOME LIGHTING**

REVISED BY: **MJF**

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
**ECHOMASTER FLEET SOLUTIONS**

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
**P-HARRB1**

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE) (NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
**YES**

## PART / PRODUCT IDENTIFICATION

**ADRIAN STEEL**

**ADRIAN STEEL COMPANY**
**906 JAMES STREET, ADRIAN, MI 49221**

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **MJF**

DESCRIPTION: **ROOF BOW HARNESS #1**

WEIGHT (Lbs.): **.50**

SEGMENT CODE: **EAU**

PART NUMBER: **63481**

# PURCHASED COMPONENT KEY FEATURES

| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING) **N/A** |
| LOAD/RATING REQUIREMENT **N/A** |
| MATERIAL REQUIREMENT **N/A** |
| PACKAGING REQUIREMENT **N/A** |
| OTHER REQUIREMENTS |

**Note:**

**Connector / Terminal Configuration:**

- **MALE 2 PIN ON ONE END**
- **FEMALE 2 PIN ON THE OPPOSITE END.**

**BOM:**

| Item | Qty. | Description |
|---|---|---|
| 1 | 1 | 36" WHITE LED STRIP LIGHT W/ADHESIVE |
| 2 | 2 | 4" ZIP TIE |
| 3 | 2 | CABLE TIE MOUNT |
| 4 | 1 | ALCOHOL PAD |




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| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

Material Thickness: per ASTM Std.
Weld Callouts per AWS

## RELEASE & REVISIONS

INITIAL ECN: 24697

CURRENT ECN: 25778

ECN DESCRIPTION:
**Revise Modular Lights With New 3M Adhesive**

REVISED BY: JLT

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
**AAMP**

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
**CL-36BLED rev.B**

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
**YES**

## PART / PRODUCT IDENTIFICATION

**ADRIAN STEEL®**

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL **B**

MAT'L USED:

DESIGNED BY: **J. TYNER**

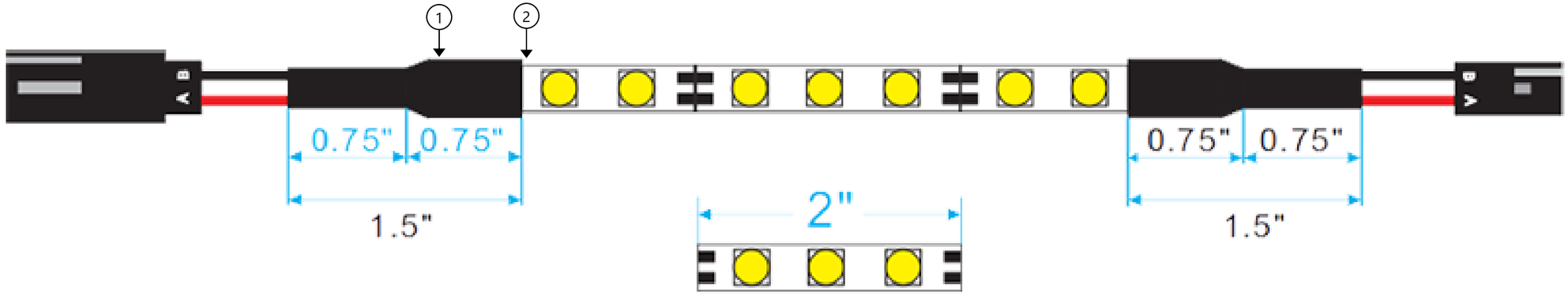
DESCRIPTION: **MODULE DOME LED STRIP 36"**

WEIGHT (Lbs.): **0.3**

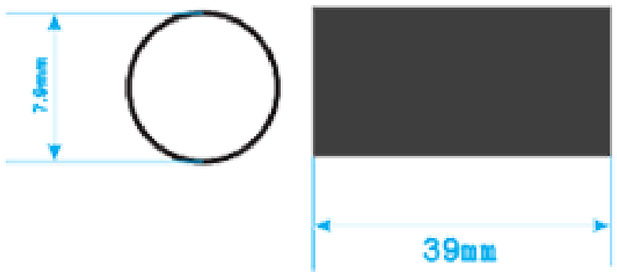
SEGMENT CODE: **EAU**

PART NUMBER: **65347**

| Notes | |
|---|---|
| 1 | 3:1 Adhesive Heat Shrink to be placed over LED Solder Joints |
| 2 | 5925 Adhesive Liner Edges to be exposed next to heat shrink |




12"=6X
24"=12X
36"=18X
48"=24X




| Revisions | | | |
|---|---|---|---|
| Rev. | Date | Author | Description |
| A | 11/1/21 | Bennet Fisher | Initial Drawing |
| B | 7/27/2022 | Bennet Fisher | Adhesive changed to VHB 5925 |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

**PROPRIETARY AND CONFIDENTIAL**

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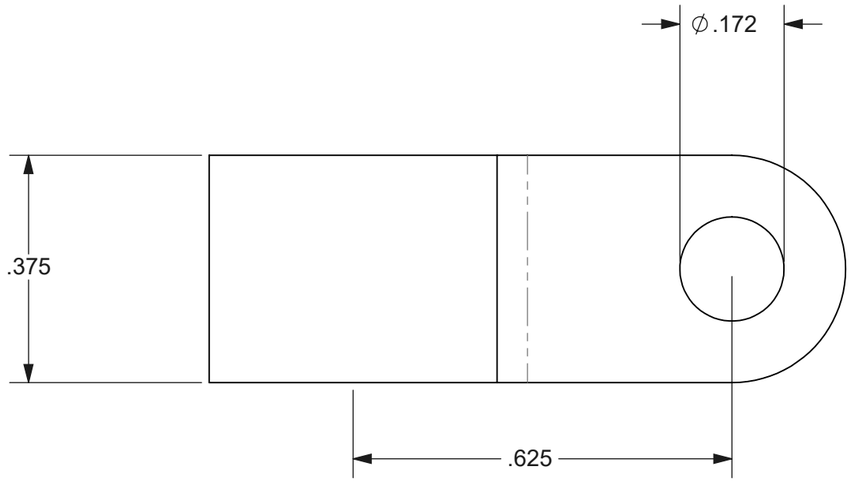
| | Name | Date |
|---|---|---|
| Designed By | Bennet Fisher | 11/1/21 |
| Engineering Approval | | |
| Manufacturing Approval | | |
| Revision Approval | | |
| Quality Assurance | | |

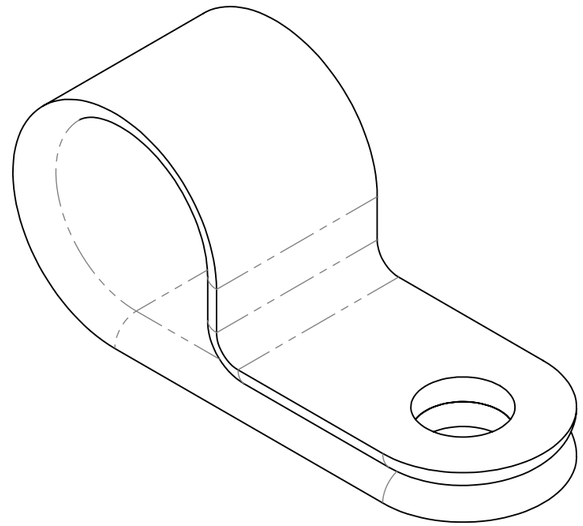
AAMP
ADVANCING VEHICLE TECHNOLOGY

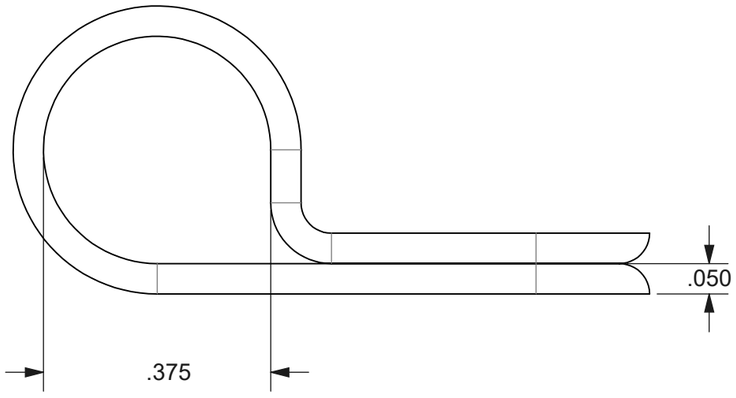
| | |
|---|---|
| Part Number: CL-36BLED | Revision: B |
| Description: 36" LED Strip | Sheet: 1 |

# PURCHASED COMPONENT KEY FEATURES

| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING) **N/A** |
| LOAD/RATING REQUIREMENT **N/A** |
| MATERIAL REQUIREMENT **N/A** |
| PACKAGING REQUIREMENT **N/A** |
| OTHER REQUIREMENTS **N/A** |






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## TOLERANCES & INSPECTION

*UNLESS OTHERWISE SPECIFIED*

**ALL BEND ANGLES ARE 90 DEGREES**

**ALL DIMENSIONS ARE IN INCHES.**

**REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION**

| FEATURES | HOLES/SLOTS | ANGLES |
|---|---|---|
| 0.0 = ± .125 | 0.0 = ± .062 | 0° = ± 2° |
| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

**Material Thickness: per ASTM Std.**
**Weld Callouts per AWS**

## RELEASE & REVISIONS

INITIAL ECN: **25297**

CURRENT ECN: **25334**

ECN DESCRIPTION:

**UPDATE SUPPLIER TO SAY EQUIVALENT**

REVISED BY:

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
**MCMASTER-CARR OR EQUIVALENT**

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
**8876T38 OR EQUIVALENT**

COLOR (ONLY LIST IF COLOR SPECIFIC)
**BLACK**

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
**NO**

## PART / PRODUCT IDENTIFICATION

**ADRIAN STEEL®**

**ADRIAN STEEL COMPANY**
**906 JAMES STREET, ADRIAN, MI 49221**

REVISION LEVEL **B**

MAT'L USED:

DESIGNED BY: **E.BURKE**

DESCRIPTION: **Nylon Plastic Loop Clamp**

WEIGHT (Lbs.): **0.001**

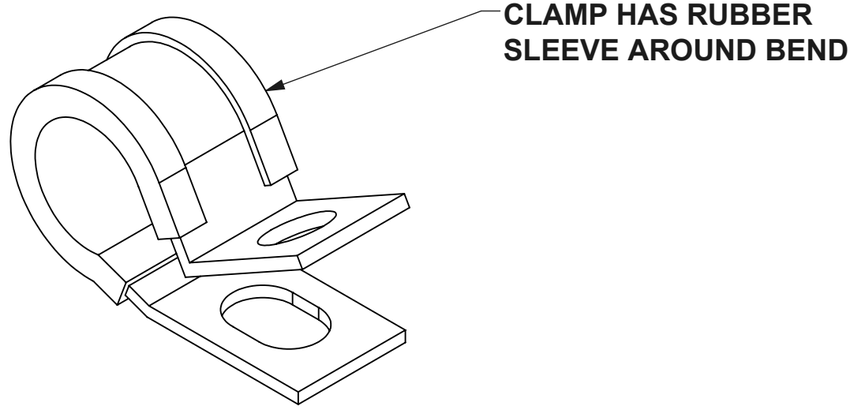
SEGMENT CODE: **HDW**

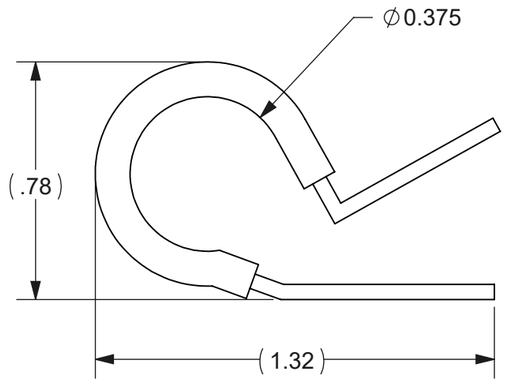
PART NUMBER: **66843**

# PURCHASED COMPONENT KEY FEATURES

| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)<br>**N/A** |
| LOAD/RATING REQUIREMENT<br>**N/A** |
| MATERIAL REQUIREMENT<br>**Zinc Plating**<br>**EPDM Rubber** |
| PACKAGING REQUIREMENT<br>**N/A** |
| OTHER REQUIREMENTS<br>**0.281 Hole Diameter** |






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## TOLERANCES & INSPECTION

*UNLESS OTHERWISE SPECIFIED*

**ALL BEND ANGLES ARE 90 DEGREES**

**ALL DIMENSIONS ARE IN INCHES.**

**REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION**

| FEATURES | HOLES/SLOTS | ANGLES |
|---|---|---|
| 0.0 = ± .125 | 0.0 = ± .062 | 0° = ± 2° |
| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

**Material Thickness: per ASTM Std.**
**Weld Callouts per AWS**

## RELEASE & REVISIONS

**INITIAL ECN:** 26661

**CURRENT ECN:** 26661

ECN DESCRIPTION:

**CREATE NEW PART NUMBER AND PRINT**

REVISED BY: **SPL**

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
Mid-State Bolt & Nut/Div Of Field

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
**COL0609ZI**

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
**YES**

## PART / PRODUCT IDENTIFICATION

**ADRIAN STEEL®**

**ADRIAN STEEL COMPANY**
**906 JAMES STREET, ADRIAN, MI 49221**

REVISION LEVEL **A**

MAT'L USED:

DESIGNED BY: **S. Lukas**

DESCRIPTION: **CABLE CLAMP-3/8" DIAM. MED DUTY CUSHION**

WEIGHT (Lbs.): **0.002**

SEGMENT CODE: **HDW**

PART NUMBER: **71671**

# PURCHASED COMPONENT KEY FEATURES

| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)<br>**N/A** |
| LOAD/RATING REQUIREMENT<br>**N/A** |
| MATERIAL REQUIREMENT<br>**N/A** |
| PACKAGING REQUIREMENT<br>**N/A** |
| OTHER REQUIREMENTS<br>**TIMER LIGHTING MODULE FOR INTERIOR PLUG AND PLAY LIGHTING ON TOPPERS** |







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## TOLERANCES & INSPECTION

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**REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION**

| FEATURES | HOLES/SLOTS | ANGLES |
|---|---|---|
| 0.0 = ± .125 | 0.0 = ± .062 | 0° = ± 2° |
| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

**Material Thickness: per ASTM Std.**
**Weld Callouts per AWS**

## RELEASE & REVISIONS

INITIAL ECN: **26830**

CURRENT ECN: **27950**

ECN DESCRIPTION:

**Update to REV B**

REVISED BY: **JJC**

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
**Stinger**

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
**71902**

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
**NO**

## PART / PRODUCT IDENTIFICATION

**ADRIAN STEEL®**

**ADRIAN STEEL COMPANY**
**906 JAMES STREET, ADRIAN, MI 49221**

REVISION LEVEL **B**

MAT'L USED: **PURCHASED**

DESIGNED BY: **E.BURKE**

DESCRIPTION: **TIMER LIGHTING MODULE**

WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

PART NUMBER: **71902**









# TLM

## Timer/Low Voltage Module

### INSTALLATION MANUAL

# Thank you for purchasing the TLM

## WHAT'S INCLUDED:

- Timer/Low Voltage Module
- Module Harness
- Cable Ties

## COMPATIBLE ACCESSORIES:

- Vehicle-specific harness (P-VTM-xxx)
- Switch harness (VTM-SWx)
- High current harness (VTM-RLY)

## FEATURES:

- Selectable timer durations - 30, 60, 90, and 120 minutes
- Selectable Low Voltage Sense shut off - 11.8V, 11.5V, and 11.2V
- Timer and Low Voltage sense work independently of each other
- Inputs for 2 momentary switches or a steady ground input
- 10A max current output

# OPERATING INSTRUCTIONS:

| DIP 1 | DIP 2 | V-Sense | DIP 3 | DIP 4 | DIP 5 | Minutes | DIP 6 |
|---|---|---|---|---|---|---|---|
| Up | Up | OFF | Timer | Up | Up | 30 | ON (Down) Steady Ground Input |
| Up | Down | 11.2V | ON (Down) | Up | Down | 60 | |
| Down | Up | 11.5V | OFF (Up) | Down | Up | 90 | OFF (Up) Momentary Ground Input |
| Down | Down | 11.8V | | Down | Down | 120 | |

**DIP 1-2**
If Voltage Sense feature is turned ON, low voltage shut down will occur when the input voltage to the TLM module drops below the V-Sense setting. To eliminate false triggers, there is a 20 second delay before shut down.
If Voltage Sense is turned OFF, input voltage level will not be monitored.

NOTE: Voltage Sense takes precedence over Timer.

**DIP 3**
If the Timer feature is turned ON and switch input is activated, output voltage will be provided for specified timer duration.

**DIP 4-5**
Switch settings will determine how long output will be active after the switch input is activated.

NOTE: If an invalid time is selected (e.g. Up, Up, Up or Down, Down, Down) the output will turn off 10 seconds after the switch input is activated.

**DIP 6**
Steady Ground Input Applications:
Applying ground to the switch input will activate the output, removing ground from switch input will disable the output. If ground is applied once again, the output will be re-activated, and the timer will reset/start over.

Momentary Ground Input Applications:
Applying a pulsed ground to the switch input will activate the output, a seond pulsed ground to the switch input will disable the output. If a pulsed ground is applied once again, the output will be re-activated, and the timer will reset/start over.

## Steady Ground Input Applications

| Trigger Input | Switch Input | Output | Voltage Sense (ON) | Timer (ON) |
|---|---|---|---|---|
| Active | N/A | ON | Monitoring Input Voltage | N/A |
| Not Active | N/A | OFF | N/A | N/A |
| Not Active | Activated (Input Grounded) | ON | Monitoring Input Voltage | Timer Starts |
| Not Active | Deactivated (Ground Removed) | OFF | N/A | Timer Off |
| Not Active | Activated (Input Grounded) | ON | Monitoring Input Voltage | Timer Starts |

## Momentary Ground Input Applications

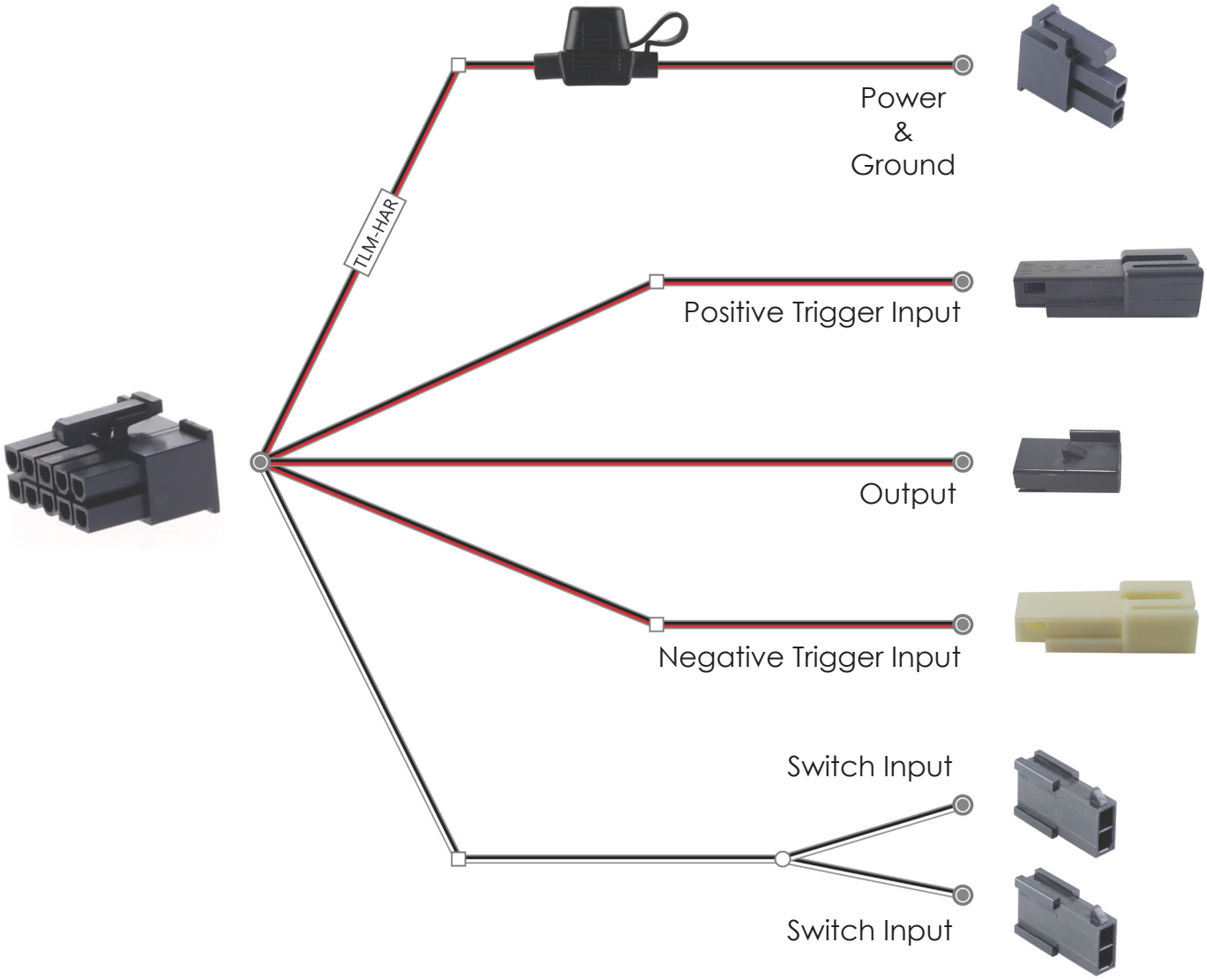
| Trigger Input | Switch Input | Output | Voltage Sense (ON) | Timer (ON) |
|---|---|---|---|---|
| Active | N/A | ON | Monitoring Input Voltage | N/A |
| Not Active | N/A | OFF | N/A | N/A |
| Not Active | Activated (Pulsed) | ON | Monitoring Input Voltage | Timer Starts |
| Not Active | Activated (Pulsed) | OFF | N/A | Timer Off |
| Not Active | Activated (Pulsed) | ON | Monitoring Input Voltage | Timer Starts |

In the tables above "Trigger Input" refers to the Positive Trigger Input and Negative Trigger Input of the module.

If a Trigger Input is active, its function takes precedence. Attempting to activate the Switch Input while a Trigger Input is active will have no effect on the modules output.

# WIRING DIAGRAMS:

## TLM Harness

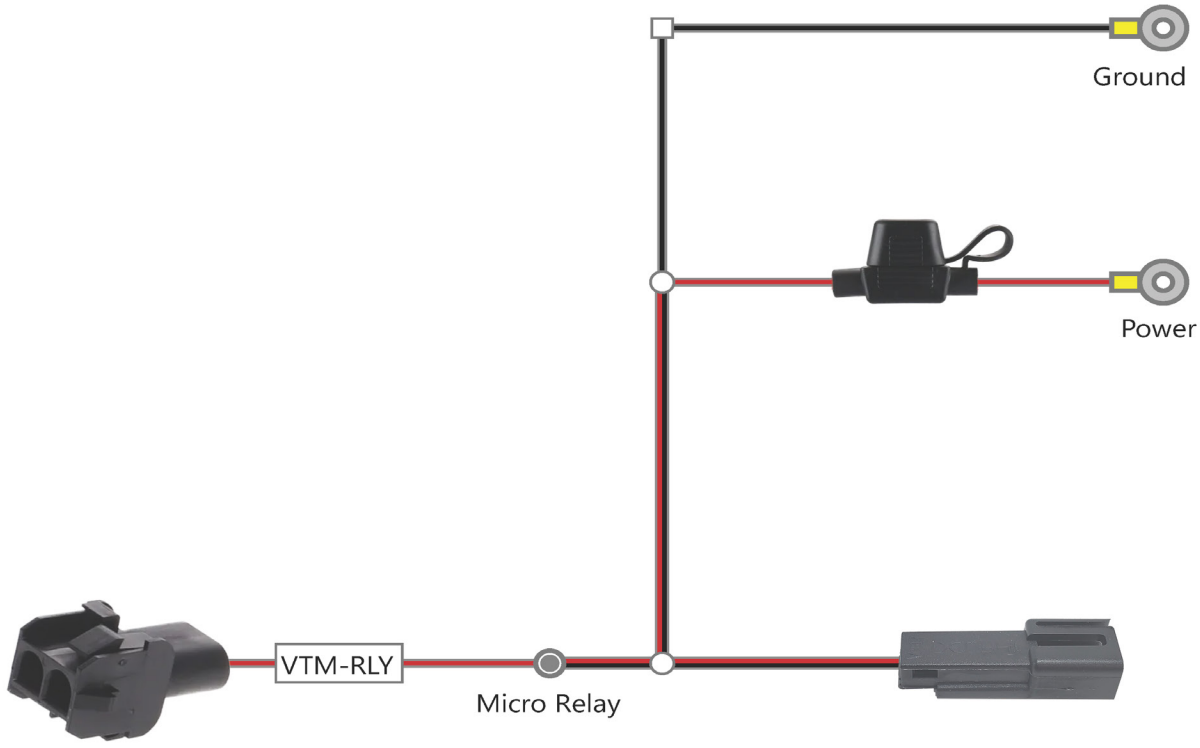



If necessary, connectors may be removed for hardwire applications.

Positive Trigger Input: Applying 12V to Red wire will activate output
Negative Trigger Input: Applying ground to Black wire will activate output
Switch Input: Closing loop between switch input wire leads will activate output

# VTM-RLY (Optional Harness)

For larger current demands, use the optional VTM-RLY and connect to power and ground, along with the TLM harness. VTM-RLY supports up to 15A.




VTM-RLY Output connects to P-VTMxxx harness for vehicle lighting

VTM-RLY Input connects to the output from the TLM harness

## Troubleshooting Table:

| | | |
|---|---|---|
| Output does not activate when Positive or Negative Trigger Input is activated | Check fuse on TLM harness | Replace fuse if it is bad |
| | Check power and ground connections | Fix loose or bad wire connection |
| | Confirm module has power and ground at its input | Replace module or damaged harness if necessary |
| Output does not activate when Switch Input is activated | Confirm DIP 6 on module matches switch type being used | Change DIP 6 setting to match switch type |
| | Confirm switch being used is not defective | Replace bad switch if necessary |
| Switch Input - Irregular behavior | Output does not turn off with switch | Check DIP 6 and confirm it matches switch type |
| | | Confirm switch is not damaged or defective; replace if necessary |
| | Output activates for 5 seconds then turns off | Input voltage to module is below Voltage Sense setting |




**Phone – 866-931-8021 (option 3)**

**E-Mail – support@stingersolutions.com**

**StingerSolutions.com**



**REV. B**

# PURCHASED COMPONENT KEY FEATURES

| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)<br>**N/A** |
| LOAD/RATING REQUIREMENT<br>**N/A** |
| MATERIAL REQUIREMENT<br>**N/A** |
| PACKAGING REQUIREMENT<br>**N/A** |
| OTHER REQUIREMENTS<br>**PLUG AND PLAY POWER HARNESS FOR TOPPER FORD KITS**<br>**POWER FROM BATTERY TO TLM MODULE** |




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PRINTED DOCUMENT IS UNCONTROLLED



## TOLERANCES & INSPECTION

*UNLESS OTHERWISE SPECIFIED*

**ALL BEND ANGLES ARE 90 DEGREES**

**ALL DIMENSIONS ARE IN INCHES.**

**REFERENCE DIMENSIONS (X.XXX) DO NOT REQUIRE INSPECTION**

| FEATURES | HOLES/SLOTS | ANGLES |
|---|---|---|
| 0.0 = ± .125 | 0.0 = ± .062 | 0° = ± 2° |
| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

**Material Thickness: per ASTM Std.**
**Weld Callouts per AWS**

## RELEASE & REVISIONS

INITIAL ECN: **26830**

CURRENT ECN: **26830**

ECN DESCRIPTION:

**RELEASE FOR MARKET FILL**

REVISED BY: **EMB**

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
**AAMP**

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
**71904**

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE) (NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
**NO**

## PART / PRODUCT IDENTIFICATION

**ADRIAN STEEL®**

**ADRIAN STEEL COMPANY**
**906 JAMES STREET, ADRIAN, MI 49221**

REVISION LEVEL **A**

MAT'L USED: **PURCHASED**

DESIGNED BY: **E.BURKE**

DESCRIPTION: **HARN, PWR TLM BATT 16.8'**

WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

PART NUMBER: **71904**

## Bill of Materials

| Id | Type | Manufacturer | Part Number | Quantity |
|---|---|---|---|---|
| 1 | Wire | | 16 AWG Red GXL | 5130 mm |
| 2 | Wire | | 16 AWG Black GXL | 5130 mm |
| 3 | Ring Terminal | Molex | 19164-0027 | 2 |
| 4 | Connector | Molex | 46993-0211 | 1 |
| 5 | Contact | Molex | 39-00-0081 | 2 |
| 6 | Splice | | ATM Fuse Holder | 1 |
| 7 | Corrugated Tubing | | 0.25" Nylon Split Wall | 5435 mm |
| 8 | Fuse | Littelfuse | 297010.WXNV | 1 |
| 9 | Cable Tie | HellermannTyton | T30LL0M4 | 10 |
| 10 | Label | | Heat Shrink Style Label | 1 |

## Coverings

| Id | Assembly |
|---|---|
| [7] | |

## Notes

1. Lock tape loom behind connector with Tesa 51036
2. Tape knuckle with Tesa 51036
3. Install 10A Mini Fuse

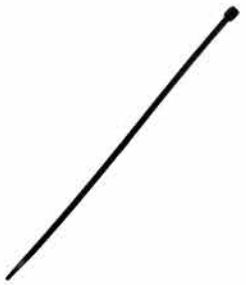
| From | To | Conductor | Color | Gauge |
|---|---|---|---|---|
| Fuse_Holder1 | C1.1 | W2.Red | | 16 AWG |
| Fuse_Holder1 | RT1 | W1.Red | | 16 AWG |

| From | To | Color | Gauge |
|---|---|---|---|
| RT1 | Fuse_Holder1 | | 16 AWG |




| From | To | Color | Gauge |
|---|---|---|---|
| RT2 | C1.2 | | 16 AWG |

| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C1.1 | Fuse_Holder1 | | 16 AWG | 39-00-0081 |
| C1.2 | RT2 | | 16 AWG | 39-00-0081 |



[9]

## Revisions

| Rev. | Date | Author | Description |
|---|---|---|---|
| A | 10/29/2023 | Bennet Fisher | Initial Drawing |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

**PROPRIETARY AND CONFIDENTIAL**

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AAMP GLOBAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF AAMP GLOBAL IS PROHIBITED.

| | Name | Date |
|---|---|---|
| Designed By | Bennet Fisher | 10/29/2023 |
| Engineering Approval | | |
| Manufacturing Approval | | |
| Revision Approval | | |
| Quality Assurance | | |

AAMP
ADVANCING VEHICLE TECHNOLOGY

| | |
|---|---|
| Part Number: 71904-A | Revision: A |
| Description: HARN, PWR TLM BATT 16.8' | Sheet: 1 |

# PURCHASED COMPONENT KEY FEATURES

| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)<br>**N/A** |
| LOAD/RATING REQUIREMENT<br>**N/A** |
| MATERIAL REQUIREMENT<br>**N/A** |
| PACKAGING REQUIREMENT<br>**N/A** |
| OTHER REQUIREMENTS<br>**PLUG AND PLAY MAGNETIC SWITCHES FOR TOPPER INTERIOR LIGHTING**<br><br>**BAG INCLUDES:**<br>**3 MAGNETIC SWITCH SETS WITH WIRE LEADS AND CONNECTORS** |



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PRINTED DOCUMENT IS UNCONTROLLED



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|---|---|---|
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| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

Material Thickness: per ASTM Std.
Weld Callouts per AWS

## RELEASE & REVISIONS

INITIAL ECN: 26830

CURRENT ECN: 26830

ECN DESCRIPTION:

RELEASE FOR MARKET FILL

REVISED BY: EMB

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
AAMP

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER
71907

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)
NO

## PART / PRODUCT IDENTIFICATION

ADRIAN STEEL®

ADRIAN STEEL COMPANY
906 JAMES STREET, ADRIAN, MI 49221

REVISION LEVEL
A

MAT'L USED: PURCHASED

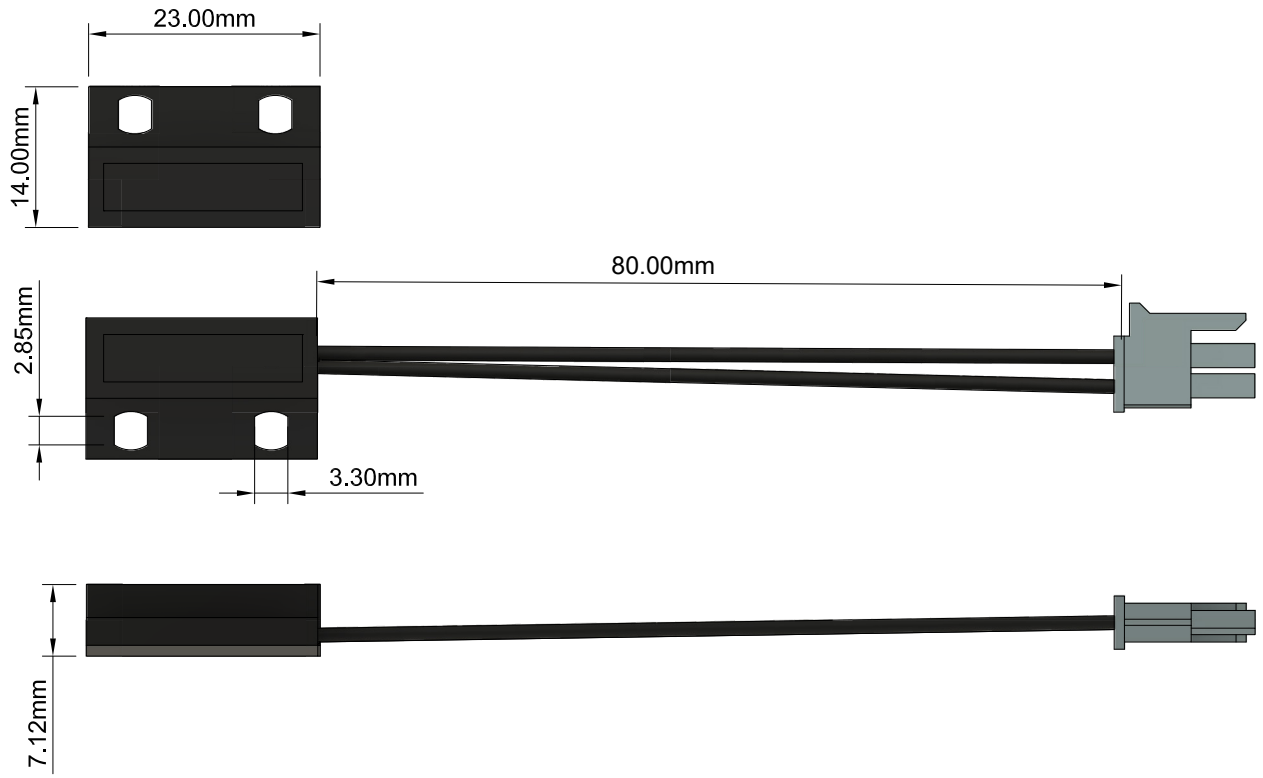
DESIGNED BY: E.BURKE

DESCRIPTION: TLM MAGNETIC SWITCH P&P

WEIGHT (Lbs.): 0.02

SEGMENT CODE: ELE

PART NUMBER: 71907




Magnetic Switch Type: N.O. (Normally Open)
Housing: Black ABS 15E1
Wire: 22AWG Black
Operating Distance: 15-20mm
Working Current: 0.5A
Operating Voltage: 0-110Vdc
IP Rating: IP67
Operating Temperature: -40 ~ 110°C
Reed Operating Temperature: -40 ~ 125°C
ABS Operating Temperature: -40 ~ 110°C
Package: 3pcs/kitted set

| Dept. | Technical reference | Created by Bennet Fisher 4/12/2024 | Approved by |
|---|---|---|---|
| | | Document type | Document status |
| | | Title: Magnetic Switch Part # 71907 | DWG No. |
| | | | Rev. / Date of Issue / Sheet 1/1 |

OKI Open up your dreams

# Reed Switch

Issue Date: Mar. 25, 2008

# ORD324

## ■Features

- In order to achieve high electrical capacity and long, uses iridium with high harness and high melting point.
- When power is turned on maximum voltage can reach 200V.
- To maintain the contact stability of the contacts, the contacts are sealed in a glass tube filled with inert gas.

## ■Applications

- Position detection machine
- Rotation detection machine
- Vehicle electrical equipment
- Civil products

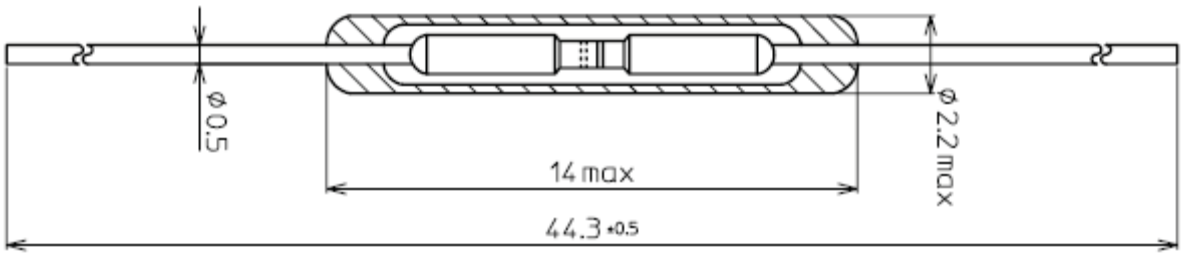
## ■Appearance



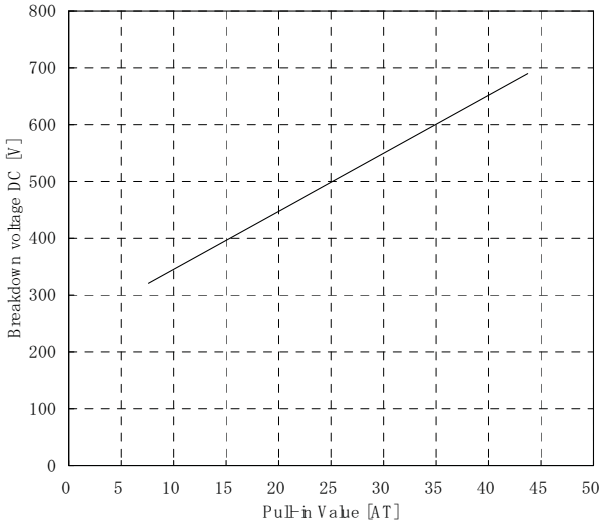
## ■Features

| Contact material / contact form | Iridium / 1A | Unit |
|---|---|---|
| Pull in value (PI) | 10 ~ 40 | AT |
| Disconnect value (DO) | 5 min | AT |
| Contact resistance value (CR) | 100max | mΩ |
| Withstand voltage between contacts | 250min | Vdc |
| Insulation resistance | $1 \times 10^{10}$ min | Ω |
| Electrostatic capacity between contacts | 0.3max | pF |
| Contact rating | 10 | W |
| Maximum switching voltage | 200 | Vdc |
| Maximum switching current | 0.5 | A |
| Maximum power current | 1 | A |
| Release time | 0.4max | ms |
| Bounce time | 0.3max | ms |
| Recovery time | 0.05max | ms |
| Shock proof | 100G-6ms | --- |
| Vibration resistance | 50G (10 ~ 2kHz) | --- |
| Operating temperature range | -40 ~ +125 | °C |
| Life (5Vdc-1mA, impedance load) | $1 \times 10^{8}$ | --- |

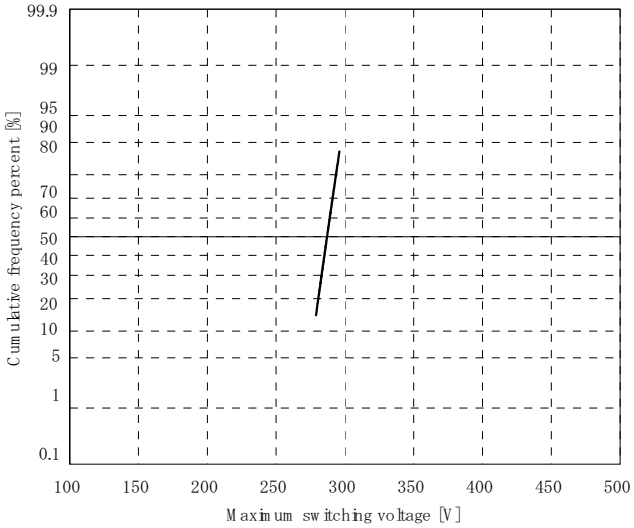
## ■Dimensions (unit: mm)



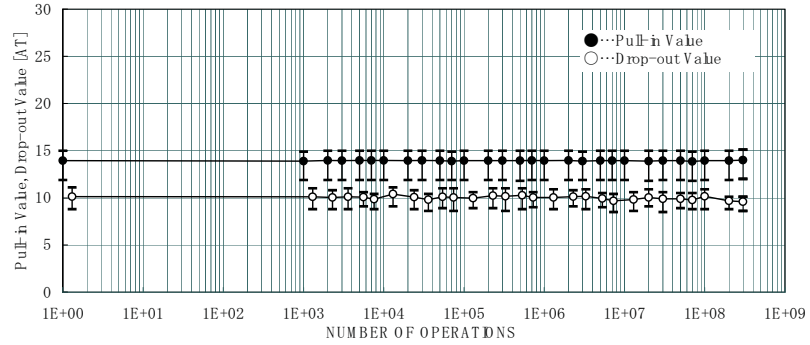
## ■Withstand voltage between contacts

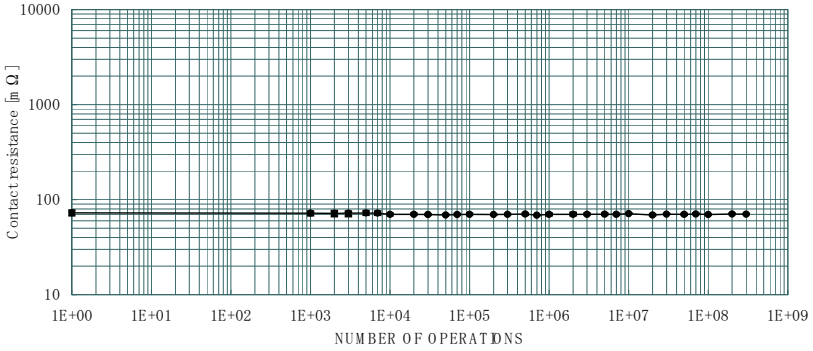


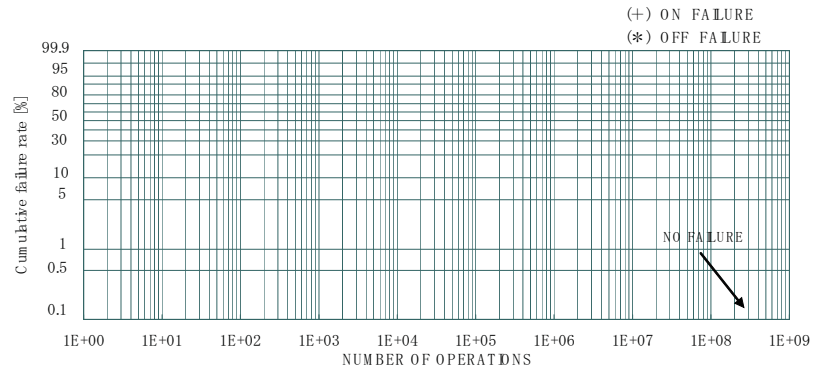

## ■Maximum switching voltage




## ■Life test data: 5Vdc-1mA

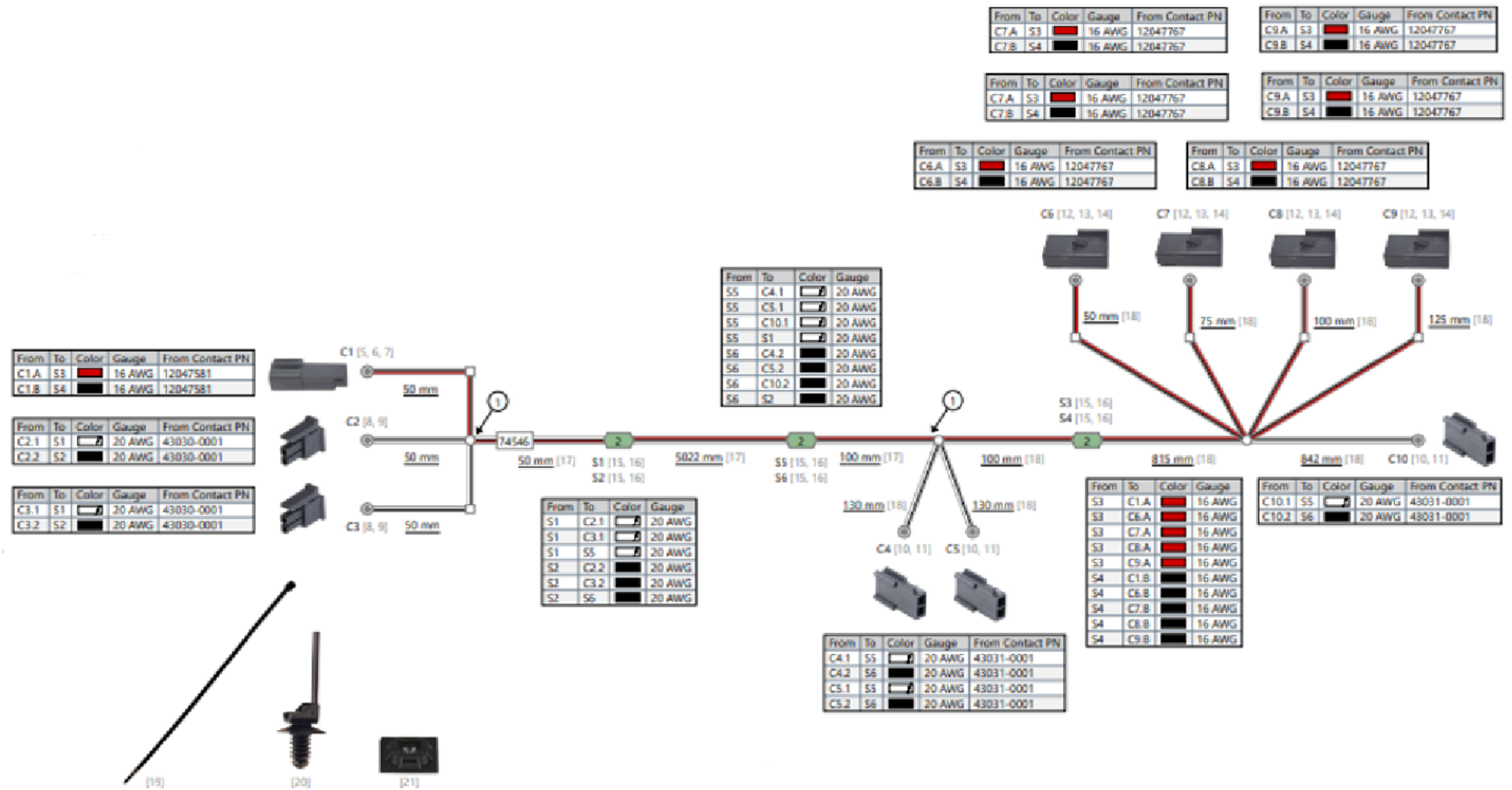


# PURCHASED COMPONENT KEY FEATURES

| DESCRIPTION OF REQUIREMENTS |
|---|
| DIMENSIONAL REQUIREMENTS (AS SHOWN ON DRAWING)<br>**N/A** |
| LOAD/RATING REQUIREMENT<br>**N/A** |
| MATERIAL REQUIREMENT<br>**N/A** |
| PACKAGING REQUIREMENT<br>**N/A** |
| OTHER REQUIREMENTS<br>**N/A** |




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PRINTED DOCUMENT IS UNCONTROLLED



## TOLERANCES & INSPECTION

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| FEATURES | HOLES/SLOTS | ANGLES |
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| 0.00 = ± .062 | 0.00 = ± .031 | 0.0° = ± 1° |
| 0.000 = ± .031 | 0.000 = ± .015 | |

**Material Thickness: per ASTM Std.**
**Weld Callouts per AWS**

## RELEASE & REVISIONS

**INITIAL ECN:** 27529

**CURRENT ECN:** 27529

ECN DESCRIPTION:

**RELEASE.**

REVISED BY: **N/A**

## PURCHASED COMPONENT

REFERENCED SUPPLIER AND/OR MANUFACTURER
**STINGER**

REFERENCED SUPPLIER AND/OR MANUFACTURER PART NUMBER

COLOR (ONLY LIST IF COLOR SPECIFIC)

COMMODITY ITEM (Y/N) (YES = ALL DIMENSIONS AND NOTES ARE REFERANCE)
(NOTE: DIMENSIONS AND FEATURES MAY VARY FOR A COMODITY ITEM.)

## PART / PRODUCT IDENTIFICATION

**ADRIAN STEEL®**

**ADRIAN STEEL COMPANY**
**906 JAMES STREET, ADRIAN, MI 49221**

REVISION LEVEL **A**

MAT'L USED: **$PRPSHEET:{Mat'l Used}**

DESIGNED BY: **JJC**

DESCRIPTION: **POWER FROM TLM TO LIGHTS HARNESS4.5 & 5 FT BEDS**

WEIGHT (Lbs.): **0.2**

SEGMENT CODE: **ELE**

PART NUMBER: **74546**

## Bill of Materials

| Id | Type | Manufacturer | Part Number | Quantity |
|---|---|---|---|---|
| 1 | Wire | | 20 AWG White-Black | 7539 mm |
| 2 | Wire | | 20 AWG Black | 7539 mm |
| 3 | Wire | | 16 AWG Red GXL | 8932 mm |
| 4 | Wire | | 16 AWG Black GXL | 8932 mm |
| 5 | Connector | Aptiv | 12047663 | 1 |
| 6 | Contact | Aptiv | 12047581 | 2 |
| 7 | Lock | Aptiv | 12047665 | 1 |
| 8 | Connector | Molex | 43025-0210 | 2 |
| 9 | Contact | Molex | 43030-0001 | 4 |
| 10 | Connector | Molex | 43020-0201 | 3 |
| 11 | Contact | Molex | 43031-0001 | 6 |
| 12 | Connector | Aptiv | 12047662 | 4 |
| 13 | Contact | Aptiv | 12047767 | 8 |
| 14 | Lock | Aptiv | 12047664 | 4 |
| 15 | Splice | | Generic Splice | 6 |
| 16 | Heat Shrink | CYG | CB-DWT-3/16 | 6 |
| 17 | Corrugated Tubing | | 0.375" Nylon Loom | 5172 mm |
| 18 | Tape | Tesa | 51608 | |
| 19 | Cable Tie | HellermannTyton | T30LL0M4 | 35 |
| 20 | Cable Tie with Mount | Hellermann Tyton | T50RTM250HSM4 | 10 |
| 21 | Cable Tie Mount | Panduit | SGABM25-AV-C300 | 10 |
| 22 | Label | | Heat Shrink Style Label | 1 |

## Coverings

| Id | Assembly |
|---|---|
| [17] | |
| [18] | |

## Notes

1. Lock tape end of loom with 51608

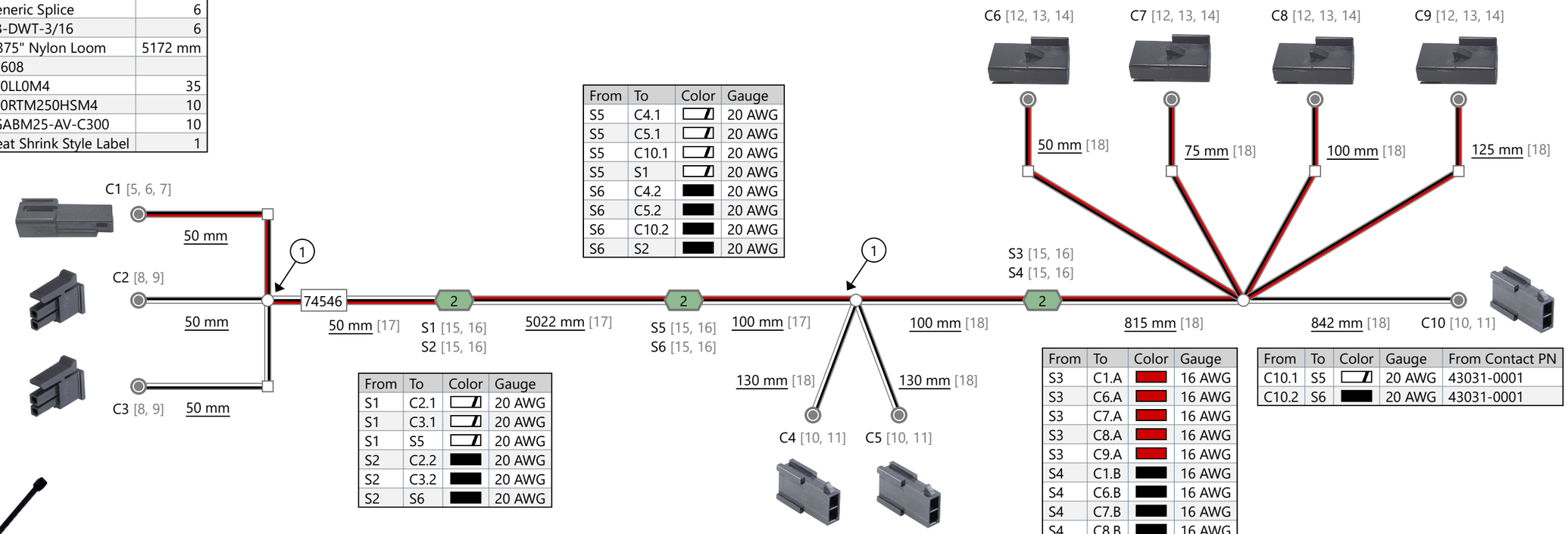
| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C7.A | S3 | | 16 AWG | 12047767 |
| C7.B | S4 | | 16 AWG | 12047767 |

| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C9.A | S3 | | 16 AWG | 12047767 |
| C9.B | S4 | | 16 AWG | 12047767 |

| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C6.A | S3 | | 16 AWG | 12047767 |
| C6.B | S4 | | 16 AWG | 12047767 |

| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C8.A | S3 | | 16 AWG | 12047767 |
| C8.B | S4 | | 16 AWG | 12047767 |

| From | To | Color | Gauge |
|---|---|---|---|
| S5 | C4.1 | | 20 AWG |
| S5 | C5.1 | | 20 AWG |
| S5 | C10.1 | | 20 AWG |
| S5 | S1 | | 20 AWG |
| S6 | C4.2 | | 20 AWG |
| S6 | C5.2 | | 20 AWG |
| S6 | C10.2 | | 20 AWG |
| S6 | S2 | | 20 AWG |




| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C1.A | S3 | | 16 AWG | 12047581 |
| C1.B | S4 | | 16 AWG | 12047581 |

| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C2.1 | S1 | | 20 AWG | 43030-0001 |
| C2.2 | S2 | | 20 AWG | 43030-0001 |

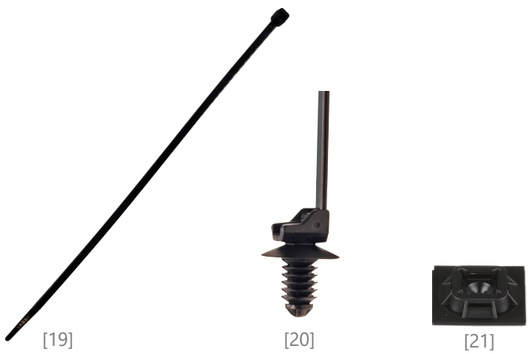
| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C3.1 | S1 | | 20 AWG | 43030-0001 |
| C3.2 | S2 | | 20 AWG | 43030-0001 |

| From | To | Color | Gauge |
|---|---|---|---|
| S1 | C2.1 | | 20 AWG |
| S1 | C3.1 | | 20 AWG |
| S1 | S5 | | 20 AWG |
| S2 | C2.2 | | 20 AWG |
| S2 | C3.2 | | 20 AWG |
| S2 | S6 | | 20 AWG |

| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C4.1 | S5 | | 20 AWG | 43031-0001 |
| C4.2 | S6 | | 20 AWG | 43031-0001 |
| C5.1 | S5 | | 20 AWG | 43031-0001 |
| C5.2 | S6 | | 20 AWG | 43031-0001 |

| From | To | Color | Gauge |
|---|---|---|---|
| S3 | C1.A | | 16 AWG |
| S3 | C6.A | | 16 AWG |
| S3 | C7.A | | 16 AWG |
| S3 | C8.A | | 16 AWG |
| S3 | C9.A | | 16 AWG |
| S4 | C1.B | | 16 AWG |
| S4 | C6.B | | 16 AWG |
| S4 | C7.B | | 16 AWG |
| S4 | C8.B | | 16 AWG |
| S4 | C9.B | | 16 AWG |

| From | To | Color | Gauge | From Contact PN |
|---|---|---|---|---|
| C10.1 | S5 | | 20 AWG | 43031-0001 |
| C10.2 | S6 | | 20 AWG | 43031-0001 |


[19]


[20]


[21]

## Revisions

| Rev. | Date | Author | Description |
|---|---|---|---|
| A | 07/09/2024 | Bennet Fisher | Initial Drawing |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS [INCHES]
TOLERANCES: ±5MM

**PROPRIETARY AND CONFIDENTIAL**

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| | Name | Date |
|---|---|---|
| Designed By | Bennet Fisher | 07/09/2024 |
| Engineering Approval | | |
| Manufacturing Approval | | |
| Revision Approval | | |
| Quality Assurance | | |

Stinger® Commercial

| | |
|---|---|
| Part Number: 74546 | Revision: A |
| Description: 4.5'-5' Bed Hood Latch Security Harness | Sheet: 1 |