

## MRI DOWNLIGHT INSTALLATION INSTRUCTIONS

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**Risk of Fire To be installed only by a licensed professional electrician**

**Risk of Electric Shock: Disconnect power at fuse or circuit breaker before installing or servicing.**

**Always wear protective equipment installing this product including Goggles and gloves.**

### Mechanical Installation:

(If assembled with Doorframe) Remove doorframe by firmly pulling on one side of door until it moves an inch or so from the plaster flange (PF). Pull remaining sides until they are equal. Continue pulling whole frame until it stops about 4 inches from the PF. Squeeze springs to clear the spring slots and seal doorframe in a plastic bag to prevent dust entrance until final assembly.

#### Flanged/Drywall Installation: (NEMA type "F" ceilings)

Find center line of fixture location. Install hanger bars in housing and slide hanger bar clips over bars. Four total, two per bar. Locate fixture aperture so that the plaster ring opening is flush vertically with finished ceiling and fixture aperture is located horizontally in the correct location. Please note that the doorframe seal to the ceiling is contingent on the PF being flush or slightly recessed before doorframe installation. Secure hanger bar clips to joists using screws or nails. Tighten screws on hanger bar clips. If the hanger bars are longer than will fit between joists, trim to length. To affix final fixture position, tighten screws on fixture body so that they lock it in place.

Cut drywall ceiling cutout for fixture, matching the plaster frame size carefully (8-3/8" diameter). Do not oversize the hole or gaps will need to be filled. **Ceiling Cutting Notes:**(Doorframe is oversized by only 3/8 inch to allow a tight seal.) Note: Do not cut ceiling to can size. Spring slots must be kept clear for Doorframe installation.

(Continue with Electrical Installation)

#### T-Bar Grid (NEMA type "G", "NFG" or "SS" ceilings)

Find center line of fixture location. Install hanger bars in housing and slide hanger bar clips over bars. Four total with two per bar. Cut ceiling panel for fixture, matching the plaster frame size carefully (8-3/8" diameter). Do not oversize the hole. Locate fixture aperture so that the plaster ring opening is flush vertically with finished ceiling and fixture aperture is located horizontally in the correct location. Please note that the doorframe seal to the ceiling is contingent on the PF being flush or slightly recessed above room-side surface of panel before doorframe installation. Secure hanger bar clips to T-bar using screws. Use hanger wires for providing additional seismic support according to local code. Tighten screws on hanger bar clips. To affix final fixture position, tighten screws on fixture body so that they lock it in place.

**Panel Cutting Notes:** (Doorframe is oversized by only 3/8 inch to allow a tight seal.) Note: Do not cut ceiling to can size. Spring slots must be kept clear for Doorframe installation.

(Continue with Electrical Installation)

### Install Doorframe:

Remove any debris from inside fixture can. This should be dust free before continuing. Remove doorframe from sealed packaging. Secure suction cup opening tool to doorframe lens. Compress two springs, one in each hand and slip ends of springs into slots found inside plaster frame. Release springs just after the cut ends enter slots. Compress remaining third spring and insert it into remaining slot as before. While holding doorframe horizontal, push it into the fixture body until it begins to close on its own.

**Caution:** This doorframe is secured with a high pressure seal and therefore may close with high speed and pressure. Keep fingers outside of doorframe perimeter. Use suction cup opening tool for closing to prevent ceiling damage or injury.

### Electrical Installation

#### Electrical System:

##### Install Driver Wiring: (one per fixture)

Select a location outside of the faraday cage of the MRI suite to secure the driver. Attach the driver or driver panel to the wall or ceiling of the utility space using approved method. Do not penetrate the Faraday cage wall. The correct space should be unaffected by and shielded from the nearby magnetic field. (Warning: The driver and its enclosure is magnetic and must not be placed within the room where the MRI equipment operates.) The driver should have access to the Entrance Filter "Line In" knockout(s).

*(An Entrance filter is often required for filtering all RF energy from wires entering the faraday cage. This filter must be able to pass DC voltages and currents in excess of 62vdc and 1.0 amps with minimal impedance. [Most standard entrance filters will work but communications type filters will not.] Consider using multi-line filters to save space on the wall and simplify conduit and wiring work. )*

Connect the low voltage DC black (+) and Yellow (-) wires directly to each fixture through the correct filter so that the length of wire does not exceed 50 feet. Connect the supply wiring to the driver line side black and white wires, keeping them separated from the low voltage side. Connect the Ground connection in the driver box to

## MRI DOWNLIGHT INSTALLATION INSTRUCTIONS

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the building ground according to code. Be sure the fixture and filter are also grounded per code through wire or conduit system. Supply wire insulation must be rated for at least 90°C.

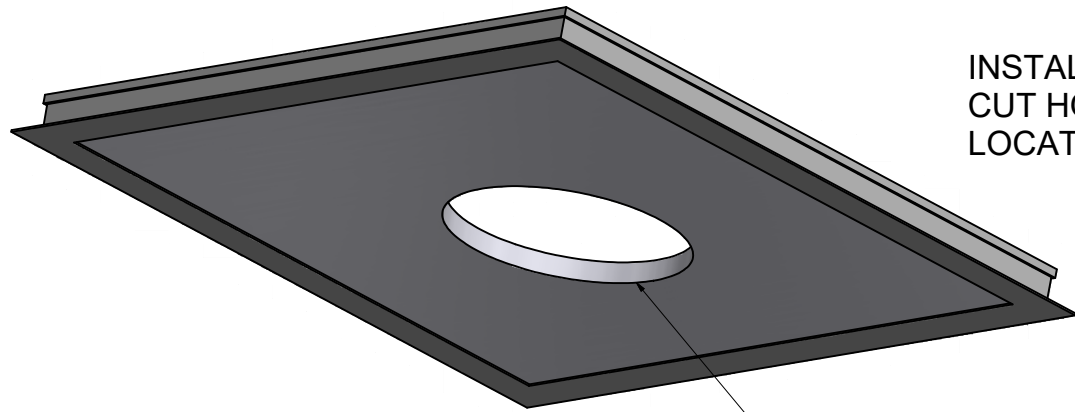
### Install Fixture Wiring:

Rough-in electrical conduit using site approved non-magnetic conduit systems. Pull insulated non-plated copper wire rated at least 18 AWG (meeting NEC and Local codes) to fixture junction box and connect with fixture wires using UL listed non-magnetic wire connectors. Supply wire insulation must be rated for at least 90°C.

DOWNLIGHT INSTALL FOR GRID

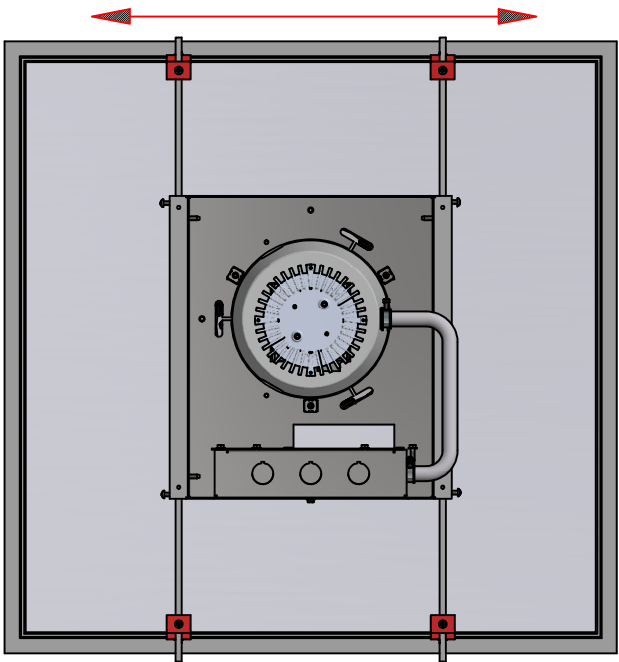
STEP 1: CUT HOLE

INSTALL CEILING PANEL AND CUT HOLE IN THE DESIRED LOCATION.



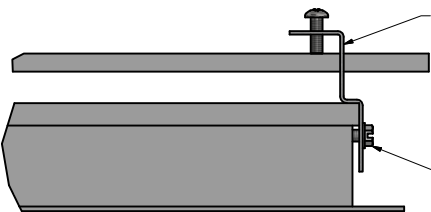
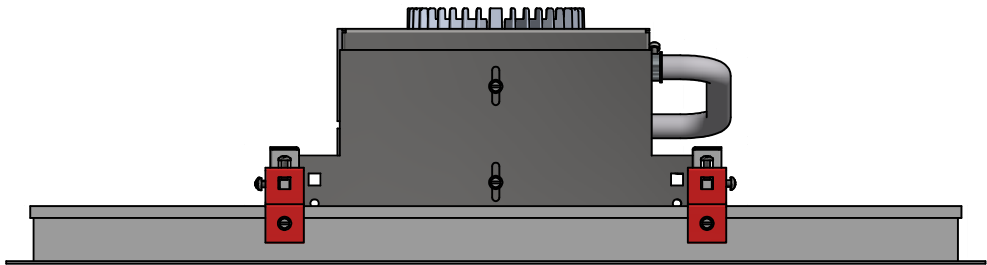
CUT HOLE 8.50" +0.0"  
-0.125"

STEP 2: HORIZONTAL ALIGNMENT



ALIGN THE ENTIRE DOWNLIGHT ASSEMBLY IN THE HORIZONTAL DIRECTION BY SLIDING THE GRID BRACKETS ON THE GRID.

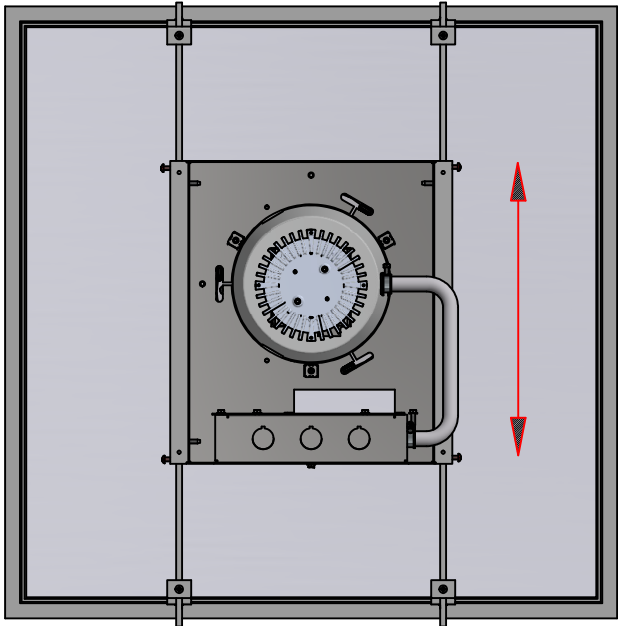
STEP 3: SECURE MOUNTING BRACKETS



MOUNTING BRACKET

#8 TEK SCREW OR SIMILAR (By Others)

STEP 4: VERTICAL ALIGNMENT



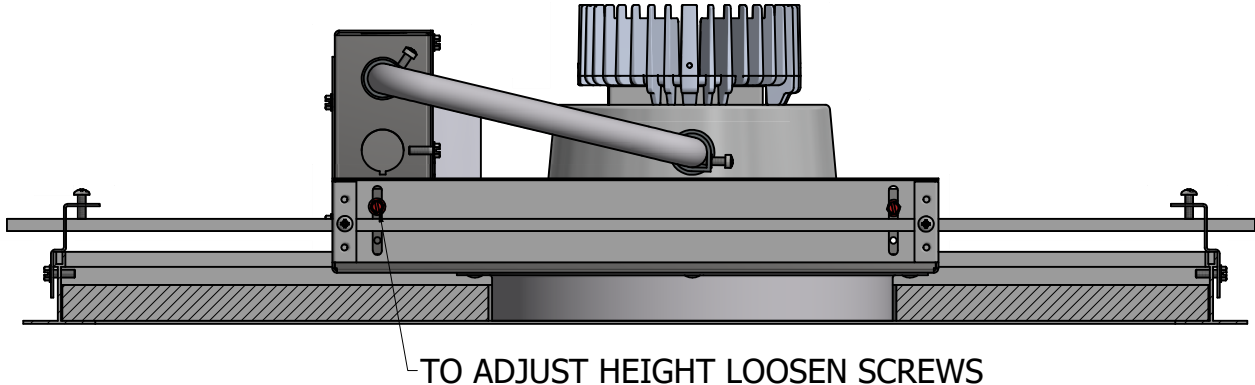
ALIGN THE ENTIRE DOWNLIGHT ASSEMBLY IN THE VERTICAL DIRECTION BY LOOSENING THE SET SCREWS (SHOWN IN RED) AND SLIDING THE ASSEMBLY ALONG THE DIRECTIONS OF THE ALUMINUM GUIDE RAILS. ONCE IN PLACE SECURE THE SET SCREWS SO THE ENCLOSURE DOES NOT MOVE.

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SCALE: DO NOT SCALE	DESCRIPTION: INSTALLATION DETAILS	PART #: IBD/SBD/PBD DOWNLIGHT
	APPROVED BY:	APPROVED DATE:
	DRAWN BY: REFUGIOR	DATE: 3/26/2020
TOLERANCES: UNITS: INCHES ANGULAR BEND ± 2° ANGULAR MACH ± .5° 0.0 ± .05 0.00 ± .030 0.000 ± .015	MATERIAL: MAKE TO ORDER	KURTZON LIGHTING 1420 S TALMAN AVE CHICAGO, IL 60608 WWW.KURTZON.COM
REV: 0	SHEET: 1	



STEP 5: SET HEIGHT OF DOWNLIGHT:

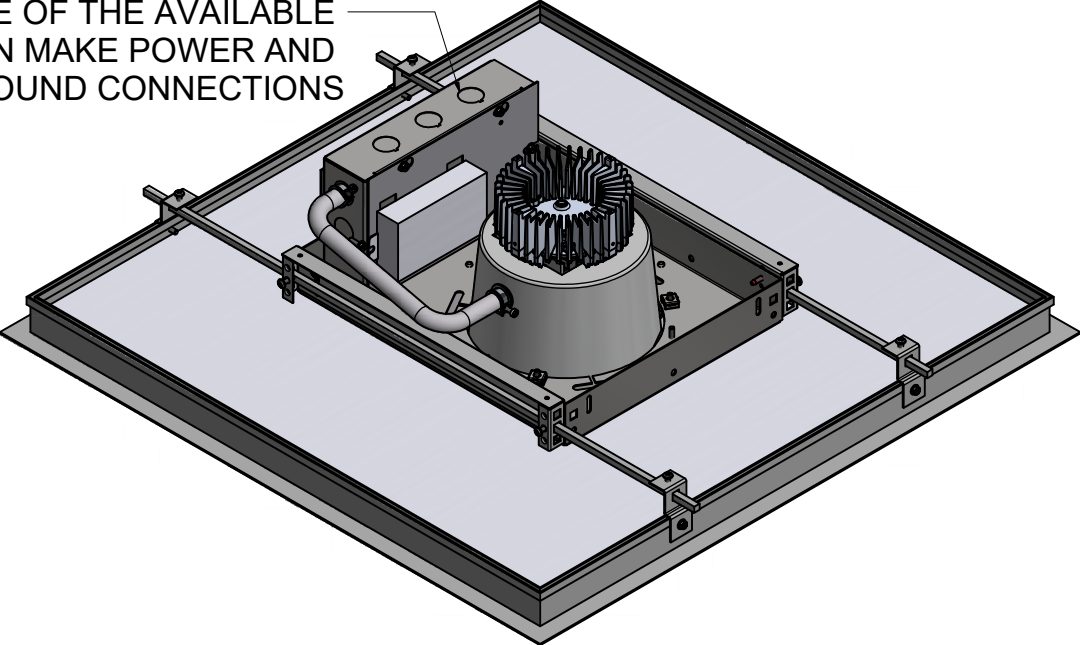


TO ADJUST HEIGHT LOOSEN SCREWS

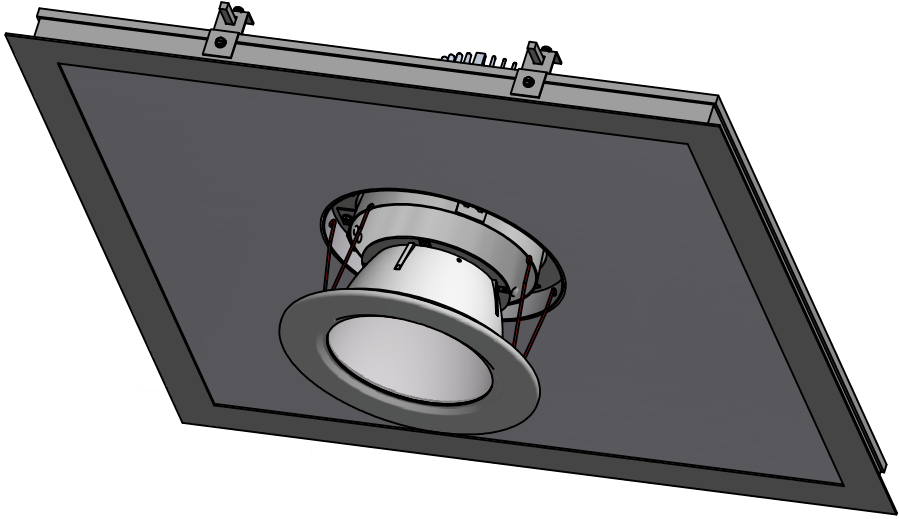
SET HEIGHT SO THAT THE PLASTER FRAME OF THE LIGHT SITS FLUSH OR SLIGHTLY RECESSED INTO THE CEILING OPENING

STEP 6: BRING IN SUPPLY POWER

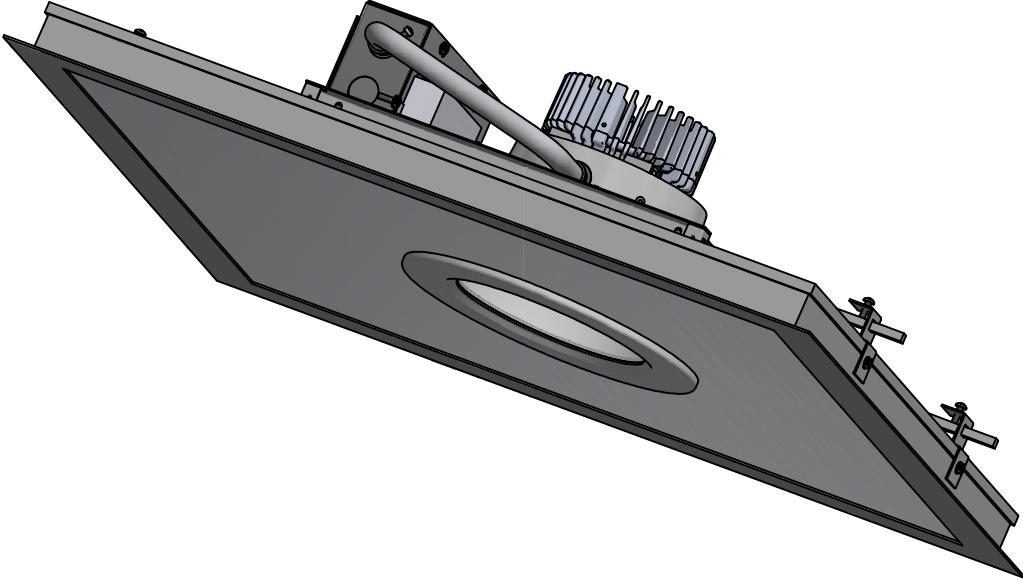
REMOVE ONE OF THE AVAILABLE KNOCKOUTS. THEN MAKE POWER AND GROUND CONNECTIONS




STEP 7: INSTALL DOOR FRAME



FOR LIGHT FIXTURES THAT COME WITH THE SPRING DOOR FRAME (SHOWN), SIMPLY PINCH THE TORSION SPRING AND POSITION INTO THE SLOT ONE AT A TIME. THEN GENTLY PUSH UP ON THE DOOR UNTIL IT PULLS SHUT.

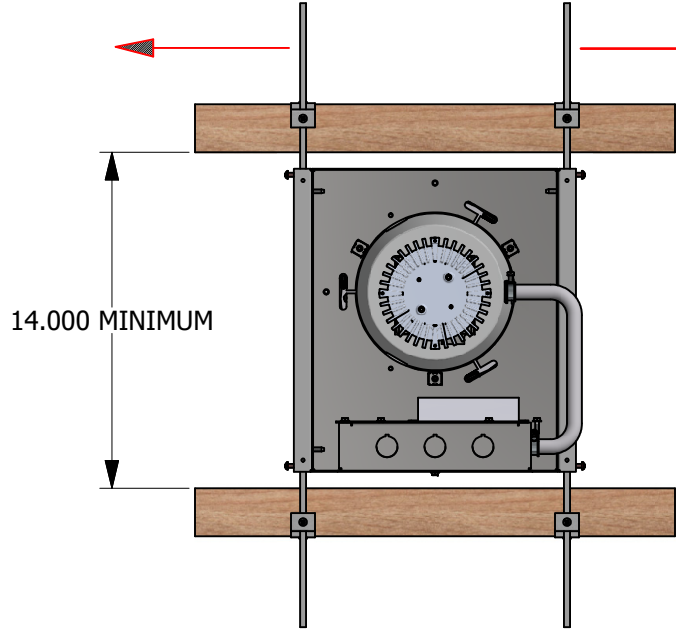


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SCALE: DO NOT SCALE	DESCRIPTION: INSTALLATION DETAILS	PART #: IBD/SBD/PBD DOWNLIGHT	
	APPROVED BY:	APPROVED DATE:	DRAWN BY: REFUGIOR
			DATE: 3/26/2020
TOLERANCES: UNITS: INCHES ANGULAR BEND ± 2° 0.0 ± .05 0.00 ± .030 0.000 ± .015	MATERIAL: MAKE TO ORDER	REV: 0	SHEET: 2
KURTZON LIGHTING 1420 S TALMAN AVE CHICAGO, IL 60608 WWW.KURTZON.COM			

**NOTE TO INSTALLER: (FOR DRYWALL CEILING INSTALLATION)**  
SINCE THE FIXTURE BODY IS LARGER THAN THE APERTURE AND DOOR FRAME, THE FIXTURE MUST BE INSTALLED PRIOR TO INSTALLING THE DRYWALL CEILING

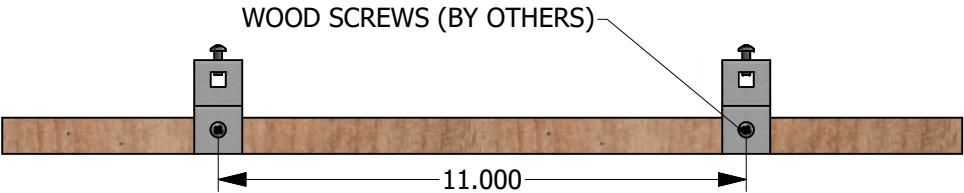
# DOWNLIGHT INSTALL FOR HARD-LID

## STEP 1: HORIZONTAL ALIGNMENT



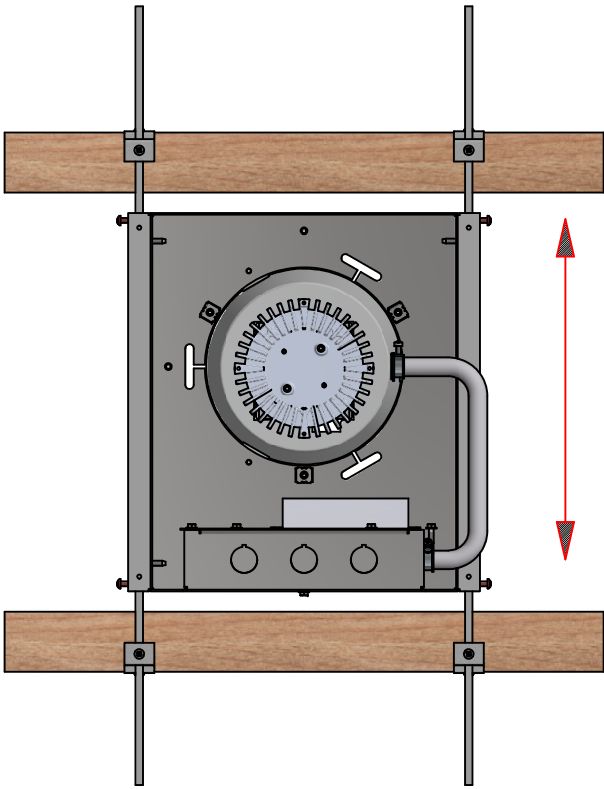
ADJUST THE BRACKETS TO THE CORRECT LOCATION ON THE GUIDE RAILS USING THE SET SCREWS. AFTER BRACKETS ARE SPACED APPROPRIATELY ON THE RAIL SLIDE THE LIGHT IN THE LEFT OR RIGHT DIRECTION UNTIL IT IS POSITIONED IN THE DESIRED LOCATION.

## STEP 2: SECURE BRACKETS IN PLACE



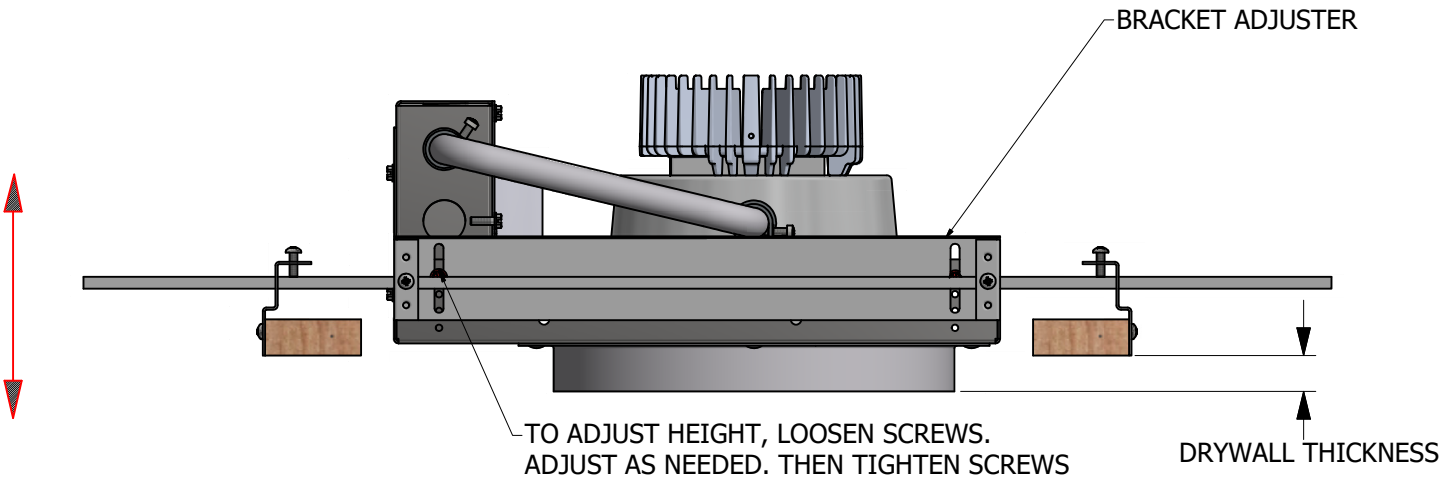
AFTER THE LIGHT FIXTUE IS IN PLACE, MECHANICALLY SECURE THE BRACKETS IN PLACE BY SCREWING INTO THE FRAMING MEMBERS (SCREWS BY OTHEERS)

## STEP 3: VERTICAL ALLIGNMENT



ALIGN THE ENTIRE DOWNLIGHT ASSEMBLY IN THE VERTICAL DIRECTION BY LOOSENING THE SET SCREWS (SHOWN IN RED) AND SLIDING THE ASSEMBLY ALONG THE DIRECTIONS OF THE ALUMINUM GUIDE RAILS. ONCE IN PLACE SECURE THE SET SCREWS SO THE ENCLOSURE DOES NOT MOVE.

## STEP 4: SET HEIGHT OF DOWNLIGHT:



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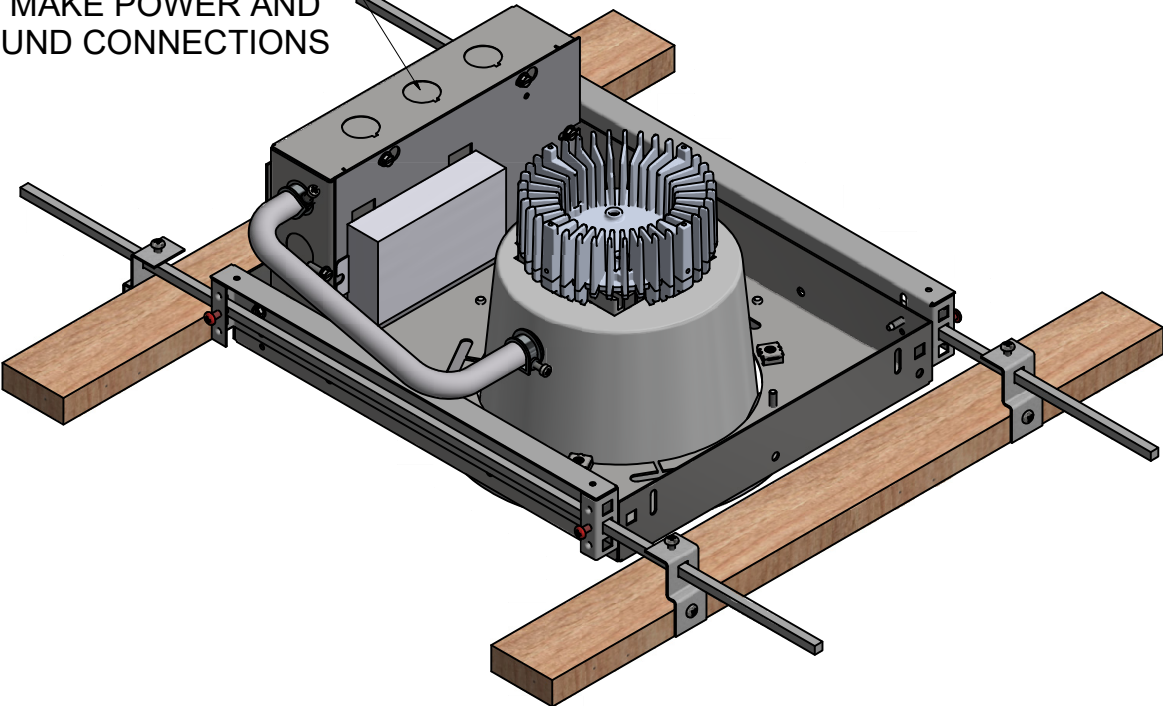
SCALE: DO NOT SCALE	DESCRIPTION: INSTALLATION DETAILS	PART #: IBD/SBD/PBD DOWNLIGHT
	APPROVED BY:	APPROVED DATE:
	DRAWN BY: REFUGIOR	DATE: 3/26/2020
TOLERANCES: UNITS: INCHES ANGULAR BEND ± 2° ANGULAR MACH ± .5° 0.0 ± .05 0.00 ± .030 0.000 ± .015	MATERIAL: MAKE TO ORDER	KURTZON LIGHTING 1420 S TALMAN AVE CHICAGO, IL 60608 WWW.KURTZON.COM
REV: 0	SHEET: 3	



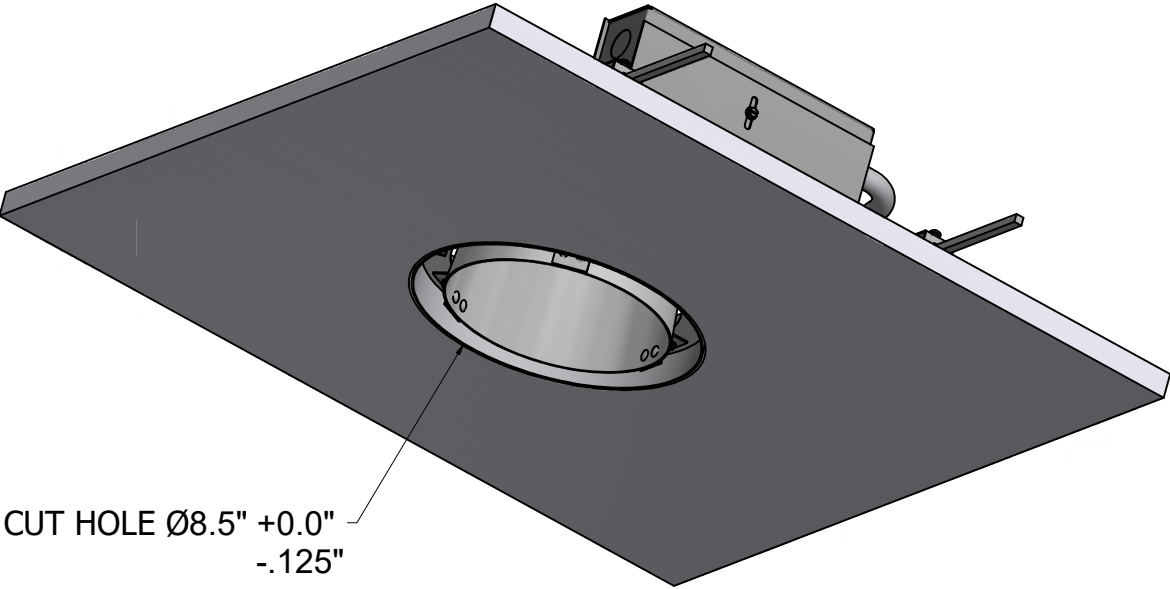


STEP 5: BRING IN SUPPLY POWER

REMOVE ONE OF THE AVAILABLE  
KNOCKOUTS. THEN MAKE POWER AND  
GROUND CONNECTIONS

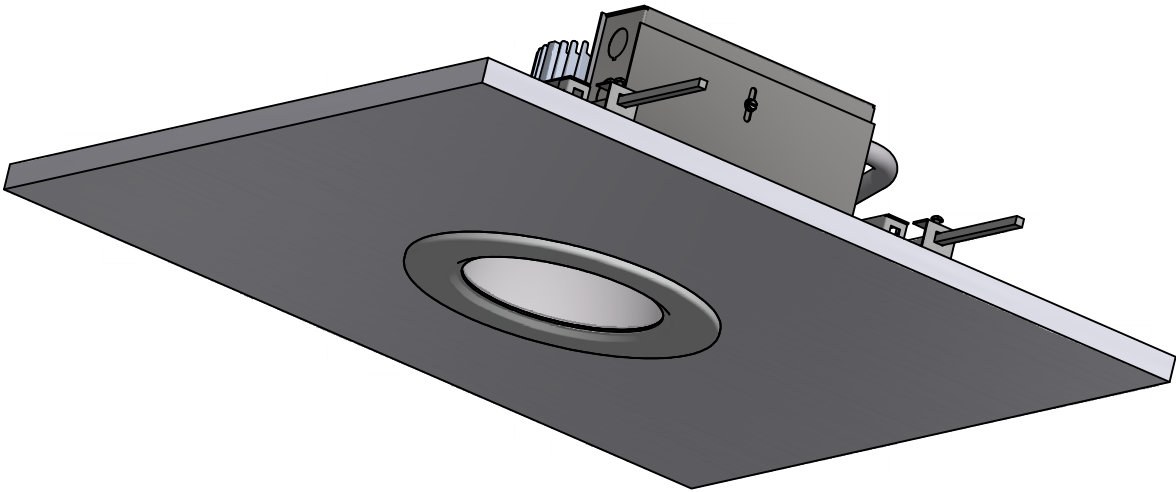
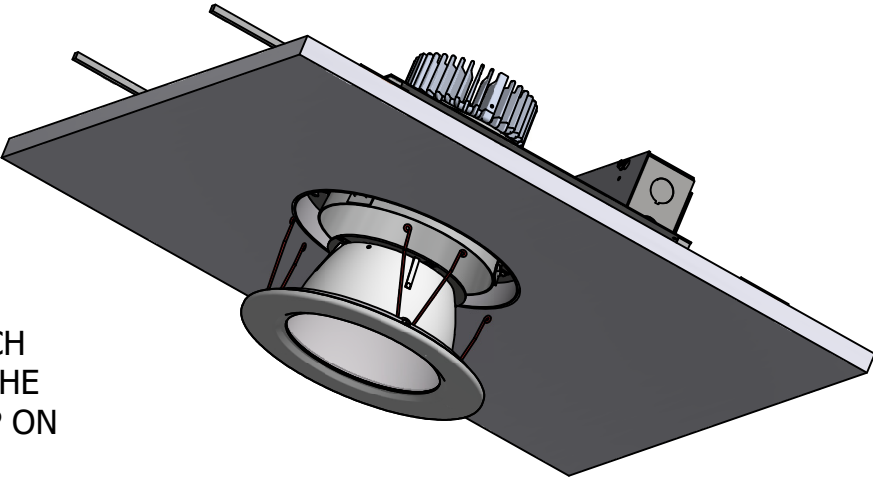


STEP 6: CUT HOLE AND INSTALL DRYWALL



STEP 7: INSTALL DOOR FRAME

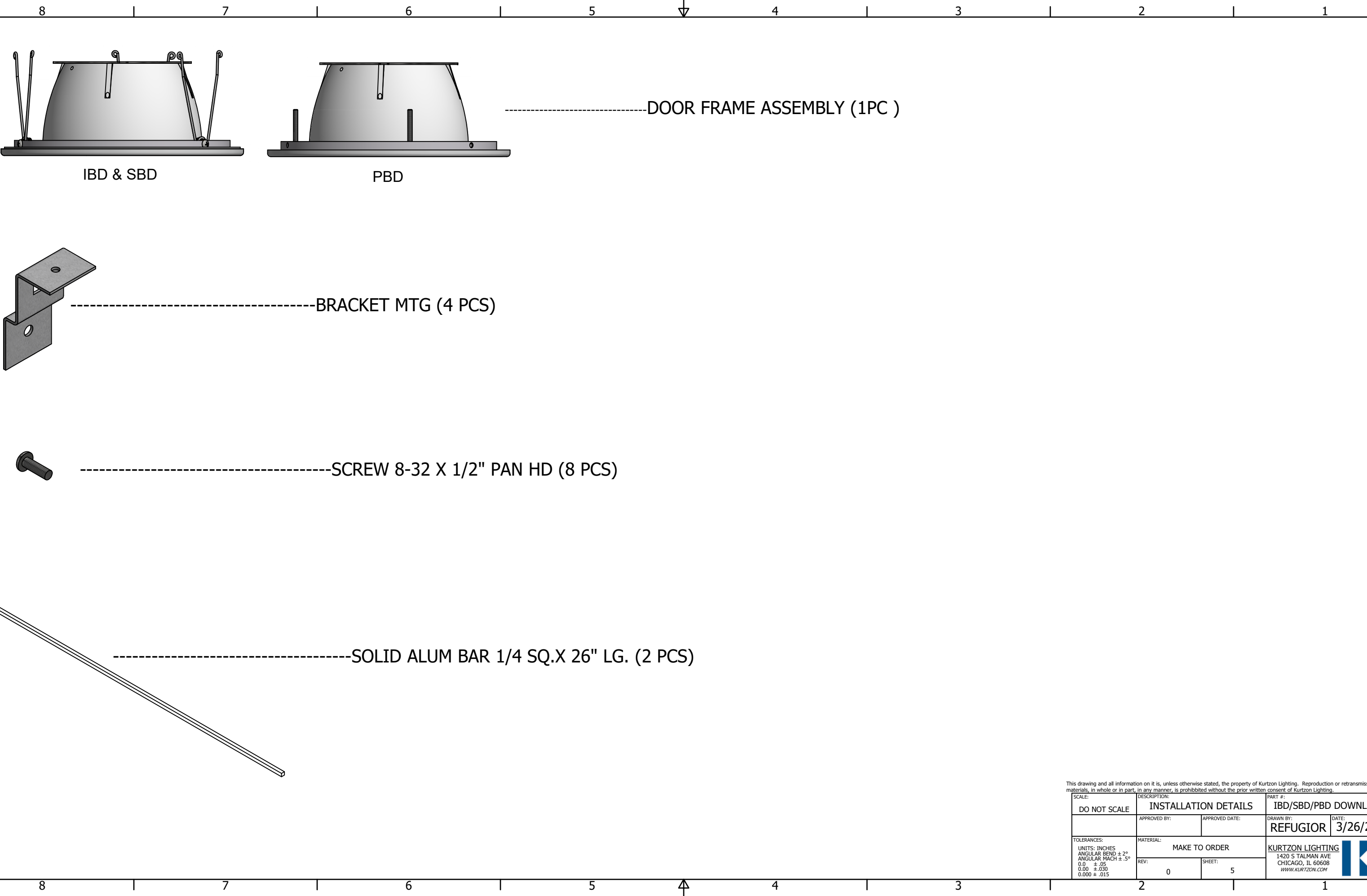
FOR LIGHT FIXTURES THAT COME WITH THE  
SPRING DOOR FRAME (SHOWN), SIMPLY PINCH  
THE TORSION SPRING AND POSITION INTO THE  
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SCALE: DO NOT SCALE	DESCRIPTION: INSTALLATION DETAILS	PART #: IBD/SBD/PBD DOWNLIGHT
3rd ANGLE PROJECTION	APPROVED BY:	APPROVED DATE:
TOLERANCES: UNITS: INCHES ANGULAR BEND ± 2° ANGULAR MACH ± .5° 0.0 ± .05 0.00 ± .030 0.000 ± .015	MATERIAL: MAKE TO ORDER	DRAWN BY: REFUGIOR
	REV: 0	SHEET: 4
		DATE: 3/26/2020
		KURTZON LIGHTING 1420 S TALMAN AVE CHICAGO, IL 60608 WWW.KURTZON.COM








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SCALE:	DESCRIPTION:		PART #:	
DO NOT SCALE	INSTALLATION DETAILS		IBD/SBD/PBD DOWNLIGHT	
	APPROVED BY:	APPROVED DATE:	DRAWN BY:	DATE:
			REFUGIOR	3/26/2020
TOLERANCES: UNITS: INCHES ANGULAR BEND ± 2° ANGULAR MACH ± .5° 0.0 ± .05 0.00 ± .030 0.000 ± .015	MATERIAL:		KURTZON LIGHTING	
	MAKE TO ORDER		1420 S TALMAN AVE CHICAGO, IL 60608 WWW.KURTZON.COM	
	REV:	SHEET:		
	0	5		



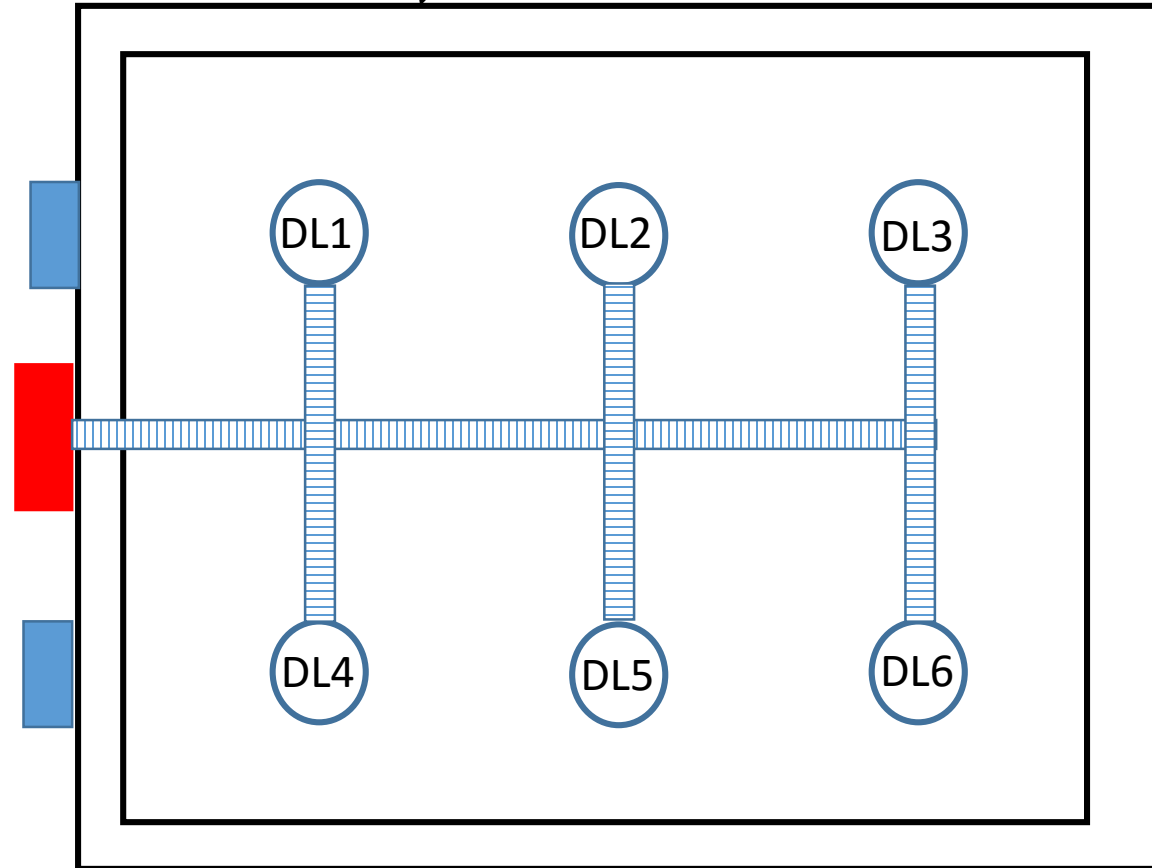
-  Remote driver enclosure (Maximum 3 drivers in each enclosure) One driver supplied per fixture.
-  Remote filter enclosure (Max (3) 3circuit filters in each enclosure). Filters are ordered separately. In multiples of 3
-  MRI Downlight with DC input Leads.

AC power is brought into the Driver box and supplied into the AC voltage side of the drivers. The driver box is supplied with the 0-10v dimming wires and the DC output wires are left inside the driver box and are ready to be connected in the field. Note that there will be a set of DC out leads for each driver supplied.

The DC output from the drivers will be connected to the RF Filter (if ordered). The DC power will be filtered and the then brought into the shielded room.

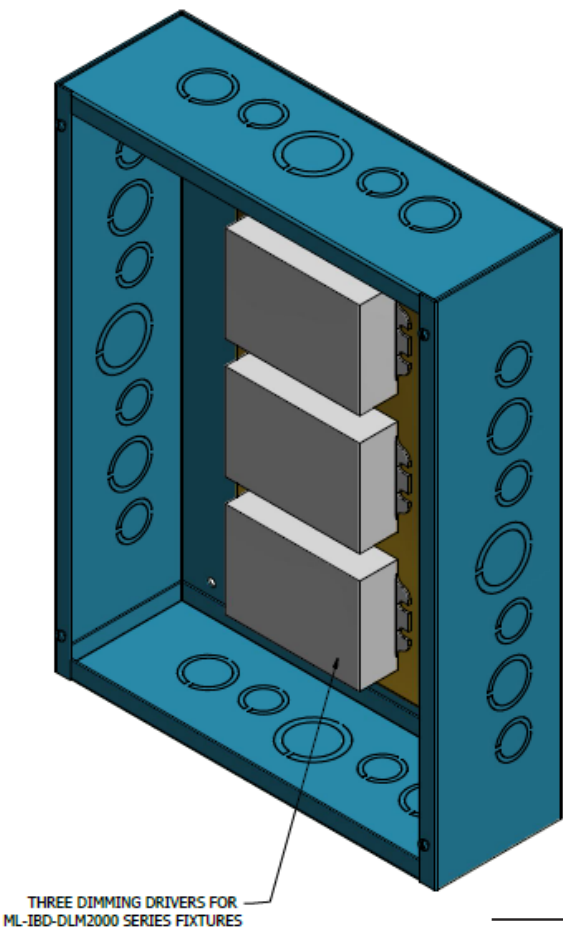
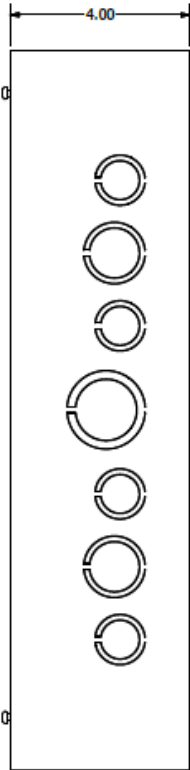
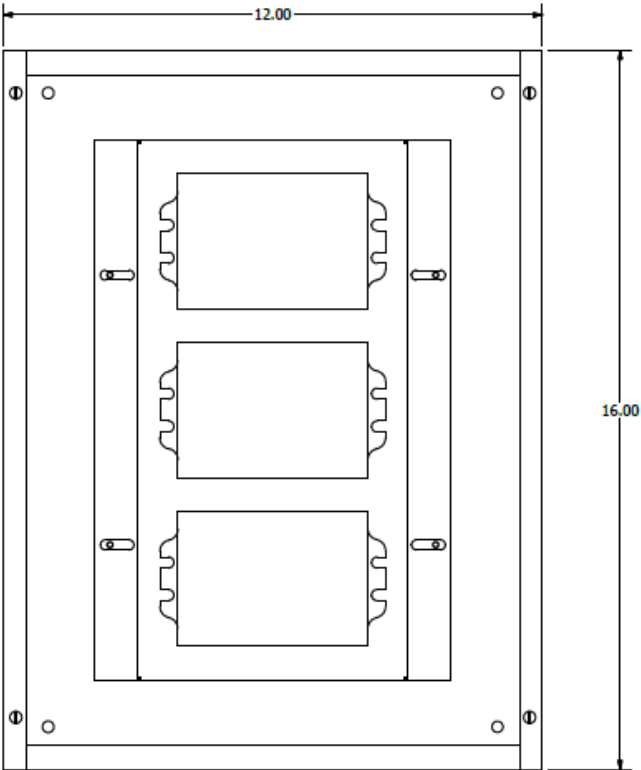
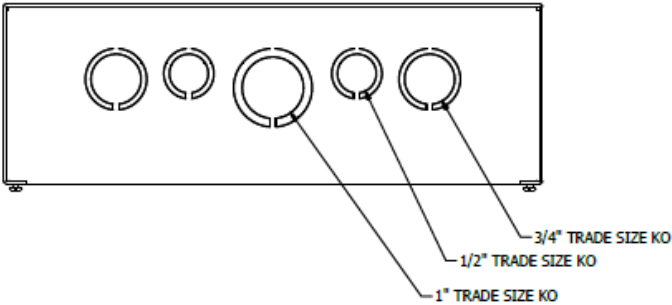
Filtered shielded wires are brought to the individual luminaires and connected. (observe polarity)

Shielded room:  
Luminaires inside,  
Driver box and filter  
box must be mounted  
outside room.

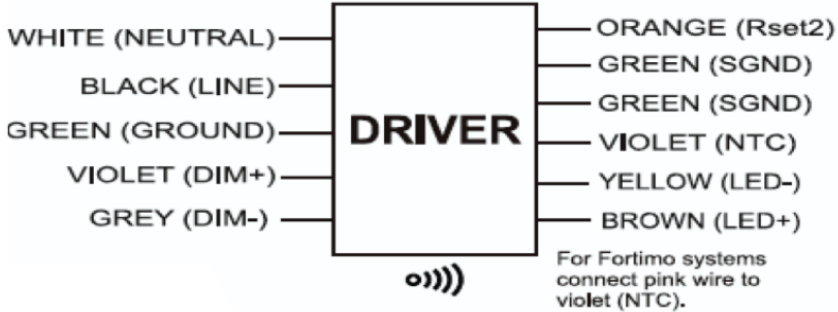




# Remote driver enclosure.



## Wiring Diagram

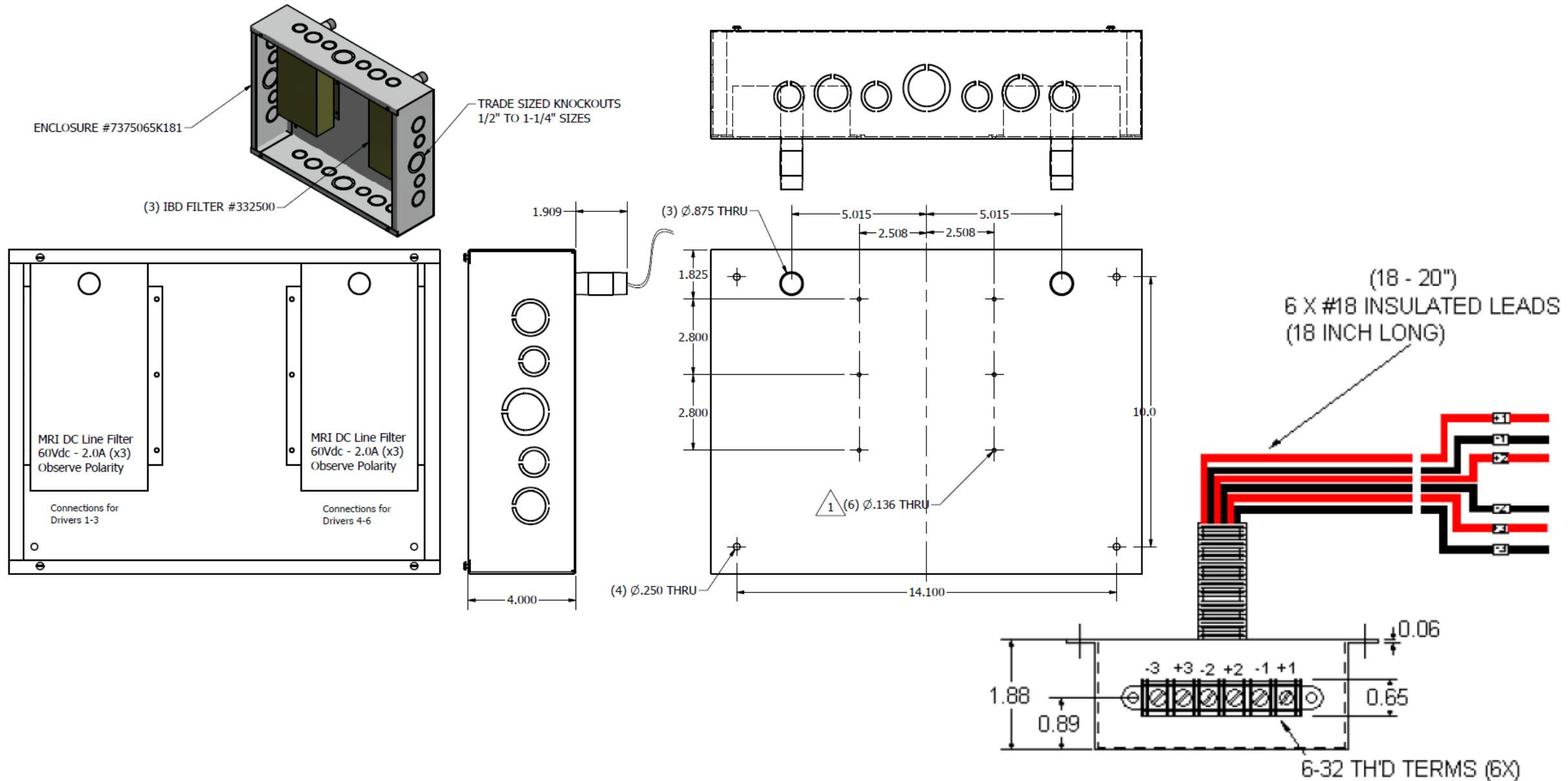


**WARNING:**  
Install in accordance with national and local electrical codes. Use 18AWG solid or tinned stranded copper wire.

**GROUNDING:**  
Driver case must be grounded.

Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)	Other Comments
0-10V Analog Class 1 or Class 2 Wiring	1% ~ 100% (for output current range 0.3-1.0A)	0.003	Dimming source current: 150 $\mu$ A

# Remote Filter enclosure (2) 3 Circuit fixtures shown. 3 max per enclosure.



**Downlight with LED Leads pulled into**  
**Junction box. Field connections**  
**made to the DC + (BROWN) and DC-**  
**(Yellow) Connectors. The rest of the**  
**wires are un-used and capped off at**  
**the factory.**

